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INVESTMENTS FINANCING IN CAPITAL-CONSUMING INDUSTRIES

Marian Turek, Izabela Jonek-Kowalska

Silesian University of Technology, Silesian University of Technology,

Faculty of Organization and Management, ul. Roosevelta 26, 41-800 Zabrze, Poland

Abstract

The main objective of this paper is to determine the extent and strength of the influence of the way of financing the development investment on the value of enterprises operating in capital-consuming industries. In order to achieve such objective, in the theoretical part decomposition of EVA was made by distinguishing operational, financial and investment quantification areas. Literature studies were used for this purpose. Then the influence of the way of investment financing on the particular areas and on the finally obtained EVA was identified, using financing structure, cost of capital engaged and invested capital. In the empirical part of the paper, an attempt was made to verify theoretical conclusions based on a case study of investment realized in one of the biggest Polish mining enterprises.

Key words: *company value, investment financing, capital-consuming industries, hard coal mining*

1. INTRODUCTION

The main objective of the paper is to determine the influence's scale and strength of the way of financing development investments on the value of companies performing in the capital-consuming industries. In order to achieve such objective, in theoretical part the concept of Economic Value Added – EVA and Market Value Added – MVA was described and the decomposition of EVA was made by distinguishing operational, financial and investment area of quantification. Next, the influence of the way of financing investment on separate areas and on finally obtained EVA was identified, using the structure of financing, the cost of capital engaged and capital invested.

In the empirical part of the paper, there was an attempt made to verify the theoretical results basing on the research conducted in a hard coal mining in years 2005-2009. Using several options of financing the particular development investment, the economic value added was calculated which was realized by the examined mining enterprise. On the basis of research results, the assessment of the influence's scale and strength of financing on company value.

2. ECONOMIC AND MARKET VALUE ADDED IN COMPANY PRICING

One of the most perfect formulas of company pricing is currently thought to be the economic value added – EVA and market value added – MVA (Boulton et al. 2001). Currently, it is postulated that the basic purpose of company's activity is a maximization of economic value added (EVA) (Babin & James 2010) defining a maximization of market value added (MVA) (Cwynar & Cwynar 2003). The first formula as well as the second one bases on profits. However, in accordance with a balance profit, it contains many vital features for measurement modifications objectiveness. The concept of economic value added mostly grounds on the calculation of operating profit, thus it only relates to the operating part of company's activities, disregarding less important activity areas for company's existence.

Nevertheless, it includes other tax charges too. Therefore, it may be stated that it reflects the factual company potential in terms of value creation (Malinowska 2001; Marcinowska 2000). Moreover, the economic value added also takes the interest of investor groups into account using the benefits expected by them (Boksberger & Melsen 2011). It includes the cost of capital engaged in company's performance.

The economic value added (EVA), in a very general depiction, compares the profit actually realized with the profit expected by investors from the company, presenting it in the following way:

$$EVA = \textit{profit realized} - \textit{profit expected by investors} \quad (1)$$

The minuend in the formula 1 is the profit gained due to a special use of resources. Subtrahend on the other hand, expresses the profit expected by investors (capital providers). For determining the profit achieved, the net operating profit after taxes NOPAT (Dudycz 2001) is used. However, the profit expected by investors is presented as the product of the capital engaged in the company – IC (*Invested Capital*) and the expected return rate expressed as WACC (*Weighted Average Cost of Capital*). In this way, the general formula 1 may be rewritten in the following way:

$$EVA = NOPAT - WACC \times IC \quad (2)$$

where:

NOPAT – net operating profit after taxes,

WACC – weighted average cost of capital,

IC – invested capital.

The profit NOPAT in EVA formula is sensitive to the changes of clearly operating factors, which makes the category of the profit objective and reflects the real company potential stemming from its basic activity (Sierpińska 1999). In practice, NOPAT is the net operating profit after taxes, which is the profit before including the costs of activity financing from external capital but after decreasing it by the tax expressed in cash. NOPAT then may be indicated by correcting operating profit with tax charges (formula 3).

$$NOPAT = EBIT \times (1 - T)$$

where:

NOPAT – net operating profit after taxes,

EBIT – earnings before income taxes,

T – tax rate (Cwynar & Cwynar, 2003).

(3)

The net operating profit after taxes (EBIT) presented in formula 3 is in fact a subtraction between the revenues and operating costs. It should be stated that on a final amount of NOPAT, apart from the operating costs and revenues, the rate of income tax also influences.

The profit expected by investors (that is providers of equity and external capital) is the minuend in the EVA formula. Investors expect the minimal, marginal profitability of the equity and external capital. Such profitability is indicated by the weighted average cost of capital – WACC. WACC allows to include the expectations of external capital providers for whom the minimal profitability of the capital

engaged means the cost of external capital, expressed as its percentage. Moreover, WACC also contains the profitability expected by the providers of equity capital which is connected with the possibility of alternative engagement of equity capital. After including the expectations of external and equity capital providers measured by WACC, the capital engaged in the company is multiplied by WACC and the result obtained expresses the profit expected by investors (Michalak 2010; Michalak 2011).

In this moment it is worth having a closer look at categories indicating the amount of expected profit, these are weighted average cost of capital (WACC) and the invested capital (IC). If the company obtains capital in the form of equity and external capital, the cost of its gain is the weighted average of both the components. The weights of the separate components reflect the capital structure and include the way of company financing at the same time (Melich 2004). The aforementioned assumptions cause that the formula of weighted average cost of capital (WACC) is in the following form:

$$WACC = \frac{(E \times C_e + D \times C_d \times (1 - T))}{E + D} \quad (4)$$

where:

E – equity capital,

C_e – cost of equity capital,

D – external (debt) capital,

C_d - the cost of external capital,

T – income tax.

After estimating the weighted average cost of capital (WACC), in the minuend shaping the amount of economic value added, the amount of capital engaged in company (IC) should also be determined (Cwynar & Cwynar 2003). The capital invested in the company means the sum of resources introduced in the company which are financing the assets gathered by the company (Melich 2004). The company cannot only gather capital. However, the final amount of EVA is not only influenced by the quantitative depiction of capital but also by the effectiveness of its usage measured by the ROIC rate. The maximization of economic value added is only possible when the company provides the profitability higher than the weighted average cost of capital for the capital invested, because EVA in the investment depiction is stated as $EVA = (ROIC - WACC) \times IC$. The company should then not only gather the primary resources, that is capital, but with its help also make such resources combination which would ensure the maximal return on invested capital. Therefore, even after achieving a positive operating result, the subtraction obtained may be negative. Then the company bears the economic loss. It concludes from the aforementioned that EVA is only positive when the subtraction between the actually achieved return rate on invested capital and the minimal return rate expected by stakeholders connected with the company, expressed by the weighted average cost of capital (WACC), is higher than zero. And the company value, measured by EVA, increases only when the profit realized is higher than the one expected by investors. The surplus in the form of subtraction between the amount of the actual and expected profit decides about the growth of company value (Stainbank 2009).

A value connected with the economic value added is the market value added – MVA. It is indicated by the sum of discounted economic added values that are realized in the future periods $t=1,2,3,\dots,n$ and it reflects the premium gained in the market due to the capital invested in the company (5) (Ehrbar 1999).

$$MVA_t = \sum_{t=1}^n \frac{EVA_t}{(1 + WACC)^t} \tag{5}$$

where:

t – time,

MVA_t – market value added,

WACC – weighted average cost of capital,

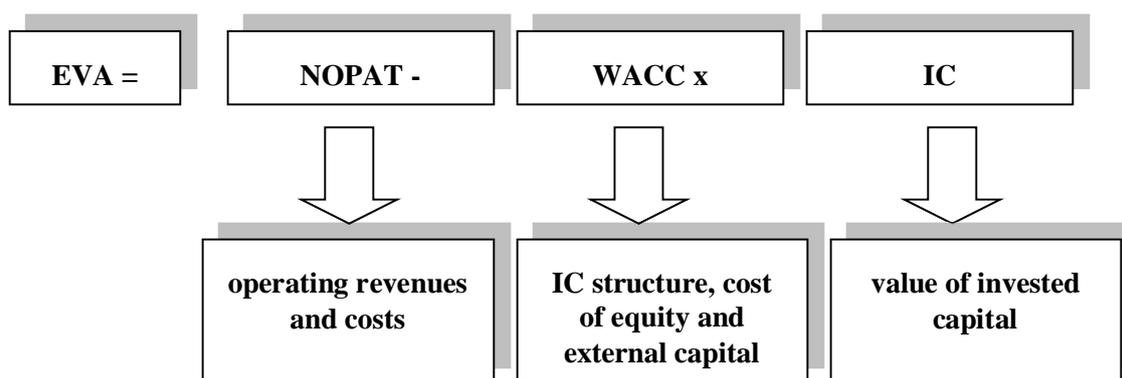
EVA_t – economic value added.

MVA shows the present value of economic added values gained in the future periods $t=1,2,3,\dots,n$ (Dorchester 2011). With regard to the above, if the company generates the stream of positive EVA values, then the additional value may be created, however, if the value of discounted economic added values is negative, then the process of value “destruction” may occur. Consequently, MVA contains a primary message stating that a new value may only be created when the capital employed by the company brings a return higher than a marginal one, indicated by its cost (Othman & Sheehan 2011). That is, if the profitability of invested capital implied by ROIC is higher than the cost of capital gained, expressed by WACC. At that time, the subtraction (ROIC – WACC) shall be positive (Bosman & Ambrosini 2010).

3. THE INFLUENCE OF DEVELOPMENT INVESTMENTS ON COMPANY VALUE

The assessment of the development investment influence on company value estimated by the use of EVA concept shall be conducted through the decomposition of elements indicating the economic value added (Abuzayed et al. 2009). In result, it is searching for an answer to a question how the development investments affect the minuend and subtrahend of the subtraction indicating EVA. The primary elements creating EVA are presented in figure 1.

Figure 1. Decomposition of EVA oriented on the assessment of development investment on its creation



Source: own work

The first of the components of the economic value added covers the operating revenues and costs. The influence of development investments on the value of operating revenues is clear and simple, as the company undertakes investments in order to increase production capacity, and at the same time, to maximize the revenues from the basic activity. Consequently, if the investment is completed, then the increase of operating revenues is expected in future on condition that the market absorbs the additional production (Lepak et al. 2007).

A launch of development investment, especially in traditional and capital-consuming industries, is also related to the necessity of bearing additional operating costs manifesting themselves in the growth of amortization, material and energy usage or salaries if the investment requires employing additional workers. Therefore, for the increase of economic value added it is necessary to achieve the operating revenues growth on the level exceeding the growth of operating costs. If such condition is not fulfilled, NOPAT shall not rise or decrease. In this moment, it is worth mentioning once more that the increase in operating revenues depends on market conditions in a big scale, therefore on the independent factors for the company (Fama & French 1998).

The next EVA component is the weighted average cost of capital dependant from the cost of equity and external capital, as well as the structure of the capital invested and risk related to the investment. The cost of equity and external capital are parameters shaped on a capital market dependant from the current market and economy conditions, thus there is a lack of possibility of their shaping by the company (Black 1993). These are the conditions set by the providers of equity and external capital. In the EVA account they may be treated as variables weakly correlated with company activities. Nevertheless, it should be underlined that the lower value of equity and/or external capital the lower WACC is and the higher possibilities of creating the economic value added (Fama & French, 2006).

The capital structure is one of the parameters being the result of financial decisions made in the company. Therefore, it is vital to optimize it in regard with the two formally contradictory factors: minimizing equity capital share as the more expensive financing source and including hierarchy of choosing financing sources, according to which the company firstly reaches for a more available, own internal financing sources. This optimizing criterion may appear in this case as the level of financing risk, indicated by the use of the basic financing rules.

The last of EVA components – capital invested, is the value which in case of undertaking development investments always rises, as its realization means the increase of total assets and requires the increase of total liabilities, which is connected with the increase of equity capital value or/and external, long-term capital, that is IC components.

The reasoning presented above is a static depiction of EVA creation through the realization of development investments. It is also worth adding the aspect of time passing, which in the process of building economic and market value added is of a fundamental significance. The realization of increased operating revenues and rise of operating costs are the effects delayed in time. Their achievement is only possible after investment completion and forwarding it to exploitation. On the other hand, the increase in invested capital value is the effect occurring already in the elementary phase of investment realization. According to the above, a natural consequence of development investment undertaking is the process of EVA decreasing in the period of its realization. Only after its completion it is possible to expect the rise in company value by the assumption of achieving expected investment effects.

To sum up, the increase of economic value added in the result of development investment realization is possible mostly when the increment of operating income is higher than the increment of investment cost of additional capital:

$$\Delta NOPAT > \Delta(WACC \times IC) \quad (7)$$

For capital-consuming investments that require investment processes for many years, achieving this condition is delayed in time and possible only when the market absorbs the additional production providing the increase of operating revenues.

4. THE METHODOLOGY OF CONDUCTED RESEARCH

As it was stated in the previous point, the investment financing finds its measurable reflection in the second component of the economic value added. But this influence appears only through the view of weighted average cost of capital – WACC. The invested capital (IC) is insensitive to the changes in financing options, however. Its value always expresses investment outlay and it does not reveal the way of its gain. According to the above, the model of investment financing manifests itself in the value of WACC. This conclusion in further study shall constitute a basis to the assessment of influence of financing models on the realized economic and market value added by mining enterprises.

To continue, it should also be ascertained that when searching for a financing model that interacts most with the economic value added, the financing sources of investment should be chosen so that they would minimize the weighted average cost of capital. Apart from this criterion, the financing risk should also be included – limiting the share of external capital in financing structure of the whole company (Bao & Bao 1998).

In the next part, on the basis of the study of the essence of economic and market value added and the chosen models of investment financing in mining enterprises, there was an attempt of assessment made regarding such models influence on EVA and MVA, stating the following assumptions (Van Staden & Vorster 1998):

- 1) EVA was estimated on the grounds of parameters of the examined investment, because of disproportionate investment outlay to NOPAT and IC of the whole mining enterprise (the examined investment relates to one mining enterprise),
- 2) the research covered years 2010-2030 in which EVA was diagnosed and for which end's MVA was calculated,
- 3) NOPAT and IC in all the models was retained on the same level due to a lack of influence of financing way on these parameters of economic value added,
- 4) WACC was calculated on the basis of accepted methods of investment financing: the shares of various financing sources of a different cost,
- 5) the assessment of the influence of investment financing on mining enterprise development was made on the basis of market value added (MVA) calculated for the separate financing model until year 2030.

5. FINANCING DEVELOPMENT INVESTMENT AND VALUE OF MINING ENTERPRISES

The investment realized in all cases requires increasing investment outlay in the value of PLN 112 457 690. The operating revenues and costs connected with its realization remain stable in all the options due to the assumption about the lack of impact of financing way on NOPAT. The financing

structure changes, and consequently, the value of financing cost (Turek & Jonek-Kowalska 2011) from several sources and the resultant of these parameters change too, that is WACC (Jonek-Kowalska 2011).

In the **first** of the examined models the equity internal capital dominates. Its share in financing structure equals 100%. The weighted average cost of such financing is 10.41%. In the **second model** the internal equity capital remains a dominant financing source but is complemented by machines and mining devices leasing amounting to PLN 35 786 690. Such financing sources constitute 31.82% of total investment outlay. In the **third model** a further increase appears in the range of external foreign financing. The company in this option uses an investment loan in the amount PLN 55 104 268.10 paid off in the ten-year term. The remaining part of investment outlay is still covered by the internal equity capital. The financing structure includes 51% of equity capital and 49% of external capital. The average cost of capital in this case equals 9.71%. In the **forth model** leasing financing from model 2 was replaced by a three-year investment loan. Financing structure includes, similarly to option 2, 68.18% of equity capital and 31.82% of external capital, the source and the cost of the latter is also different. In the result of the change made, the weighted average cost of capital amounted to 9.96%. The result is slightly higher than in model 2. In the **fifth model** the investment was financed by shares issuance, with the assumption that the cost of capital gained in this way is equal to the income retained increased in the first year by issuance cost. According to the above, in the first year the weighted average cost of capital was on the level of 15.11%, in the subsequent years it decreased to 10.41%. The share of external equity capital amounted to 100%. **The model 6** assumes the domination of external capital. In this option, the object of investment is financed in 100% through 10-year bonds issuance. In the first financing period the cost of capital is increased by issuance cost and equals 16.54% but in the next years its value is 10.98%. **The model 7** implies a varied capital structure with 35% share of internal equity capital and 65% share of external foreign capital in the form of investment loan. The cost of capital amounts to 9.49% in this option.

On the basis of the chosen financing models defined in such a way, the calculation of economic value added was made, consistent with the methodology presented in the theoretical part of the paper. The invested capital (IC) was correspondent with the value of investment outlay, and at the same time with the value of financial sources used (PLN 112 457 690.00). NOPAT in years 2010-2030 was estimated on the grounds of the value of operating revenues and costs of the examined investment forecasted in the subsequent years (table 1). Both these parameters remained unchanged in each of the analyzed models (Turek, et al. 2008).

Table 1. The value of forecasted operating revenues and costs, EBIT and NOPAT in the examined investment in years 2010-2030

Year	2010	2011	2012	2013	2014
Operating revenues	1157068514.25	1318006536.00	1333749060.00	1317165360.00	1316607530.00
Operating costs	1000491300.00	1055354700.00	1023022600.00	1060499000.00	1023175400.00
EBIT	156577214.25	262651836.00	310726460.00	256666360.00	293432130.00
NOPAT	126827543.54	212747987.16	251688432.60	207899751.60	237680025.30
Year	2015	2016	2017	2018	2019
Operating revenues	1373505000.00	1373505000.00	1373505000.00	1373505000.00	1373505000.00
Operating costs	1020924700.00	1017189900.00	1035491800.00	1013996700.00	1029402300.00
EBIT	352580300.00	356315100.00	338013200.00	359508300.00	344102700.00
NOPAT	285590043.00	288615231.00	273790692.00	291201723.00	278723187.00

Source: own work

Furthermore, when calculating EVA the changes were made in WACC due to the changing structure of financing sources in each model. In table 2 there are the basic characteristics presented of the separate financing models and the average economic value added obtained through their use.

Table 2. Characteristics of financing model and the average EVA realized through their use

Model	Share of equity capital	Option and cost of equity capital	Share of foreign capital	Option and cost of foreign capital	WACC	Average EVA [million]	Ranking for EVA
1	100%	10.41% financial surplus	0%	-	10.41%	269.54	5
2	68.18%	10.41% financial surplus	31.82%	7.61% leasing	9.52%	270.55	2
3	51%	10.41% financial surplus	49%	8.99% loan	9.71%	270.33	3
4	68.18%	10.41% financial surplus	31.82%	8.99% loan	9.96%	270.05	4
5	100%	15.11% i 10.41% akcje	0%	-	15.11% and 10.41%	269.29	6
6	35%	10.41% financial surplus	65%	16.54% and 10.98% bonds	14.19% and 10.78%	268.93	7
7	35%	10.41% financial surplus	65%	8.99% loan	9.49%	270.58	1

Source: own work

As it is shown above, the best model in terms of EVA creation is the one with loan domination as the external foreign financing. Later, there are models with the dominance of equity capital and leasing and the investment loan too as the additional financing sources. Definitely, the models using 100% equity capital in the form of financial surplus, as well as shares issuance are a worse option. The least beneficial from the point of EVA's view the model 7 is indicated with a dominance of external capital obtained through bonds issuance. Such hierarchy is defined mainly by the cost of obtaining separate financing sources. It is also worth adding that the influence of financing way of investment on EVA is not significant. In the capital-consuming industries, investment success and EVA creation is mostly defined by the operating factors, related to achievement of the assumed operating revenues and not exceeding operating costs (Turek & Jonek-Kowalska 2008) shaping NOPAT (Jonek-Kowalska 2011).

6. THE ASSESSMENT OF THE INFLUENCE OF INVESTMENT FINANCING MODELS ON THE MINING ENTERPRISES DEVELOPMENT

The assessment of the influence of investment financing models on the mining enterprises development shall be conducted through the view of market value added (MVA) indicating the enterprise value growth during the time of realizing investment benefits (Bowman & Ambrosini 2000). The most favorable from the perspective of company growth shall be such financing models considered that guarantee the highest increments of MVA with ensuring an optimal level of financing risk.

The value of discounted EVA and MVA level until year 2030 for all examined financing options are enclosed in table 3.

Table 3. MVA for the examined options of investment financing in years 2010-2030

Model 1										
Year	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Discounted EVA	182 085 990.07	196 861 641.18	145 766 615.61	152 062 896.01	166 925 751.47	152 857 111.36	131 033 211.38	126 562 945.49	109 512 111.38	109 436 605.84
Year	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Discounted EVA	100 680 969.01	93 326 692.62	82 325 557.14	76 065 960.71	66 994 279.67	67 656 603.24	59 991 766.64	55 527 299.27	49 236 002.38	30 058 807.30
MVA	2 270 089 515.78									
MVA/IC	20.19									
Model 2										
Year	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Discounted EVA	184 479 560.88	200 908 617.00	150 111 133.93	157 762 025.19	174 454 589.12	161 043 205.10	139 200 751.18	135 512 327.85	118 228 389.53	119 065 320.60

Year	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Discounted EVA	110 423 678.45	103 181 657.75	91 766 488.21	85 472 434.79	75 897 730.46	77 244 078.24	69 054 149.64	64 430 404.96	57 598 373.75	35 502 753.73
MVA	2 427 459 241.84									
MVA/IC	21.59									

Model 3										
Year	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Discounted EVA	183 965 313.52	200 035 815.79	149 170 769.57	156 524 499.14	172 814 741.77	159 254 492.14	137 410 289.62	133 544 379.13	116 305 535.86	116 934 714.93
Year	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Discounted EVA	108 261 107.39	100 987 364.72	89 657 745.64	83 364 875.63	73 896 597.88	75 082 760.71	67 004 819.90	62 410 904.41	55 695 622.34	34 259 593.40
MVA	2 392 489 845.34									
MVA/IC	21.27									
Model 4										
Year	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Discounted EVA	183 291 379.81	198 894 745.64	147 944 179.20	154 913 573.81	170 684 249.92	156 935 315.26	135 093 641.88	131 003 118.91	113 827 598.45	114 194 388.40
Year	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Discounted EVA	105 485 230.20	98 176 381.72	86 961 828.83	80 675 839.02	71 348 522.33	72 336 025.31	64 405 660.24	59 854 669.03	53 292 022.38	32 692 869.70
MVA	2 264 804 004.35									
MVA/IC	20.14									

Model 5										
Year	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Discounted EVA	182 085 990.07	196 861 641.18	145 766 615.61	152 062 896.01	166 925 751.47	152 857 111.36	131 033 211.38	126 562 945.49	109 512 111.38	109 436 605.84
Year	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Discounted EVA	100 680 969.01	93 326 692.62	82 325 557.14	76 065 960.71	66 994 279.67	67 656 603.24	59 991 766.64	55 527 299.27	49 236 002.38	30 058 807.30
MVA	2 264 804 004.35									
MVA/IC	20.14									
Model 6										
Year	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Discounted EVA	181 102 228.00	195 209 766.50	144 004 867.26	149 765 242.01	163 907 296.66	149 594 237.27	127 797 006.00	123 037 057.32	106 098 269.83	105 686 445.99
Year	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Discounted EVA	96 908 226.94	89 532 361.73	78 711 844.72	72 486 110.80	63 625 667.49	64 049 382.17	56 601 990.16	52 216 249.29	46 144 208.44	28 059 659.49
MVA	2 205 183 000.02									
MVA/IC	19.61									

Model 7										
Year	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Discounted EVA	184 560 920.98	201 046 871.48	150 260 261.22	157 958 477.33	174 715 161.50	161 327 721.56	139 485 840.48	135 825 988.15	118 535 176.97	119 405 585.22
Year	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030

Discounted EVA	110 769 393.76	103 532 794.06	92 104 276.60	85 810 370.09	76 218 925.94	77 591 319.08	69 383 730.56	64 755 511.48	57 904 994.41	35 703 317.66
MVA	2 433 051 947.28									
MVA/IC	21.64									

Source: own work

According to data presented in table 3, the highest market value is specific for financing model no. 7. High MVAs are also generated by models 2 and 3. The further places are taken by no. 4, 5, 1 and 6. This confirms the results found by the use of EVA, consistent with the assumption that MVA is the discounted EVA stream.

In the horizon of over twenty years, market value added will exceed the invested capital 19-21 times. However, the difference in MVA creation between the worst and the best model is slight and equals PLN 1.64 million.

7. CONCLUSIONS

The models presented above constitute a case study of different investment financing options in the examined mining enterprise. The detailed conclusions stemming from the analysis of 7 chosen options and assessment of their influence on EVA, MVA and mining enterprises development are as follows:

- the most beneficial, from the perspective of EVA and MVA creation, is model 7 with a dominance of foreign capital in the form of investment loan,
- a profitable influence on EVA and MVA are also demonstrated by varied financing structures in which, apart from equity capital, there is also leasing and investment loan,
- the least beneficial is investment financing from internal and external equity capital in 100% due to the high cost of this financing source,
- a high financing cost is also specific for the model using bonds issuance as a dominant financing source.

The conclusions of a general character include the following conclusions:

- the influence of investment financing on EVA and MVA manifests in WACC,
- investment financing does not have a direct impact on NOPAT and IC,
- the scale of the influence of investment financing on obtained EVA and MVA in the realization of capital-consuming investments is insubstantial,
- the maximization of EVA and MVA through the use of various financing models should be oriented on minimizing the weighted average cost of capital, ensuring at the same time the optimal level of financing risk,

- WACC minimization should lead to maximizing the cheapest financing sources in the financing structure of investment with retaining financing safety.

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**MARKETING IN THE CONTEXT OF KNOWLEDGE MANAGEMENT
IN CONDITIONS OF SMALL AND MEDIUM ENTERPRISES**

Jakub Rečičár, Juraj Tomlain

Institute of Management, Slovak University of Technology, Vazovova 5, 812 43 Bratislava,

Slovak republic, e-mail: jakub.recicar@stuba.sk, juraj.tomlain@stuba.sk

Abstract:

The authors clearly theoretical introduce the available information about interdisciplinary of the marketing and knowledge management. The results of empirical research in small and medium-sized enterprises are shown in the practical part of the paper. These outcomes follow-up to the discussion, that points to possible improvements in marketing activities tied to a common knowledge-management company. In conclusion are recommendations formulated for the business sector.

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Key words: *marketing, knowledge management, SMEs, knowledge society*

1 INTRODUCTION

The issue of small and medium-sized enterprises (SMEs) is in the current continued recession steadily achieving prominence in the context of the existence and importance of these companies. SMEs represents by their nature less (smaller), but more flexible production units. For this benefits they are perfect replacement to large enterprises - their activities can almost perfectly substitute selected activities of large enterprises, making them key players in the market. The disadvantage of these companies, however, remains the lack of funding, resulting in the emergence of some negative phenomena - SMEs with lack of funds easier decline and seek to death, unable to progress effectively in comparison to large enterprises with a stable financial base, their capacity for innovation and creation of new knowledge is attenuated and weak competitiveness.

SMEs starting point is represented by activities in the improvement of marketing strategies and strengthening the knowledge base of these companies, especially in this area. Knowledge base of the enterprise includes data, information and knowledge itself from all areas of business activities. Knowledge is constituted by the very existence of society, but particularly by purposeful activity of single workers which are converting their knowledge and experience into usable form, easily accessible and editable by using information and communication technologies.

The important role of knowledge workers and marketing specialists is constantly cooperating in ensuring the flow of essential information about specific data for the company. Those data and information are necessary to perfect the functioning of society - as demonstrated by research, information about competitors, market and methods of acquisition are essential for individual companies. Information naturally help implement marketing tools in an ever changing environment. Endless cycle of data and

information is therefore in the context of bilateral cooperation knowledge management and marketing tools considered an effective tool not only building the knowledge society and its evidence base, but also an important element of the marketing mix applied in terms of sustainable development.

2 KNOWLEDGE CULTURE IN SMEs

Managers are mostly of SMEs themselves the owners of these companies, what means that their decision making is centralized and has fewer levels of management. This has resulted in the faster and more efficiently decision-making process in these companies than at large enterprises. The main drivers of SMEs are the owners themselves on the assumption that they can appreciate the importance of knowledge management in the enterprise. It should be noted that managers managing SMEs must take into account all aspects of business management, giving them a limited time on strategic issues related to knowledge management. By contrast, the top management of large enterprises has the possibility of delegating its powers to lower levels of management and thereby achieving time to implement decisions in the knowledge business strategies. The advantage of SMEs compared to large enterprises in relation to the structure of the implementation of knowledge management is the simple, flat and less complex structure, facilitating initiated changes throughout the organization.

SMEs tend to be more organic and fluidized culture as their opposite - large enterprises. Fewer employees are usually united common beliefs and values, which means easier way for an organization to implement change and knowledge management. It is easier to create a knowledge sharing culture in a smaller organization than in larger organizations. In smaller organizational units of type SMEs may be cultural values and beliefs influenced by the owner himself. The problem may be a lack of trust Holder to their employees or not supporting the culture of knowledge sharing and knowledge for significant activity. In this case, the owner may be perceived as a barrier to knowledge - prevents the development of knowledge instead of developing them. (Rasheed, 2005)

Each function of their knowledge management and interaction of creating unique for each entity requires a system of knowledge management. This effectively managed, long maintained a system consisting of Primal creation, acquisition, use, sharing and continuous recovery of information and data, ongoing and continuous training of workers of all effective organizational structures, a complex of activities and actions that lead to a functional mechanism to facilitate the effective administration of job performance in the process of marketing mix not only the individual but also the entire organization in terms of building a knowledge society with a long-term effect of sustainability, which also characterizes the social position of workers in the future, as human capital, knowledge and skills and the ability to be their most important features. (Porubčinová, 2011)

3 KNOWLEDGE-ORIENTED MARKETING

Knowledge-based marketing is a marketing platform which uses macro and micro-environmental knowledge that is available for economic functional units in organizations and business. It represents a philosophy of "what you need to know" than "knowing what you know" in changing micro-and macro-environment. When marketing the theoretical aspects of the type of the importance of continuous scanning and monitoring environmental trends are not transferred into practice, this may lead to product failure. The screening and monitoring is using to gain knowledge of consumers, maintain long-term brand value and the use of local market knowledge and establish partnerships.

An important factor is the use of activities, Customers & Market Knowledge (CMK) group in the company, whose function is to manage our own research group method, using professional applications and obtain business from education research core competencies, sharing services and infrastructure and the use of traditional research base such as watching his own brand of experimental acquisition of consumer contacts and the like.

On the other hand there are methods of small businesses based on less sophisticated knowledge of marketing activities, which are carried out more effectively. Intentionally attempt to capture and retain knowledge about each of their customers they serve. These activities are carried out involving the exchange of ideas with their target market. It is the analysis of customer databases, listening to the customer and management of marketing surveys and studies of micro and macro environmental trends involving the competitors.

The Knowledge Management - Knowledge Management System (KMS) is important in any company that wants to implement marketing knowledge and KMS model is applicable to all industries, including technical and biotechnology industry. (Yoosuf Cader, 2007)

Marketing decisions, such as stocks and demonstration of products, distribution channels and advertising media based on traditional segmentation results, progressing towards the weak responses and bring increased costs. Today's customers have different tastes and preferences, which cannot be grouped into large homogeneous populations to develop marketing strategies. In fact, he wants every customer to be operated in accordance with its individual and unique needs. Database marketing which features marketing strategies based on the large amount of available information from customer databases and transaction databases has become a popular and most organizations approach to creating massive databases about their customers and their purchasing transactions.

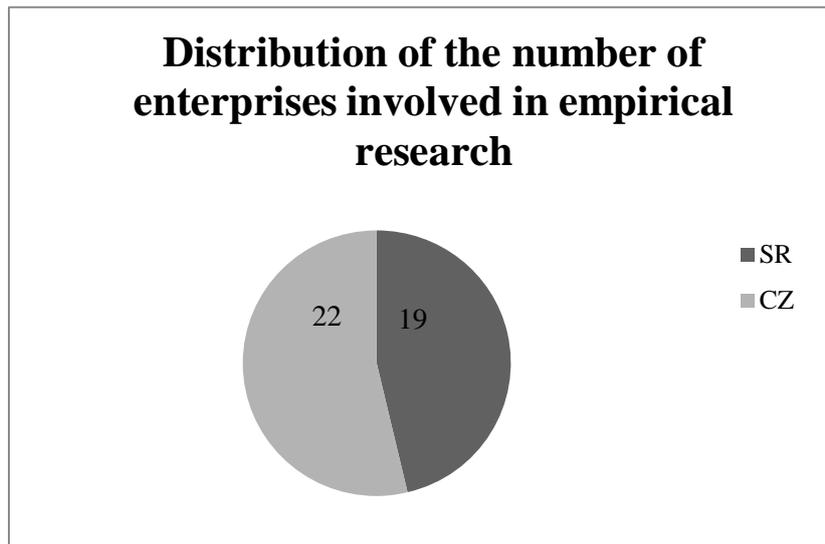
But due to the lack of appropriate tools and techniques for analyzing these huge databases, resulting wealth of customer information and purchasing behavior is still hidden and untapped knowledge in these databases. Knowledge-based marketing, which uses appropriate tools for data mining and knowledge management system, addresses this need and help to exploit the knowledge hidden in databases. There are three main application areas of data mining for knowledge-based marketing based on knowledge of marketing customer profiling, analysis of variance and trend analysis. (Shaw, 2001)

4 EMPIRICAL RESEARCH

The main objective of the empirical research was to identify the linking of existing marketing efforts with company's knowledge management. They direct their action significantly affecting the individual partial knowledge activities occasioning total knowledge flow. Application of selected marketing tools is able to detect their positive impact not only on selected indicators of business performance, but also the overall performance and also on competitiveness and business efficiency.

Theoretical aspects of marketing activities of enterprises bases were examined in a sample targeted for "start-up" companies. The term start-up refers to organizations that are currently under establishment for the purpose of introducing a new product (service) or marketing. A typical example of a start-up is called new technology-based firms in which the core activity is the development, marketing or use of the technology. The emphasis in this type of companies is not a novelty as such, but to its behavior in the use of technical and technological innovations. Financing of start-up companies are often based on venture capital.

The actual empirical research has been conducted on small and medium-sized companies (within three years of the company) in the field of information and communication technologies. Number of research units (Graph 1) reached the number of 22 enterprises in the Slovak Republic (SR) and 19 enterprises in the Czech Republic (CZ). This research was conducted through personal interviews with controlled pre-prepared questionnaire.



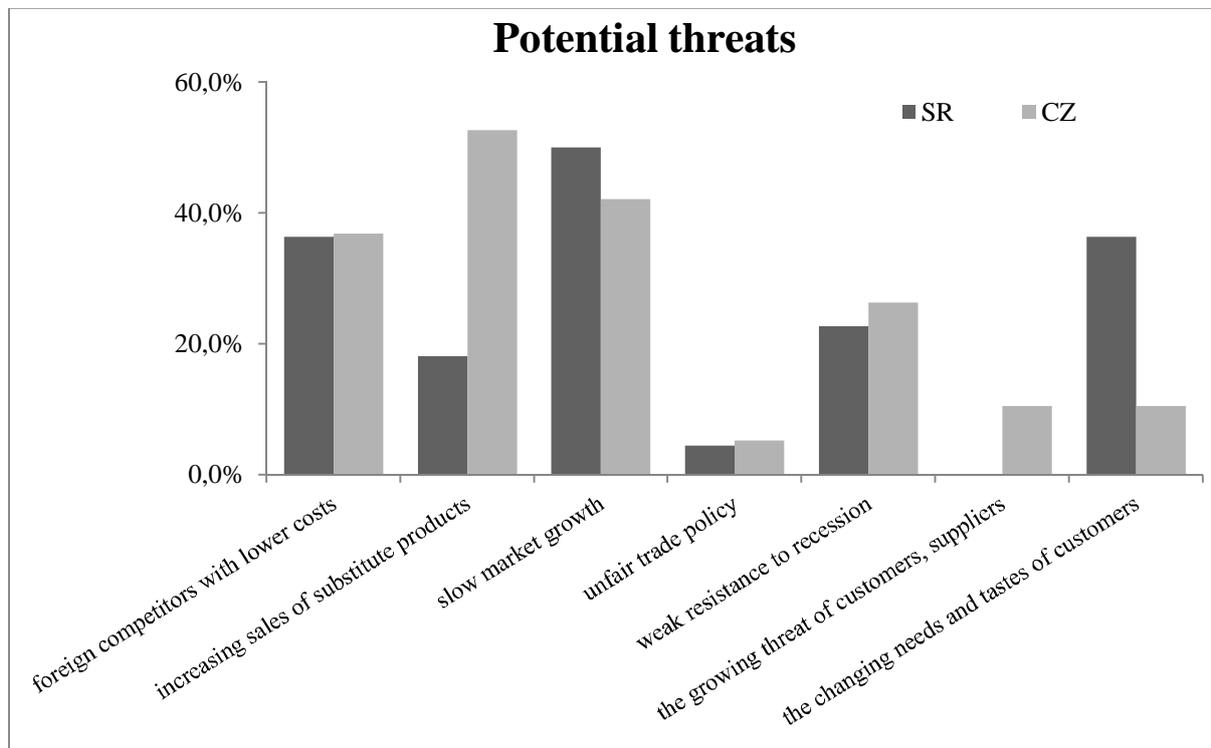
Graph 1 Distribution of the number of enterprises. Source: own research

Selected enterprises assessed as suitable candidates for the scientific studies that are part of empirical research were mainly enterprises in incubators and technology parks of the Czech Republic in Prague (CVUT incubator and CKD), Brno, Plzeň and Trutnov and Slovakia in Bratislava, Malacky, Sládkovičovo and Žilina.

Selected companies were visited after agreement and researched during an interview lasting approx. 45 minutes with business representatives (usually the director or owner of the company) realized with completed pre-prepared questionnaire.

5 RESEARCH RESULTS

Several factors have been identified in the area of potential threats for company, especially in Slovakia and Czech Republic. The research showed clearly that these are important factors of internal characteristics of the company.

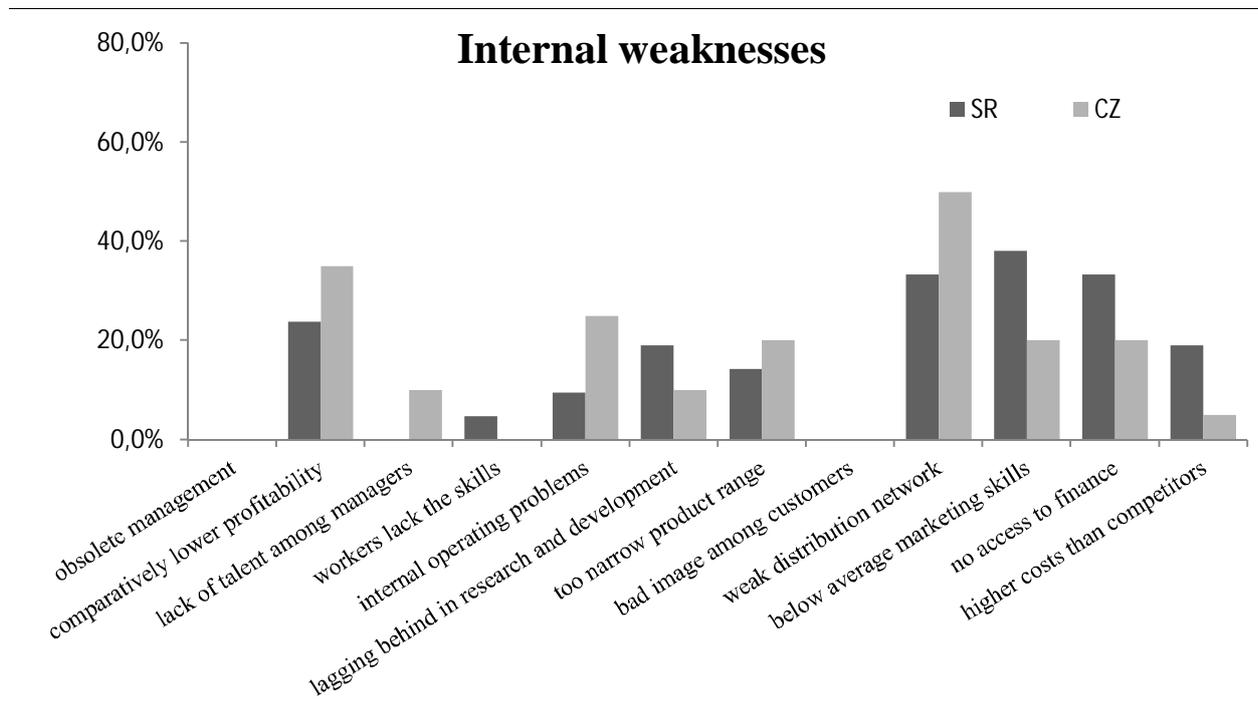


Graph 2 Potential threats of enterprises. Source: own research

The results of empirical research (Graph 2) have shown the existence of potential threats, weaknesses and potential opportunities in the study of knowledge units - SMEs.

In the area of "potential threats" have been identified and studied seven principal factors: the entry of foreign competitors with lower costs, increasing sales of substitute products, slow market growth, unfavorable trade policies, weak resistance to the recession, the growing threat of customers or suppliers and the changing needs and tastes customer. These factors represents for SMEs participating in this research real potential threat. The research results clearly showed that a clear threat to SMEs in Slovakia is a slow growth market; contrary to the Czech SMEs is the biggest threat the rising sales of substitute products. Conversely for Slovak SMEs is the slightest threat growing threat of customers and suppliers in the Czech SMEs unfair trade policies.

Comparable factors of "potential threats" to the SMEs in both countries are foreign competitors with lower costs, slow market growth and weak resistance to recession. Other observed factors show no comparable trend.

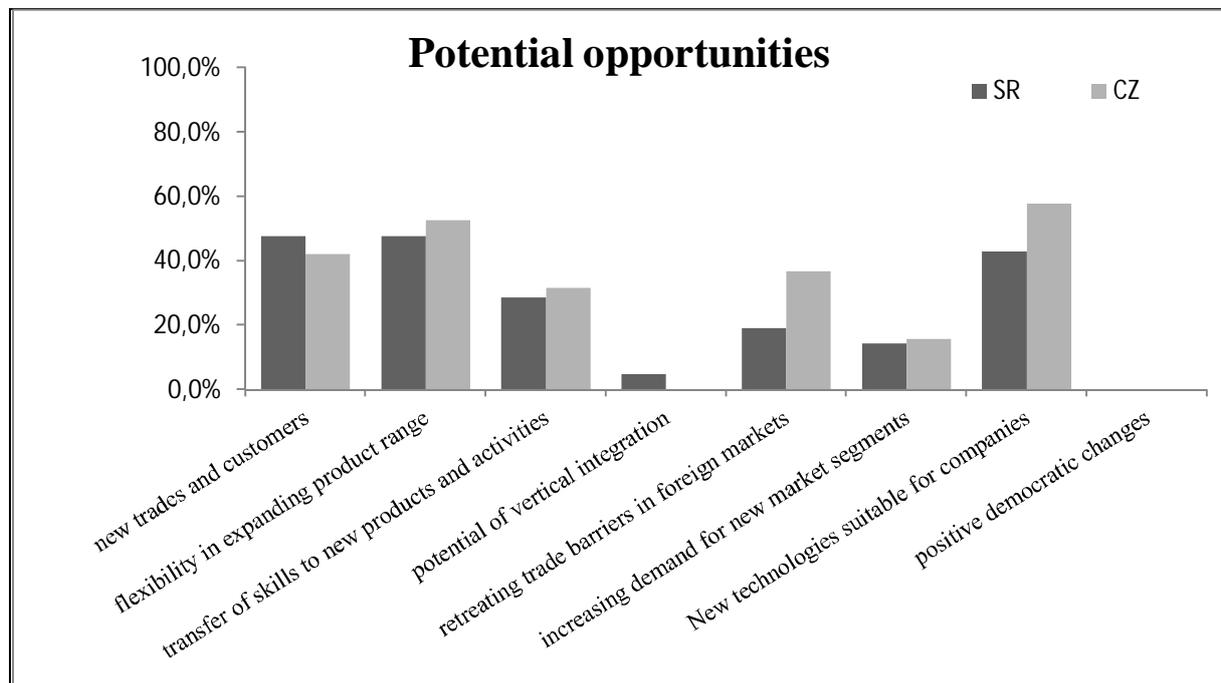


Graph 3 Internal weaknesses of enterprises. Source: own research

The area of "internal weaknesses" shown in Graph 3 is characterized by factors: obsolete management, comparatively low profitability, lack of talent among managers, workers lack skills, internal operational problems, delays in research and development, too narrow product range, bad image among customers, poor distribution network, marketing skills below average, no access to finance and a higher cost compared to the competition.

In this study the results reached the highest values in the case of Slovak SMEs to factor "Weak distribution network" in case of Czech SMEs "Below average marketing skills."

Comparable results were for Slovak Republic and Czech Republic achieved only in the case of factors "obsolete management" and "bad image among customers." On the contrary, apparently different results were obtained at other factors, where there were significant differences in favor of SMEs from both countries.



Graph 4 Potential opportunities of enterprises. Source: own research

Identified potential opportunities (Graph 4) are factors identified also in relation to knowledge-based activities. These activities were characterized by the following factors: new markets and customers, the flexibility in expanding product range, transfer skills to new products and activities, potential for vertical integration, receding trade barriers in foreign markets, increasing demand for new market segments, new technologies for the company and positive democratic changes.

In this area, a significant correlation was observed for the various factors in Slovakia and the Czech Republic, the most significant variance accounted for only factors potential for vertical integration and "retreating barriers to foreign markets."

Similarity of correlation factors can be interpreted as potentially linking these opportunities to the activities of knowledge management. It is generally a clear positive approach to innovative and knowledge-based activities, which is characterized by factors "transfer skills to new products and activities" and "new technologies for the company."

6 CONCLUSIONS

Individual threats identified within activities of the SMEs in Slovakia and Czech Republic should be subjected to more study and analyze. Their interaction at the SMEs causes negative effects as reduction in competitiveness, reducing revenue but also changes in consumer behavior. These threats cannot be clearly discarded, but it is possible to eliminate their interaction. The extent of interaction of the threats depends on access and activities of the company. Effective solution is in the use of knowledge

management activities. Knowledge-based systems and mainly knowledge management activities can support the fulfillment of targets - business opportunities. The solution seems to be the influence of selected factors affecting the activities and efficiency of company with the negative trend of application of knowledge and innovation to positive influence to these factors. It is necessary to break down and eliminate weaknesses and threats to the enterprise through changes in organizational performance, processes and people. Changes and their positive effects can be achieved if they respected and accepted the basic attributes of knowledge management cycle, which forms the basis for innovation, adaptability and the creation of added value. In this case, a knowledge management represents integrated system of basic factors consisting of leadership, teamwork society, education and using of new technologies.

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**APPLICATION OF DISCRIMINANT ANALYSIS IN DETERMINING ECONOMIC
EFFECTS OF TECHNICAL INNOVATIONS IN THE SMES**

Jakub Tabas

Mendel University in Brno,

Zemědělská 1, 61300 Brno, Czech Republic

jakub.tabas@mendelu.cz



Abstract

Economic effectiveness of innovations is accentuated on both, macro and micro economic level. Innovations are supposed to be “something” that creates value and makes companies competitive. Currently, aspects of economic effectiveness of innovations on a company level are the key questions also with regard to the fact that innovations are generally believed to be unmanageable and uncertain. In this context, no empirical approach to evaluate probable effect of innovation in financial performance of a company exists, like e.g. approaches to investment effectiveness evaluation. It could be also objectively supposed that these economic effects will be different case to case as business entities are differing. Any model of prediction of potential economic effect of innovation would be just probabilistic one. Objective of the paper is to determine possibilities of application of the Discriminant Analysis in order create a basis to model expected effects of technical innovations in the small and medium-sized enterprises because Discriminant Analysis is seen as one of possible tools to identify elementary factors delimiting innovation effectiveness in business entities characterized by their specific features.

Key words: *Discriminant Analysis, Financial Performance, Innovation, SMEs*

INTRODUCTION

During last decades, innovations are accentuated as even critical tool to reach and to maintain the place on a market for each business entity (Wright, 2012). Nevertheless, mainly small and medium sized enterprises have to enforce and to keep their viability in competition of multinational corporations.

In literature, it is possible to find a range of different definitions of innovation as well as a range of innovations' classifications while one of them presents division of innovations into technical and non-technical. Common element of all of them which is concurrently usually marked at the first place is that innovation would have to create a new value. In so far, companies invest great figures of their resources with expectation of future benefits (Patterson, 2009). Significant amounts which are spent for innovation on both, on micro-level as well as on macro-level, inevitably lead to questions about efficiency of these expenditures then (Synek, 2007).

The only tool, how to “survive” on highly competitive global market are innovations. According to Wright (2012): "to innovate means to regenerate". Number of companies fell into decline or recession phase rightly because they did not regenerate – did not innovate (Wright, 2012). Strengthening global competition puts the stress on continual improvements in every sphere of business entity's activities. This way, innovations are the almost only tool to maintain customers, subsequently to keep the place on

a market or the market share, and then to sustain the financial performance of a company, it means to maintain the going concern of a company.

Objective of the paper is to determine possibilities of application of the Discriminant Analysis in order create a basis of the model of expected effects of technical innovations in the small and medium-sized enterprises because Discriminant Analysis is seen as one of possible tools to identify elementary factors delimiting innovation effectiveness in business entities characterized by their specific features.

The research is focused on the small and medium sized-enterprises especially because these enterprises form, in European average, more than 99 per cent of active business entities. These enterprises are also considered as bearers of innovations however some types of innovations are quite financial demanding and the SMEs are quite often characterized with a lack of financial resources. Some types of innovations are also risky, and for the SMEs, when financial demandingness is combined with higher level of risk, the probability of market success of innovation and realization of innovation profit is very important.

INNOVATIONS IN ECONOMIC THEORY

Innovations are an important topic of economic theory already since the Schumpeter's times. Schumpeter's theory of innovations (1932) leads to the conclusion that innovations are necessary also at maintaining the going concern of the whole current society.

In his work, Schumpeter (1934) has starved for approaching the economy in dynamic way. This approach was based on the role of entrepreneur as of the creator and bearer of innovations. Here, entrepreneur-innovator is able to present something new that disrupts established stereotypes. When entrepreneur brings a successful innovation, he/she temporarily gains monopoly positions and profit. Subsequently, other entrepreneurs who imitate the innovation enter the branch. It means that the initial innovation wave is exhausted, innovation profit is melted and newly established branch becomes one of the leading branches in economy. Economy then returns to routine cycle but on higher grade. It means that benefits go not only to entrepreneurial level but the benefits go to the whole society. This implies that innovations have a range of possible forms. Innovation is not only presentation of new product on a market, but new production method, opening a new market, gathering a new resource of raw materials, realization of new organization as e.g. destruction of a monopoly, as well (Schumpeter, 1934).

Also nowadays it is possible to hear about necessity of innovations for future economic development. Governments are introducing new programmes of technological agencies and centres, while the financial resources are accentuated as one of the most significant barriers to innovations. The role of entrepreneur as of a bearer of innovations is suppressed (Skopeczek, 2013).

In his work, Schumpeter (1934) realized that innovations do not appear equally. On the opposite, innovations usually appear in clusters, i.e. radical innovation induces subsequent innovations. Innovation wave circulate through economy until its exhaustion. According to Schumpeter (1934) this is right the explanation of economic cycles which are caused by irregular development of innovations.

Nevertheless, currently the role of entrepreneur-innovator is pushed into background and governments are starving for award the economic recession off by a range of various tools. But it should be obvious that technological centres and unlimited financial resources are not enough because innovations are mainly about persons of entrepreneurs who are able to find a gap on market and who ready to take the risk (Skopeczek, 2013). Schumpeter has never been joining the innovations with amounts of money destined to research and development, but with entrepreneurs' desire for profits. It means that economic recession is a necessity for elimination of bad investments that release resources for new better

investments. But these investments always stand on debit of entrepreneur, and entrepreneur is the one who undergoes the risk. It means that question of innovation effectiveness on level of a business entity needs an answer.

EFFECTIVENESS OF INNOVATIONS

In literature, it is possible to find a range of different definitions of innovation as well as a range of innovations' classifications while one of them presents division of innovations into technical and non-technical. Common element of all of them which is concurrently usually marked at the first place is that innovation would have to create a new value. In so far, companies invest great figures of their resources with expectation of future benefits (Patterson, 2009). Significant amounts which are spent for innovation on both, on micro-level as well as on macro-level, inevitably lead to questions about efficiency of these expenditures then (Synek, 2007). Taking into account that innovation is possible to be seen as an investment on one side, but on the other side it is very specific "investment", then evaluation of innovation efficiency objectively requires much more than just an application of some of the established and well known methods of investment effectiveness evaluation.

A resource or a generator of innovations in a business entity is undoubtedly the human capital. Then, this is possibly the reason of the fact that the most of existing studies on innovation effectiveness (see Tabas, Beranová & Polák, 2012) are dedicated to management, e.g. in a sense of creation of such conditions which enforce and encourage innovation processes in companies. Another focus on innovation processes is presented by economic aspects. Here, the authors are divided basically into two groups while the first one argues that economic effects of innovations are not possible to determine for various reasons, and the second one is represented by author proposing some possibilities how to measure these effects but such approaches are just reproductions of methods of investment effectiveness evaluation.

Approaches to evaluation of innovation processes which are inscribed as managerial are characteristic with their outcomes. The outcomes of these approaches are mostly not in a form of quantified metric that would define an effect of realized innovation, but these approaches are mainly directed to creation of conditions in a company leading to successful innovation process. This way, these approaches are usually based on non-financial indicators enabling to cover up also the factors which support innovation processes, i.e. mainly the characteristics of organizational quality. On the other hand, if there is any numerical outcome, its measurement is built on subjective basis.

Practical possibility and relevance of quantification of innovation effects is given by a depth of the innovation. Possibilities of innovation effectiveness measurement are the point of interest for example of Valenta (2001) who has subsequently introduced the conclusion that better results of business activities, respectively in general point of view, a change in economic behaviour toward to environment is on only an outcome of production innovations but also the result of non-production innovations, i.e. managerial and service activities in a company. Then this change is also inevitably joined with changes in the general environment of a company, e.g. changes in prices. Moreover, various accounting operations in costs and revenues could lead to both, overestimation and undervaluation of this economic effect. That is the reason why Valenta (2001) has concluded his work like that real economic effects of innovation are factually not possible to measure.

In the opposite, there are authors (e.g. Dvořák, 2005; Pratali, 2003; Acs & Audretsch, 1992) suggesting various criteria for innovation effectiveness measurements while the very important factor is if the measurement, respectively the evaluation should proceed ex-ante or ex-post. The ex-ante evaluation is

relatively fair at innovations of revolutionary character but practically impossible at innovations of evolution character. At ex-ante evaluation, there is discrepancy and deficiency in predictions of future incomes or benefits from innovation especially because of the fact that before starting or at starting the innovation process it is not possible to estimate all the consequences of this process which often leads to existence of synergies. Some of these authors subsequently suggest employment of the same methods which are used for evaluation of investments effectiveness (e.g. Dvořák, 2009; Pratali, 2003). On one side, the truth is that evaluation of the innovations effectiveness has the common points with effectiveness of investments but at the same time, the measurement of innovations effectiveness has a number of specifics. The most significant is that the innovations have intangible character until a certain moment and some of the innovation would never have material substance. Then it stands on reason, and is prove by practice that innovations of different degrees would have different effect on their financial performance. For evaluation the effect of innovation ex-post e.g. Pratali (2003) suggests three groups of criteria which are technical, economical and others. Subsequently, the economic effects are divided into direct and indirect effect while the direct effects are derived especially from profit of from the contribution to fixed cost and profit covering. But these measures are confronted with the problems discussed by Valenta (2001), and are also connected with serious uncertainty especially at the beginning of the innovation process and which are applicable only at product innovations in fact. At the process innovations, the effort is to observe if the innovation has led to decrease in costs. Then, indirect effects of innovations are mostly related especially to competitors.

Currently, two directions dealing with the effect of innovation differing by their connection to the market exist. First, there are criteria evaluating the innovation effectiveness without explicit relation to the market while this approach employs the ratios such as e.g. return on sales, cash-flow to sales ratio, or productivity of work which have only limited evidence ability when regarding to the company's position on the market (e.g. Forsman & Rantenen, 2011). The second group of criteria evaluate innovation effectiveness with relation to the market, i.e. these criteria bear some expression of product's market success which employs the measures expressing the change, e.g. annual increase in sales, annual increase in profit, or a change of a product share on the market (e.g. Oksanen & Rilla, 2009). In frames of these approaches, various metrics are used in order to evaluate the effect of innovation. Nevertheless, these metrics could be the points of discussions; e.g. if the return on sales mentioned in the first point should be related only to the innovation how the incoming variables for this ratio are measured. The annual increase in profit, in the second point, uses the accounting variable which is relatively problematic and the annual increase in sales is directed only on one side, i.e. on revenues, and does not deal with potential change in costs.

BACKGROUND OF DISCRIMINANT ANALYSIS APPLICATION IN DETERMINING THE ECONOMIC EFFECTS OF INNOVATIONS

On the issue of economic efficiency of innovation must be viewed as on system, which is generally defined as a structured complex. Valach & Klir (1965) then the system defines as a group of elements, among which there are some links.

Discriminant analysis is one of the multivariate statistical methods that allow solving classification tasks, i.e. such tasks when there is a set of statistical units described at least by two statistical numeric characteristics. For each unit is also known to which group it belongs while it is also known the total number of units in the population of at least two existing groups. At fulfilling the assumption that separation of groups is successful, i.e. discrimination of groups, it is considered that each new unit would

be classified into one of the existing groups based on the observed values of the characteristics (Minarik, 1998).

The primary task of Discriminant Analysis has been defined in the 30th of the last century by R. A. Fisher as a tool of exploration of capabilities of the variables to help at distinguishing the different groups of units in a set. Thus, Discriminant Analysis is leading to classify units with unknown group membership (Hebak *et al.*, 2004).

Discriminant Analysis is therefore aimed at the role of optimal identification of the object to one of several categories which are described of some statistical information. This identification is performed by using a vector of values measured on the system of variables by which a statistical unit (object) is described. Using the learning data set discriminant function, which can be in the simplest way described by linear general form are identified then, i.e.

$$Y = b_1 X_1 + b_2 X_2 + \dots b_j X_j + \dots b_m X_m = b^T x$$

Where Y is the symbol for discriminant function;

$X_1 \dots X_m$ are single statistical characteristics by which statistical objects are described, i.e. these are the independent variables that are the most sound for classification of objects into groups;

b is vector of unknown parameters, coefficients of discrimination, and

x is vector of statistical characteristics (Hendl, 2004).

At classification, the values of discriminant functions for new objects are calculated then by putting the items of classified vector. Based on the calculated values, the classification of object into a category is proposed then (Minařík, 1998; Hendl, 2004). Discriminant criterion for classification of unknown objects into groups is a function of the original variables, estimated on a sample of units with a known belonging to a group (Hebák, 2004).

Discrimination of objects between the two groups is the theoretical basis for the classification of units into three or more groups while at the prerequisite of multi-dimensional normality and conformity of covariance matrices the general linear discriminant criterion used for the two groups can be relatively easily extended for the case H groups, where $H > 2$. Then, for the H^{th} group the discriminant criterion is described by the equation

$$x^T \sum^{-1} \mu_h - \frac{1}{2} \mu_h^T \sum^{-1} \mu_h + \ln \pi_h$$

(Hebák, 2004).

One possibility here is creation of h discriminant functions in the form,

$$\begin{aligned}
 Y_1 &= \left(x - \frac{1}{2} \bar{x}_1\right)^T S^{-1} \bar{x}_1 \\
 Y_2 &= \left(x - \frac{1}{2} \bar{x}_2\right)^T S^{-1} \bar{x}_2 \\
 &\vdots \\
 Y_h &= \left(x - \frac{1}{2} \bar{x}_h\right)^T S^{-1} \bar{x}_h
 \end{aligned}$$

(Hebák, 2004).

Any additionally considered subject will be classified into one of the H groups according to which of the considered discriminant functions Y_j would have a maximum value. Then, the elementary principle of classification is based on putting the characteristic independent variable of a new object into all constructed discriminant functions, and subsequent calculation of their values (Hendl, 2004).

Answering the question of economic effect of innovation by application of the Discriminant Analysis needs both, the Bayesian principle, i.e. elementary discrimination, as well as canonical, i.e. the Fisher's approach which is based on searching for such linear combination of variables

$$Y = b^T x$$

where b is characteristic vector of parameters that is the best appropriate for the task solved.

Economic effect of innovation in a business entity is given by a range of various factors which are more or less significant from the business branch to the management style. Within these independent variables, there are those which are logic from the very essence of the problem. For modelling of this problem it is possible to consider especially following factors as independent variables:

- Type of innovation;
- Business branch;
- Financial limitations of a business entity;
- Employees and management resistance to change;
- Training of employees;
- Internal know-how;
- Management style and bureaucratization of business entity;
- Corporate culture;
- Innovation infrastructure.

These factors were derived from author's previous researches as those affecting the final economic effect of innovation. Nevertheless, other factors are not out of the question because it is possible that within subsequent research other factors would be found as important. At the same time it is obvious that the economic effect of innovation, measured by change in financial performance, is the criterion for determination of groups of business entities.

Nevertheless, variables which will be used for the classification of business entities have to fulfil the prerequisites as follows:

- i. Randomness of the sampling, which is used to create the discriminant function,
- ii. Normal distribution of independent variables in all groups,

iii. Homogeneity of covariance matrices for all groups.

Compliance with the assumption **i.** is achievable in practice, if there is enough data available for selected representatives of all groups. In case of small statistical sample in a random selection, it is not guaranteed representation of representatives of all groups in the sample, corresponding to the actual ratio of the two groups in the population.

Filling the assumption **ii.** is then necessarily related to fulfilling the assumption **i.**, but only to a certain extent. Normality of the distribution of quantitative independent variables' values is sufficiently when the prerequisite of large random sample is reached. Among the independent variables that are considered for discrimination into groups as mentioned above, also the qualitative variables are included. It is obvious that these variables have a nature of characteristic of a given observation (so called dummy variables) which means that normal distribution of values cannot be met. Nevertheless, it was proved that although these variables even if they do not replicate the normal distribution, they may be included in the Discriminant Analysis and help to improve the final classification. Moreover, some authors (e.g. Eisenbeis, 1977) point out that a failure at complying with the requirement of normality for quantitative variables does not result in unusable tests of statistical significance.

The requirement contained in condition **iii.** is that the variables for all groups correspond to a comparable distribution, especially due to the design of tests of statistical significance, which are based on the pooled variance of variables in groups. Negative results of these tests, however, can be overcome, e.g. by elimination of extreme units. Nevertheless, inability to realize the test could lead to singularity of some covariance matrices. Then, this is possible to be evaded by e.g. discarding those variables that are strongly positively correlated with each other.

Selection of final set of independent variables primarily depends on the aim of analysis (McLachlan, 1992). If the main objective of the analysis is use of the discriminant function for prediction of objects belonging to the groups, then the main criterion for selection of variables' combination is the error rate of classification that is observed by testing the resultant function. Here, it would seem to be advisable to include as many possible indicators to a model, regardless to their structure. On the other hand, if the discriminant analysis is aimed at identifying significant differences among groups, the key here is the contribution of each variable to the classification, as measured by test statistics (Hendl, 2004).

Here, in application of the Discriminant Analysis on the problem of economic effect of innovations the both mentioned directions of this multi-dimensional method are followed. For identification of factors of the most significant effect on economic effectiveness of innovations, currently the data of 250 statistical objects are available while these data were obtained in two surveys realized in 2011 and 2012. The statistical objects are small and medium-sized enterprises, limited companies and joint-stock companies, doing their business in the Czech Republic.

At realization of the Discriminant Analysis, the general proposal of discriminant analysis algorithm (see e.g. Hebak & Hustopecky, 1987; Hendl, 2004; Meloun & Militky, 2002 etc.) will be applied. At present, the number of classification groups is not known yet. Nevertheless, based on the Exploration Data Analysis results which already exist, it is possible to suppose at least three classes of statistical objects – business entities. Of course the final number of classes will be rigorously determined after subsequent analyses. Then, the canonical discrimination will be applied in order to find a linear combination of independent variables, which would present the optimal separation of the **H** considered groups, in the sense that intergroup variability of these classes is minimized while intragroup variation of these classes will be maximized, i.e.

$$E \rightarrow \min; B \rightarrow \max.$$

This will be reach at maximal value of the ratio

$$F = \frac{b^T B b}{b^T E b}$$

(Hebak *et al.*, 2004).

Subsequent procedures of the analysis follow several steps. However, a description of the algorithm is beyond the scope of this article.

Another possible aim of the Discriminant Analysis is classification of objects of unknown origin to the possible groups. Theoretical basis of the direction discrimination was already mentioned above where it is shown that it is also necessary to consider the choice of a priori probability of belonging to groups of objects. There exist several approaches of the probability determination while in this situation, the Laplace the uncertainty principle appears to be acceptable; i.e.

$$\pi_1 = \pi_2 = \dots = \pi_h = \frac{1}{h}.$$

Nevertheless, in this case it is indifferent whether the a priory probabilities will be included into the classification criterion or not. Even if the Laplace approach would be acceptable, it would be better to determine probabilities base on the relative frequencies of groups in the statistical sample. A priori probabilities of belonging to groups will be different then, and their inclusion in the classification criteria reduces the overall probability of misclassification this way.

It is obvious that in this real application of discriminant analysis, it would be necessary to replace the vectors of mean values μ_h , covariance matrix Σ , and the a priory probabilities π_h with their unbiased estimates. For the classification of each other business entity, respectively the innovation realized by given business entity into some of the considered group, classification criteria in the tender form will be used then. Nevertheless, the probability of error in classification is not minimal here anymore.

When concluding and discussing the application of the Discriminant Analysis on the problem of economic effect of innovations on the financial performance of a business entity, it is obvious that the procedure is very demanding on the input data. As shortly mentioned above, the research has been realized in two stages while the statistical sample counts 250 SMEs now. The objective of my work is to construct the probabilistic prediction model of economic effect of innovation on the financial performance of a business entity. It means that my intention is to observe the innovation profit which is already mentioned in Schumpeter's works (1934 and others). What is already sure, it is that Discriminant Analysis is not a method to determine the exact effect. Nevertheless, it is the way to predict even a belonging of defined innovation into a group which has some possible result in the sense of effectiveness of such an innovation.

CONCLUSION

Innovations play crucial role in competitiveness. Innovations are inevitable part of modern economies and currently are gaining the importance. Innovations help the European countries to sustain their competitiveness in the global economy, provide new working places and subsequently lead to improvement in quality of life. From the viewpoint of business economics and financial management, objective of innovations is to increase the company value. From the viewpoint of economy, these changes lead to increase in wealth within national economy, and are supposed as one of important

resources of economic growth. From this angle, governments should be aimed at creating the circumstances that enforce the innovations. Prerequisite of sustainable development of each economy, Czech economy included, is permanent competitiveness which is influenced by a range of factors. One of basic indicators of country's success rate on international markets is price, respectively cost competitiveness. In this sense, it is necessary to point out the results of author's pre-research on economic effectiveness of innovations in SMEs which have conclusively shown the fact that in these business entities, innovations are focused mainly on reduction of costs, not on increase in sales.

Generally, performance of a business entity is framed as an ability of enterprise to reach certain results which are subsequently the object of comparison in time or in space. In relation to above mentioned widening, strengthening and global competition, performance of a business entity is often connected with its chance on survival on a market that inevitably joined just to innovations. In present, it is just about the innovations as about a critical process without that business entities are not able to maintain the place on a market. Then, business entities spend great amounts of their resources while it is expected that these investments would be gained back in the form of future profits. Objectively, in some branches, typically in the service and trade companies, imitation is much easier for competitor than in production companies, among others because of possible patents or other form of intellectual property protection. Then, in the environment of globalization increasing pressure on competitiveness it is evident that innovations are a key to maintain the place on a market based on on-going competitiveness. Here it is obvious that higher level of development of business entities implies also higher level of development of the whole society. Nevertheless, the final question is how this natural development, as it is presented in Schumpeter's work, is affected by governments' interventions, respectively how long this "artificial" development is sustainable.

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INCREASING VALUE PERCEPTION IN KNOWLEDGE-INTENSIVE SERVICE ACTIVITY BY SERVICE DESIGN

Jana Kukk, Anu Leppiman,

Chair of Marketing, Department of Business Administration,

Tallinn University of Technology

Abstract

Being originally designed as a tool to solve the existing problem of a service buyer, knowledge-intensive service activities (KISA) provided by KIBS are initially meant to be co-created by service stakeholders and therefore are a clear example of a service-dominant logic in practise.

KISA often occur in the conditions of information asymmetry between buyer and seller. Therefore it might be quite challenging for a seller to provide a service the perceived value of which would satisfy the customer, as well as for the buyer to understand fully the value of the service acquired.

This paper suggests a possible solution to the problem described above via the application of service design techniques. As the purpose of service design is to model the touch-points of buyer-seller interactions, the right approach gives an opportunity for the seller to manage the buyer's value perception of a business service.

Key words: *knowledge-intensive business service (KIBS), knowledge-intensive service activities (KISA), service design (SD), value creation*

INTRODUCTION

Attention towards research on knowledge-intensive business services (KIBS) has been increasing over recent years mainly because knowledge has become the main source of global competitiveness for firms and industries, and learning and innovation are considered to be the key processes in achieving this. (Aslesen & Isaksen 2007). Though there is no accepted standard approach to KIBS (Wood 2002), Toivonen (2006) has generalised the definition of KIBS, describing it as expert companies that provide services to other companies and organizations. In other terms the main aim of a KIBS is to provide knowledge that the service buyer is missing to solve an existing problem.

Even though the definition proposed by Toivonen (2006) may describe the essence of KIBS well, it is important to note, that a major shift in the vision of KIBS has been recently tracked by some researchers (Muller & Doloreux 2007): "Initially KIBS were seen as accompanying entities supporting their clients' innovation processes and adopting from time to time technologies developed elsewhere. Lately, they have been recognised as innovators and carriers of change on behalf of – and in cooperation with – their clients." The service activities that are provided by KIBS are often referred to as knowledge-intensive service activities (KISA) (OECD 2006). Some authors stress that KISA can be provided not only by KIBS, but also by a broader range of non-specialised providers (Aslesen & Isaksen 2007; OECD 2006). However, in the frame of the current research, authors focus on KISA provided by professional service providers, that is KIBS.

As scholars confirm the importance of KISA in forming organisations' competitiveness, the issue of the value of a business service arises. This article aims to propose a solution to the problem of the asymmetry of information between service seller and service buyer (Gummesson 1978, Thakor & Kumar 2000, Ojasalo 2001) that influences value creation directly. As a possible answer to the problem we see the implementation of tools of service design within KISA offering, yet it is unclear if their implementation would be possible and effective taking into account the specific features of KISA. Therefore, with this research we aim to identify *if and which tools of service design are applicable in KISA in order to maximise the value of the service.*

The study relates to the discussions on value co-creation. The approach of the study is theory-driven (Leppiman 2010, 4, 124). Theoretic approach aims to fulfill two tasks: theory as a supporting tool of empirical research or theory as outcome (Eskola & Suoranta 1998, 82). Our research focuses on the second objective, that of theoretic approach. We aim to understand, analyse and develop the existing body of knowledge related to the research question.

VALUE OF KISA

The concept of service value

Value as such is quite an abstract concept with meanings that vary according to context (Sweeney, 1994). Early definitions of perceived value state that it "is the consumer's overall assessment of the utility of a product based on a perception of what is received and what is given" (Zeithaml 1988) and that customer-perceived value is the ratio between perceived benefits and perceived sacrifice (Monroe 1991). These definitions apply to perceived-value in general (both products and services).

Even though terms of "service quality" and "perceived value" are quite often paired, within this paper we focus principally on the second term. The reason being that customer-perceived value increases the perception of service quality (Bolton & Drew 1991) and leads to satisfaction, which in turn leads to positive behavioural intentions (Eggert & Ulaga 2002). Therefore, we find perceived value to be the key element in this chain of consumer response.

The intangible nature of a service makes it particularly difficult to define what is its actually worth. Therefore, to develop further discussion on the elements that facilitate maximisation of perceived value, it is essential to define the term, limiting the broad concept within the frames of services and KISA in particular.

Eggert and Ulaga (2002) state that among different definitions of perceived service value, a list of three common elements can be outlined:

- 1) Multiple components of perceived value; since value is often described as a trade-off between benefits and sacrifices, the key elements that play a role in forming service value perception are both physical and intangible attributes of the service, and monetary or other sort of sacrifice.
- 2) Subjectivity of value perceptions; different clients may rate the value of the service differently according to their personal background. In addition to that, when business services are considered, then different members of the service buying organisation may perceive the value differently.
- 3) The importance of the competition; perceived value may be shaped in relation to the services that other providers are offering.

Services typically aim to change the state of people, artefacts, or of information and knowledge, rather than produce artefacts themselves (Miles 2005). Based on this, one may judge value of a service primarily based on their *effects* on the buyer rather than how they are produced (Wood 2005). Therefore, the creation of a service value can be defined as “*turning potential resources into meaningful benefits*” (Lusch et al. 2008). This definition of service value is quite universal and can be applied to KIBS as well, but taking into account the specific features of business services, this idea may be developed further.

The value of a service can be determined either by the seller, or by the service buyer. Vargo and Lusch (2008, quoted by Vargo 2008, Heinola 2012, 8) describe the evolution of shaping the value at hand with the emergence of the service-dominant (S-D) logic. The first step of this evolution is *value-in-exchange*, which is determined solely by the service seller. The subsequent step is *value-in-use*, which is determined by the service buyer based on how the service output (tangible or intangible) is used. The final form of value creation in the evolution chain is *value-in-context* (Vargo, 2008) according to which, value is always uniquely determined by the beneficiary. Value-in-context is similar to value-in-use as both of these values are determined by the service buyer. However, if the term “use” refers to a concrete output of a service, then “context” implies to a specific situation.

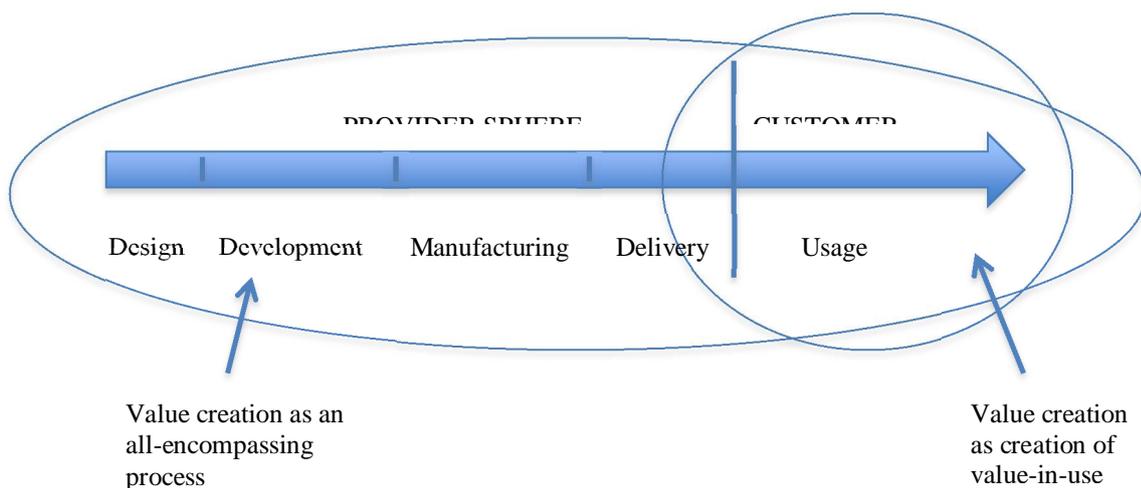


Figure 1. Value Creation as the Customer’s Creation of Value-in-use or as an All-encompassing Process (Grönroos 2011, 283)

Value-in-context also resonates with (albeit not identical) with Grönroos’ (2011) definition of value creation as an all-encompassing process (see Figure 1). According to Grönroos value is no longer shaped only during the last stage of service delivery and consumption (value-in-use), but during the entire process of the service creation. The main difference between value-in-context and the Grönroos’ (2011) all-encompassing approach is the fact that value-in-context includes not only the provider and the customer spheres of the service, but also involves broader networks of other service providers (both of seller and buyer) into the service value creation process (Vargo 2008).

To transfer the generalising definitions of service value and the main S-D logic principles to the KIBS context, it is important to keep in mind that the complexity of the offering and intensity of customisation and interaction with the customer, are typical in KIBS (e.g., Cova and Salle 2008; Sawhney 2006, 368-369, Aarikka-Stenroos & Jaakkola 2010). This makes KIBS a good example of an S-D logic, where value is created by cooperation of service actors and throughout the whole service lifecycle. Several scholars (Aarikka-Stenroos & Jaakkola 2010, 2012; Heinola 2012, 66; and others) find that in complex services, the maximum value can be created in joint effort and dialogue between provider and customer.

Service value is often viewed paired with service quality. Within this paper it is essential to separate these two terms. Even though customers' perception value is positively related to their evaluations on service quality, they are not identical constructs (Bolton & Drew 1991). According to Bolton and Drew (1991), "perceived service value is a 'richer,' more comprehensive measure of customers' overall evaluation of a service than service quality".

Patterson and Spreng (2005) also bring out the multi-dimensionalism of service value perception. They list five critical factors, in addition to outcome, that influence both customer satisfaction and perceived value of a business service: methodology of service, service process reliability, relationships between seller and buyer, global contact and knowledge network, and precise problem identification.

Some researchers find that "*value is now centered in the experiences of consumers*", and not in services and products as such (Prahalad & Ramaswamy 2004). Experience in this context is a holistic experiential feeling that may lead to *changes* in the opinions and attitudes of a customer (Leppiman & Same 2011). Therefore, one can assume that if a business service is designed as a *meaningful experience* (*Ibid.*) it could increase the value of a particular service as perceived by the customer.

Verhoef et al. (2009) also suggest that customers evaluate experiences holistically. For this reason, service providers (including KIBS) need take into account the broad picture while aiming to improve the buyer's perception of the business service.

Several researchers state that customer satisfaction based on service quality depends on how the service performance meets prior expectations (Cardozo 1965; Oliver 1980; Olshavsky and Miller 1972; Olson and Dover 1976, Bolton & Drew 1991). Yet the impact of expectations is not as obvious as one would anticipate; researchers describe that the customers who received a service that was below their expectations may still be satisfied. Particularly the research showed that shortcomings in service performance may be offset by perceived reductions in sacrifices (ex. "They went the extra mile to satisfy us", implying this extra effort was not paid for; "They did a professional, thorough job for a modest fee") (Patterson & Spreng. 2005).

The ideas described above imply that in order to create a meaningful experience and thereby maximise perceived value of a business service, customers' expectations of both the service process and the outcomes should be considered.

Specifics of value creation in KISA

Based on the definitions of service value creation by Lusch et al. (2008) and Grönroos (2011), and taking into account the specific features of KIBS and the services provided by them, we define KISA value creation as *creating positive effect for service beneficiary by employing recourses of both service provider and buyer, as well as of surrounding networks*.

Research by Aarikka-Stenroos & Jaakkola (2012) confirms that the value of a service provided by KIBS is created in the process of co-creation (Figure 2), and both service provider and service buyer have different roles in this process.

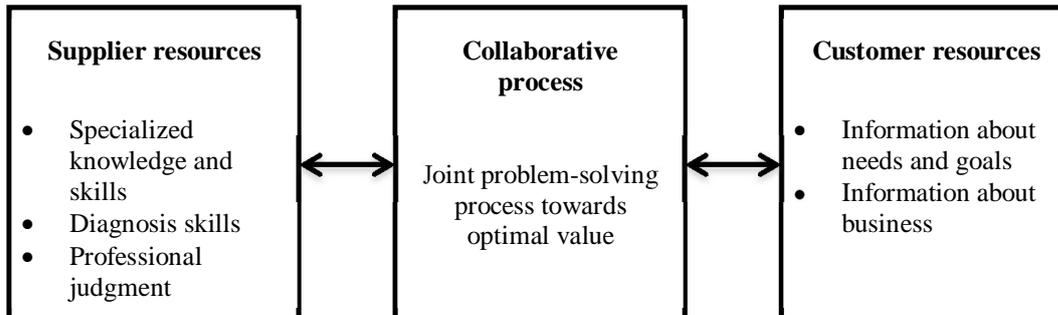


Figure 2. Value co-creation in KISA. Adapted from Aarikka-Stenroos & Jaakkola (2012)

The main challenging issue in value co-creation within business services, is the asymmetry of information possessed by service seller and service buyer (Gummesson 1978, Thakor & Kumar 2000, Ojasalo 2001). As discussed above, *informational input of both sides* and *the exchange of information* are critical components of a business service. In addition to that; complexity, specialist knowledge requirements, high level of uncertainty regarding exact content of the service and the expected outcome, and unrealistic expectations by the customer, are quite common within KIBS industry (Aarikka-Stenroos & Jaakkola 2010).

The issue of asymmetry of information in business services causes complexity of rational value evaluation for KISA buyer. In the conditions of possessing less specific knowledge, the buyer may not be competent enough to objectively estimate the impact of the service. Yet it is essential for KIBS to ensure that the customers perceive the value of the provided service as being high, as it directly effects their repeat purchase behaviour (Patterson & Spreng 2005).

A recent study (Aarikka-Stenroos & Jaakkola 2012) also confirms the suggestion proposed earlier (Aarikka-Stenroos & Jaakkola 2010, Gummesson 1978, Thakor & Kumar 2000, Ojasalo 2001) that achieving maximal outcome in a collaborative value creation is often obstructed by information asymmetry that occurs between supplier and customer.

USING THE TOOLS OF SERVICE DESIGN TO INCREASE VALUE-IN-USE IN KISA

The process of KISA can be generally divided in four main stages (Aarikka-Stenroos & Jaakkola 2012): problem identification, solution, implementation and value-in-use. Both KIBS and the service buyer are involved in the first three stages, the fourth generally involving the exploitation of the results of KISA by the service buyer. In order to maximise the value-in-use of KISA, it is essential to minimise the information asymmetry in the first three stages of the service.

The co-creative nature of KISA makes it a custom-made (or customised) service, which again creates obstacles in applying a standardised model in order to minimise information asymmetry between seller and buyer. We suggest to take into account the specific features of services provided by KIBS, especially

their co-creative nature and the fact that, due to the high level of customisation, each KISA becomes a unique offering, the value-in-use can be escalated via integrating tools of service design into the KISA delivery process.

The Concept and Tools of Service Design

There is no universal definition of service design (SD). It is a broad concept that can be considered more as an approach to creating services than a field of study (Mager & Sung 2001, Goldstein et al. 2002, Moritz 2005, Miettinen 2009, Tafel-Viia et al. 2012, Kuosa & Koskinen 2012) Scholars list different definitions based on different purposes that the SD approach serves.

In the context of this paper, the understanding of service design is based on the body of knowledge summarised below.

The aim of service design is to produce for clients while involving the clients (co-creation) (Leppiman 2013). Service design is creating opportunities for change in customer service through the creation of facilities for personalisation (customer perspective) and customised service (service provider perspective) (Leppiman 2010, 215). For businesses, service design creates added value by differentiating themselves from competitors and also by utilising better their resources involved in service production. For customers this draws an improvement in the quality of service experience (Moritz 2005, 57).

A client's service experience is formed by different touch-points (Mager 2004, Leppiman 2010). Service Design aims to ensure that the service interfaces are useful, usable and desirable from the client's point of view (Mager 2009, Stickdorn 2011). Service design means developing services in an innovative way, so that the service meets the needs both of the service provider and service buyer (Leppiman 2010, 213).

Another pertinent definition (Mager 2004, Saco & Goncalves 2010; Moritz 2005; Leppiman 2010) states that SD:

- "Aims to create services that are useful, useable, desirable, efficient, and effective."
- "Is a human-centered approach that focuses on customer experience and the quality of service encounter as the key value for success."
- "Is a holistic approach that considers in an integrated way strategic, system, process and touch point decisions."

In addition to the definitions listed above, it is essential to add that SD is quite a young field of study and contrary to the traditional concept of design, is creating something intangible (Saco & Goncalves 2010).

Some scholars also distinguish between service design and service experience design. For example Pullman and Gross (2004) define service experience design as "an approach to promote highly positive emotions for customers by designing virtual or tangible services". This concept is more emotion-centric and leaves out the aspect of service quality, efficiency and usability. Therefore, we find that the more holistic approach discussed earlier would be more appropriate in the context of business services.

SD is generally considered as an interdisciplinary approach that aims to create a flawlessly dynamic and efficient process of consuming a service and combines a variety of tools. An overview of SD tools is given in Table 1. The tools are grouped according to the stages of service design process that they can be implemented in. It is also imperative to note that several tools can be used at different stages of a service design project (for example service staging is applicable in all three stages, blueprinting can be used both in generating and implementing a new service, etc.)

Table 1. A variety service design tools

SD Activity	Tools (sample)
Understanding needs	<ul style="list-style-type: none"> - Benchmarking - Stakeholder maps - Service safari - Critical incident technique - Customer journey maps - Ethnographical studies (various techniques: contextual interviews, mobile ethnography, a day in the life etc.) - Shadowing - Trend scouting - Expectation maps - Cultural probes - Persona approach
Generating a new service and reflecting on it	<ul style="list-style-type: none"> - Affinity diagram - Fishbone diagram - Design scenarios - Service prototype - Service staging - Touchpoints analysis - Storyboards - Desktop walkthrough - Agile development - Body-storming - Randomizer - Unfocus group - Experience prototyping - Metaphors - Heuristic evaluation
Implementing in practice	<ul style="list-style-type: none"> - Storytelling - Customer lifecycle maps - Blueprint - Business model canvas - Service staging - Role script

Source: adaption of Stickdorn & Schneider (2011) and Saco & Goncalves (2010)

Not all of the tools in Table 1 are adequate to be implemented in KISA. The specific attributes of a business-service, such as high level of customisation and requirements of confidentiality, can limit the use of several service design instruments. Therefore, it is essential to create a miscellany of tools that would answer the needs and specifics of knowledge-intensive B2B services.

INTEGRATING SD TOOLS IN KISA PROCESS

Service design activities can be categorized in three major groups (see Table 1); understanding needs, generating a new service and reflecting on it, and implementing it in practice. This categories run in parallel with the three main stages of KISA delivery process, which lead to value-in-use; problem identification, solution, and implementation (Aarikka-Stenroos & Jaakkola 2012). This leads to a suggestion that tools of service design could be successfully integrated into KISA delivery process in order to facilitate the co-creation process and minimise information asymmetry. Yet, we also suggest that not all of the SD tools should be integrated into the process of KISA delivery, as most of them are meant to be applied during the service planning process, *before* the actual application of the designed service. In case of KISA they are needed to be applied in order to personalise and optimise an *existing service*, that sets certain criteria for the selected tools.

Service design is a holistic way for a business to gain a comprehensive, empathic understanding of customer needs and consumer behaviour (Mager 2009; Frontier Service Design 2010; Park 2010). A user-centric approach offers a common language we can all speak; the service users language. Services should be experienced and created through the customers’ eyes, and interaction between a service provider and customer (Moritz 2005, 43; Leppiman 2010, 215 – 216; Stickdorn 2011, 36-37).

Table 2 summarises the main objectives of the service stakeholders in KISA and suggests examples of SD tools that may be integrated into the service delivery process at every stage.

Table 2. SD tools and their applicability in the KISA delivery process

Stage of KISA	Objectives of the service provider*	Objectives of the service buyer*	Applicable SD tools
Problem identification	Identifying the true need of the service buyer Making an agreement with service buyer on the expected goals of KISA	Communicating the details on desired outcome to service provider	Tools that allow to gain maximum information about client (background, business, problem), ex.: <ul style="list-style-type: none"> • shadowing • ethnographical studies (various techniques: contextual interviews, mobile ethnography, a day in the life etc.) • cultural probes
Solution	Creating the expedient offering	Receiving an offering proposition that is in sound with the expectations	Tools that allow to personalize existing service in order to propose a unique solution that meets the needs, ex.:

	Clarifying the reasoning of the proposed offering to the service buyer	In case of dissatisfaction with the proposed offering to make the suggestions about changes in it	<ul style="list-style-type: none"> • affinity diagram • fishbone diagram • agile development
Implementation	<p>Implementing the solution</p> <p>Achieving the aimed outcome in the end of the implementation stage</p>	<p>Supporting the service provider in implementation of the solution</p> <p>Being aware of what is happening within the service</p> <p>Achieving the aimed outcome in the end of the implementation stage</p>	<p>Tools that allow to implement the solution in a way that would allow the service provider to deliver the service as expected and would allow the service buyer to be aware of the progress, ex.:</p> <ul style="list-style-type: none"> • Service blueprint • Agile development

* Objectives of service provider and service buyer are based on research by Aarikka-Stenroos & Jaakkola (2012)

As seen in Table 2, in order to minimise the information asymmetry and to engage both service stakeholders into the process of co-creation, several SD tools may be applied. In addition to the application of these tools, Table 2 also helps to systematise communication between service stakeholders and create solid structure to the service delivery process.

It is also clear that implementing SD design tools would correspondingly be quite demanding towards all the stakeholders' input to KISA. Since the service provider is generally expected to contribute plenty to service design, (Aarikka-Stenroos & Jaakkola 2012), this demanding approach does not really effect the seller. However, for the service buyer such effort might be unexpected or even challenging. This means that the integration of the tools listed in Table 2 without the client's enthusiasm to contribute to the service being proposed will not deliver the desired outcome.

IMPLEMENTATION AND FUTURE RESEARCH

Theoretical concepts regarding value creation and the integration of SD tools into KISA described in this article offer a set of recommendations to managers of KIBS, who are interested in maximising the value of their service offerings. General theoretical approach of the article ensures that the findings are applicable to a wide variety of knowledge-intensive B2B services.

The study also raises new questions for further research. First of all, as this study is theoretical, it is necessary to conduct an empirical research in order to confirm the results and recommendations presented in the study are relevant. Another potential research direction would be that of analysing whether service buyers are actually ready to participate in value co-creation processes to the extent that the proposed SD tools would demand.

CONCLUSION

This theoretical research questions if and which tools of service design are applicable in KISA in order to maximise the value of the service rendered.

In-depth analysis of topics of value creation by KIBS and the objectives of service design, has provided sufficient input to suggest that tools of service are suitable to be integrated into the process of KISA delivery. Analysis also confirms that integration of service design tools would facilitate the increase of value created within KISA.

Results of our research indicate that tools of service design are applicable in the process of KISA. They need to be selected according to the phase of KISA and the desired goals of the service provider and service buyer involved in the process. Research provides examples of service design tools that may be applied in the three stages of KISA: problem identification, solution and implementation.

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UNAMBIGUITY OF THE DEGRESSIVELY PROPORTIONAL DISTRIBUTION

Janusz Łyko

Wrocław University of Economics, Komandorska 118/120, 53-325 Wrocław, Poland

Abstract

The principle of degressively proportional distribution of seats in the European Parliament laid down in the Lisbon Treaty does not indicate a clear-cut solution. Furthermore, addition of boundary conditions, which determines the minimum and maximum number of seats in conjunction with the overall number of seats does not solve the problem either. It can be shown that, depending on the demographic structure, i.e. the population of the Member States, the number of feasible solutions ranges from about twenty to over a hundred million. Unequivocal distribution can therefore be obtained only by introduction of at least one additional condition. The paper will present the proposals of such additional demands which would allow finding an unambiguous solution.

Key words: *degressive proportionality, elections, European Parliament, fair division*

1. INTRODUCTION

The Lisbon Treaty defined degressive proportionality as a rule governing distribution of seats in the European Parliament among the representatives of member states. This rule, however, has not been clarified in the Treaty. What is meant by degressive proportionality is basically a consequence of the content presented in another document, namely the resolution of the European Parliament (Lamassoure & Severin 2007). The additional distribution rules specified in the resolution allow interpreting degressive proportionality in the meaning that a country larger in terms of population cannot be represented by a smaller number of members of parliament than the less populated one, and that the number of voters represented by one member of parliament increases along with the increase of the country's population. It is this second condition that constitutes the departure from the classical, culturally shaped principle of proportional distribution of goods that was created by Aristotle.

Accepting the principle of proportionality, as a rule of allocation of indivisible goods, such as electoral mandates, the problem of the ambiguity of the rules comes only to the integer representation of the proper proportion. In this regard, there are several solutions adopted by existing electoral laws. Lack of a clear concept is a result drawbacks of each of the proposed solutions (Young 2003). However, at the level of each of the accepted principles of electoral law, which is a set of laws governing the emergence of the representation of the electorate, already shows a clear solution. So there is no room for political negotiations at the stage of selecting the composition of the parliament.

This lack of clarity, however, affects the rules governing the allocation of seats in the European Parliament. The result is that, since the Lisbon Treaty entered into force in 2013, the composition of Parliament has been determined in the result of political negotiations and was never in line with the principle of degressive proportionality. This situation undoubtedly demonstrates the need to clarify the current rules.

2. BOUNDARY CONDITIONS

Then cited Article 9a of the Lisbon Treaty in addition to the establishment of the principle of degressive proportionality in regard to distribution of seats in the European Parliament also sets some boundary conditions which the said division must satisfy. The provisions of the Article determine the total number of deputies as well as the maximum and minimum representation of States, members of the community. These are respectively 751, 96 and 6. Number of Members has been determined accurately, and the most and the least numerous representation, though, only in the form of inequality. It is therefore yet another example, where there is a large possibility of interpretation. Looking through documents relevant to the Treaty there can be found a statement that the numbers 96 and 6 should be achieved, i.e. it can be practically stated that what in the document was described as an inequality, in practice should take the form of equality.

Therefore, one can limit the discussion to those degressively proportional divisions for which the number of shared seats is 751, the most populated country – Germany, receive 96 seats, and the least populated Malta – 6. You will notice that the boundary conditions themselves already set some restrictions on the possible allocations. They define in particular, the largest r_{max} and smallest r_{min} number of voters, which may be represented by one deputy. This marks the boundaries of violating the principle of proportionality. To put it geometrically, it indicates to what extent can sections connecting the appropriate values of the number of voters and seats for the most and the least populous country deviate from the parallel lines.

It turns out that the adoption of such presuppositions still leaves a lot of possible solutions. Their number depends on the structure of the population of Member States. And so it can be shown that for the population data of 2006 there are 189,947,339 of them (Łyko, Rot & Rudek, 2012). Thus, the issue remains how of so many acceptable solutions it is possible to unequivocally choose the composition of the European Parliament.

3. INTERNAL CONDITIONS

The term of boundary conditions itself is not enough to design specific algorithms for selecting the composition of the European Parliament. For obvious reasons, the demographic structure of the European Union countries should also play a role in construction of the division. Determining the boundary conditions only creates a framework for further solutions, which must take into account the size of the population of each country. Assuming that $p_1 \leq p_2 \leq \dots \leq p_{27}$ is a sequence of population twenty-seven Member States of the European Union (in the considerations Croatia will not be accounted for, as Croatia was not a member of the community at the time the provisions of the Treaty of Lisbon were determined) and $r_1 \leq r_2 \leq \dots \leq r_{27}$ a sequence specifying the number of voters per one deputy, each such sequence $r_1 \leq r_2 \leq \dots \leq r_{27}$, for which $r_1 = r_{min}$ and $r_{27} = r_{max}$ can generate degressively proportional distribution of seats meeting the initial conditions, as long as one makes sure that the sum equals 751. Hence, one must also determine the principle of degressive proportionality governing the internal distribution among the countries of the community.

Limiting only to determining boundary conditions does not solve the problem. The same divisions can be obtained with a completely different structure of population, and vice versa, the same structure can lead to different degressively proportional divisions meeting identical initial conditions. It is therefore necessary to determine new additional criteria, otherwise the procedure of selecting the composition of the European Parliament will always be vulnerable to influence of subjective interests of individual countries.

The criteria should be formulated in such a way that on their basis the composition of the Parliament could be determined unambiguously. Thanks to that the currently held political discussions for selecting the Parliament's composition could be transposed to agree on the principle underlying the criteria of internal distribution. On the one hand, this approach allows to avoid the selection of the composition by negotiations, on the other hand, brings us closer to establishing clear electoral rules in each Member State.

Now it remains to answer the question what principle of the division should be chosen under the existing circumstances. Drawing on the philosophical concept, namely citing the views of Aristotle contained in *Nicomachean Ethics* (Arystoteles, 2002), it should be made sure that within the already established disproportionality, if possible, some proportionality was maintained. The provisions mentioned in the abovementioned resolution of the European Parliament (Lamassoure & Severin 2007) should also be interpreted similarly. However, this does not solve the problem. It is not clear how such proportionality should be understood.

4. INTERNAL RULES OF ALLOCATION

There are least three ways of interpretation imposed. The first and simplest of these is to ensure that the resulting division, under conditions forced by the Treaty, was as close to a proportional distribution obtained by calculating the classical proportions. Then, it is just to specify the function $A_1(t) = \frac{H}{V}t$

where $H = \sum_{i=1}^n s_i$ and $V = \sum_{i=1}^n p_i$,

next, the theoretical allocation $A(p_1), A(p_2), \dots, A(p_n)$, then request to a specific division, in a fixed metric, was the closest to this theoretical allocation. It is worth noting that in this case, looking for integer solutions that are best in terms of the adopted metrics, approaches the theoretical and actual proportions.

Choice metric here is actually a secondary issue. You can, for example, offer distance,

$$d_1(a, b) = |a_1 - b_1| + |a_2 - b_2| + \dots + |a_n - b_n| \quad \text{and} \quad d_2(a, b) = \sqrt{(a_1 - b_1)^2 + (a_2 - b_2)^2 + \dots + (a_n - b_n)^2}$$

that approach considerations to classical, proportional divisor methods or

$$d_\infty(a, b) = \max\{|a_1 - b_1|, |a_2 - b_2|, \dots, |a_n - b_n|\}, \quad (a, b \in R^n);$$

which refers to the well-known history of American democracy, the method of Hamilton.

Second way, which may be taken into account is one in which it is assumed that the deviations from the proportional distribution over the interval $[p_1, p_{27}]$ are to be uniform. More specifically, the distance is minimized, for example in terms of the aforementioned metrics, from the theoretical distribution obtained on basis of the actual allocation function

$$A_2(t) = s_1 + \frac{s_n - s_1}{p_n - p_1}(t - p_1)$$

(Słomczyński & Życzkowski, 2011). Divisions obtained in this way include to a greater extent the boundary conditions. It can be seen that the theoretical distribution of $A_1(p_1), A_1(p_2), \dots, A_1(p_n)$, obtained by means of the first function is the same for fixed structure of the population regardless of the assumed

r_{min} and r_{max} , and therefore the advantage of minimizing the deviation of distribution $A_2(p_1), A_2(p_2), \dots, A_2(p_n)$ is entering into the boundary conditions the principle of internal proportion. It can be concluded that the distribution obtained in such a way that better reflects the structure of the population, taking into consideration the fact that the proportions were already altered by determining the maximum and minimum number of seats. This distribution somewhat compensates deviations from proportionality imposed by boundary conditions.

For metrics d_2 , an empirical verification was carried out taking into account the of population data of 2006 (Łyko, Rot & Rudek, 2012). Unfortunately, it is not possible to compare the results with the actual composition of the European Parliament as since the time the Treaty has been in force, it did not meet the boundary conditions. The proposed solution can therefore only be applied to other theoretical concepts of seats' divisions presented in the literature (Pukelsheim 2007; Ramirez González, Polomares & Marquez 2006; Ramirez González, Martinez Aroza & Márquez Garcia 2012; Serafini 2012).

The third possible interpretation refers to the concept of justice of allocation in terms of welfare economics. Known in this respect the Lorenz curve and the Gini coefficient can be used as a measure of deviation from the proportional allocation. Empirical Lorenz curve can be constructed in such a way that on the horizontal axis one applies the cumulative, normalized to unity the number of people living in specific countries ranging from the largest, and on the vertical axis one applies the cumulative and also normalized to unity the number corresponding to the number of seats in parliament. The Gini coefficient, calculated on this basis corresponds to the uneven distribution of seats with regard to population. It can therefore require minimization of this coefficient which means seeking among all possible divisions meeting such boundary conditions, for which it takes the smallest value. This solution accepts the concept of justice of distribution known in economics. It is a solution that within the imposed boundary conditions minimizes the loss in the number of seats for the more populous countries, to the benefit of the less populous ones.

5. CONCLUSIONS

Rules of allocation of seats in the European Parliament are not completely clarified. Even with the additional assumption that the boundary conditions establish the total, maximum, and minimum number of Members of Parliament shall be treated in terms of equality, without any additional rules governing the allocation to other countries one cannot establish with certainty a particular division. Referring to the Aristotle's principle of proportional distribution one should strive to maintain within the non-existent proportion the best possible Parliamentary representation of the population structure of the Member States. The solutions presented in different ways relate to this concept. Although the resulting solutions can be different, it is difficult to deny each of them references to the rule of proportionate distribution of goods. Therefore, relevant legislative regulations should be expected to allow the use of the rule in a particular form, in practice of selecting the composition of the European Parliament.

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THE EXAMINATION FINANCIAL MANAGEMENT'S TASKS

Kalman Komaromi

Szent Istvan University, Institute of Finance and Accounting

Abstract

The author examines the results of a questionnaire survey that focused on the task of financial management and was conducted from 2011 and 2012 among middle-sized and big companies. The examination relates to the identification of financial management's representative tasks, the role of planning, information and reporting systems.

Key words: *financial management, reporting system, management control systems*

1. INTRODUCTION

In the last decades the tasks and responsibilities of financial management have increased in an accelerating measure. So have the set of information required increased also. These have led to the necessity of using, developing, improving different informational systems.

The foresight of companies was considerably deteriorated by the financial troubles and rapid changes of macroeconomic and financial positions in Hungary emerged from the 2008 financial crisis. The crisis of the financial sector widened rapidly to a general crisis that has led winding-up many companies through market disorders, order-book delays and slump of consumption. Circumstances like the market changes high interest rates the hectic fluctuation of exchange rates pinch of financier possibilities stricter loan conditions costs increase, uncertain supplier-buyer relations motivated the management to reduce cost to improve more stable financial positions through the development and preservation of solvency conservative financier strategies and optimal financial structure. (Bod et al. 2009)

Financial management doesn't have long traditions. The tasks and tools of companies' financial management have gone through many changes until reaching its scheme of our times. The main reasons of this improvement were the economic, company and financial sciences' development. Financial tasks became more complex.

At the beginning of the 20th century financial management's task was to secure the adequate amount of capital and liquidity. This task became more stressful at the end of the 1920s. From the 1950s the expansion of financial field's tasks can be observed. (e.g. capital budgeting, financial sources allocation, risk and return relationship). Nowadays the supervision and control of financial transactions, securing of money circulation and cash-flow, being in rapport with banks, securing the financial sources of company's functioning, invoicing and verification, clearing the accounts, financial planning, analysis, evaluation of investments became a part of financial management's range of duties beside the procurement of capital and securing the liquidity. (Sóvágó, 2006)

Not only have the duties of the financial management increased but the responsibilities also. Nowadays financial management acts as a strategic partner of the top management besides it fulfills the roles the financial stability and safety's guard and the provider of information. It has to take part in strategic planning in making the investment decision, secure the regularity of the administration, transparency of the company, legality.

To fulfill this expanded range of duties financial management has to gather internal and external information and register, interpret, react to changes. This puts stress on problem solution and on the necessity of providing adequate information. It raises the value of confirmed information and the role of the information system that is in use. Information systems in fact do the jobs of data collection, systematization, data storage and verification and provide up- to- date data to produce purposeful information according to the needs of the decision making's preparation process and forward it to the responsible decision maker. (Raffai, 2003)

I composed the following assumptions in relation to my examinations:

1. The complexity of financial management's functions and financial flexibility are more developed according to the size of the company.
2. The size of the company influences the financial side of management control system positively, and improves the effectiveness of financial management.

In accordance with my assumptions I've accomplished a questionnaire survey among middle- sized and big companies based on the procession of special literature and interviews. The aim of the survey was to explore the characteristics of the management control system function that supports the financial management. I processed the replies with SPSS (ver. 16) statistic software package. In my examination I've focused on the financial management's level of development, the flexibility of financial management.

2. RESULTS

As a first step I investigated how the financial management uses the different strategic and operational tasks. To reduce the number of the possible variables I have created two principal components: the strategic financial tasks (total variance: 46.389, factors: long term financial planning, shaping financial politics, capital structure/capital investment, risk management, optimization of risks and returns) and operational financial tasks (total variance: 42.072, factors: procession of transactions, working capital management, short term financial planning, reporting, cost management internal audit).

I used these principal components to make cluster, so I've created the clusters with Developed (n: 53) the Operatively developing (n: 26) Undeveloped (n: 26) financial management. The sample proved the growing role of financial management that appears in the range and amount of information collected and provided and in its role in strategic decision making.

Moreover I have examined the cluster groups' intersection with company size and realized the 64.4 percent of the big companies belong to Developed financial management cluster, and 63.3 percent of the middle-sized companies belong to Undeveloped financial management cluster. This means that bigger companies have more developed financial management.

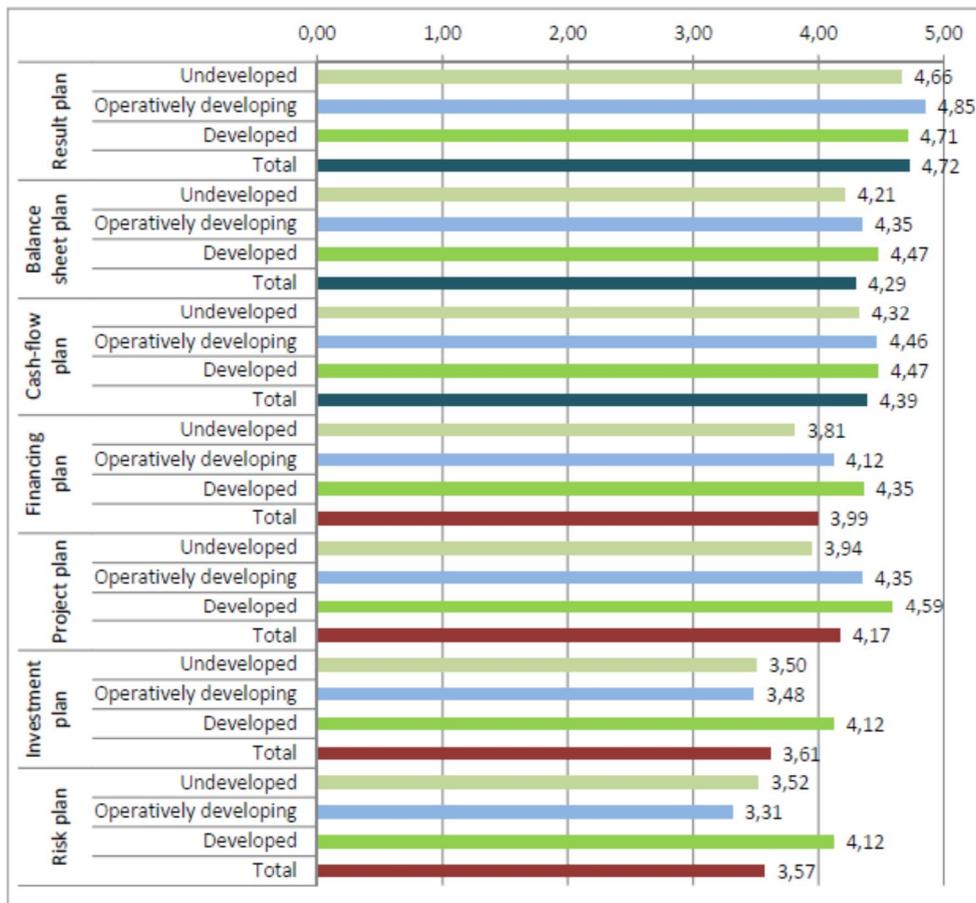


Figure 1 Financial planning according to financial management’s development

Among the clusters with financial management’s different level of development I haven’t found any relevant differences in the usage of result plan (Undeveloped: 4.66 Operatively developing: 4.85, Developed: 4.71) balance sheet plan (Undeveloped: 4.21 Operatively developing: 4.35, Developed: 4.47) and cash- flow plan (Undeveloped: 4.32 Operatively developing: 4.46, Developed: 4.47). These are commonly used. In the companies with Developed financial management also find it important to use the financing plan (4.35), project plan (4.59) and financial risk plan (4.12). This demonstrates that development appears in more complex treatment of financial matters. (Figure 1)

To fulfill these involved tasks developed financial management needs wide-ranging information. Usages of different information system conform also to these needs. (Figure 2)

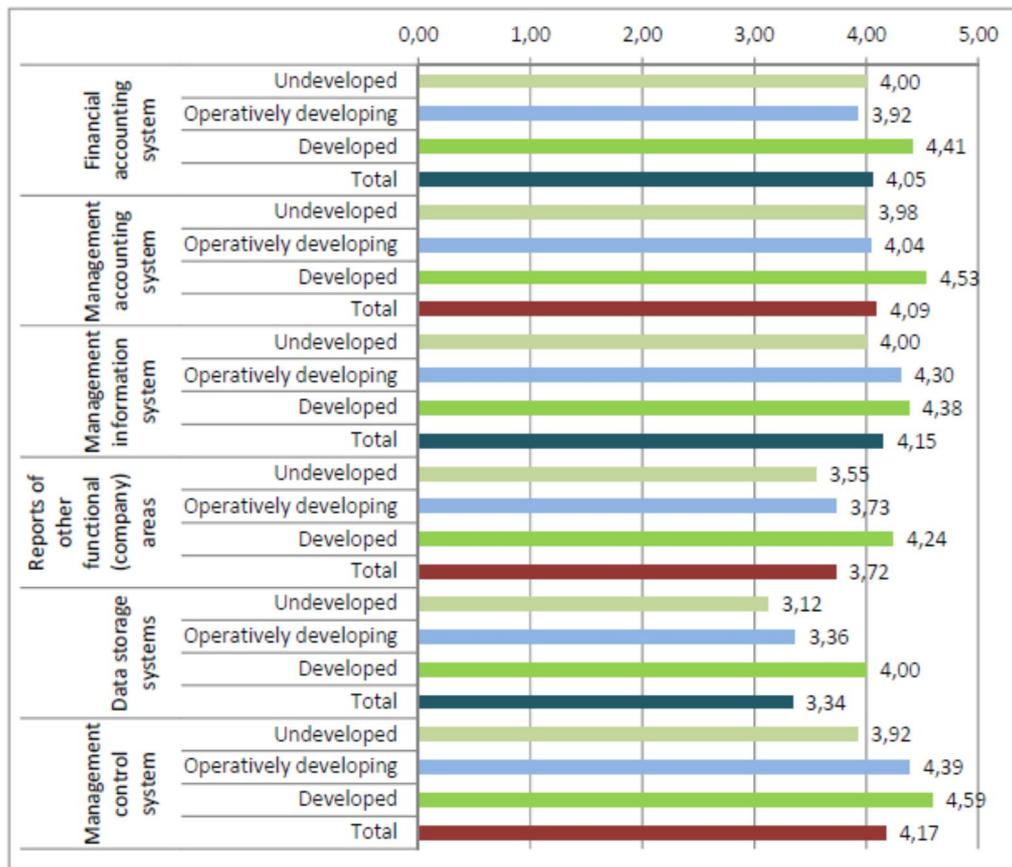


Figure 2 Information systems according to financial management's development

The accounting system is used by all of the companies in the sample more or less for these purposes. (Undeveloped: 4.00 Operatively developing: 4.92, Developed: 4.41) The developed financial management can be significantly separated from operatively developing financial management and undeveloped financial management clusters by comparing the information system usage. Among the developed financial management cluster the management accounting system (Undeveloped: 3.98, Operatively developing: 4.04, Developed: 4.53), reports of other functional (company) areas (Undeveloped: 3.55, Operatively developing: 3.73, Developed: 4.24), data storage systems (Undeveloped: 3.12, Operatively developing: 3.36, Developed: 4.00) and management control system (Undeveloped: 3.92, Operatively developing: 4.39, Developed: 4.59) have reached the highest average points from answers. I haven't found significant differences among the clusters in case of the frequency and reliability of the reporting system. Companies in the sample used yearly, half-yearly, quarterly and monthly reports most frequently. Companies with developed financial management are more satisfied with the reliability of the reports on a par, which can be derived from the used systems' higher level of coordination.

The next important question about financial management focused on the change following ability. For the beginning I've reduced the number of variables by making principal components. I've created the operational tendencies (total variance: 59.075, factors: the complexity of financial management's tasks

increased, the functional areas' management have come in closer connection with financial management, the operational information need (frequency and amount) of financial management has increased) and the directing and organizing tendencies (total variance: 61.622, factors: the importance of financial information and financial management has increased, the coordination tasks of financial management have increased, the strategic importance of financial management has increased, the role of financial management's supporting information systems have increased).

I've created clusters from the sample with the principal components made according to the tendency perceiving ability: Tendency followers (n: 18), Moderately followers (n: 53), Non followers(n: 50). 63.2 percent of the big companies belong to the cluster of Tendency followers, 21.1 percent to the Moderately followers. 46.1 percent of the middle-sized companies belong to the Non followers, and almost the same percentage (48%) to Moderately followers.

Company size		Tendency perceiving ability			Total
		Non followers	Moderately followers	Tendency followers	
Middle size	Count	47	49	6	102
	% within company size	46,1%	48,0%	5,9%	100,0%
	% within tendency p. a. clusters	94,0%	92,5%	33,3%	84,3%
	% of Total	38,8%	40,5%	5,0%	84,3%
Big size	Count	3	4	12	19
	% within company size	15,8%	21,1%	63,2%	100,0%
	% within tendency p. a. clusters	6,0%	7,5%	66,7%	15,7%
	% of Total	2,5%	3,3%	9,9%	15,7%
Total	Count	50	53	18	121
	% within company size	41,3%	43,8%	14,9%	100,0%
	% within tendency p. a. clusters	100,0%	100,0%	100,0%	100,0%
	% of Total	41,3%	43,8%	14,9%	100,0%

Table 1 Crosstab of the Tendency perceiving ability clusters and company size

I could significantly separate these groups from each other according to the employed information system in the case of management control system system (Tendency followers: 4.71, Moderately followers: 4.06, Non followers: 3.96), management accounting system (Tendency followers: 4.71, Moderately followers: 4.06, Non followers: 3.96), accounting system (Tendency followers: 4.56, Moderately followers: 4.17, Non followers: 3.72) and reports of other functional (company) areas (Tendency followers: 4.38, Moderately followers: 3.71, Non followers: 3.56). (Table 1)

By all information systems the Tendency followers have gave the highest average points. As consequence it can be declared that the cluster of Tendency perceivers and followers use more information systems to collect and process the information to their decisions. The role of the management control system has to be emphasized, because its major role is to detect changes and generate reactions. (Figure 3)

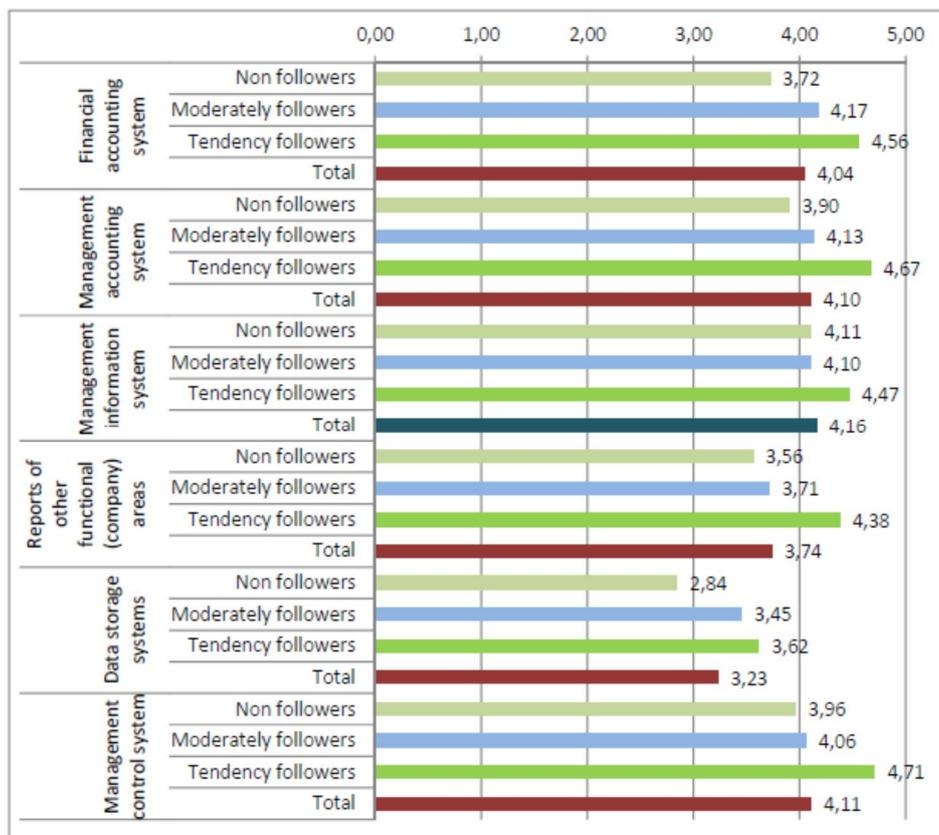


Figure 3 Information systems usage according to the tendency perceiving ability

Financial management's different level of development clusters		Tendency perceiving ability clusters			Total
		Non followers	Moderately followers	Tendency followers	
Undeveloped	Count	22	26	2	50
	% within development clusters	44,0%	52,0%	4,0%	100,0%
	% within tendency p. a. clusters	59,5%	66,7%	12,5%	54,3%
	% of Total	23,9%	28,3%	2,2%	54,3%
Operatively developing	Count	13	9	3	25
	% within development clusters	52,0%	36,0%	12,0%	100,0%
	% within tendency p. a. clusters	35,1%	23,1%	18,8%	27,2%
	% of Total	14,1%	9,8%	3,3%	27,2%
Developed	Count	2	4	11	17
	% within tendency p. a. clusters	11,8%	23,5%	64,7%	100,0%
	% within development clusters	5,4%	10,3%	68,8%	18,5%
	% of Total	2,2%	4,3%	12,0%	18,5%
Total	Count	37	39	16	92
	% within development clusters	40,2%	42,4%	17,4%	100,0%
	% within tendency p. a. clusters	100,0%	100,0%	100,0%	100,0%
	% of Total	40,2%	42,4%	17,4%	100,0%

Table 2 The intersection of cluster groups

I have examined the two before mentioned cluster groups' intersection, and I have realized that 64.7% of the developed financial management cluster belongs to the Tendency followers and 23.5% to the Moderately followers. (Table 1) The half of the operatively developing financial management cluster belongs also to the Non followers. And also the half of the undeveloped financial management cluster belongs to the Non followers and moderately followers. 68.8 percent of the Tendency followers have Developed financial management, and 59.5% percent of the Non followers have Undeveloped financial management. The development of the financial management makes the better change perceiving ability possible. (Table 2)

3. FINDINGS

The groups of the strategic (long term financial planning, shaping financial politics, capital structure/capital investment, risk management, optimization of risks and returns) and operational financial tasks (procession of transactions, working capital management, short term financial planning, reporting, cost management internal audit) were significantly identifiable based on the examination of the questionnaire survey.

The variety of financial management's tasks and complexity increases according to the size of the company. This affects the financial management's flexibility positively.

4. CONCLUSIONS

In the course of the financial management's examination the middle-sized and big company practice showed significant groups of financial duties. These groups can be called the strategic and operational tasks and present the role of financial management in the context of company decision making. As a consequence financial management has to collect and process information both from the internal and external environment to get able to fulfill its task effectively. The execution of these tasks makes financial management to become a partner of the top management.

I haven't found any relevant differences in the usage of different financial planning methods (result plan, balance sheet plan and cash-flow plan) among companies in the sample. These are commonly used. In companies with developed financial management I found the usage of the financing plan, investment plan and financial risk plan important too. This demonstrates that development appears in more complex treatment of financial matters. To fulfill these involved tasks developed financial management needs wide-ranging information. Usages of different information system conform to these needs. The accounting system is used by all of the companies in the sample more or less for these purposes. The developed financial management can be significantly separated from "operatively developing financial management" and "undeveloped financial management" clusters by comparing the information system usage. Among the developed financial management cluster the management accounting system, reports of other functional (company) areas, data storage systems and controlling system have reached the highest average points among the answerers. I haven't found significant differences among the clusters in case of the frequency and reliability of the reporting system. Companies in the sample used yearly, half-yearly, quarterly and monthly reports most frequently. Companies with developed financial management are more satisfied with the reliability of the reports on a par, which can be derived from the used systems' higher level of coordination.

Financial management can perceive the internal and external effects affecting the company according to its development the employed information systems and tools. As a reaction financial management

can change its own organism and the working processes. The sample has reflected the financial management's growing importance in the company.

I've created clusters from the sample using principal components that were made according to the tendency perceiving ability. (Tendency followers, Moderately followers, Non followers) I could significantly separate these groups from each other according to the employed information system in the case of controlling system, management accounting system, accounting system and reports of other functional (company) areas. By all information systems the Tendency followers gave the highest average points. As a consequence it can be declared that the cluster of Tendency perceivers and followers use more information systems to collect and process the information according to the decisions' needs.

Because of my assumption I have examined the two before mentioned cluster groups' intersection. 64.7% of the developed financial management cluster belongs to the Tendency followers and 23.5% to the Moderately followers. The half of the operatively developing financial management cluster belongs also to the Non followers. And also the half of the undeveloped financial management cluster belongs to the Non followers and moderately followers.

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**THE PROCESS OF RUSSIA'S HARMONISATION
TO INTERNATIONAL FINANCIAL ACCOUNTING STANDARDS**

Ekaterina Kodenko

Szent István University, Institute of Finance and Accountancy, 2100 Gödöllő, Páter K. u.1.

Abstract

The national accounting-reporting standards of different countries differ. This fact is in accordance with the general levels of development typical of a certain country, the global political and economic circumstances as well as the legislative systems.

The International Accounting Standards (IAS) and the International Financial Reporting Standards (IFRS) were created to standardise the information gained from the accounting systems. The United States Generally Accepted Accounting Principles (US GAAP) also serve to make the data of the accounting information systems uniform.

The most rational system, i.e. the adaptation of the national accounting standards to the international ones was chosen in Russia regarding the application of the international standards. The prerequisite of this method is the gradual modernisation of the Russian accounting principles as required by the international standards.

In my article I summarise the differences of the application of the international standards between Russian and the Western countries.

Key words: *national accounting-reporting standards, IAS, IFRS, US GAAP, accounting information systems*

1. INTRODUCTION

The accounting directives effective in the United States of America were formulated by the American Finance and Accountancy Committee between 1978 and 1985. At present working out accounting standards is still based on these principles. Directives are such documents that define basic financial and accounting tasks as well as their implementation.

2. DIRECTIVES

The first directive contains the objectives for preparing financial accounts of business organisations. The most basic one of them is supplying precious information both for the internal and external users. The following information using groups are concerned: owners and stakeholders of enterprises (shareholders, investors), managing directors, the state, creditors, suppliers, employees, trade unions, financial analysts, brokers etc.

The most essential objective of the business organisations abroad and making financial accounts is to create such information that assists in making decisions primarily on credit and investment. Concentration on external users derives from the typical features of the American business organisations.

The financial instruments are tightly connected to the market value of the shares of the enterprise concerned. The necessary sources are usually obtained in the form of credits and access to credits depends on the financial situation of the enterprise to a great extent.

Nowadays Russian business organisations rather count on other financing opportunities such as human capital, their connection to authorities, preferential credits and tax allowances etc.

Table 1 below summarises the basic differences between the objectives and tasks of the American and Russian accounting system.

Table 1: The objectives and tasks of the accounting system

American accounting system	Russian accounting system
The most basic objective of financial accounts is to create such information that is useful in making investment and credit decisions. Meeting the requirements of the internal management is a secondary task.	Accountancy accounts primarily provide information for the internal users (managers, shareholders etc.) and then the external ones (investors, creditors).
The controlling function plays a slight role regarding the objectives of financial accounts as these problems are dealt with by other organisations.	The controlling function and that of complying with the law and regulations are assigned to the accounting system.
Pointing out the profit generated by the enterprise is not the primarily function of the financial accounting system.	The data of the financial accounting system are used to avoid losses.
Financial accounts assist the creditors and investors in exploring the flow of monetary funds.	Directly such a task is not part of the Russian accounting system.
The information obtained from financial accounts help make managerial decisions.	It complies with the American accounting system although it is not so straightforward.

Source: own compilation based on [4]

The second directive comprises the basic principles of accountancy.

The ratio of *costs and benefits* states that the benefit of creating information should be proportionate to the costs incurred.

Unfortunately, in Russia this criterion hardly complies with the basic principles. The prevalence of the cost-effectiveness of the accounts system is difficult enough, as well.

Significance: to make sure that the information is useful for the user its role must be significant in the decision-making process. It is significant if it has an impact on the users' decision making, assists in evaluating actions of the past, present or future or it strengthens and/or modifies their judgement and decisions. [1]

This basic principle prevails in the accountancy accounts approved by the Russian Ministry of Finance.

Topicality: if presenting information does not take place at the right time only with a significant delay, then information might lose its significance. The management must find a balance between the advantage of an accounts prepared in time and the safety provided by reliable information. To make sure that information is at our disposal in time, we have to make accounts before all the aspects, parts or factors of the given event or transaction are made public, which can sometime undermine the reliability of information. At the same time, if we wait till every detail is known when preparing accounts, then it is true that the information is more reliable but it is less useful for the end-user when making decisions.

In Russia the criteria of meeting the deadline are much stricter than in other countries so the directive of topicality is ensured.

Comparability: financial accounts must be compiled so that they could be comparable with the data of other enterprises or the ones of the previous years. Disposing comparable information requires the enterprise to present the economic events, actions and dealings in a consistent way. To meet the principle of comparability users must present the accounting policy of the enterprise, its changes and the impacts of changes as well as the data of the previous period must also be shown in the financial accounts. The application of International Accounting Standards helps the prevalence of the principle of comparability. [1]

Importance: The nature and significance of the information have an impact on its importance. Sometimes even the nature of information defines its significance, e.g. the information about new markets. Information is important if its non-disclosure or misinterpretation can influence the business decisions of users. Importance depends on the size of the given item or mistake under the given circumstances. That is why importance rather marks a threshold and not a qualitative feature primarily which suggests which information is useful.

According to Russian rules the mistake is a serious one if in the year of realising the mistake during the controlling process the sum of the explored mistakes in the same year exceeds 5 per cent of the balance sheet asset value of the controlled business year.

The basic accounting principles and methods have a lot in common in different countries, which are as follows: the principle of continuing the enterprise, conservatism (of the two alternatives always choose the safer one, i.e. in which case the probability of over-evaluating instruments and revenue is less) , the principle of continuity, the principle of comparability, the method of double-entry bookkeeping and the application of a monetary unit (bookkeeping is carried out in a stable currency).

3. THE DESCRIPTION OF THE BASIC DIFFERENCES BETWEEN THE ACCOUNTING SYSTEMS USED IN RUSSIA AND THE COUNTRIES THAT USE IFRSS.

Terminology: The problem here is not only that different expressions are used, rather it is that the same expression is interpreted in another way at a different location. To this end, a 'vocabulary' is used in international accountancy, which is an organic part of the entire IFRS.

System of accounts and the structure of the balance: There are different variations from country to country but the main points of the systems of accounts are the same. There is no strict numeration in the USA and England but the layout by balance exists. France, Germany, Turkey and North Africa (Tunisia, Morocco, and Algeria) use the strictly defined Russian type system of accounts and an account can even consist of 10 digits.

Accountancy features of accounts: Keeping the accounts is like in Russia in a T-shape. The Russian accounting system uses accounts that are both active and passive. In the international accounting system each account is of active or passive nature.

Corrections in IFRS: Corrections mean cancellation that increases the number of accounting items. The difference in Russian practice is that cancellation is not given a negative sign, rather it is put into brackets.

Balance: Compiling the balance is an all-time task but carried out in a slightly different form:

- The basic terms used are not „Assets=Liabilities”, rather „Assets=Liabilities + Capital”,
- The balance according to IFRS standards includes the data of the previous period, as well. Assets are in the order of increasing liquidity like in Russian accountancy (in a US GAAP balance the order is reversed). In assets liquidity decrease from top to bottom (from monetary funds to invested instruments), and liabilities depending on their deadline range from short-term ones to long-term ones. At the bottom of the right side of the balance own capital is displayed.

Taxes: Keeping track of taxes in the given country is regulated by the law on taxes in effect so that is why fixing the tax base and tax liabilities differ from country to country. In addition, in each country legislative bodies prescribe the accounting laws and regulations of taxes.

Time of recording events: On the basis of comparability and distinguishing in time the price incomes, revenues, costs and expenditures of the given period must be recorded in the books independently of financial performance. In Russian practice it is carried out on the basis of a bank notification (in line with the financial accomplishment).

The transformation of the accounting system: the compilation of financial accounts on the basis of certain standards, i.e. making accounts by re-grouping and correcting the existing accounts.

The main reasons for a Russian enterprise to change for a system of international standards are the following:

- application for foreign credit and requiring foreign operating capital if necessary,
- supplying accounts made by international standards to Russian creditors or investors (e.g. some banks may require it),
- public limited companies listed on the stock exchange have to prepare their accounts according to international standards and supply them to anyone interested,
- for the successful management of the enterprise (based on own initiatives). The classical financial analysis is based on accounts that comply with international standards. [3]

At present there are three methods regarding the compliance of the Russian accounting system to international standards and regulations:

1. Sectoral coefficients (multipliers) will be worked out to convert Russian accounting items to GAAP standards. When working out multipliers a lot of factors must be considered (the duration of the operation of the enterprise, fluctuations in foreign exchange rates, sectoral and geographical specialities etc.). Every item to be converted is multiplied by the calculated coefficient so in this way the accounts are transformed to be compatible with GAAP standards. Of course, this method has some shortcomings:

- when working out multipliers only the data of some enterprises are considered and the influencing factors may in many respects differ from the average.
 - Objectivity is difficult to ensure.
2. Compliance of national accounting standards to international ones by means of special processes.
 3. Recording all economic events since starting operation (or other date) is in parallel according even to international regulations. [4]

Forth first tie in Russia it was the National Bank of Russia that began to use the international standard sin 2004. As a consequence, the banking sector was affected first by the changes. [2]

There are no universally accepted series of steps taken in the harmonisation process although we can separate the following stages from the practice of the single enterprises as presented by the tables below.

Table 2: The steps of the harmonisation process I.

Block I: Analysing information, accounting „mock” accounts compiling	Stage 1: Examining the accounting policy and bookkeeping of the enterprise concerned (exploring the deviation of the single parts of the accounting policy in effect and accordingly, planning the tasks)
	Stage 2: Working out „mock” accounts for the beginning and the end of the period (by managing data of general ledger accounts and tables for transformation).
	Stage 3: Analysing the closing balance of the accounts, preparing work documentations (work documentations comprise the following basic areas: recording tangible assets, recording immaterial goods, liabilities, capital items etc. Work documentations should also include remarks and notices on the basis of which corrections are made.
Block II: Working out corrected accounting items, complying with international standards	Stage 4. Preparing corrected accounting items
	Stage 5: Introducing corrected items into tables of transformation (inserting corrected items into starting accounts by considering end -of-the -year data)
	Stage 6: Regrouping accounts and compiling accounting balance while complying with international standards (regrouping account balances by the national system of accounts in compliance with international standards. Five groups can be distinguished among them: current assets, instruments invested, short-term liabilities, long-term liabilities and own capital. The accounting balance in compliance with international standards is prepared on the basis of the transformed account balances.)

Source: Own compilation [2]

Table 3: The steps of the harmonisation process II.

Block III: Compiling the financial accounts of the enterprise in compliance with international standards	Stage 7: Preparing profit and loss accounts in compliance with international standards (analysing information on income and expenditure and on their basis the preparation of work documentations. Correction of income and expenditure items and compiling a corrected profit and loss account in compliance with international standards.)
	Stage 8: Preparing cash-flow statement in compliance with international standards (balances at the beginning and the end of the period are prepared on the basis of which the cash-flow statement is prepared indirectly)
	Stage 9: Preparing accounts together with some remarks attached. (parts of the accounts are finalised: the balance, profit and loss account, cash-flow statement, data of deferred stock are attached in an annex and also necessary amendments to financial accounts are also dealt with)

Source: Own compilation [2]

4. CONCLUSION

At present not too many enterprises in Russia can afford to change to international regulations because this transitory period requires certain professional knowledge and experience. Foreign professionals or national accountants who have completed retraining are capable of fulfilling this task. In general only the enterprises that either have a foreign partner, listed on the stock exchange or turned to a bank that requires accounts in compliance with international standards can take part in the process of harmonisation.

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FINANCIAL INNOVATION MANAGEMENT

Krupkina Anna

National Research University «Higher School of Economics»,

Myasnitskaya st. 18, Moscow, Russian Federation

Abstract

The research introduces multi-period model of financial innovations, based on Hotelling approach. There exist two banks (Innovator and Imitator), which compete in prices and quality of services. The Innovator invents a financial innovation, while Imitator may reproduce this service with low (almost zero) costs of imitation. The level of the initial service quality is uncertain for banks and consumers and reveals only after one period. All consumers are situated between these banks and divided into three main groups by their propensity to innovate. For this model we found optimal profits of both banks and compared them with each other. Using parameter calibration we showed that dependent on different consumers' propensity to innovate and innovation quality either imitative or innovative strategy could be more beneficial than other. As a result we give economic interpretation of results and explain how incentivize banks to provide financial innovations.

Key words: *financial innovation, Hotelling model, Innovator, Imitator*

INTRODUCTION

Contemporary empirical and theoretical researches show that there is a positive link between development of the financial sector and economic growth. Thus improvement of financial markets' efficiency is one of the key factors for sustainability of the future economic development and reduction of poverty.

Financial innovations are related to the constant changes in the financial services industry, which has now become an important factor in the development of the real economy: financial services comprise about 4 % of the Russia Federation GDP and more than 9% of all population is employed in this area. Moreover, financial services provide payment services and redistribute economic resources over time and space between firms and households, and the main provider of these functions is banking industry.

Recent changes in banking area, such as appearance of new financial instruments and increasing importance of information technologies, force banks to seek for new opportunities of enhancing their performance; they start to introduce financial innovations. But in developing countries most part of banking products are homogeneous in their characteristics, while innovations are introduced rarely on the financial market. The reason of this problem is closely connected to the fact that successfulness of these innovations depend not only on the basic determinants of the financial novelties (return, riskiness, package and etc.), but also on the ability of population understand and use these kind of services (absorptive capacity), while, typically, low levels of financial education and propensity to invest in innovative products are more common in developing countries. So effect of consumers' propensity to purchase innovative services on the possibility of introduction financial innovations is becoming urgent topic of research.

Nowadays there is a various literature which is connected with the topic of financial innovations. The first mentions about financial innovations we can meet in papers G. Tarde, J. Schumpeter in the beginning of the XX century, but the full and developed studies in the field of financial innovation have appeared in the late 70s - early 80s. That period scientists have studied the factors contributing to the invention of innovations, the classification of financial innovation and its distinctive features. The largest contributions to the study of financial innovation have made M. Miller, F. Modigliani, C. Ross, H. Minsky and etc. In our work we try to combine industrial organization and management approaches to financial innovations in order to answer the questions whether invention or imitation of innovations is the beneficial strategy for banking area and how the initial characteristics of financial product consumers affect the successful introduction of financial innovation. Similar ideas can be found in the works J. Person, V. Wartner, D. Duffie, P. Ireland and other.

In our view, the described authors concentrate on issues related to the production of innovative services, but do not pay enough attention to the demand for financial innovation. As a result the effect of demand factors on innovation activities of financial intermediaries was not fully considered in the existing economic literature, while the demand factors are getting more influential with the development of knowledge-intensive services. Therefore, in our study we want to investigate the demand for innovative services the influence of its structure on the successfulness of innovation. In order to achieve this objective we introduce a theoretical model of financial innovations and try to explain the reason why there exist barrier for development of innovative activities.

Now we represent the main assumptions of the model, and then give a brief solution and explanation of the received results.

MODEL ASSUMPTIONS

Now we consider the main assumptions of the model, its solution and properties of equilibrium. As a result we introduce multi-period model of adoption of the financial innovation that describes the behavior of banks, which makes a decision about production of innovation. Also we show that different distributions of absorptive capacity of individuals affect the possibility of introduction the innovation. We assume that there exist two banks in the economy, which have its own different types of corporate products and these products are personalized in the way that every consumer has its own product and service with a different distinctive features. One of the banks is the innovator, which is expressed by index $i=0$, and other is the imitator, which has index $i=1$. Both banks are situated in the end of the line, while all consumers of their product are uniformly distributed along line.



Figure 1. Representation of Hotelling model on the plot

In the beginning of the first period the Innovator starts to increase its R&D cost on invention of a new product. For instance, we may assume that Innovator suggests to clients possibility of investment in

structured deposit, which guarantees for clients small the fixed return and the random part, which depends on the mutual fund dynamics. But generally it can be any type of product banking innovation. The reason of starting innovations can be the possibility of getting additional profit, competitive advantage in the market due to experience which is acquired by early invention of product and “learning by doing” effect. When the innovator decides to create a new commercial product it pays C_0 (fixed costs of creation a new type of services). As soon as the bank has invented a new service and suggests this innovation to clients it starts to receive a positive profit. But since the patent protection is unavailable in the financial market and every new product can be easily copied by other institutions, the second bank (Imitator) can free-ride on the developments of Innovator and make analogous services. In this case we assume that Imitator has smaller cost of re-producing this product than the Innovator. For simplicity we may assume that these costs C_1 are sufficiently small in comparison with C_0 , so $C_0 > C_1 > 0$.

The innovative services provided by banks are differentiated by the level of quality, which means that consumers *ceteris paribus* prefer the bank with higher quality, which is being innovated, and denote quality of bank i 's service be q_{it} ¹ in time period t . Alternative interpretation of this parameter can be the level of return on the product. For our case we find that the initial return of Innovator's product is \tilde{q}_{00} , which can be high or low dependent the state of the world (good or bad).

We suggest that the Imitator can learn the design of the security immediately and almost for free, but it may only be able to imitate this product and can't do it per we assume that customers have their own preferences about banks, which we define as transportation costs (s), changing linearly along line. These costs depend on absorptive capacity of consumers, i.e. their ability to perceive the financial information, knowledge about financial services. Finally, for the client located at point x her value of hiring either type of banker at time t is given by:

$$U_{0t}(x) = q_{0t} - p_{0t} - sx;$$

$$U_{1t}(x) = q_{1t} - p_{1t} - s(1-x);$$

where p_{it} is the price, which paid to the bank (Innovator or Imitator) for engineering a new product. Also we define $\Delta q_t = q_{0t} - q_{1t}$ as the return differential, which equals the difference in the return level of banks. Since the imitator can learn the design of innovation immediately and almost for free, he may only imitate the innovator's new product imperfectly, because Imitator do not have enough experience in working with the same structure of mutual fund investments as Innovator. Mathematically, it means that $q_{0t} \geq q_{1t}$ and the return differential is higher or equal 0.

The value function expresses utility function of every consumer suppress his costs of receiving a service, but unfortunately, the level of return stayed for consumers unobservable for the first period. If both banks establish the same financial innovation, then the consumer compares values, which she gets from banks and chooses the investment bank with a higher value function. As a result the value to the consumer adopting the product of bank 0 or 1 depends on relative prices, on the relative return of the product, and, what is more important, on the proximity of the bank's variety to the consumer's preferences. Also we assume that the consumers normalize a reservation value to zero ($U_{it}(x) \geq 0$) and cannot delay the financing decision.

Despite the fact that consumers distributed uniformly along the line, we divide consumers into 3 groups by their propensity to innovate. Consumers with high propensity to innovate (α -share of population)

¹ $q_{it} > 0$, because we assume that the invention of a financial innovation in our model is considered as a good which increases welfare of consumers

choose innovative product independent on its characteristics. Also we assume that $\alpha < 1/2$, because the level of risky and innovative consumers, as we have seen in the Rogers's research is lower than 5%. Consumers with average propensity to innovate (β -share of population) purchase innovative product if they observe any demand on it and if they get positive outcome. And individuals with low propensity to innovate (γ -share of population) are very conservative and purchase product only if they see stable demand of 2 previous groups for two periods.

$$\alpha + \beta + \gamma = 1$$

After a customer is drawn, both banks compete in prices to sign a contract with her. Then for the given type of client, qualities, and transportation costs (s), each bank has per deal profit in every point of time t :

$$\pi_{it} = (p_{it} - c) D_i(x; p_{0t}; p_{1t}; x; q_{0t}; q_{1t}; s; t), \text{ - for every } i = 0, 1;$$

where C is a marginal cost of delivering a service, advertising, legal fees and etc. The demand function D_{it} represents binary variable with the following properties:

$$D_{0t} = \begin{cases} 1, & \text{if } u_{0t}(x) > u_{1t}(x) \\ 0, & \text{otherwise} \end{cases}$$

$$D_{1t} = 1 - D_{0t}$$

In the model we consider 4 periods $t=0, 1, 2, 3$, since most innovations at financial market finite-lived and has 4 typical stages: introduction, growth, maturity and decline. So, the expected profit of the Innovator is a discounted stream of all future cash flows at period zero:

$$\Pi_{e,0} = -C_0 + \pi_{e,0}(0) + E \sum_{t=1}^3 \frac{1}{1+r^t} \pi_0(t),$$

where $\pi_{e,0}(0)$ represents the Innovator's expected profits in the first deal, which it gets for sure, because it is the only issuer in that period; the value of the term $\frac{1}{1+r}$ denotes the pure time discount factor $\frac{1}{1+r}$, which can also be time dependent, but for simplicity we assume it to be constant through time. We assume that δ is a return from alternative investments.

The timeline of the model is the following. The Innovator enters the market, while α -share of consumers purchases the product at the null period. Imitator and other groups of consumers passively observe the market. At the first period the Imitator enters the market. The Innovator and the Imitator compete in prices and profits. $\alpha+\beta$ -share of consumers purchases the product. The product is less profitable with probability π in the bad state of the world and more profitable in the good state of the world, which happens with complimentary probability $(1-\pi)$. At the second period the Innovator and the Imitator compete in prices and profits. In the bad state of the world β -share of consumers leaves the market, in the good state of the world it stays. At the very last fourth period the Innovator leaves the market. Imitator satisfies residual demand of the share α , $\alpha+\beta$ or 1 dependent on the state of the world. After brief introduction of assumptions and timeline, we turn to model solution and its empirical implication.

SOLUTION AND ECONOMIC INTERPRETATION

This section we describe the derivation of equilibrium and its main properties based on the timeline scheme, which we have described earlier in the previous section. In the null period Innovator creates a new financial service and represents it to society. Since at this period the bank 0 is the only seller of a financial innovation and act like a monopolist, it gets a certain level of profit π_M , but in the next period

the innovator loses part of its market share. In the first deals the bank wants to suggest the highest possible price for consumers and introduces the price differentiation for all consumers. This price of the services is defined by:

$$p_{00} = E(\tilde{q}_{00}) - sx, \text{ since in that point } U_0(x) = 0$$

We take here expectations of \tilde{q}_{00} since the consumers does not know the true realization of return until the end of the first period. It means that the maximum price that consumer wants to sacrifice in order to receive this financial product is equal to her reservation value, which we assumed to be zero. Also we know than only Novelty-lovers would by this product, so the monopoly expected profit at time 0 is:

$$\pi_{e, M} = \int_0^\alpha (p_{00} - c) dx = \int_0^\alpha (E(\tilde{q}_{00}) - sx - c) dx = \alpha(E(\tilde{q}_{00}) - \frac{\alpha}{2}s - c);$$

In order to develop an innovation the innovator and the imitator should have positive profits and since q_{1t} is smaller than q_{0t} , the main conditions for this can a sufficient guarantee that innovation appears at the market and Imitator wants to replicate it:

$$E(\tilde{q}_{00}) \geq c + \alpha s/2 \text{ and}$$

$$E(\tilde{q}_{11}) \geq c + \alpha s/2.$$

If these conditions are satisfied then in the period 1 appear Imitator.

In the first period, we have competition in prices between two banks, which are trying to attract a certain client and which are reducing the prices until one of them reaches its marginal cost. Firstly, we find the indifferent consumer $\hat{x} = \frac{1 + \Delta q_1}{2 + 2s}$. We denote \bar{x} such that, for any client $x < \bar{x}$, the innovator can undercut the imitator below marginal cost and get the whole deal, while his profit is still positive. Thus, the range of consumers that would underwrite the following innovation: $x \in [0; \bar{x}]$ and $\bar{x} = \min(1; \hat{x})$.

This period β -share of consumers also decides to purchase the product, so the total share of consumers is getting $(\alpha + \beta)$. Here we may have two cases: if $(\alpha + \beta) \geq \bar{x}$ (this means, that the share of relatively conservative consumers is quite low in the society) and if $(\alpha + \beta) < \bar{x}$ (this means, that the share of relatively conservative consumers is quite low in the society). In our model we have considered both cases, but in the paper we will consider in details only first case and give brief interpretation of the second case solution. If $(\alpha + \beta) \geq \bar{x}$, then one period profit of the Innovator:

$$\pi_{e,0} = \int_0^{\bar{x}} (p_{01} - c) dx = \int_0^{\bar{x}} [(1 - 2x) * s + \Delta q_1] dx = (\bar{x} - \bar{x}^2) * s + \bar{x} \Delta q_1 = \bar{x}((1 - \bar{x}) * s + \Delta q_1);$$

Consequently the Imitator's profit is the following:

$$\pi_{e,1} = \int_{\bar{x}}^{(\alpha+\beta)} (p_{11} - c) dx = - \int_{\bar{x}}^{(\alpha+\beta)} [(1 - 2x) * s + \Delta q_1] dx = (\bar{x} - \bar{x}^2) * s + \bar{x} \Delta q_1 - ((\alpha + \beta) - (\alpha + \beta)^2) * s + (\alpha + \beta) \Delta q_1 = \bar{x}((1 - \bar{x}) * (s + \Delta q_1)) - (\alpha + \beta)[(1 - \alpha - \beta) * s + \Delta q_1];$$

We assume that in the end of the period 1 the level of return \tilde{q}_{00} can become high with exogenous probability $(1-\pi)$ and low with complementary probability π . As a result we may have two possible cases. In the good state of the world, which occurs with probability $(1-\pi)$, profits of banks can be computed by formulas:

$$\pi_{e,0}(1) = (\alpha + \beta) (q_{00}^H k_{1+u} + (1 - \alpha - \beta)s),$$

$$\pi_{e,1}(1) = 0,$$

where u is the initial quality difference between the Innovator and the Imitator, k_1 is a change in the initial quality of Innovator's service in period one. In the bad state of the world, which occurs with probability π , profits of banks can be computed by formulas:

$$\pi_{e,0}(1) = s \left(\frac{1}{2} + \frac{\Delta q_{L1}}{2s} \right)^2;$$

$$\pi_{e,1}(1) = s \left(\frac{1}{2} + \frac{\Delta q_{L1}}{2s} \right)^2 - (\alpha + \beta) [q_{00}^L k_1 + u + (1 - \alpha - \beta)s];$$

In the end of the first period all consumers receive information about service quality and in the bad state of the world β -share of consumers leaves the market. In the good state of the world β -share of consumers stays at the market. The good state of the world takes place with probability $(1-\pi)$, and we have the following profit values in the second period:

$$\pi_{e,0}(2) = s \left(\frac{1}{2} + \frac{\Delta q_{H2}}{2s} \right)^2;$$

$$\pi_{e,1}(2) = s \left(\frac{1}{2} + \frac{\Delta q_{H2}}{2s} \right)^2 - (\alpha + \beta) [\Delta q_{H2} + (1 - \alpha - \beta)s];$$

where k_2 is the progress in the initial quality of Innovator's service in the second period.

In the bad state of the world, which occurs with probability π , profits of banks can be computed by formulas:

$$\pi_{e,0}(2) = (\alpha + \beta) [q_{00}^L k_2 (k_1 + 1) + u + (1 - \alpha - \beta)s];$$

$$\pi_{e,1}(2) = 0;$$

In the third period the Innovator leaves market and the Imitator satisfies the residual demand for this service, and then the innovation turns into a traditional products and ceases to be the subject of our discussion. In the good state of the world, which takes place with probability $(1-\pi)$, there are 2 cases. If conservative consumers (γ) decide to enter the market with probability $(1 - \pi_2)$, the profit of the Imitator is the following:

$$\pi_{e,0} = \int_0^1 (p_{13} - c) dx = \int_0^1 (q_{13}^H - s(1-x) - c) dx = q_{13}^H - \frac{s}{2} - c;$$

If conservative consumers (γ) decide not to enter the market with probability π_2 , the profit of Imitator is the following:

$$\pi_{e,0} = \int_0^{\alpha+\beta} (p_{13} - c) dx = \int_0^{\alpha+\beta} (q_{13}^H - s(1-x) - c) dx = (q_{13}^H - s + \frac{s(\alpha+\beta)}{2} - c)(\alpha + \beta);$$

In the bad state of the world, which occurs with probability $(1-\pi_2)$, only α -type consumers stay in the market, and the profit of Imitator is the following:

$$\pi_{e,0} = \int_0^{\alpha} (p_{13} - c) dx = \int_0^{\alpha} (q_{13}^L - s(1-x) - c) dx = \alpha(q_{13}^L - s + \frac{\alpha s}{2} - c);$$

Then we found the difference between the total discounted Innovator's and Imitator's profits in the good and in the bad state of the world separately, in order to verify the research hypothesis. In our investigation we estimate conditions in which innovative and imitative strategies are more beneficial in terms of profits, what factors stimulate introduction of innovations and how the share of conservative consumers effect on the successful implementation of financial innovation. Firstly we consider the more general results of our model and then discuss financial innovation drivers. We found that in our model typically exist two different scenarios (depending on the state of the

world), which lead to completely different relationships between Innovator's and the Imitator's profits. In case of the bad state of the world, imitation of innovative services always gives a higher level of profit than provision of research and development of innovation. As a result, it is getting unprofitable to be the Innovator in this state of the world. However, the situation is changing in the good state of the world. In this case innovative strategy can be more profitable than imitative one, but now the advantage of innovative strategies depend on the initial demand and supply parameters. Thus, if the probability of the bad state of the world is large, then there are no incentives for innovators to create innovation.

Also we have analyzed the situation when the share of relatively conservative consumers is high ($(\alpha + \beta) < \bar{x}$) and when it is low ($(\alpha + \beta) > \bar{x}$). In analytical calculations, we found that the individual profit level of Innovator and Imitator is not the same among these situations. However, the overall profit differences are the same in the good and in the bad state of the world, so the impact of supply and demand factors are also the same, regardless of share of conservative consumers (γ). This allows us not to focus our attention on the relative share of conservative consumers in further analysis.

Now we will concentrate our attention on the supply and demand factors that determine the successfulness of innovations. In the analysis we have obtained the critical values of parameters for which, other things being equal, the Innovator has higher profits than the Imitator. Among the supply side factors we can identify the following critical values.

1. The initial quality of innovation (\tilde{q}_{00}) should be more than eight times higher than the average social cost of purchasing the innovation;
2. Progress in Innovator's service quality must be positive ($k_1 > 0$) in the first period, and there should not be a high regress in the innovation quality in the second period ($k_1 > k_2$);
3. The share of consumers with a high propensity to purchase innovative services (α) should be more than 0.19;
4. The share of conservative consumers with a low propensity to purchase of innovative services (γ) should be from 0.45 to 0.25;
5. The willingness of conservative consumers to purchase innovative products ($1 - \pi_2$) is over 0.6.

Thus, we have identified the critical values of the main demand and supply factors for which innovative strategy is more profitable than the imitative one. However, we cannot easily manage with all the parameters of the model; for example, a propensity of consumers to purchase innovation could not be changed in the short term perspective and even in the long term it is difficult to alter structure. Therefore, using the results of our model, we may determine how we should change the supply parameters in order to preserve innovators' incentives to produce innovations.

In particular, we can already say that the share of consumers with an average propensity to purchase innovative products (β) play a significant role in the demand structure, especially, if the share of innovative consumers (α) less than 10%, which is a usual characteristic of the real economies. Namely, if the share of innovative consumers (α) is low, then when the values of β are less than 0.2 or greater than 0.8 introduction of financial innovations is unprofitable, i.e. according to the model innovative strategy is not always beneficial for every demand structure.

Summarizing this chapter, we can say that, based on the proposed model, we have analyzed the conditions which are necessary for the successful implementation of financial innovation. Typically,

there exists a situation of innovation (the bad state of the world), when innovative strategy is not profitable regardless the demand and supply parameters. In the good state of the world, profitability of innovative strategy depends on various factors. For instance, the Innovator receives a significant advantage in profit comparing to the Imitator if the initial high quality of innovation is high and the progress in service quality is large throughout the innovation life cycle. In addition, we have identified critical demand and supply parameters, for which innovations are always profitable than imitation. But in the short term the possibility of changing the demand structure is small, therefore we may only take these factors into account before the introduction of new services in the market.

Finally, we fixed the values of the different demand patterns and found that a high share of consumers with a high propensity to purchase innovations and a relatively low level of conservative consumers are enhancing improve the position of the Innovator at the market. So as we showed earlier, the integrated approach for the demand and supply factors forms the basis of the strategic decision-making and is becoming the key criterion of successful innovations in the economy.

CONCLUSION

We achieved the main goal of the paper and represent a multi-period model of financial innovation diffusion taking into account the specifics of the Russian banking system and possible effect of individuals' propensity. The model allows us to justify the fact that financial innovation can be a profitable for banking industry in absence of patent rights invention. The main conclusion of the study is that the increase in consumers' propensity to innovate leads to improvement of Innovator's position in the market. Therefore the high level of financial education and culture in the society are necessary determinants of beneficial and efficient financial innovations.

In our model we consider two distinct banks, which produce financial innovation. One of the banks (Innovator) invents a new financial service and has additional costs for its invention. Another bank (Imitator) can reproduce this innovation with a lower return and with delay in time. Both banks are located at the edge of a straight line of length one. Customers of these banks are uniformly distributed along this line according their preference and propensity to innovate. An important prerequisite for the model is involvement of consumers in the production of a financial product (consumer intensity).

The initial return of product is unobservable at the first period and aware only in the second period. As a result we may have two typical scenarios: good state (when Innovator get monopoly profit and effectively exclude Imitator) and bad state (when both Innovator and Imitator divide market between each other) scenarios. After receiving the optimal profits of both banks, we compared the overall three-period discount profits of Innovator and Initiator and found that innovative strategy is advantage increases with probability of good state of the world, higher initial level of product and its dynamics, higher share of innovative consumers and lower share of conservative consumers. So both supply and demand side characteristics become crucial for successful introduction of financial innovations.

We believe that commercial banks, developing new financial product, and state institutions, working out financial programs, may implement management part of our research existing results. Since introduction of financial innovations depends on the propensity of consumers to innovate, human behavior and its features are becoming an important factor of financial markets development.

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**SERVICE QUALITY PERCEPTIONS OF BULGARIAN TOURISTS ON SMALL
CRUISE BOAT VOYAGES IN TURKEY**

Lidia Atanassova

National Assembly of Republic of Bulgaria

Committee of Economy, Tourism and Energy

e-mail: lidiabulgaria@gmail.com

Erdal ARLI

Kocaeli University Barbaros Maritime Higher School

Maritime Business Management Department

e-mail: earli@kocaeli.edu.tr

Abstract

Maritime tourism industry has been one of the industries experiencing competition harshest as a result of economic, social and political developments, during the recent years. As an economic sector bringing foreign currency in Turkey every year with worth around US\$ 2 billion, maritime tourism retains a share of approximately 25% in total foreign exchange earnings, obtained from tourism activities. Maritime tourism, particularly led by small cruise boat voyage known as blue voyage which is performed daily and weekly between various national and international ports, islands and coves within the Mediterranean and Aegean Sea, is one of the paramount areas of tourism attracting daily increasing investments, due to its fast climbing growth curve during the last couple of years, in Turkey. Making the small cruise boat companies more preferable and recommendable and an improvement in perceived service quality and customer satisfaction can be realized by deliberate and correct service quality strategies. The purpose of this research is to determine the impacts of the service quality perceptions of Bulgarian tourists on their general levels of satisfaction. In order to achieve this purpose, the research follows a survey based data collection methodology, the survey being administered on a small cruise boat voyages in Turkey. Data were collected from 102 Bulgarian tourists, within the scope of the research. According to the resultant findings of the research, the perceived components of service quality were assessed to have a significant impact on general satisfaction level of Bulgarian tourists.

INTRODUCTION

Maritime tourism industry has been one of the industries experiencing competition harshest as a result of economic, social and political developments, during the recent years. As an economic sector bringing foreign currency in Turkey every year with worth around US\$ 2 billion, maritime tourism retains a share of approximately 25% in total foreign exchange earnings, obtained from tourism activities (Tourism Strategies of Turkey, 2006: Industry Report of the Turkish Chamber of Maritime Commerce, 2010). Maritime tourism, particularly led by small cruise boat voyage known as blue voyage which is performed daily and weekly between various national and international ports, islands and coves within the Mediterranean and Aegean Sea, is one of the paramount areas of tourism attracting daily increasing investments, due to its fast climbing growth curve during the last couple of years, in Turkey. Cruise boat

voyages, falling within the scope of the marina tourism domain, on the other hand, has an especially increasing importance across the EU member states and within the Mediterranean region in particular, as a branch of the marina tourism that responds well to the wishes of people, who want to feel free and explore newer places, while getting apart from the adverse effects of urban life, among the tourism demand that gets intensified in almost anywhere around the world, today. In this category, Spain, France, Italy, Slovenia, Croatia, Greece and Turkey are the leading target countries of tourists, worldwide. Yet, Turkey is still unable to obtain sufficient competitive power and earn its long deserved place in competition among the aforementioned countries, for many reasons (Dağcı, 2002; Özkan, 2008) The investments materialized in marina tourism as an industrial sector of engagement during the last two decades toll around US\$ 1 billion. Of this total, an approximate of US\$ 400 million represents the share of marinas and a US\$ 350 million represents that of cruise tourism undertaken between coves, islands, ports and countries on the Mediterranean and Aegean Sea, at a five-star hotel's comfort standards under the name "Blue Voyage". In addition to US\$ 50 million investments in the yacht building industry, US\$ 100 million investments in the promotional activities and US\$ 100 million, in such other areas of marina tourism as under- and above water sports, deep water archaeology and etc. (Özkan, 2008; Industry Report of the Turkish Chamber of Maritime Commerce, 2010 and 2011; Interview with Ms. Ipek Sapmaz, Supervisor of Maritime Tourism in Turkish Chamber of Maritime Commerce, May 2012).

The number of cruise boat tends to increase against the investments carried out in the small cruise boat voyage tourism sector of Turkey. For this reason, during the recent years, measures are adopted and implemented by the existing operators to gain competitive advantage, while securing a higher level of service quality and customer satisfaction.

In the pace of these developments, effective service quality management is predicted to be one of the practices luring growingly higher customer satisfaction and competitive advantage both at present and in the future at the cruise boat business. Especially the level of satisfaction achieved in tourists of international origin who wish to attend small cruise boat voyage in Turkey from the services supplied within that complex would not only lead them share this experience with friends and colleagues but also render the country as the top choice of preference among international tourists. The purpose of this research is to determine the service quality perceptions of Bulgarian tourists on small cruise boat voyage in Turkey. The resultant findings of this research are expected to give an idea to the managers and associates at small cruise boat enterprises, tour operators and travel agencies that choose Bulgarian tourists as a target market.

Furthermore, the quality of service provided in respect of the cruise boat operations plays a crucial role not only for the enterprises that offer and render such services, but also for the promotion of a country, in the greater perspective.

SERVICE QUALITY PERCEPTION AND MEASUREMENT

Quality is defined as the meeting and conveyance to an advanced level of customer needs and expectations (Hurley, 1994). Ishikawa defines quality shortly as the "quality of product" (Ishikawa, 1997). The European Organization for Quality Control (EOQC) defines quality as "the degree of compliance of a certain good or service with the customer's needs (Ertuğrul, 2004). The quality of service, on the other hand means the ability of an enterprise to meet or exceed the expectations of the customer (Odabaşı, 2004). According to Parasuraman et al. (1985), the quality of service is the comparison of perceived service quality against expected service quality among themselves. To offer service for meeting the customers' needs and requests is a prerequisite for offering quality service. Only

this way, the enterprises can fulfill the expectations of their customers and increase the quality of service perceived by the customers (Okumuş and Duydun, 2008).

According to Gronroos (1984), the quality of service has three aspects. These include technical quality, functional quality and company image. They all directly influence the quality of service.

A review of service quality literature to date reveals that Parasuraman, Zeithaml and Berry (1985; 1988; 1991; 1994) conducted a series of efforts concentrated around conceptualization of service quality, determination of factors having influence on it and qualitative measurement of perceived service quality (i.e. the SERVQUAL Scale) in the period between 1985 and 1994, eventually developing a standard scale for measuring quality of service, which they called "SERVQUAL".

In order to develop a standardized method of measurement for service quality, the most efficient way, as generally accepted, is to identify the factors forming up the quality of service (Kim and Kim, 1995). The number and definitions of factors forming up the quality of service varies depending on the structure of service being offered (Robinson, 1999).

An alternate method for measuring quality of service is that proposed by Cronin and Taylor (1992), by the name SERVPERF. Cronin and Taylor advocated that the SERVQUAL model was insufficient for measuring service quality and proposed SERVPERF, as an alternative thereto. This model uses the same 22 questions that formed up the SERVQUAL scale. Nevertheless, they also assert that service quality is only a function of perceptions. In other words, measurement of service quality according to the SERVPERF model is considered sufficient for measuring the perceived service. Cronin and Taylor attempted to explain the relationship between service quality perception and customer satisfaction and intention to buy, in a series of studies; they performed using the SERVPERF scale (Cronin and Taylor 1992; 1994).

PURPOSE AND USE OF THE RESEARCH

The objectives of this research can be enumerated, as follows:

- To identify factors determining the perceived service quality of Bulgarian tourists,
- To determine whether these factors have any impacts on general levels of satisfaction. The resultant findings of this research are expected to give an idea to the managers and associates at small cruise boat enterprises, tour operators and travel agencies, which are engaged in the field of small cruise tourism and especially define Bulgarian Tourists as their target market. Furthermore, it is of common hope that this research would provide input for literature on the issue, not only for determining whether service quality perceptions of customers have any statistically significant impact on their general satisfaction levels.

METHODOLOGY

This research used qualitative research method for the achievement of its predefined objectives and surveying method for collecting data. The survey questionnaire consisted of three sections, the first of which covers questions on demographic characteristics of the respondents. The second section is comprised of the variables included in SERVQUAL scale developed by Parasuraman, Zeithaml, Valarie and Berry between 1983 and 1990 (Parasuraman et al., 1985; Parasuraman et al., 1988; Zeithaml et al., 1990). However, the scale has been rearranged for the purpose of this research according to cruise

services, with particular reference to the fact that service quality dimensions may vary across different service sectors, wherefore, the expressions included in the scale should be readjusted according to each sector, as suggested by a research performed by Carman (1990) on different service enterprises, making use of the SERVQUAL scale. Moreover, it made use of researches reported as performed, in literature on this area, when adapting the survey to the particular field of cruise tourism (Duman and Mattila, 2005; Park, 2006; Andriotis and Agiomirgianakis, 2010; Juan and Chen, 2011; İnan et al., 2011).

The survey consists of three parts, and the first part covers questions concerning the demographical characteristics of the answerers. As for the second part, it consists of variables addressed towards determining the service quality factors. Interval scale was used for variables involved in the second part (1: Strongly Disagree, 5: Strongly Agree). The third part of the survey consists of question incorporating variable for determining the “general level of satisfaction” parameter.

The data of the research were taken in the period between May 2012 and October 2012. Data collected and collated within the framework of the research were subjected to an assessment using the SPSS 15.0 software package.

For analyzing data, “factor analysis” was performed to identify the factors that form up the perceived service quality, in addition to the regression analysis used to test and verify the hypothesis.

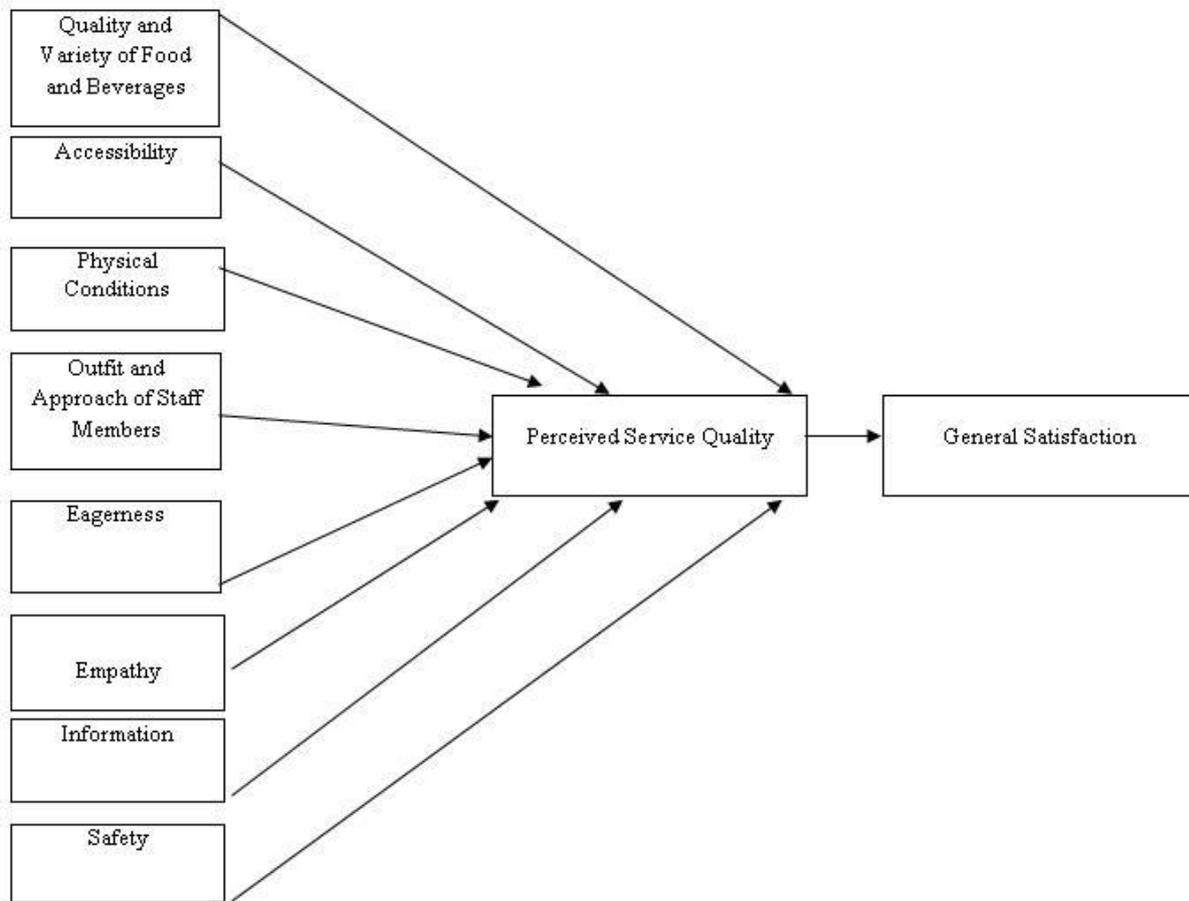
Problem of the Research

This research sought answers to the following questions:

1. What are the factors that determine the service quality perception by Bulgarian tourists?
2. Do these perceived service quality factors have any influence or impact on “general level of satisfaction” of customers?

MODEL OF THE RESEARCH

While efforts were pursued to determine whether the factors forming up the service quality perception of Bulgarian cruise tourists have any impacts on their general levels of satisfaction.



Hypothesis of the Research

The following hypotheses were developed to test and verify the objectives of this research:

H₁: The perceived service quality factors do have a statistically significant and positive impact on “general level of satisfaction” of Bulgarian tourists.

H_{1a}: Quality and Variety of Food and Beverages do has a statistically significant and positive impact on “general level of satisfaction” of Bulgarian tourists.

H_{1b}: Accessibility do has a statistically significant and positive impact on “general level of satisfaction” of Bulgarian tourists.

H_{1c}: Physical Conditions do has a statistically significant and positive impact on “general level of satisfaction” of Bulgarian tourists.

H_{1d}: Outfit and Approach of Staff Members do has a statistically significant and positive impact on “general level of satisfaction” of Bulgarian tourists.

H_{1e}: Eagerness do has a statistically significant and positive impact on “general level of satisfaction” of Bulgarian tourists.

H_{1f}: Empathy do has a statistically significant and positive impact on “general level of satisfaction” of Bulgarian tourists.

H_{1g}: Information do has a statistically significant and positive impact on “general level of satisfaction” of Bulgarian tourists.

H_{1h}: Safety do has a statistically significant and positive impact on “general level of satisfaction” of Bulgarian tourists.

FINDINGS

DEMOGRAPHICAL CHARACTERISTICS OF ANSWERERS OF THE SURVEY

Of the 102 Bulgarian tourists who have responded the survey questionnaire, 49 were female and 53 male. 68 respondents were married, while 34 were single. As regards the ages, 19 respondents were in the age grouping of 26 to 35, 32 were in the age range of 36 to 45, 36 were in the age range of 46 to 55 and 15 respondents were at or above the age of 56.

FACTORS OF SERVICE QUALITY AS PERCEIVED BY BULGARIAN TOURISTS

The respondents were asked to express their level of agreement with 22 statements, to determine the factors of service quality as perceived by Bulgarian tourists. Then a factor analysis was performed, with the dual purpose of gathering these variables in a less number of variables and identifying the factors of perceived service quality. The following results were obtained through the factor analysis:

Table 1: Factors of Service Quality as Perceived by Bulgarian Tourists

	Component							
	1	2	3	4	5	6	7	8
Factor 1: Quality and Variety of Food and Beverages								
Variety of Beverages	,928							
Variety of Foods	,917							
Quality of Foods	,910							
Quality of Beverages	,892							
Factor 2: Accessibility								
Ability to communicate with the captain		,879						
Accessibility of a responsible person when a problem is encountered		,869						
Communication of problems to higher management		,844						
Ability to communicate with the staff		,840						
Factor 3: Outfit and Approach of Staff Members								

Outfit of Staff Members			,968					
Geniality of Staff Members			,907					
Politeness and courtesy of Staff Members			,872					
Factor 4: Physical Conditions								
Cleanliness and hygiene of cabins			,956					
Cleanliness of the main deck			,890					
Cleanliness and hygiene of WC, baths etc.			,885					
Factor 5: Empathy								
Intuitive knowledge of the requests and needs of customers				,948				
To perceive the problems of passengers as if one's own and act accordingly				,937				
Factor 6: Information								
Information on services to be provided and daily schedule					,933			
Information on possible irregularities					,914			
Factor 7: Eagerness								
Treating Customers so as to make them feel Self-Worthy						,912		
Staff Members' Desire to Serve						,908		
Factor 8: Safety								
Navigation Safety								,858
General Security								,838
Kaiser-Meyer-Olkin Measure of Sampling Adequacy: 0,655								
Bartlett's Test of Sphericity: Approx. Chi-Square:1903,702; df: 231: Sig. ,000								
Croanbach'Alpha: 66,7%								

During performance of factor analysis for identifying the factors forming up the perceived service quality in cruise tourism, the perceived service quality was explained with 8 factors with a total variance of 87,4%.

According to Table 1, these factors were named as "quality and variety of food and beverages", "accessibility", "physical conditions", "outfit and approach of staff members", "eagerness", "empathy", "information" and "safety".

REVIEW OF ANSWERS PROVIDED TO VARIABLES OF GENERAL LEVELS OF SATISFACTION

Below provided are answers provided by Bulgarian tourists to variables concerning their general satisfaction levels.

Table2. General Satisfaction Level of Bulgarian Tourists on Small Boat Cruise Voyages in Turkey

	Frequency	Percent
Very Unsatisfied	-	-
Unsatisfied	13	12,7
Neither Unsatisfied Nor Satisfied	17	16,7
Satisfied	32	31,4
Very Satisfied	40	39,2
Total	102	100,0

A review of Table 2 suggests that %12, 7 of Bulgarian tourists responding the questionnaire is unsatisfied, 31, 7 % of is satisfied and 39, 2% of is very satisfied with the services provided in small boat cruise voyages in Turkey.

IMPACT OF PERCEIVED SERVICE QUALITY FACTORS ON “GENERAL LEVEL OF SATISFACTION” OF BULGARIAN TOURISTS

A regression analysis was implemented to determine whether perceived service quality factors on “general level of satisfaction” of Bulgarian tourists as obtained and named through the factor analysis has any impact on “general satisfaction level”. According to the model summary of the regression analysis, the eight service quality perception factors as identified at the end of the factor analysis explains 44% of the rate of change in the “general satisfaction level”, which is a dependent variable. Furthermore, the relationship between variables is significant at a confidence level of 0.05, according to the results of variance analysis performed.

The table of regression analysis coefficients for the impact of perceived service quality factors on “general level of satisfaction” of Bulgarian tourists is as follows:

Table3. The Impact of Perceived Service Quality Factors on “General Level of Satisfaction”

	B	Std. Error	Beta	t	Sig.
(Constant)	3,873	,058		66,568	,000
Quality and Variety of Food and Beverages	,409	,058	,543	6,994	,000
Accessibility	,080	,058	,106	1,372	,173
Outfit and Approach of Staff Members	-,013	,058	-,017	-,222	,824
Physical Conditions	,240	,058	,318	4,100	,000

Empathy	-,097	,058	-,129	-1,664	,099
Information	,005	,058	,006	,080	,936
Eagerness	,048	,058	,063	,813	,419
Safety	-,083	,058	-,110	-1,422	,158
R:0,663; R ² :0,440; ANOVA: F:9,140: Sig.0,00					

According to Table 3, it is apparent that quality and variety of food and beverages, and physical conditions components of the perceived service quality factors have a statistically significant impact on general satisfaction levels of Bulgarian Tourists on small boat cruise voyages in Turkey, within a confidence interval of 95%. Based on this result, the hypothesis given in H₁ is acceptable for quality and variety of food and beverages, and physical conditions components.

CONCLUSION AND DISCUSSION

Provision and delivery of quality service is synonymous with meeting at the highest levels attainable and exceeding the customers' needs requests and expectations. In order for boat tour enterprises to offer services with quality beyond the tourists' expectations, they need to know the basic factors of service quality and the actions they must carry out to deliver high quality services. In this research, factors of service quality perception of Bulgarian tourists were identified in a count of eight.

Of the factors we obtained through this research, "quality and variety of foodstuffs and beverages" denotes the variety and quality of food and beverage products served at cuisine of boats. The analysis performed within the framework of this research shows that "quality and variety of food and beverages" have a statistically significant and directly proportional impact on the general satisfaction level of Bulgarian tourists. For instance, the most valued items or Bulgarian people in time of breakfasts include coffee, white cheese, black olives, jams and loose leaf teas, they prefer to have soups, roasted meat and salads rich of olive oils, tomatoes, onions and cucumbers in lunches and dinners.

The "physical conditions" factor, on the other hand, explains the physical look and aesthetics of the environment formed up by the service. Through the analyses, the physical conditions of the boats were found to have a statistically significant and directly proportional impact on general satisfaction level of Bulgarian tourists. This finding suggests that cleanliness and hygienic conditions of boat's cabins, main decks, sunbathing places, other common areas and cuisine is highly important to Bulgarian tourists.

This research establishes links between certain theories and approaches, for making a theoretical contribution. It is that the perceived service quality factors do have a statistically significant and directly proportional impact on general satisfaction level of customers. This finding shows similarities with the other research reported in the literature. In example, it was demonstrated that consideration of holiday or vacancy as fun had both a directly and indirectly proportional impact on prospective behavioral intentions of travelers taking tours on ships, through their general satisfaction levels (Duman, 2003:160-178). Petrick (2004) tested three competing models for predicting behavioral intentions and found that although all three factors (quality, value and satisfaction) directly influence repurchase intention, quality indirectly affects repurchase intention via the mediators of satisfaction and value.

As the perceptions of tourists about the quality of service they receive tends to incline towards positive, their levels of satisfaction also tends an increase towards positive, that is, their level of satisfaction from the services provided increases. Likewise, increased positive perceptions about quality of service and levels of satisfaction have positive reflections on behavioral intentions of tourists, as well. The incremental changes in service quality perceptions and levels of satisfaction may also have a positive influence on the intentions of tourists for choosing the cruise enterprise / boat that previously served them again and/or for recommending it to friends, mates and family members.

In conclusion, it can be said that care should be exercised to offer higher quality food and beverages in more varieties compliant with Bulgarian culinary culture, providing higher quality and more diversified food and beverages, clean and hygienic conditions, as well as to perform work with full heart and deliberation, carry out activities centered around customers, to establish empathy and sense problems intuitively before they happen, while remaining to be kind and genial, to increase the quality of service for Bulgarian tourists. Achievement of all the above can be assured only through hiring and appointing workers in possession of knowledge and experience necessary for meeting or exceeding the expectations of the Bulgarian tourists. At this end, boat enterprises which intend to choose Bulgarian tourists as a target market are encouraged and advised to develop strategies and policies for structuring of their service quality and customer relations, having due regard to the resultant findings of this research. Accordingly, some assurance can be obtained for repeated preference of a particular enterprise, through strategies and polices to be developed.

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**NEW DIRECTIONS FOR IMPROVING THE COST CALCULATION
BY USING EVALUATED COST CALCULATION METHODS**

Luminita Nicoleta Popescu (Costache), Camelia Georgeta Uta (Constantin)

University of Craiova,

Faculty of Economics and

Business Administration Craiova, Romania

Abstract

In the current economic and social landscape of our country, marked by the gradual installation of the free market mechanism, the affirmation of new rules of the game, the mentality of the electrotechnical industry as companies and their working methods require a radical change. To be able to survive, but also to conduct a profitable activity in specific competition conditions of the market economy, enterprises in the electrotechnical industry must be responsive to external environment requirements, have a high capacity to adapt to the changes, flexibility of the operating mechanism. Therefore, all their activities must be planned and carried out basically in a new view, where the calculation of the costs and cost calculation methods must have a pivotal role. Improvement of involves the adoption of management accounting methods and techniques of budgeting, tracking and costing allowing simplicity, efficiency, economy, forecast, all accompanied by increased quality results. Created value by improving management accounting techniques and procedures must compensate broadly resources we use or consume.

Key words: cost, calculation methods.

Management accounting takes into account a broad information spectrum, ranging from primary information based on a "simple" cost calculation, to managerial decisions essential in the activity of a company such as "make or buy". If at first glance, management accounting is susceptible to be even regarded as a facultative "annex" of financial accounting by a less circumspect user, given that under the Romanian laws, "the manner of organizing the management accounting is up to each company", knowing the benefits generated by the proper use of specific techniques and methods is an important advantage to for any competitor in the of production or services field.

The management accounting is required to meet the information requirements of decision makers. Meeting these requirements depends on the method of calculation chosen, on how this method is oriented or not towards the principle of the effective conduct of business. In its evolution, business thinking, meeting the requirements of practice, established and improved in time several cost calculation methods, with various information possibilities oriented towards the different needs of decision makers.

The permanent increase in the business efficiency and the requirements of the company management under the market conditions, determines the need to improve the cost calculation methods in such a way as to increase their role in the substantiation of current decisions and for the improvement of technological processes de, etc. This concerns the need to increase It seeks managers need to increase the efficiency of the data supplied to managers, increasing the information content concerning the costs

in terms of determination of efficiency indicators required for the scientific management of the business, improving the manner of distributing indirect costs using appropriate criteria, etc.[6]

Given that cost has various meanings for each phase or technological operation, for each cost-generating place and for each product information allowing for its multilateral knowledge is required at each management level. In this respect, in order to get conclusive information, cost calculation should provide information ensuring:

- The cost control and analysis at each cost-generating place;
- The operational management of each cost-generating place, specifying the forecast production and costs and the control of their achievement;
- The correct evaluation of the stocks of products;
- Determining the efficiency of the actions performed based on the decisions made.

Consequently, in the cost area, the efficiency of the information is essential because, if the costs are known after the product was manufactured, the information in question has only a mere ascertaining effect and can only serve to obtain potential long-term forecasts. The efficiency should be such that any uneconomical expense should be detected before it is incurred. We can thus generalize information and preventive control over any manufacturing expense. At the same time, cost calculation will become provisional, which is a big requirement for solving problems related to the introduction of new technological processes, for the manufacture of new products, etc.

The process of the improvement and diversification of the cost calculation methods must be based on these real needs. The main purpose of the development and diversification of the cost calculation methods is to make them more operative and more efficient in the supply of the information necessary to the management in order to make decisions. However, this is not possible without using a good computer system. The use of information systems using databases provides the user with information characterized by accuracy, timeliness, relevant and accessible forms of presentations, high value knowledge and decision structures depending on the decision level to which they are dedicated.

Thus, by highlighting the classification of expenses not only according to their economic nature but also according to their purpose and especially according to their changes compared to the workload (depending on which company costs are divided into fixed and variable), bigger possibilities are created for the analysis of the results, the control of the activity on each responsibility centre, establishing the influence of each type of expense on the cost in order to make reasoned management decisions.

Faced with the new economic and technological restrictions and opportunities of the global environment, the company seeks to satisfy its customers in order to preserve and develop its market share (flexibility) and at the same time looks into the minimization of its own costs (productivity).

Companies are therefore in looking at a system of objectives:

- Improved quality;
- Increasing adaptability;
- Reducing deadlines;
- Reducing costs.

The other two goals that were conflicting in the past - productivity and flexibility - become simultaneously compatible nowadays thanks to technological possibilities and performance of the machines.

The dilemma "TO BE PROFITABLE"- with major product series, in order to achieve large economies, nevertheless with homogeneous products, that are not agreed by all customers, or "TO BE CLOSE TO THE CUSTOMER"- but with specific products which are expensive and unprofitable, due to the fact that they are manufactured in small series - no longer exists. Flexible technologies and new ways of organizing production allow for the manufacturing of small profitable series that can satisfy any customer. Electronic equipment and CNC machines provide significant flexibility. In fact, production can be done in small batches to meet the specific needs of individual customers remaining profitable anyway, because the flexibility of the tools allows for the elimination of losses and for lower costs.[4]

The new strategic orientations that meet this context are:

- The development of products that constitute value for the demand (utility, quality, service);
- Providing flexibility in production, organization and human resources to adapt to any rapid market developments;
- Achieving simultaneous cost reduction and quality improvement.

These developments necessarily lead to changes and adaptations of the management tools and management control: the increasing use of advanced cost calculation methods.

Choosing the most appropriate method of organizing expense bookkeeping a number of issues related to specifying the categories of carriers, the calculation unit, establishing analysis centres, forecasting techniques, monitoring and control, specifying the documents system and their preparation and circulation criteria.

Worldwide, both in the literature and in the economic practice of the developed countries the advanced cost calculation methods are widely spread, starting from the fact that the calculation of the full or total costs has become powerless compared to the tasks of controlling the economic efficiency of the entity and the decision-making. Traditional cost calculation methods become inefficient because the information supplied late does not allow for the correction of the phenomena that disturb the managed system. By using the traditional calculation cost methods, the cost control is reduced to comparing the actual production costs of a reference period and inferring what may arise from this comparison. In this situation it is difficult to draw precise conclusions because there is no standard to allow for a distinction between normal and abnormal.

There are a number of advanced cost calculation methods allowing for the comparison of the actual cost with the pre-determined one, exercising an analysis of the deviations and a control that allows for making effective decisions with effects on the final results of the entity. Among these there is the Target-Costing method.

In the contemporary period, which is crossed by radical changes worldwide and in a competitive business environment where prices are set by the market under the pressure of the competition or by the aggressive policy of the management of an entity concerning the penetration of a targeted market segment, the *Target Costing* method sets a new pace in cost management, encouraging management accountants to adopt and implement it in order to solve the above-mentioned problems.

In the literature, most specialists approached the Target-Costing method from various points of view meant to highlight the advantages or disadvantages of its use. Worldwide, this method was very carefully

studied, especially by CAM-I, whose results have been published and who prove the actual utility of this method towards the continuous cost reduction, together with Kaizen Costing.[3]

Therefore, according to the definition given by CAM-I Target Costing is “a set of management tools and methods designed to direct the design and planning for new products, which provide a basis for subsequent exploitation phase control, and ensuring that their products achieve their goals of profitability throughout their life cycle.” The purpose of the Target Costing method consists of identifying the production cost for the monitored product, so that, when this product is sold, the desired profit margin is generated.[2]

Target-Costing is a method of setting the prices used by the companies. This is defined as "a cost management tool for the reduction of the total cost of a product throughout its lifecycle, by means of research in production, engineering, research and design".[5]

Target-Costing involves setting a target for lowering costs to a desired profit margin with a competitive price in the market.

A lengthy but complete definition is "Target Costing is a disciplined process for determining and achieving a full-stream cost at which a proposed product with specified functionality, performance, and quality must be produced in order to generate the desired profitability at the product's anticipated selling price over a specified period of time in the future."[1]

The Target-Costing method is part of a strategic managerial approach within which each cost carrier is analysed throughout its life cycle.

The implementation of the Target Costing method in an entity is a major change that will affect not only the internal organization but also, the future thinking of all those involved in its smooth running.

The target cost or the objective cost is a cost management concept used and developed in Japanese companies, especially in the automotive industry, ever since the 1970s. This new cost-target concept is based on the following major changes:[4]

- the need to produce smaller series of products in order to better adapt to the market needs;
- the introduction of new methods of organizing production (Just In Time operating system);
- the implementation of technologies based on automation (the CIM Computer – Integrated – Manufacturing - Systems).

On the other hand, target costs are based on the rule according to which the market, not the company costs, is the one that dictates sale prices, so the value-price-benefit-cost analysis must be monitored.

This method is in line with preparing budgets and forecasts for a longer period of time. Basically, it starts from the idea that costs and results are generated throughout the entire life of the product.

The target – costing method is a method that links the company or the enterprise, the market and thus competition and the long-term strategy of the company, strategy to which each product contributes in one way or another (influences generated throughout the entire life of the product).

The objective of the target method - costing was formulated as follows: “to improve the situation of the results related to the product by a reduction if the standard costs towards target costs consistent with the competitive situation”. In theory, the objective of target – costing is based on the following principles, as follows:

- The analysis is made the entire life of the product, because it is shown that approximately 80% of the costs of a product are engaged even from the product design stage.
- The result is pursued throughout the entire life of the product because, usually, in the first years of life of the product after its launching higher costs are generated and, thus, lower or even negative results. However there must be a capacity to fund losses.
- The cost of the product set as a target cost is calculated, determined Starting from the market (the market price) towards the company, taking into account a desired or accepted profit margin.

$$\text{Target cost} = \text{Market price} - \text{Profit margin}$$

- The market price is established by the market, so it cannot be modified because it is given by the competition.
- The profit margin is usually an average margin of the respective business sector.

The margin may be reduced, but has implications for the subsequent strategy and development of the company.

In the literature, scientists have identified the following general steps underlying the use of the Target Costing method:[6]

- **Setting the target price.** In principle, the target price is set by study techniques and concerns the entire lifetime of the product. Consequently, it has a strategic determination, a dynamic nature and takes multiple forms and levels in relation to the market segments and the evolution of offer and demand in time.

- **Setting the target profit.** This determination stems from the medium-term strategic planning of the company and from its product portfolio at the horizon. Therefore, the size of the target price is not a fixed amount but a profit curve depending on the product lifecycle simulated by the financial analysis, the expected profitability of the product and taking into account the assumptions concerning the sales volume. The preparation process is interactive and therefore, it should not be perceived as unique and linear. While profits estimates are global and approximate at the beginning of the processes, they become more precise and more reliable if the features of the future product are clearly defined.

- **Setting the target costs.** The target cost is deducted from the previous calculations by simple subtraction. The assessment is not made at global level but analytically on types of partial target costs depending on the product components and subassemblies, as the breakdown can be done with two main families of methods:

- *the organic breakdown of the product* on subassemblies taking into account its physical structure. This method is based on knowing the current costs of the components and the capacity of the company to manufacture them. It involves a continuity in preserving the existing techniques, but also an adjustment through innovation concerning the product characteristics;
- *the functional breakdown* based on the analysis of the product, taking into account the repeated needs of the customer: every function is a customer need that the product must

meet. This method is based on the needs of the customer and of the market; the target cost means what customers are willing to pay for all the services they expect from the product.

The target – costing method is a method that links the company or the enterprise, the market and thus competition and the long-term strategy of the company, strategy to which each product contributes in one way or another (influences generated throughout the entire life of the product).

From the analysis of these methods a few defining features for the target – costing as follows:

- target–costing is a unitary and closed oriented towards the product;
- the functional analysis of the costs (how much the value of the product costs to cover as many functions as possible) until the substitution analysis (what product can do the same thing but with lower costs or with a better provision of the functions);
- the orientation of the product towards customers' requirements, the customer expects a certain ratio between the price and the operational capacity of the product, and the manufacturing company needs to focus on the requirements. Therefore, in order that the company may sell its future product, and get a certain profit at the same time, a value analysis or engineering process is necessary from the strategic point of view in the product design phase on the price - profit - cost route.
- Ensuring the competitive capacity instead of quick savings. The strategic cost management should aim the competitive capacity, not the quick saving effect. The company should not aim the issue of the mere saving, but on the contrary, obtaining a cost advantage compared to the competition.
- kneading costs in an early stage of the product creation process.

In doing so, are problems and special interests identified and solved, potential conflicts between the objectives are discovered in time, and in this way future costs of changes or delays in the promotion of the product on the market are avoided.

In conclusion, we can highlight some of the main features of the target-costing method:

- It is viewed as a management tool to reduce costs throughout the product lifecycle;
- is a market-oriented costing method, based on the rule that the market is the one that dictates selling prices and costs not the companies;
- The fundamental equation is: “Target price - target profit = target cost”;
- it involves a team of specialists from different departments of the company who are responsible for determining a sale price acceptable by the company, as well as for the identification of the possibilities to reduce the cost, in this latter case the members of the involved team start by eliminating all the costs that do not generate value, and by improving the design of the product and by changing the manufacturing methods.

Consequently, we can say that this method is consistent with budgeting and forecasts for a longer period of time. Basically, we start from the idea that costs and results are generated throughout the entire life of the product.

Finally we can say that the *Target Costing* method involves a major change in the mentality of many industrial entities in Romania, of the managers and management accountants accustomed to operate in a business environment that accepts the regular price increase in the previous years.

These industrial entities, including those in the electrotechnical industry, are the most affected by the increase of the pressures at global level and the competitive environment in the meantime could respond faster to the approach and benefits provided by the *Target-Costing* method.

These entities that do not seem to be affected can fall or react as fast as possible, by obtaining benefits from previous planning of costs and especially of managerial costs, or by studying their impact on the profitability and on the position on the market.

The main reason for adopting the *Target-Costing* method consists of using it for planning or designing the costs of the products before placing them into production, and in ensuring that the products whose margins generate insufficient profits are not placed into production.

Therefore, the improvement of management accounting requires the adoption of methods and techniques of budgeting, tracking and costing enabling simplicity, efficiency, economy, forecast, all accompanied by the increase of the quality of the results. The value created by improving the management accounting techniques and procedures should however largely compensate the resources it uses or consumes.

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WHEN USE MEETS CONTENT GENERATION: THE CASE OF WAZE

Marco Tregua, Claudia Casbarra

Department of Business, Management, Institutions

Università degli Studi di Napoli Federico II



Abstract

User-generated content is a topic linked to service logic and it can be examined through user's motivations and participation. New technologies lead to a more inclusive participation of users, facilitating democratizing innovation of services. Our aim is to categorize users thanks to the analysis of their behaviour in using a free social navigation app forum, Waze, that is completely powered by users.

Netnography is the suitable method to investigate community. Our research took place for six months, by collecting users' interventions and by analysing them to understand their motivation and their level of participation. We put the analysed users in a matrix achieving four different categories and the emerging profiles. The outcome of our research can add a contribution to user-generated content literature and it provides an insight about the way in which firms can create and manage sharing and participative contexts.

Key words: *user-generated content, service logic, value creation, co-production*

1. INTRODUCTION

Customers are gaining a more important role compared to the past, especially in activity performed in direct connection with firms and other users. In this context the contribution of a customer has to be analysed in a new way. In detail it is necessary to focus on the way in which new activities take place and moreover on the reasons why consumers started collaborating with firms in a new perspective.

One of the results arising from the new activities performed by customers is user-generated content. This result is common in more and more industries, as new technologies are allowing an easier and faster way to connect consumer to firm's process. What is the role of customers in this new perspective is not still defined, as scholars are divided in considering them just as consumers or as volunteer workers. Moreover it is necessary to define the features of the activities performed by customers, as they are so different leading to its consideration as user because of the wide range of activities performed. He is no more thought just as consumer. In detail he support firms and other consumers by using resources. This support was defined in lots of ways and co-production is one of them, especially for user-generated content. The notion of co-production in relation to value creation and co-creation has been defined in contrasting ways, so new investigations are needed to better frame the consumer behaviour and parallel to this to clarify the concept in literature.

2. THEORETICAL BACKGROUND

Service logic is one of the most recent topics in marketing and management leading to a new perspective. This new vision has been introduced by different authors (Vargo and Lusch, 2004, Grönroos, 2006) and during its development scholars recognized the importance of earlier contributions by authors from the previous century (Alderson, 1957, Penrose, 1959) or in recent years (Normann, 2001). The service logic represented a shift from the old logic named goods logic. The two logics are different one each other for some reasons. The first one to be considered is the concept of value and in detail, value-in-use and value-in-exchange. The main concept for goods logic was value-in-exchange as value was referred to as embedded in goods and people were considered as buying goods as they are, while in the service logic approach, people purchase goods for the services they can obtain thanks to them (Grönroos, 2006). This concept leads to one more difference between the two logics, as service is not referred to as the provision of an activity by a provider to an actor, but as the activity performed by an actor after buying something from a firm. In order to perform an activity it is necessary to combine resources bought from the supplier, resources already owned by the customer, and customers' skills to let value emerge. Following to this the two values are connected one each other and interdependent and this relation was stated even before service logic bloomed. In particular, value-in-exchange depends on value-in-use, because if a customer perceives value-in-use he will be interested in taking part in an economic transaction in which the value-in-exchange emerges (Ravald, 2001).

After considering the new vision about goods and services it is necessary to take into account the way in which value arises. The condition to let value emerge is the interaction, because thanks to it, firms and customers can act together to combine resources (Prahalad, Ramaswamy, 2000). In some cases this perspective lead to two different models for the firm: the value facilitation model and the value fulfilment model (Grönroos, 2006, Grönroos, Helle, 2010). In the first case firms just facilitate customers in their activity to create value, because they provide the platform where resources and skills will be mixed. Interaction plays a crucial role and only by considering it, value can be created. The value creation can happen with the customer on his own or together with the firm. Grönroos (2011) states value creation happens when an activity is performed by a customer, while value co-creation does not, as it depends on the process involving a firm and a customer together. In detail the idea in the first model had been presented by Grönroos (2011) as "solo creation" and changed in "independent value creation", in order to better underline how customer is creating value on his own.

Customers' role has been modified and redefined thanks both to this new perspective and the fruitful usage of new technologies, shaping the above cited platform. As it regards these latter, a customer can easily interact with a firm. Prahalad and Ramaswamy (2004) underlined this new form of interaction in a model, known as Dart model. In this model the elements used to describe the new way in which firms and customers interact are: dialogue, access, risk assessment and transparency. Dialogue is the necessary process to interact and it is based on knowledge and idea sharing. The relationship is based on mutual trust. Access is the availability of information in order to involve people in the activities requested to let value emerge. Risk assessment is the evaluation of the risk and the necessity to give consumers all information about the possible risks. Finally the transparency is needed to decrease the gap between a firm and a consumer about information. Thanks to technologies the interventions to reduce this gap are easier than in the past. On the basis of the features of the model and of the achievable result, firms have to be rethought and built around the customer in a *customer-centric perspective* (Galbraith, 05).

In service logic literature two more concept arose: co-creation and co-production. This latter had already existed before service logic appeared. In particular Ackoff (1972) defined co-production as the activity performed by an actor (called co-producer) together with a firm to accomplish value creation through a

specific output. Whitaker (1980) and Wikström (1996) considered it as an activity in service provision in which consumers act with firms to receive a service. These two authors applied respectively this notion in private services business and in public agencies activities. One more contribution by Piller et al. (2004) remarked co-production activity as taking place when a service is designed together with customers. They even verified this activity with an empirical approach and they have been able to highlight consumers higher willingness to pay for the products after being involved in co-production. Even if scholars used the same notion, they don't share a common perspective on the two concepts, as sometimes they have considered them as synonymous or at least similar, someone else defined co-production embedded in co-creation and some other contributions analyse them in comparison as different one another. Normann (2001) stated co-producer role can be assigned both to customers and firms, because it depends on different actors operating in the same time to create value. While Bendapudi and Leone (2003) classified customers as co-producer since first supermarkets started their activity; this vision had been similarly introduced by Lengnick-Hall (1996). Some other scholars (Etgar, 08, Ordanini, Pasini, 08, Lang et al., 09) just considered co-production as a synonym for co-creation. The third possible perspective is expressed by Vargo and Lusch (2006) explicitly defining co-production as a part of a whole called co-creation. This vision was shared in another contribution (Frow et al., 2010), where co-production was just thought as co-design, co-promotion, co-outsourcing and so on is one of the possible way to define co-creation. The same concept is presented in a stricter sense when co-production is considered as a way to transfer knowledge during co-creation activities (Mahr et al., 2010).

A plain comparison between co-production and co-creation has been done by Grönroos and Helle (2010) when defining the different areas of the process leading to value creation in the time. They stated the first area is *value facilitation*, consisting of a firm providing resources. Then *value co-creation* occurs in the moment in which a customer and a firm jointly create value thanks to interactions. Finally the *soft value creation* takes place when the customer perform activities alone, by using resources provided and the ones in his possession. The central part of the model is value co-creation; when a customer is in relation with a firm to actively participate to the process in which the firm is in charge to produce, customer's co-production happens. This vision is confirmed by one of the two authors when at a later and more recent stage (Grönroos, 2011) he focused on the role of a customer in co-creation. In particular, the customer is considered as "*engaged in the firm's process as a resource in the production process*". In a similar way the firm is seen as a resource in the customer's value-creating process.

As user-generated content is often consider as a production activity related to new content, it is relevant to focus on one of the different above cited perspectives. In this paper the co-production is considered as different from co-creation. From this choice a research question will emerge as we want to understand in which way co-production and co-creation can be considered together in this context, in particular by considering user-generated content as a form of production or co-production and taking into account the usage itself to show if a platform, a community or a service can be considered both for co-production and co-creation.

Following to this new vision customers are experiencing a wider role, considered as workers (Cova, Dalli, 09), partial employees (Dholakia, Blazevic, 09), advertisers (Berthon et al.,08), designers (Battarbee, Koskinen, 2005), developers (Jeppesen, Molin, 04), innovators (Chang, Kaasinen, 2011), and so on, leading to the wider definition of customers as users. Customers can be considered as potential innovators if they can act after a properly involvement. Namely customer is defined by Kanstrup and Christiansen thanks to the shift of the role "*from a victim who needs support to a valuable source of inspiration*" (in Chang, Kaasinen, 2011). The concept of use is just linked to the resources used by the customers in the activities to be performed to achieve value creation. The dichotomy between these two terms still exists. Thoroughly they are important when talking about the result of the activities performed

in new high-technology setting. Scholars defined this result as user-generated content (UGC) or customer-generated content (CGC). New technologies act as enablers to let users be active in creating value (Obrist et al., 08). Websites support the creation, sharing, and deployment (Blythe, 09) of such a kind of contents. User-generated content still existed before web 2.0 spread it in a larger way (Kaplan, 10), with a strict connection to customer participation online. Scholars stated (George, Scerri) web 2.0 empowered the UGC and presented new challenges to all actors moving around it. The Organization for the Economic Development (OECD) defined (2007) UGC and CGC as “*content made publicly available over the internet*”. This explanation is criticized (Cha et al. 2007), as sometimes contents are just available for the ones belonging to a community. OECD tries to frame UGC, by defining it as “*one of the main features of this so-called participative web*” (2007). The statement is deepened when it is stated consumers have just been the perceivers, whilst now they are directly acting. This notion can be even confirmed by looking at another academic field. In fact journalism industries often benefit of similar activities (Nilsson, 2010), especially to favour the diffusion of news from a local level to a national or even international level. This context is useful to underline UGC is produced for an unpredictable amount of people (Stoeckl et al. 2007). Contributors to UGC are considered even in a stronger way when Muniz and Schau (2011) defined them as *fans* instead of consumers. The achievement of the status of fan for consumers represents a great advantage for firms, as they can involve them in brand communities. These communities can be created and managed by firms or they simply appear spontaneously. In this last case Prahalad and Ramaswamy thought (2004) has to be taken into account again, as they stated customers behaviour in spontaneous community are not self-censored. In this way the results achieved can be better. The definitions of UGC and CGC appear contrasting in some way, but this comparison is not so stressed in literature. The approach to this difference can be based on the role of customer and moreover on the definition of user. Nowadays the user concept seems to be more accepted as there are lots of cases in which an actor uses resources apart from buying processes. In particular the consequences of value creation activities performed by firms and customers together are several and different one each other. Moreover they are not directly linked to service provision. Uniqueness (Prahalad, Ramaswamy, 2004) was one of the concepts considered as a precursor of service logic, because the results of interaction are considered as *unique*. Following this firms’ matching part cannot be only defined as customers, but they can be considered as users (Cowe, Williams, 2001, Shaw, Shiu, 2002).

From this perspective the term user can include consumer, as the consumer has to use resources in order to reach an aim through value creation. The term user is often intended as “*consumers, readers, purchasers, and audiences*” (Lastowka, 2008). Some academic contributions addressed to users in two different ways on the basis of the role they played in the context in which they are. Users are classified in *lead users* and *ordinary users*. These two possible definitions are shared in several contexts, viz. journalism (Hermida, 07), tourism (Akehurst, 2009) and politics (Sarmiento et al., 2009). The participation of both kinds of users allow the generation of new contents, useful to decrease users uncertainty (Daugherty, 2008) and Williams stated it can improve firms performance (in Hermida, 2007). In connection with this last effect, users are generating content as volunteer for firms (van Dijck, 09). Users’ contributions lead to common benefits and even if they are voluntarily taking part to a community, the debate is open on their awareness (Schatzki, 1996, Korkman, 2006, Raval, 2009, Cova, Dalli, 2009) of their contributions for the firms. By the way the missing wage is not leading to the total absence of benefits, as users participate for different reasons. Namely the reasons are: esteem, play, efficiency, excellence, status, esteem, play, aesthetics, ethics, and spirituality. Parallel to this Dahl and Moreau defined seven different reasons leading to actors participation: competence, autonomy, learning, engagement and relaxation, self-identity, public accomplishment and community. Several motivations are referred to even in Roberts et al.(2006) research in online contexts. They stated contributors’

motivations can vary subjectively, but they affects participation. In the past Katz et al. (1973) too defined needs leading to participation as cognitive, affective, personal integrative, social integrative, and tension.

The achievable results themselves are a motivation to keep going on with the collaboration. In detail, the emerging context is perceived as attractive and consumers are encouraged in producing, designing, publishing and so on (Krishnamurty, 2008). By the way their participation can be hurdled by three reasons: lack of interesting, low quality content, low usability (Obrist et al., 08). Moreover Lenders (2008) suggested UGC value as higher if “*spatial and temporal properties can be verified*”.

3. RESEARCH QUESTIONS AND AIMS

Starting from literature review, we aimed at a deeper understanding of the reasons why people participate in a community in co-production activities. In line with this aim we want to depict the role of users inside a community, taking into account the activities performed, the motivations and their behaviour in online contexts.

On the basis of these consideration, our first research question can be summarized as it follows:

“Why users participate to communities? And which are the features of their roles?”

Moreover we want to better understand the linkage between co-production and use activity. In detail, in literature there are different perspectives about these two topics and particularly when scholars define co-production and co-creation. User-generated content plays a fundamental role in this dichotomy and scholars underlined the call for a research on it (Obrist et al., 2008)

As a consequence of what we have read from literature, our second research question is:

“What is the link between co-production and use?”

4. RESEARCH METHODOLOGY AND CONTEXT OF ANALYSIS

The research is based on netnography, as we decided to describe an online community, namely the online forum of a free navigation app called Waze and available on smartphones and tablets. This app is free of charge to download and can be used as a navigation software while driving to receive, spread and integrate news and data about traffic conditions, both live and stored ones. In addition it is interesting to understand how it can be suitable for a research on co-production as this app lets users act as programmers or developers, as they can modify maps or propose new features to be offered. In the choice of the case study to be analysed we moved the first step of the research in line with the excellence case suggestion by Yin. We can define Waze as a top case as it is the most rated and downloaded free app, as analysed from data published on app store websites and consumers forums. Moreover research on the tie between user-generated content and apps is encouraged in literature to better understand how it works and because of the huge amount of information passing on apps to generate new contents (Dhar, Chang, 2009). As we decided to define the features of the community behind Waze, we set up a netnography on the basis of Spradley (1979) and Kozinets (2002) studies. In detail Spradley analysed and presented ethnography as a research methodology emerging from anthropology. It can be applied by taking part of the context to be analysed, starting from understanding it, its language, its features and then analysing the people in it, just by observing them or by interviewing them. Recently Kozinets (2010) framed netnography as the usage of ethnography in an online context. Following its suggestions as it regards this kind of investigation, we aimed to the analysis of users behaviour in an online context.

In order to do this we both started being part of the community, without influencing it but trying to understand its mechanisms, the most common expressions and finally the way in which people interact. In an online community and even in this one, people can just take a look to the forum, or they can answer to discussions started from someone else or they can even start a discussion themselves. We focused on these possibilities to describe a first characteristic of Waze community users, known as *wazers*. With this aim we classified users on the basis of the way they participate to community. In order focus on this aspect we studied *wazers* behaviour for six months. Everyone taking part to the community in this period has been taken into account in our research. By acting in this way we created a list of 376 users. Meanwhile we wanted to focus even on the content of the posts aiming to deepen users' motivations in taking part to this community. A similar approach has been used to study community and interactions (Brodie et al., 2011).

Netnography methodology suggests, we need to build categories to classify users, so we set up a matrix based on two variables. The first one is the way of participation, as introduced some lines above. This aspect is defined in our vision as a ratio deriving from the number of discussions (or topics) started and the total number of messages posted in the forum. This feature of their behaviour was subsequently considered as high or low. Then the second variable is considered as the intended beneficiary or beneficiaries of the discussion. By reading all posts starting a discussion we classified posts as "for self" or "for others". Even from this variable two categories emerged. So the matrix has been set up as a 2x2 model and used to collect data.

		“For who”?	
		<i>For others</i>	<i>For self</i>
“in which way?” (Participation / initiative)	<i>High opening ratio</i>		
	<i>Low opening ratio</i>		

The analysis has been performed in relation with all users taking part in the interactive processes of the community in the semester above cited. From our analysis we excluded people posting messages in languages different from English, French and Italian. We didn't consider topics written in other languages, like German, Spanish and Polish. Moreover users with no discussions started were not part of the analysis. In this way the users analysed decreased to 270. So in collecting information for our research we analysed more than 3800 starting posts of different discussions in Waze community.

5. RESULTS OF THE ANALYSIS AND DISCUSSION

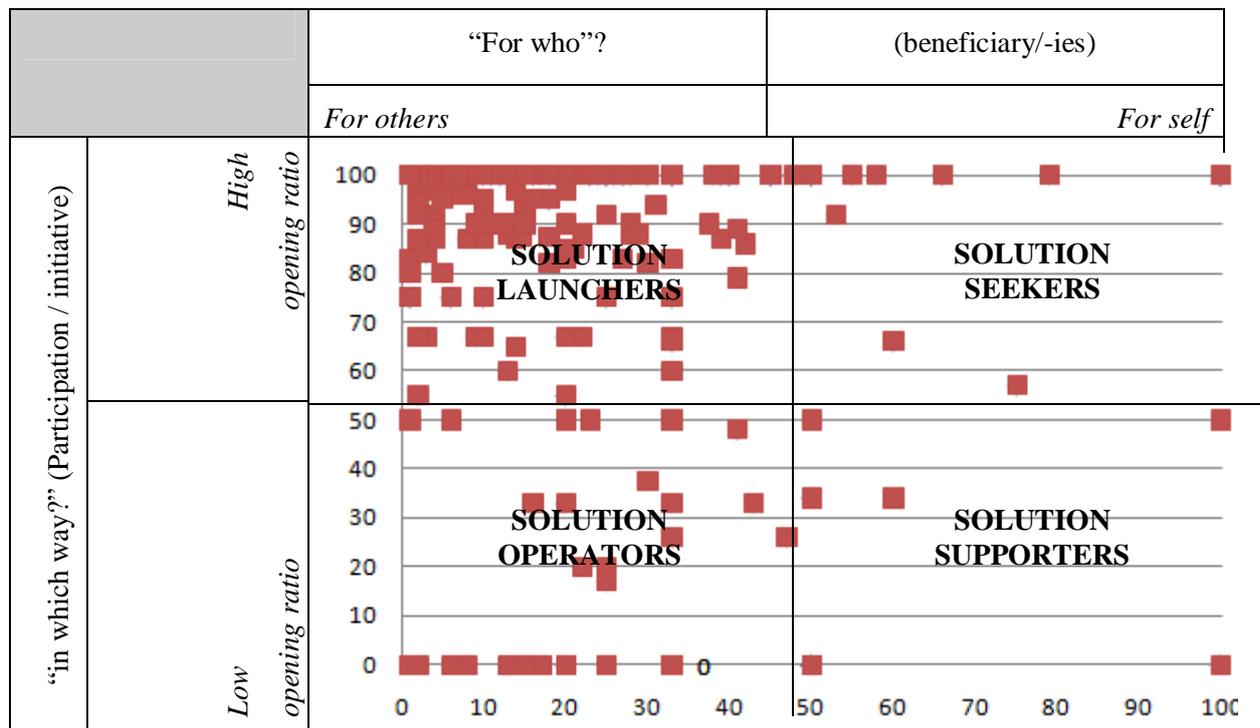
The results of the analysis allowed us to define four different profiles emerging in line with the four categories of the matrix.

The first category is connected with an high percentage of discussions opened compared to the total amount of messages posted and with the prevalence of issues regarding benefits for others in the community. We named these users as "solution launchers" because these users propose solutions to be applied or verified in order to improve the navigation software and consequently the benefits arising for everyone. It was very common to find inside this category people just using the forum to communicate map updating results or to ask for database unlocking to improve software features. In this category people participate just (or in most of cases) by opening discussion instead of taking part to the existing ones. In relation with Holbrook's contributions to research on motivations, we can consider efficiency, as the users in this category are focused on the result to be proposed to other users in a fast way and without particular commentaries in their topics.

The second category derives from the crossing of an high ratio of discussions started compared to messages posted and a personal interest behind the choice of opening the discussion. Users in this category created topics for different issues. It is common to read about someone asking for information in using Waze. Other users started discussion to ask about the rewards to be sent by Waze owners. These rewards depends on the number of miles driven by using the navigation app. This category is defined as "solution seeker" because people write for their own interests And just (or in most cases) participate by opening discussion instead of interacting in already started discussions too. Autonomy is the motivation most suitable to describe their behaviour. This concept arises from Dahl and Moreau studies.

The third category is characterised by a low ratio of discussions opened compared to posted messages and the reason why people participate in such a way can be addressed to benefits for other users. In this area it is possible to find the biggest part of *wazers* as commonly people join a community and act in it with constant efforts. This result is in line with Dahl and Moreau notion of community, as they act for community and within it. Even engagement is so relevant for the users in this category. They support users asking for help and in the same time they join discussions started by people in the first category, by supporting them in developing solutions starting from "solution launchers" proposals and because of this we defined them as "solution operators". They perceive a communitarian inclination, leading them to support others and to improve software, its features and first of all its functionality. High number of messages posted in the whole community is one more feature of people in this category.

The last category emerge when considering users acting with a low ratio of opened discussions and motivated by the willingness to gain a benefit. They just opened topics to achieve their own benefits, but they enjoy being part of the community, as they posted lots of messages. They post even to be part of the process of making solutions for them. So they are not just asking for a solution as people in the second category, but they act and interact to receive benefits. They have been named as "solution supporters", because of the reasons introduced above and they post lots of messages, even if not in a quantity comparable to the users in the third category. The learning motivation (Dahl and Moreau, 2007) is evident in this kind of process as these users look for support, but they actively participate in order to be part of the solution. A similar consideration can be found in Chen (2011) research, when positively linking partner matching with co-production.



The co-production is particularly interesting in this case, because it can happen in two different ways. First of all users are encouraged to use Waze when driving, in order to let the software acquiring information about traffic condition. Moreover users can add some information by using the option proposed by the software on the mobile app. Parallel to this users can also improve the database for streets all around the world by modifying maps and information about routes, car services, road condition, safety suggestion and so on.

Following these consideration we can state co-production can happen together with use and even before or after it. This three condition lead us to the consideration of co-production and use (so, sometimes co-creation) as different one each other, but linkable and mutually influencing. In this way we align our state of mind to some scholars (Grönroos, Helle, 2010, Grönroos, 2011) and we highlight the necessity of a new research: defining the linkage between co-production and co-creation, based on the time they happen. Even other scholars studying user-generated content (Hwang et al. 2011) underlined the role of users as *"pivot between production and consumption"* even if they did not analyse it in detail.

Finally the quality of the results achieved thanks to *wazers* can be considered, as continuous improvement are performed (Obriest et al. 2008). Moreover the forum presents a special area useful to evaluate the usability of the functions, thanks to users reports.

6. MANAGERIAL AND RESEARCH IMPLICATION

The research tries to shed new light on service logic discussion an namely on two aspects: the relation between co-creation and co-production and the interaction communities towards value creation. Particularly as it regards value co-creation and co-production the relation and the interaction between

them can be considered. Finally communities are seen and analysed as platform and context in which the value creation can take place thanks to a wider, easier, and more democratic participation. In this way firms should move in these new contexts in order to favour participation, by using a “*user-centric model of consumption*” (Daugherty et al., 2008).

7. LIMITS AND FURTHER RESEARCH

This research has been performed for quite a long period and on a wide range of users and messages. Moreover has the community is composed by users from different nationalities and cultures, the impact of their background is low on the research and results are not affected by strong cultural features.

During the research a “thanks” button has been added. We did not considered it, because the research had already at an advanced step, but in the future it will be useful to take it into account to consider its impact on motivations in line with the significance a *popular* evaluation performed by the community (Roberts, 2006).

Next steps of the research are related to a more detailed investigation with users, namely by face to face interviews in order to confirm the results presented here. Parallel to this the results achieved here can give several information by analysing the other messages of the users. In this way a deeper insight about participation through interaction in community. Finally results can also be compared by analysing other communities, first of all the ones connected to app, then similar ones.

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ON THE EVOLUTION OF MARKETING –CRITICAL ANALYSIS

Marek Prymon

Faculty of Management ,Computer Science and Finance, University of Economics at Wrocław

Ul.Komandorska 118/120 , 53-145 Wrocław, Poland



Abstract

The history of marketing as of a managerial concept and the teaching field is over one hundred years old. During this period there appeared many concepts of which only part proved to be really new and useful .Other resulted in nothing but confusion. The purpose of a paper is to present results on studies on the evolution of marketing.

The thesis by author is that it is the creation of consumer value that was and still is the core of marketing. In the paper an author analyses both real and artificial progress in marketing theory with respect to value creation.

At the beginning the process of evolution of marketing philosophy and the focus in marketing literature is critically explored. The two processes appear to be partly independent. In the next part of a paper , presentation of various relationships between marketing and particular schools of strategic management is included. Evolving strategic management theory is considered a big challenge to marketing management. Conclusion is, that basic marketing categories like value for consumers, product and markets are more and more influential upon basic categories of corporate strategies : mission, vision ,value declaration , business models and strategic priorities.

Next, an author analyses the process of the evolution of marketing instruments in the context of concepts like value added marketing, relationship marketing and services marketing.Special stress is on an influence of relationships marketing on the role of marketing segmentation.The thesis is that relationship marketing and relationship management in are not substitute for market segmentation , as long as , creation of value is a goal. ,

In the final part of a paper, the value content in elements of marketing mix is analysed. Using practical examples of global companies, an author identifies value for consumers concerned with elements of marketing mix, as a source of competitive advantages. Special attention is devoted to the elements of values for consumers in marketing communication. The proposition is that exploration of consumer value should become the main aspiration for corporate strategies in the future.

Key words: *marketing philosophy, marketing strategy, consumer value, services marketing, relationship marketing*

1. INTRODUCTION

The first purpose of a paper is to present the results of studies on the role of value for consumers in both tradition of marketing teaching and the practice by global companies. The main thesis is that the core of marketing philosophy was and is creating of value for consumers, and that traditional conceptual frameworks concerned with implementation of this philosophy remain fruitful. The second purpose is to share conclusions concerned with observation of the history of marketing, with special stress on what

in this history was real and what only artificial change. The criterion is what a concept brings into possibilities of value creation. An outcome of studies is also indication of a set of misinterpretations concerned with marketing. This can lead to better understanding of marketing.

The paper represents an outcome of theoretical studies conducted by an author as a marketing scholar. The theoretical part of a paper is supported by author's research on strategies by global companies.

2. EVOLUTION OF MARKETING PHILOSOPHY AND MARKETING THINKING

Marketing evolved in practice, and as a result, it impossible to trace its real origins. For Lancaster and Massingham an idea of marketing is as old as trade itself (1993:5). As for more formal framework of marketing, it was still Adam Smith who, in 1776 wrote that "consumption is the sole end and purpose of all production and the interests of the produces ought to be attended to, only so far as it may be necessary for promoting that of consumer" (1937). At the very beginning of XIX century it was pioneers of Industrial Revolution, M. Boulton and J. Watt who not only developed elements of technical production such as standardization, quality control procedures, cost accounting, and concept of interchangeability of parts, and work planning. They also recommended some analytical approach to company: to start from making research of the demand for its products and next, they recommended to analyze the product with respects for requirements of clients. Such recommendation directly concerns the core of marketing thinking (Smith 2007 : 34). It should be noted that for many American authors, including Ph. Kotler it was Cyrus McCormick who after 1830 started to invent fundamental marketing ideas (Lyons 1955).

During the evolution of marketing there appeared three different processes: evolution of marketing philosophy, evolution of the marketing focus and evolution of marketing practice.

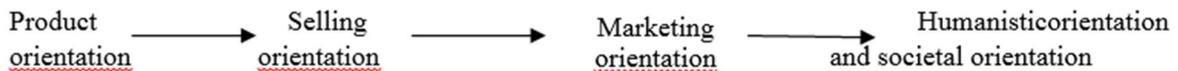
It is commonly shared opinion that "contemporary" marketing philosophy originated, as a widely accepted philosophy, in mid fifties of the last century. The milestone was to be the concept to locate the marketing function not at the end but at the beginning of production cycle, what was declared by managers of General Electric (General Electric 1952). This was to be the core of marketing orientation or philosophy, one that was proceeded by selling or promotional orientation, and product or production orientation (Keith, 1960, Stanton 1978:11, Lancaster and Massingham 1978 :13, Michalski 2000:35, Boone & Kurtz 1992 :11).

Assuming that company's philosophy generally expresses an idea of what a company's development is dependent on, the process shown at the ill. 1 reflects a sequence of different philosophies. Marketing philosophy here, means an idea that company's development depends on satisfying people's needs and wants. The core of the philosophy was explained by Levitt (1960): businesses will do better in the end, if they concentrate on meeting customers' needs than on selling products. Alderson suggested that firms' survival depended on the patronage of buyer (1957 : 54). Despite the fact that the core of marketing was declared clearly so many years ago, some authors today assume that in the past we dealt with nothing but the so called transactional marketing, marketing focused on transactions instead of consumer needs (Lewis and Warey 2000).

In fact, transactional marketing based on idea of maximizing one time contacts with clients has nothing common with marketing philosophy. Transactional marketing should be regarded as a version of selling or promotional orientation. A term transactional marketing has been introduced as an artificial concept used to justify the concept of its alternative: relational marketing.

To the high extent, the old idea of marketing remains valid today. The main challenge to this marketing philosophy has been created by three factors: consumerism, growing care about an environment, and growing care about ethical conduct by a company. Such factors led to proposals to see a company responsible for not only satisfying peoples' needs but for delivering long term well being. What was expected by marketing theorists was introduction of the mentioned humanistic and societal orientation (as shown at the ill 1). This orientation means however more enlarging the scope of marketing, than changing the very philosophy. Finally, the process of evolution of marketing evolution, originally proposed by Keith (1960) was extended.

It is interesting that the process shown at the ill.1 expresses not only history of marketing but it also reflects some universal process of development of management within many companies.



III.1 The process of evolution of marketing thinking

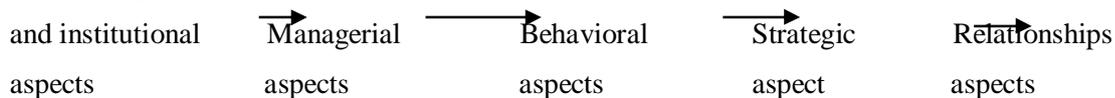
Source: Keith (1960) and Stanton (1978).

As stated earlier, modern marketing philosophy frequently used to be dated back to fifties of the last century however it is not commonly shared knowledge, that the idea of marketing strategy was proposed as early as in 1926 by S.Lyon. It is remarkable that his proposal has not lost its theoretical and practical value.

Lyon pioneered an introduction of what could be called contemporary use of strategy. He indicated the role of relationships between company's resources and environmental changes (Lyon 1926). He stressed fundamental reason for a company to have strategy- coordination role of strategy (Prymon 1982, Sharma 1999). He explained that the strategy helped to evaluate changes in an environment and make appropriate decisions. For Lyon, an essence of strategy was a set of combined goals and tools. Many years later, one of famous marketing writers, W.Keegan says much the same Lyon told- marketing is the process of focusing the resources and objectives of an organization on environmental opportunities and needs (Keegan 2002:2). One can conclude that marketing strategy as a concept proceeded concepts of general company's strategy.

If the core of marketing remains much unchanged with time passing, what really changes, is the focus of marketing scholars. At the beginning the central focus was on functional aspects of marketing and on the role of marketing functions within the company. Next focus shifted to behavioral and managerial aspects of marketing, then to strategic aspects and finally to complex relationship aspects.

Commodity



III.2 The evolution of marketing focus

3. CONSUMERS NEEDS AND WANTS, VALUE FOR CONSUMERS AND THE PROCESS OF EVOLUTION OF MARKETING AND MARKETING FOCUS.

The focus on consumers, needs and wants or in other language, on value for consumers, remains fundamental for marketing philosophy since its origins. Substitution of an idea of satisfying needs by wants by the concept of creating, and communicating and delivering the value is not substantial change of philosophy. It is rather a change of the language.

Proposed by Webster, marketing processes is inclusive of: value defining process (through market research and company itself analysis), value developing process and value delivering process Webster 1997 :39-66). All of them reflect one basic, traditional marketing process. After years of marketing history, Kotler et al. explain what is marketing, saying that marketing is about identifying and meeting human and social needs (Kotler 2009 :9).

The introduced category of value is important as a synthesis of the subject of both consumers' needs and wants, and of company's marketing activities. Also the use of category of value, helps to stress the marketing interpretation of a company's offer. Value is very useful as a category operated in an analysis of the value chain (Porter 1985) and in strategic analysis.

Value for consumer is fundamental category in the process of creating competitive advantage. Business Dictionary uses Porter's concept of competitive advantage -competitive advantage is interpreted as superiority gained by an organization when it can provide the same value as its competitors but at a lower price, or can charge higher prices by providing greater value through differentiation (Business Dictionary).

If marketing philosophy remains unchanged, apart from the marketing literature focus, what changes is the very context of creating the value. Putting consumer at the center of the scene implies that it is consumer who dictates an offer. An information from consumer may come either directly or indirectly from consumer, it is through market research. So it is not new recommendation as some might think, that consumers participated in creating the value. The idea of prosumers (Toffler, 1980), it is the concept of that the consumer is a part of the supply chain and not at the end of it and, that consumer could both the producer and the very consumer, is not really revolutionary idea. For instance

Most old proposals for new product planning process provide for the presence of the consumer from the beginning to the end of the process (Stanton, 1978 :184-185).

Concrete role of consumer in the process of creating the value can be influenced by three factors. The first is firm's technological advantage over consumer. If it is a case, there appears a reason for a company to be active side, and for marketing theory to recommend an active, anticipating and innovating role of a firm. As a result, what can be observed is the situation when consumer gets more than he or she demanded. As writes Lukas et al., the normative heuristic for product decision is one of matching the needs, however industry evidence suggests that supplier firms routinely make product decision that lead to overshoot customers, whereby customers receive products with capabilities that exceed their requirements (Lukas, Whitwell and Heide : 2012). In fact it is risky conclusion since in the case of more complex products, when some product attributes are better than expected other are worse than expected.

The second factor is growing possibilities of direct expressing of needs and wants by customers, in their relationships with a firm. So in the light of relationships marketing concept (Berry 1983) based on direct contacts between customers and a firm, customers may become more active partners.

The last factor is growing role of other than customers stakeholders, as receivers of the value. Because of the pressure from different stakeholders, final value for customers is a result of a some compromise. The role of other than customers stakeholders is appreciated even in some marketing definitions (Gronroos, 2006 :395-417).

4. THE STRATEGIC MANAGEMENT CHALLENGE. ON RELATIONSHIPS BETWEEN MARKETING AND STRATEGIC MANAGEMENT .

To high extent, the development of strategic management has challenged the role of marketing. But also it is also marketing has been highly influential upon strategic management.

As indicated earlier , marketing strategy idea was developed prior to strategic management (Sharma 1999, Prymon 1982). Since formal beginning of strategic management in mid 50' of the last century, the two disciplines used to influence each other.

The so called long range planning was highly consistent with marketing thinking. It was marketing research that enriched prognostic framework for long range strategies. It is also marketing that was helpful in filling the content of strategic goals.

Later on, in times of the development of the so called strategic planning ,some new challenges appeared for strategists. One was growing popularity of acquisitions and mergers. The other was growing competition in the market and failures of traditionally formulated strategies.

In the light of new challenges there emerged an idea of corporate strategies . The idea of corporate strategies provided for development of the multilevel strategies . Within the framework of the idea marketing started to be regarded , at best , as one of functional strategies. The challenge was so strong that even within marketing experts ,the idea of marketing as only functional strategy started to be accepted. Even if the role of marketing started to be reduced, both marketing and strategic management used to develop and exploit the same conceptual frameworks like portfolio analysis, product life cycles, SWOT analysis and so on (Best 1997) .

Strong challenge came from the evolving resource base view school (RVB). In its pure form, RVB ignored the role of the market as a primary strategic factor. Marketing did not account even for being a firm's unique capabilities and core competencies (Sharma 1990).

Since time passing, RVB has soften its stand and instead of ignoring the market it started just to be more focused on resources than on the market.

After years, marketing philosophy started to regain its importance. What is today offered ,as company's goals –missions, vision , corporate values or business models, are predominantly based of marketing categories. Research made on formal statements strategies of global companies that are leaders in their markets, shown that as much as 54 per cent of missions and 60 per cent of declarations of company's values are based on marketing categories (Prymon 2012).

It is visible today that in practice, corporate strategies started to be filled with marketing categories.

5. EVOLUTION OF MARKETING INSTRUMENTS CONCEPTS.

At first glance, it looks that if marketing philosophy remains the same, it is instrumental part of marketing that has subjected to big change. A general instrumental framework of marketing consists of following categories marketing segmentation , market targeting and marketing mix.

Marketing segmentation was based on the concept of disaggregating the market, a concept opposed to the idea of average consumers (Smith 1956, Levitt 1974 :69) . As was declared by Smith, segmentation was based on the development of demand side of the market and represented rational and more precise adaptation of product and other marketing activities to requirements of consumer or final user. So the idea of segmentation was closely subordinated to marketing philosophy. Marketing segmentation is very effective source of informations on customers needs or on customer value. The best example is the so called situational segmentation. If typical demographic or psychographic criteria may help to indicate consumer values in indirect way , it is situational segmentation that suggests them directly.

It is relationships marketing or relationship management that used to be considered an alternative to marketing segmentation. In fact relationship marketing can hardly substitute marketing based on segmentation because of following reasons:

- managing relationships usually requires some classifications of customers, for instance some behavioral segmentation based on the rate of use. In such a way a very relationship marketing would require market segmentation,

- in many businesses, operating of marketing channels used to be based on improvising the cooperation between channel members, including customers (Mallen 1964).So relationship marketing was not new proposal, as far as marketing distribution management is concerned.

- for some businesses, where partners have to cooperate strategically, especially where one firm supplies only big buyer , they have many years ago , introduced the concept of symbiotic marketing (Varadarajan and Rajaratnam 1986, Adler 1966),

- relations within the framework of relationship marketing, are viewed primarily from the view point of the value for a company not value for customer. As a result relationship marketing may be not save proposal.

- in many mass markets like FMCG, relationship marketing can at best be only supportive for marketing decisions. Relationship marketing is more useful where it evolved, it is in services sector and direct marketing.

- relationship marketing is based on weak assumption of unlimited elasticity of a firm in the process of creating the value,

- what is fundamental for relationship marketing -focus on the retention of customers prevents a firm from reacting on changing environment. So it is more useful for tactics than for strategies.

- relationships with customers are important . However they can be managed within the framework of strategically selected market segments.

Marketing mix. The most fundamental category of marketing philosophy is marketing mix. The concept is sometimes interpreted in simplified manner , as just a set of instruments. In fact marketing mix concept represented a kind of intellectual revolution. The idea was that what consumer want from a company is not mere product with its obvious functions. Instead, it is a set of utilities (Solomon and Stuart 1997 : 22). So , it was the core of the concept – utilities or values , not the list of instruments. One of pioneers of the idea of marketing mix , McCarthy defined marketing mix as the controllable variables that the company puts together to satisfy a target group (McCarthy and Perreault,1990: 728).

The next aspect of marketing mix was that utilities expected by customers , are potential intruments to be used by a company. Marketing mix is interpreted not only as a value. In the context of marketing

strategy it represents basic tools of gaining competitive advantage. As wrote Claycamp, strategic marketing is concerned with problem of defining broad spectrum of marketing mix from the view point of gaining long term competitive advantage (Claycamp 1985 : 5).

Final aspect of marketing mix was that the whole group of marketing mix elements create the system with closely interrelated elements.

In the process of evolution of marketing there have appeared partly artificial changes concerned with marketing mix elements . The most visible challenge happened to the product mix.

It was services marketing that resulted in revision of the concept of product. The starting point was an assumption that services unlike goods are intangible (Shostack 1982, Rushton and Carson 1985) . What was missed however was that more than intangibility the core of services is the process (Lehtinen 1983). Services only in part are intangible. Analysis of any products (goods or services) show that all of them are both material and nonmaterial (Solomon & Stuart 1997; 294). Observation of successful services management in sectors like hotels, restaurants, repair services, etc., is based on managing the tangibles and on perfect logistics. For some marketing services scholars typical for services is lack of distribution or logistics.

It is more and more visible that it is goods (physical goods) management not services management, that require caring about intangibles .So it is the process that should be considered the core of a service, not only a part of marketing mixes.

One of the most known idea developed within the framework of services marketing mix elements concerns , the so called fifth P'- people. Though the marketing role of service company's staff is very important ,inclusion of fifth P in fact was not revolution .From the very beginning, personal selling, as broadly interpreted ,used to be included in promotion or communication mix. The role of a personel is very important , as a part of promotion of both goods and services. Other thing is, that in narrow interpretation , personal selling is sometimes reduced to activities by salesmen or to aquisition, as a method of selling.

Some authors like Gordon , believe that the very marketing mix should be replaced by relationship marketing (Gordon 1999: 336). An assumption here is that ,traditionally, firm focus on marketing mix not on relationships with customers. In fact , marketing philosophy has never recommended to focus on marketing mix. Also an analytical approach to relations between a company and its clients shows that the value for consumers is finally realized using the elements of marketing mix. So no reasons to diminish the role of marketing mix as a vehicle carrying the value.

The idea of marketing mix subjected to the some challenge also from the side of value added marketing. The core of value added marketing meant basically move back to fundamentals of marketing mix, it is to the value expected by consumers.

What was really specific with value added marketing was its technical and managerial side. The concept was based on following assumptions:

- consumers perceive product as a sum of benefits,
- the choices in the market are made on the basis of maximization of a difference between the sum of benefits price,
- the success of a company depends on offering the highest value added (Nilson 1992 :44).

An idea of focusing on value is closely based on marketing philosophy and is good recommendation for a firm. However the assumptions of the concepts are artificial. Synthesis of benefits made by consumers is partly an artificial idea. For some clients what is important is concrete elements of an offer and not the sum.

Next, for some clients, of primary importance, are product benefits, while the price comes into consideration later on. Finally the idea of maximization of a difference is hardly practicable recommendation. From the pair of products of which one would be worse but representing bigger difference and the second being better but representing lower difference, the first has necessarily to be a choice.

If both market segmentation and marketing-mix continue to be basic concepts concerned with marketing strategy, really big novelty that appeared in the past within the framework of fundamental marketing concepts, was product/company positioning (Trout 1969 : 55-59, Dhalla and Mahatoo 1976). This idea partly changed marketing philosophy in a way, that it stressed the new aspect of a product/company, it is psychological value.

What really creates big potential for an improvement of marketing is not simply creating the best value for consumers, but conducting an analysis of value content of marketing activities and implementing this value.

6. VALUE FOR CONSUMERS IN MARKETING MIXES.

No doubt that of all marketing mixes, it is product mix that is frequently interpreted as a fundamental field for defining value for consumers. So highly popular was the idea to replace 4P' by 4 C'. In the context of the idea, product mix is substituted by consumer value, in terms of value for consumer. However the whole marketing mix, not only product mix, should be filled with value for consumer.

This idea is not new, however we can observe some kind of paradox in the literature. On one side they declare marketing philosophy, and on the other no transmission of philosophy to different marketing instruments is proposed. For instance promotion management is mostly viewed from the side of efficiency of instruments, while communicational needs of consumers are ignored.

In popular classifications of communication tools they used to ignore, as a criterion, value expected by consumers or receivers. In fact, any communicational tools include actual or potential concrete value that should be identified:

- Personal selling represents, first of all, knowledge transferred to consumers. Other values are possibilities to try the product (if offered), possibility to enjoy confidence on the seller.

-Sales promotion offers whole set of values: material values (for instance money), trial use, emotions (for instance participation in a contest),

-Public relations offers two kinds of value: informations and material values. It is especially important tool when true information is expected (Prymon 2009, Robinson et al.2012).

-Advertising is valuable in terms of both information delivered by a company, and in terms of the product enrichment (psychological value).

The use of communication mix as a source of value would require not only to operate interactive models of communication (Solomon 1999: 355), but also to regard consumer as active partners who represent some communicational expectations.

Distribution mix offers much more value than the value of right time and place. Values in distribution can be observed alongside with the list of functions of distribution channels (Lancaster and Massingham 1993 :228). Contacts, assembled merchandising, risk taken by a company, product stored and delivered, financing of transactions or market informations are all fundamental values.

The process of evolution of middlemen like retailers in fact represents the evolution of value offered by middlemen (McCarthy and Perreault 1990: 379).

Price mix represents at least following values:

-any price means some concrete relation of consumer to the ownership of product (leasing, rental etc.),
-price of a product as compared with other prices can make product finally desired, price can represent the quality of product. In a way the price enriches the product. Any of the above short list of values that can be included in marketing mixes, show how big is potential for the use of marketing mix to identify competitive advantage. It should be noted that in tradition of marketing they sometimes reduce the utility of a price to the utility of possession (Solomon and Stuart,1997 :22).

7. CONCLUSIONS

Basic conceptual frameworks developed within marketing theory remain valid even today. Though practical context of adopting the marketing philosophy subjects to a lot of change, the very marketing philosophy remains durable. The basic strategic concepts like market segmentation, marketing positioning and marketing mix not only remain valid conceptual frameworks, but they also create deep source of inspirations for marketing decisions and strategies. Various concepts in the history of marketing, that were proclaimed as new ones, in fact do not change the core of marketing.

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TECHNICAL EFFICIENCY OF PORTUGUESE BEEF PRODUCTION FARMS

Maria José Palma Lampreia dos Santos, Rui Miguel Simões Pinto de Oliveira

Lusofona University of Porto, Portugal

Abstract

The main goal of this study is to measure the levels of technical efficiency of a sample of beef production farms, in the Portuguese Alentejo and Beira Interior regions in Portugal, and relate these efficiency levels to some farm characteristics, agricultural structure and managerial practices. The methodology selected to measure the individual levels of efficiency was Data Envelopment Analysis (DEA). The inputs and outputs were selected by multivariate techniques namely factorial analysis. Results show that beef cattle farms could increase the efficiency if they have better managerial techniques. The main conclusions suggest that the Common Agricultural Policy for 2014-2020 and the Multiannual Framework Funds must favor more the Rural Development measures in relation to the direct payments in particular for Portugal in order to improve the efficiency of beef sector.

Key words: data envelopment analysis, technical efficiency, beef production.

INTRODUCTION

The main goal of this study is to measure the levels of technical efficiency of a sample of beef production farms, in the Portuguese Alentejo and Beira Interior regions in Portugal, and relate these efficiency levels to some farm characteristics such as physical and economic size, farmers' age, land property, irrigation, labour use, and area and product specialization.

The production of beef cattle in Alentejo represents 39% of national production, followed in order of importance the region of Beira Interior. In the last decade, as a result of the adoption of the 2003 Common Agricultural Policy Reform (CAP) and the Health-Check, there was an increase of 1% of the production of beef cattle, although the number of farms has decreased. The existence of the Single Payment Scheme (SPS) and subsidies linked to production, led to an extensification of production which led to the abandonment of marginal lands for cereals and replacing it with beef cattle (Dos Santos et al., 2012). Nevertheless, the number of farms with beef production decreased by 51%, although the number of beef cattle per farm has increased 1% (INE, 2012). This trend was similar to the other Portuguese farms in the last decade that increased their Utilized agricultural Area (UAA) from 9 to 12 ha.

The main goal of this study is to measure the levels of technical efficiency of a sample of beef production farms, in the Portuguese Alentejo and Beira Interior regions in Portugal, and relate these efficiency levels to some farm characteristics such as: physical and economic size, farmers' age, land property and labour and capital use.

The paper is structured as follows. The next section presents the methodology, namely, previous studies reviews on determinants of technical efficiency in beef production in EU and others countries, introduce and present the DEA and the second-stage regression and the Principal Component Analysis (PCA) approach. Section 3 presents the description of data, whilst section 4 discusses the results and section 6 concludes.

METHODOLOGY

Two major approaches to measure efficiency have evolved, namely parametric and nonparametric approaches, with the stochastic frontier production function approach and the Data Envelopment Analysis (DEA) methodology, respectively, as most popular techniques. Charnes, Cooper and Rhodes (1978) developed the DEA method from the earlier works by Farrell (1957). This non-parametric method has been used to estimate the efficiency in the organizational units in several areas. DEA is used in the first stage for estimating technical efficiency. The DEA methodology has some important advantages over the econometric approach to efficiency measurement. Firstly, because it is nonparametric there is no need to make assumptions concerning the functional form for the frontier technology or the distribution of the inefficiency term. Secondly, the approach permits the construction of a surface over the data, which allows the comparison of one production method with the others in terms of a performance index. In this way DEA provides a straightforward approach to calculating the efficiency gap that separates each producer's behaviour from best productive practices, which can be assessed from actual observations of the inputs and outputs of efficient firms (Haji, 2006; Reig-Martinez and Picazo-Tadeo, 2004, Malano et al., 2004; Wadud and White, 2000; Silva and Berbel, 2004).

Furthermore, when using DEA, efficiency measures are not significantly affected by a small sample size, as long as the number of inputs is not too high in comparison to the sample size. (Thiam et al 2001; Chambers, 1998). Oude Lansink et al. (2002) finally argue that calculating sub-vector technical efficiencies using a stochastic frontier approach would be highly problematic. The disadvantages of DEA, however, are that it is deterministic and sensitive to measurement errors and other noise in the data, although several studies comparing both methodologies have shown that results from both methods are highly correlated (Alene and Zeller, 2005; Thiam et al., 2001; Wadud and White, 2000). We have privileged DEA approach for the main reason that it does not require the specification of a functional form for the frontier or of the distribution of disturbances, and therefore avoids misspecification errors.

DEA is based on the notion that a production unit employing less input than another to produce the same amount of output can be considered as more efficient, with a production frontier constructed and an efficiency measure obtained simultaneously. The frontier surface is assembled piecewise by solving a sequence of linear programming problems, one for each farm, with each farm related to this frontier. The frontier created envelops the observed input and output data of each farm (Speelman et al., 2007).

In this study, an output-orientated farm level model is used because it is assumed that, in the absence of output quotas, farm managers have more control over output quantities than over inputs. We use DEA approach applied by the Program (DEAP) developed by Coelli (1996).

In order to ease the interpretation of results presented in this paper, it is useful to recall that in the output-orientated DEA model an efficiency score $\hat{\delta}_i$ is calculated for the i -th farm by solving the following program:

$$(1) \quad \max_{\lambda, \hat{\delta}_i} \quad \hat{\delta}_i$$
$$\text{subject to} \quad -\hat{\delta}_i y_i + Y\lambda \geq 0$$
$$x_i - X\lambda \geq 0$$
$$\lambda \geq 0$$

The above specification is under constant returns to scale (CRS); for a specification under variable returns to scale (VRS) the additional constraint $\bar{\mathbf{1}}\lambda = \mathbf{0}$ is added, where $\bar{\mathbf{1}}$ is a vector of ones². The constant returns to scale model (CRS), corresponds to the original model developed by Charnes et al. (1978), that assumes all firms were operating at an optimal scale. Later Banker et al., (1984) suggested a model extending the original, in which the variable returns to scale (VRS), change the linear programming by incorporating convexity limitations (restrictions). This change permitted the division of technical efficiency (or global technical efficiency) into pure technical efficiency and scale efficiency. If the CRS and VRS are run operated with some data and if there is some difference between firms, that is due to scale inefficiency. That inefficiency must be calculated from the difference between CRS and VRS. The pure technical efficiency coincides with VRS. The scale inefficiency, can be explained as a result of the fact that scale level is not optimal (when CRS=1). The global technical efficiency (CRS) is the product of pure technical efficiency and scale technical efficiency. When not all decision-making units are operating at the optimal scale, it will result in technical efficiency, which can be confused with scale efficiency. The use of the VRS specification will permit the calculation of technical efficiency devoid of these scale efficiency effects.

Many studies have separated the technical efficiency scores obtained from a CRS DEA into two components: 1) one due to scale inefficiency and 2) another one due to "pure" technical inefficiency (Coelli, 1996). If there is a difference in the two technical scores for a particular decision-making unit, then this indicates that the decision-making unit has scale inefficiency and that scale inefficiency can be calculated from the difference between VRS and CRS technical efficiency scores.

As the efficiency score is bounded on the left at 1 ($1 \leq \hat{\delta}_i$), $\hat{\delta}_i - 1$ is the proportional increase in outputs that could be achieved by the i -th farm with input quantities held constant (Coelli et al., 1998). What is reported as an efficiency estimate in this study is $\hat{\delta}_i$ with $\hat{\delta}_i - 1$ representing the potential output expansion.

Priori in order to select the inputs variables we use the Principal Component Analysis (PCA). This approach is used in order to reduce the set of m components or factors that accounts for most of the variance in the p variables. PCA is one of the multivariate techniques analysis currently used in many different areas, namely, in animal production (Abreu et al., 2006; Cardoso et al., 2003; Azevedo et al., 2003; Pinto et al., 2005). Each factor is estimated as a weighted sum of the p variables. The i^{th} factor is thus

$$F_i = W_{i1}X_1 + W_{i2}X_2 + \dots + W_{ip}X_p$$

This may also express each of the p variables as a linear combination of the m factors,

² The technical efficiency calculated under CRS is called the total technical efficiency, and can be broken down into two components: the pure technical efficiency, that represents the management practices and that is given by the specification under VRS, and the residual, called the scale efficiency.

$$X_j = A_{1j}F_1 + A_{2j}F_2 + \dots + A_{mj}F_m + U_j$$

where U_j is the variance that is unique to variable j , variance that cannot be explained by any of the common factors. (Hair et al., 2005).

The model used in this study includes one output variable and four inputs. The data was obtained from Portuguese Farm Accountancy Data Network (FADN). The farms selected had a value of the product of production of beef cattle more than 65% of the total product. Total output value in euros is used as the measure of 'output'. This aggregate variable has been constructed by the total of animals sold. Regarding the inputs, the PCA analysis results indicated that the principal components results explained 90% of the total variation of the inputs data, namely, the value of the intermediate consumption as a variable input factor and was calculated univariate correlations between the variables and components. The variables which estimations were highly correlated highly significant ($P < 0.01$) with the components were used as input variables in the analysis of DEA. According this four inputs included are: utilised agricultural area (UAA) in hectares (ha) as a land factor; annual work units (AWU) as a labour factor; depreciation plus interest as a capital factor; and the value of intermediate consumption as a variable input factor. This inputs selection is according previous authors, namely Latruffe et al., (2008) and Silva and Berbel (2004), among others.

SECOND-STAGE REGRESSION

In a second stage, the estimation of a Multiple Linear Regression Model (MLRM) is used to regress efficiency scores on a set of explanatory variables. Others authors use a tobit model or a truncated maximum likelihood, among others techniques (Simar Simar and Wilson (2000 and 2011), Latruffe et al., 2008). Some authors find similar results among the last techniques used. These techniques depends more the need and the nature of the variables. In the present study unfortunately we don't have the social and educational levels of farmers (namely, age, gender, education, number of years in agricultural activity etc.), because the FADN dataset don't have available this kind of data. The technical inefficiency score is chosen as the dependent variable in the present paper.

Based on previous research on farm efficiency in Mediterranean countries, a number of explanatory variables are considered. UAA for beef cattle farms are used as a size variable. The impact of size on technical efficiency is a recurrent issue in the efficiency literature. For example Henriques et al., (2009) find a positive correlation between size and efficiency in wine farms in Portugal. Curtiss (2002) found that for crop production in the Czech Republic, farms with a larger land area were more technically efficient.

The ratios of capital to labour and land to labour are technology proxies. Evidence for this has been found for Poland by Latruffe et al. (2008). The degree of integration in factor markets is represented by the shares of hired labour in total labour input, and of rented land in UAA (Dos Santos, 2013).

A ratio of interest plus rentals to total output is included as an indicator of the financial stress on the farm caused by repayments of loans and rents, and which may affect its performance according Latruffe et al., (2009). Lenders transfer their costs for screening and monitoring the loans to borrowers. Consequently, highly indebted farmers bear high costs from receiving credit. The scope of management decisions is restricted and, efficiency is reduced.

DESCRIPTION OF DATA

This study draws data from the 2009 Portuguese FADN dataset. The initial set included 79 farms. After checking for missing or inconsistent data the useable sample wasn't reduced. The summary statistics of the variables of interest for the sample farms are presented in Table 1. The sample farms are located in two different regions of Portugal: Alentejo in the south and Beira Interior on the middle of the country. These regions are the main principal producers of beef cattle.

Table 1: Summary statistics

Variables	Mean	Standard Deviation	Minimum value	Maximum value
DEA model				
Total output	43,727	30,262	6,948	127,951
Land (ha)	141,82	116,610	13,42	669,9
Labour (AWU)	1,336	0,668	0,4	4,19
Capital (000 euros)	6,063	4,159	1,336	19,186
Intermediate consumption (000 euros)	8,662	11,396	0,107	57,759
Second-stage regression				
Livestock Units	43,28	36,36	5	263,6
Capital/ Labour (euros /AWU)	3756,2	4597,1	0	27458
Land / Labour (ha /AWU)	106,59	66,51	9,867	338,52
Share of hired labour	0,18	0,51	0	2,75
Share of rented land	0,459	0,465	0	1
Financial stress ratio	0.032	0.030	0	0.189

Source: FADN, 2013 and own calculations.

RESULTS AND DISCUSSION**TECHNICAL EFFICIENCY**

Estimates technical, pure technical and scale efficiency are presented in Table 2. The percentage of efficient farms represents the share of farms with an efficiency score of unity. The results confirm that only 8 beef farms were efficient, thus representing a 10,2% of the total number of farms. The average of technical efficiency was 0,725. It is possible to produce the same amount of output while saving approximately 27,5% of inputs. These results showed that the Alentejo and Beira Interior beef catles efficiency could be improved. The direct payments favouring the big and extensive farms in the First Pillar and the reduced amounts to the Second Pillar in order to promote the farms investment could justify this results. In the next Multifinancial Framework Funds (MFF) according the draft for EU agricultural budget for 2014 (European Commission, 2013) the weight of the rural development in the Second Pillar is 73,89% and the First Pillar represent only 23,6%. These decisions could encourage the extensive beef farms and not he investment and the innovation in agricultural sector.

The global technical efficiency (CRSTE) is divided into two components, VRSTE and SCAL. Technical efficiency from variable returns to scale model increased to 0,792, and scale efficiency is 0,855. Scale inefficiency (14,5%) may occur due to an operation below the optimal scale, as a result of the fact that a 85 % of beef farms operate at increased returns to scale (IRS) and a 20% were operating at decreasing returns to scale (DRS).

Table 2: Descriptive statistics of technical efficiency (*technical efficiency: increasing and decreasing, and constant*)

	CRSTE	VRSTE	SCAL
Mean	0,725	0,792	0,855
Standard deviation	0,164	0,173	0,124
Maximum	1	1	1
Minimum	0,383	0,452	0,561
Efficient farms	11	31	11
IRS			85
DRS			20%

Source: own calculation, 2013.

FACTORS ACCOUNTING FOR TECHNICAL EFFICIENCY VARIATIONS

The second-stage results from the log multiple regression estimation are presented in Table 3. As already mentioned, the dependent variable represents the efficiency scores. The independent variables has different kinds of units, namely, ha, euros, etc. To overcome this source of variation we use a log transformation' variables.

Table 3: Determinants of technical inefficiency

	Beef farms
Constant	0.86 ** (0.25)
Size variable	2.17 E-2** (0.46 E-2)
Ratio capital/labour	2.33 E-2 ** (0.69 E-2)
Ratio land/labour	-8.20 E-2 (4.63 E-2)
Share of hired labour	-1.86 E-2 (2.24 E-2)
Share of rented land	—
Financial stress ratio	40.63 ** (17.63)

Source: Own calculations, 2013. **: 5% significance. E-2: 10 power -2. Standard errors into brackets.

The second-stage regression in Table 3 indicates that most of the variables impact significantly on beef farm technical efficiency. The size measured in livestock units, is an important source of efficiency for cattle farms. The opposite occurs with the land to labour ratio. The farms must reduce the labour in order to obtain gains in the efficiency, or to bring specialised skills workers. The share of rented land had no impact on farms' efficiency because the most of the agricultural area was owned in Portugal. The financial stress have a positive impact which takes into account the burden of the repayment of rentals

and interest. Recalling that capital is measured by depreciation plus interest, this result may indicate weaknesses in management decisions regarding the purchase of machinery and equipment, the construction of new buildings irrespective of the farm size, as well as the potential efficiency with which capital could be used. On the other hand, some farmers have old and obsolete capital stock. The maintenance costs for such stock are usually high and often require loans and payment of interest.

CONCLUSIONS

The paper provides a two-stage estimation of the effect of a range of variables on non-parametric estimates of technical efficiency. Two main conclusions could be drawn from this application.

Concerning the key issue addressed in this paper, the explanation of sources of variation in efficiency within the analysed farm samples, important insights were given by the confidence intervals and the consistent estimates of the second-stage regression. The results of the DEA suggests that Alentejo and Beira Interior beef farms could improve their efficiency. The second-stage regression indicated that technical efficiency was positively influenced by a high capital intensity, small use of hired labour and by a high financial stress. This suggests that individual farmers still lack the managerial experience necessary for rational investment and labour decisions. The prevision of the predominance of direct payments funds (First Pillar) in relation to the Rural Development (Second Pillar) in the next MFF could compromise the improvement of beef farms efficiency in the next period.

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**NEW CONCEPTS AND THEORIES IN ECONOMIC EVALUATION
OF INDUSTRIAL PROJECTS**

Marian Andrei Gurau, Mircea Gorgoi

Faculty of Engineering and Technological Systems Management,

University "Polytechnics" of Bucharest, Romania

Abstract

In this article are presented concepts and theories about economic evaluation of industrial projects, types of investments and how to approach them. Also is presented the most important stage of the methodology of economic evaluation of industrial projects (M.E.E.P.I), first, because according to this is the classification of projects and project variants available. In this stage are identified the initial financial elements of investment, the method of calculating them and the types of decisions that can be taken according to their values.

Key words: economic evaluation, investment, industrial project, cash flow, discount rate.

1. INTRODUCTION

In a competitive business environment in the current global economic situation, companies in most industries are fully aware of the fact that investment opportunities with true profitable are few, limited by fixed assets, to be allocated a limited number of projects in accordance with the strategy of long-term business (Zhang, 2008, pp.35-70). Business planning and careful evaluation of viable investment alternatives have become indispensable steps to reach the strategic investment decisions and well informed. Real options analysis provides a complementary approach to low-flow liquidity. In fact the concept of low-flow liquidity plays an important role in estimating the current value of the project, before real economic assessment model can be applied to an investment project with different phases (Hyvari, 2007, pp.55).

Although the concept of "*real options*" was created with forty years ago, significant applications of the concept in the budgeting of capital companies began in the late 1980s and early 1990s (United Nations Report 2007), when the theory of real options analysis was better designed, and competitive environment for domestic and international business has necessitated a strategic thinking and business planning in the long term, also when technology has advanced in many industries have taken hold across the new business opportunities with the high degree of uncertainty. The rapid change in technology and market demand companies greater responsiveness to the changing conditions of the market and flexibility in product offerings and business options in general (Harel, 2005, pp. 34-59). Real options analysis, combined with traditional models of cash flow updated, offers an alternative approach designed to assess investments in many industries.

In fact (Gurău, 2012, pp.52-56), in comparison with classifications realized by (Neumann, 1997, Harel, 2005) scenarios of investment in industrial projects, classified as real options, are the following:

1. Investment in licenses or patents: the investor can decide whether it is to conclude an agreement for the production, marketing and sale of a particular product that uses a patented technology, or to pay and

to enter into a license agreement for the right to produce and sell a product for a certain period of time. The objective of the analysis in such cases is to give the correct information on the value of the patent or of the license to the investor, to have reached such an agreement. The investor will compare the actual cost of the agreement to enter into such an agreement, and thus will make the decision.

2. Development investments: in such a scenario, the investor plans to invest in a project originally on the small scale, and where all events are favorable internal and external after the initial project, the investor will continue to invest in a larger project (development). In this case the real analysis helps the investor to assess the flexibility to invest in big projects, if events are favorable (Keidel, 2007, pp.120).

3. Investment in research and development: many companies in the pharmaceutical industry, information technology, telecommunications and other industries with technology intensive industries, it must invest heavily in advanced technologies to maintain the positions of leaders and profitability. In many cases, investments in research and development opened the way for a successful production and profitability of the operation in the future, therefore, the costs of research and development are that as a "prize" for an investment in future production and sales.

4. Delayed investments: the investor may choose to not invest immediately in a specific project, but instead to keep the investment for a limited period of time, as the investment opportunity is still open. The investor can take the time needed to analyze the risks and benefits associated with the project, uncertainties in market demand and competitive dynamics, and can search for other possibilities of investment. Real analysis in this scenario will give the investor the flexibility in making decision to postpone the investment for a future date.

Similarly (Milosevici, 2008), can be analyzed investment alternatives in the case of certain projects have not met the expectations of the initial financial return, due to changes in the internal and external conditions, as well as changes in market competitiveness of products related to the investment project. In this case, the investor has the following options (Sharpe, 2004), (Gurau, 2012):

- 1'. The abandonment or sale of assets related to the project.
- 2'. Changing the domain of investment to produce other types of products or services, which are more competitive and more profitable.
- 3'. Reduction of the investment project and off in the manufacturing of products which are no longer competitive.

In all scenarios described above, can be applied models that show the real value of the option, with all the required parameters and estimate if the project should be sold, exchanged in other applications or . The investor will compare these values of options with the financial consequences of continuing the original project and will pick the appropriate course of action.

2. ECONOMIC EVALUATION OF INDUSTRIAL PROJECTS – FIRST STEP

In this chapter is presented the first stage of the methodology of economic evaluation of industrial projects, hereafter referred to as (*M.E.E.P.I.*), being considered the most important step in starting the industrial projects (Gurau, 2012, pp.45-48).

M.E.E.P.I. 1 - The planning and selection of initial investment

The aim of planning and the selection of investment are the identification, evaluation and quantification of the financial elements of an investment project. It is the most important stage in which are made exact

calculations for the identification of the elements of the investment, wrong values and their interpretation can lead to disastrous results of the project (the default blocking of money, lack of profitability, etc.).

M.E.E.P.I. 1.1 - Setting the size of the initial investment of the project, I_j

Project initial investment I_j , is represented by the value (the size of) the capital necessary for putting into service the project. The components that play value of the initial investment can be the following (Doicin, 2009, pp.90-120):

- The purchase price of all fixed assets (including all the fees that will not be recovered, customs duties, etc.);
- The opportunity cost of the existing assets of the society of the project (ex: construction land already owned by the society, to be used in the new project);
- Salaries costs (only for investment project);
- Special costs with installations, assembly, delivery and handling;
- Costs related to the testing of the project functioning (ex: materials used for testing of new production lines);
- Cost current assets (ex: inventory, receivables).

The initial investment will be played by the sum of all these costs, but whether the investment will be spent during many years, to be able to determine the value of the initial investment will be achieved an update calculation (all charges made at a time other than that initially will be converted to equivalent values of initial) (Shy, 2008).

M.E.E.P.I. 1.1.1 – The case if the project will generate cash flows to 1 year when the last investment part has been spent:

$$I_j = I_1(1+k)^{d-1} + I_2(1+k)^{d-2} + \dots + I_h(1+k) + I_{h+1}, \text{ where:} \quad (1)$$

d – Maximum duration of objective realizing, years;

I_1 - First part of investment, corresponding to first year of construction;

I_h - Part of investment corresponding to h year;

I_{h+1} - Last part of investment, corresponding to last year of construction;

Thus, for a project with three consecutive years of funding ($d = 3$), the value of the investment will be:

$$I_j = I_1(1+k)^2 + I_2(1+k) + I_3. \quad (2)$$

M.E.E.P.I. 1.1.2 – The case if the project will generate cash flows to 1 year when the first part of investment has been spent:

$$I_j = I_1 + \frac{I_2}{(1+k)} + \dots + \frac{I_h}{(1+k)^{d-2}} + \frac{I_{h+1}}{(1+k)^{d-1}}. \quad (3)$$

Thus, for a project with three consecutive years of funding ($d = 3$), the value of the investment will be:

$$I_j = I_1 + \frac{I_2}{(1+k)^1} + \frac{I_3}{(1+k)^2}. \quad (4)$$

M.E.E.P.I. 1.2 - Determination of the discount rate, k

First mention, that the size of the discount rate has a major impact on the results of the particular investment decision. The rate is higher, the more values of the calculated economic indicators are diminishing, therefore, will be disposed some types of projects. In fact, the discount rate is subject to the financial situation of the investor.

Thus, if the value of the investment is secure on its own sources, the rate shall be determined on the basis of the average funds invested in the period immediately prior to the project. Discount rate must be greater than the interest rate of the loan capital in the financial market. But the problem occurs is of RIR (internal rate of return) ($RIR > k$).

If the funding is from several external sources, the rate of discount must be brought back to a weighted average of the cost of different sources of capital, plus a margin of risk:

$$k = k_1 + \chi, \text{ where:} \quad (5)$$

k - Lender interest rate including the margin of risk;

k_1 - Monetary market interest rate without risk of capital borrowed;

χ - Risk margin (the amount is additional risk premiums assumed by investing in certain types of industrial projects more or less risky);

Using the Black-Scholes equation was determined these rates:

$$k = \frac{\ln[e^{-k_1 T} \cdot N(d_2) + \frac{A_0}{V} N(-d_1)]}{-T}. \quad (6)$$

$$\chi = k - k_1 = \frac{\ln[e^{-k_1 T} \cdot N(d_2) + \frac{A_0}{V} N(-d_1)]}{-T} - k_1. \quad (7)$$

If the project is funding through bank loan from a single source, the discount rate shall be:

$$k = k_1 + (2 - 4\%). \quad (8)$$

In the case of projects made from European funds, for applicants, the problem of determining the update rate is non-existent-it is required by the guidelines. This real rate proposed by the European Commission for Member States benefiting from the cohesion policy is 5%. The rate of 5% is only a suggestion of the European Commission and the Member States may choose to propose to another value, in the case of Romania who did not propose a different rate, it is 5% referred to in the guidelines for applicants.

Examples of discount rate values, used in the oil and gas industry in the U.S.A.:

$k = 11\%$, for modernization projects of distribution networks;

$k = 12\%$, for extraction and refining;

$k = 23 - 25\%$, for research projects of new digging oil and research, development, innovation projects;

M.E.E.P.I. 1.3 - Determining available cash flows, CFD_h

In the case of the economic evaluation of investment projects will have regard to the cash flows generated by these projects (provisioned analyze characterized by uncertain values of terms take into account). In fact, in the evaluation of projects is trying to determine the cash flow available (estimated) based on known data. To obtain results as much as real, they must be estimated very accurately the net profit, depreciations, interest rates and economic growth.

To calculate the cash flow available in any year h of the project life CFD_h , it starts from a profit and loss account of the investment, which also must be estimated as accurately (are made estimates for incomes and future payment of the project):

$$PN_h = PB_h(1 - 16\%), \quad (9)$$

PN_h - Net profit after tax;

PB_h - Gross profit from project exploitation (estimated);

16% - Share of the profit tax;

M.E.E.P.I. 1.3.1 - The case if the investment is realized from own sources (self-financing)

$$CFD_h = CF_{functionare} - Ce_h, \quad (10)$$

$CF_{functionare}$ - Cash flow resulting from operation of the project;

Ce_h - Economic growth that mainly consists of immobilizations variation on h year duration and variations of net current assets in debt service;

$$CF_{functionare} = PN_h + A_h, \quad (11)$$

where:

A_h - Depreciation for the h year of new assets project;

M.E.E.P.I. 1.3.2 - The case if the investment is realized from external sources

$$CFD_h = CF_{functionare} - Ce_h, \quad (12)$$

$$CF_{functionare} = PN_h + A_h + Dob_h, \quad (13)$$

Dob_h - The additional interest costs of new assets, payable in h year;

M.E.E.P.I. 1.4 The establishment of the project life duration, n

To determine duration of the project life are taken into account more concepts, as follows:

- Technical project duration - the time period in which the fixed assets (equipment, machinery, and construction) are situated in specified technical parameters of use.

- Accounts project duration - the time of normal operation of the assets (according to time intervals since the depreciation rules);
- Commercial project duration - is the length of products life manufactured under the respective project;
- Legal project duration - is the period of legal protection of a patent, license, etc.

In practice, the four periods will be never equal. That's why in the calculations for determining the efficiency of industrial projects, will be used the duration considered representative for analyzed project.

In fact, in the current economic crisis estimated periods bigger than maximum of 5-7 years does not lead to reliable results for investors, for longer projects may cover future cash flows with residual values equivalent to times $h = 5 - 7ani$.

M.E.E.P.I. 1.5 Determination the residual value of project, VR_n

Residual value is the value that can be reclaimed in from the fixed assets taken out of operation at the end of their normal life cycle (n). Residual value is the amount that the company likely to get through the resale of the asset at the end of its period of use, diminished with the expenditure amount of transfer. So the residual value can contain multiple items:

- The value of goods purchased at the beginning of the project through its sale (if the sum obtained is greater than the depreciation sum abided results a profit, otherwise this will result in a loss);
- The value of previous decreases and increases of assets (recovery stocks);
- Further costs of immobilizations.

In practice, there are three possible methods for calculating the residual value:

M 1 – the first choice is made taking into account the residual market value of its fixed assets, as it would be sold at the end of the time horizon, and of remaining net passives.

M 2 – by calculating a residual value of all assets, based on a formula of economic depreciation and accounting standard (usually different from the depreciation for capital income taxes).

M 3 – by calculating the net present value of cash flows in the remaining life of the project.

Depending on the industries that will implement projects it is recommended that the three methods to be applied such: in the sectors of transport, environment, social services will apply the method **M2**, and in the sectors of tourism, eco-efficient systems, CDI, ICT, energy will apply the method **M3**.

In fact, we can determine the residual value according to the equation 14:

$$VR_n = \frac{CFD_{n+1}}{(k - f)}, \quad (14)$$

where:

CFD_{n+1} - Cash flow from the next year following the expiration of the reference period (project life duration);

k - project discount rate;

f - the average annual growth rate of estimated for the project cash flow;

$$k > f;$$

According to **M.E.E.P.I. 1.4** the maximum duration of the project life to forecast is $n \leq 7$, but if it consider a machine with a normal period of depreciation ($n=10$), the residual value equivalent to cash flows generated in the years which overtake the estimate period (8,9,10), it will result in such:

$$VR_{ech.} = VR_7 = \frac{CFD_8}{1+k} + \frac{CFD_9}{(1+k)^2} + \frac{CFD_{10}}{(1+k)^3} + \frac{VR_{10}}{(1+k)^3}. \quad (15)$$

3. CONCLUSIONS

Project economic evaluation is an essential part of the operation of investment decisions. All project solutions adopted are accompanied by calculations, technical-economic analysis and financial for that implemented projects to always be the most efficient of the variants and alternatives of capital allocation.

The generation of all investment variants is as rule, a decentralized problem that allows to be developed proposals for investment at all levels of the enterprise. The lower levels will offer replacement investment, modernization or expansion, and the higher levels will have the responsibility of preparing proposals for development projects. Thus, in this stage, each project must be accompanied by a commercial, technical and financial study, to justify the appropriateness and sustainability of the investment.

With the help of stage presented are established the initial financial elements of each project or project variants, being shown how to approach and calculation mode.

The selection of investment projects is carried out on financial criteria, the establishment of initial investments and comparing them, but taking into account the direct investment policy priorities. It refers to the choice of investment cost effective depending on the resources that can be allocated to them.

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INNOVATION IN THE CONTEXT OF ECONOMIC CRISIS

Martin Petříček

Technical University of Liberec, Faculty of Economics, Department of Economics

Voroněžská 13, 460 02 Liberec, Czech Republic

e-mail: martin.petricek1@tul.cz

Abstract

This paper studies innovation, as introduced by J. A. Schumpeter. For him, innovations play a significant role in relation to the entrepreneur, who is regarded as an innovator implementing new knowledge in the market. Simultaneously, innovations are also important for Schumpeter's developing of the business cycle theory. This paper examines the economy of the United States of America, specifically the impact of innovation waves on the development of sub-sectors. The study focuses on the period between the years 1987 and 2012. Information technologies, demonstrating a long-term rapid growth, seem to be the most interesting sector for a detailed analysis. The article subsequently quantifies three out of five basic attributes of innovation, as defined by Schumpeter. Another issue included in the paper covers the topic of support for businesses in the stagnant economy in the context of the concept of creative destruction.

Key words: *innovation, J. A. Schumpeter, the economic cycle*

INTRODUCTION

In this paper, innovation is analysed from the perspective of an Austrian-born economist, Joseph Alois Schumpeter (1883-1950). The aim of this paper is to apply the theory of business cycles, which is built on the basis of innovation, on a particular economy. The application should quantify basic elements of innovations and analyse their role in the economic development of a particular sector.

Although sometimes Schumpeter is classified as one of the Austrian school, his views on the methodology of economics differed from it in many ways. The main differentiating attribute is his use of quantitative methodology. At the same time, due to the influence of ideas of Léon Walras, he saw an opportunity to express economy in a balanced way, which was rejected by the representatives of the Austrian school (Mises, 2006). In his thinking Schumpeter uses new concepts. One of them is the concept of innovation, which is something that moves a new market further. His precise understanding of this concept is described in Chapter 1.3. A set of innovations which are implemented over time in the market, is a process that Schumpeter named as the innovation wave. The introduction and depletion of innovation waves is a foundation on which he builds his theory of the business cycle. He also works with the concept of creative destruction, which conceptually follows his logic of economic cycles. Creative destruction is a necessary process for the healthy development of the economy (Schumpeter, 2004). In the paper, all terms are analysed and applied to the current economic conditions, namely on the economy of the United States of America.

From a theoretical perspective, it is important to note that Schumpeter does not associate entrepreneurial profit with market imbalances. If the entrepreneur innovates and collects the profit, it does not cause

market imbalances. This is the main difference from the neoclassical approach (Holman, 2005). He does not treat the economic process as that of balance adaptation.

1. ENTREPRENEUR IN THE ROLE OF INNOVATOR

Schumpeter saw the entrepreneur's major role as one of an innovator entering the market and also becoming the main driver of the economic process. Not only does the entrepreneur fill a gap in the market with his business intention, but he also agitates the developmental process and increases an interest in the sector by an application of his innovation.

Schumpeter does not understand entrepreneurs only as an entity bringing innovations to the market. (Schumpeter, 1987; Nicholas, 2003) An entrepreneur plays a much more important role. The primary importance of a business person means that he or she can deal with the innovations in the market so effectively to be able to generate the additional business profit. This profit is based on the assumption that the entrepreneur (innovator) in a certain industry keeps gaining a monopoly for a certain period of time. This is the result of the fact that it is only he who has introduced something new to the market – an innovation - and can collect additional, entrepreneurial profit. This state does not last long, as there are other entrepreneurs who also want to get a part of the business profit. The whole process takes as long as it takes for the business profit to be completely divided among a large part of entrepreneurs. This will also deplete the innovation wave.

If there is an innovation wave coming to the market, there will be as many entrepreneurs interested in making the most of it as possible. With an increasing number of entrepreneurs, their quality will weaken. Assuming that the best innovator is the one who comes to the market as the first, and who actually introduces a given innovation to the market, it is he who receives the maximum business profit. However, visions of the business profit attract other entrepreneurs who do not have the same quality as the first one. If we claim that a stronger innovation wave gives more space for more entrepreneurs, we can also ascertain that there will be a larger number of lower-quality entrepreneurs in the market who benefit only from the innovation wave, not because of their entrepreneurial skills. When the innovation tide runs out, innovative entrepreneurs start to face the market environment, and there may be only two possible scenarios. Either the entrepreneur survives in the market due to high-quality entrepreneurial abilities³, or he leaves the market, usually at a loss. There are state incentive and support programmes and those from supranational institutions, both financial and non-financial ones, to prevent unsuccessful businessmen from leaving the market. But is it effective to support these failed entrepreneurs? If they were able to remain profitable only because of the innovation wave, they may not represent a due importance for the economic growth. The problem for these unsuccessful players, who have remained on the market until the next wave of innovation not because of their skills, but because of the support, appears at a time when the next wave of innovation gets exhausted and the economy stagnates. Mostly, the above mentioned support usually ceases to accrue, and the entrepreneurs are getting into even more trouble. Subsequently, they leave the market with a loss. For the entire economic process these unsuccessful entrepreneurs, who cannot succeed in the market in the long run anyway, are more expensive due to the support through which they could stay in the market. The support programmes may, therefore, be reasons for disrupting the process of creative destruction.

³ Keynesian term *animal spirits* could be applied in this context too.

2 THE THEORY OF BUSINESS CYCLE

Schumpeter's theory of businessmen is followed by the theory of the business cycle, utilizing the concept of innovation again. Innovation is used in the context of economic cycles, combined with the effects of innovation waves. An expansion of the economic cycle begins when an innovator introduces a set of innovations into the economy, giving thus an impetus to economic growth. Simultaneously, a support for investments in the given sector is created, and another side-effect is the expansion of credit. Yet, a wave of new innovations finishes with time and all initial signs gradually disappear. In some cases, the economic recession follows. (Schumpeter, 1987; Kuznets, 1940)

2.1 Innovation at the Turn of the Century

If we introduce Schumpeter's concept of innovation in the economy of the 21st century, we will focus on selected sectors in which we monitor growth. The focus on the sector and not on the whole economy is based on the logic of innovations themselves. They are implemented in a single or several related industries, and thus they affect the evolution of aggregate variables. For a sector to be described as a growing one, its share of the total real gross domestic product (GDP) of the given economy must be measured. In this study, measurement was applied on the economy of the United States of America between the years 1987 and 2010. We can consider information technologies, air transportation and telecommunications as the long-term growth sectors. In them innovation waves might have probably been demonstrated, bringing profit to numerous innovators. Evolution of the percentage of selected sectors of the real GDP is shown in Figure 1.

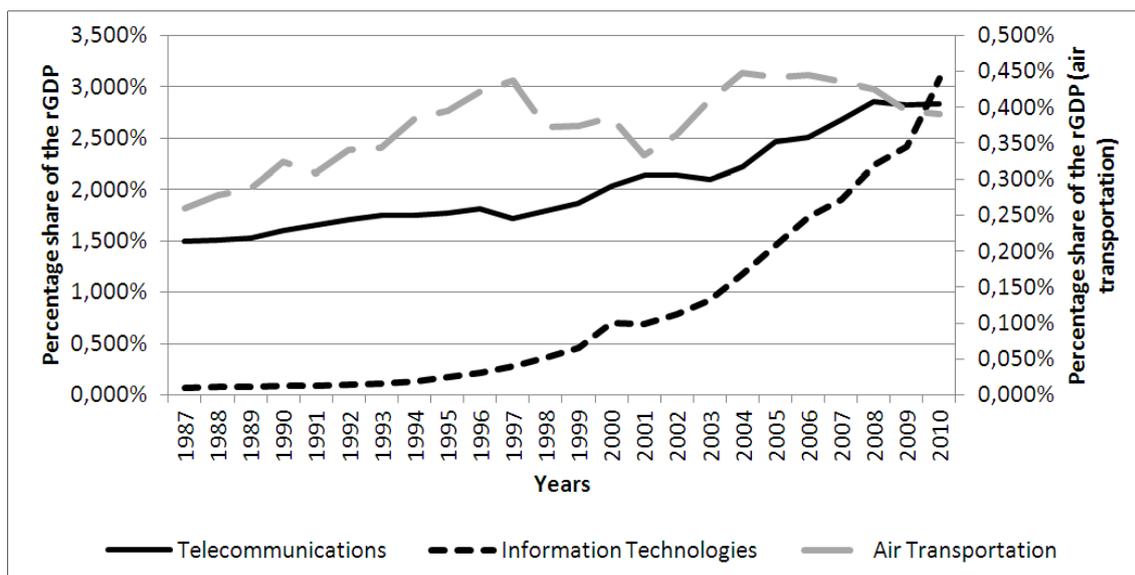


Fig. 1 Development of observed sectors in years 1987 - 2012

Source: Bureau of Economic Analysis of the United States of America; own processing

It is an interesting fact that in all three sectors (telecommunications, computer technology, air transportation) one common phenomenon can be observed. This is well reflected in Table 1. Here we can see that even though the share of the sector of the real GDP continues to grow, the number of workers

who are employed in the industry keeps constantly dropping. This means that the industry is able to effectively use their manufacturing factors (probably both labour and capital). More efficient use of production factors can then be associated with the successful grasping of innovations and their implementation in the market.

Years	Sector					
	Air transport		Telecommunications		IT	
	Percentage share of the rGDP (%)	Number of staff (in thousands)	Percentage share of the rGDP (%)	Number of staff (in thousands)	Percentage share of the rGDP (%)	Number of staff (in thousands)
1998	0,372	559	1,787	1427	0,36	1828
1999	0,374	585	1,863	1496	0,454	1756
2000	0,386	608	2,035	1607	0,695	1799
2001	0,333	618	2,136	1639	0,685	1756
2002	0,361	565	2,142	1504	0,781	1499
2003	0,411	531	2,1	1401	0,922	1353
2004	0,447	517	2,222	1353	1,177	1317
2005	0,441	503	2,461	1319	1,454	1308
2006	0,445	485	2,507	1301	1,73	1304
2007	0,436	494	2,678	1358	1,901	1273
2008	0,425	492	2,857	1335	2,24	1246
2009	0,395	464	2,823	1274	2,412	1137
2010	0,39	452	2,832	1197	3,081	1099

Table 1. Development of the number of employees and the share of the sector in the real GDP

Source: Bureau of Economic Analysis of the United States of America; own processing

Growth in one industry is certainly connected with a decline of another. This situation is demonstrated in Figure 2, which represents a growth in the air transport sector share of the real GDP, depending on the decrease in the share of rail transportation of the real GDP between the years 1987 to 2010.

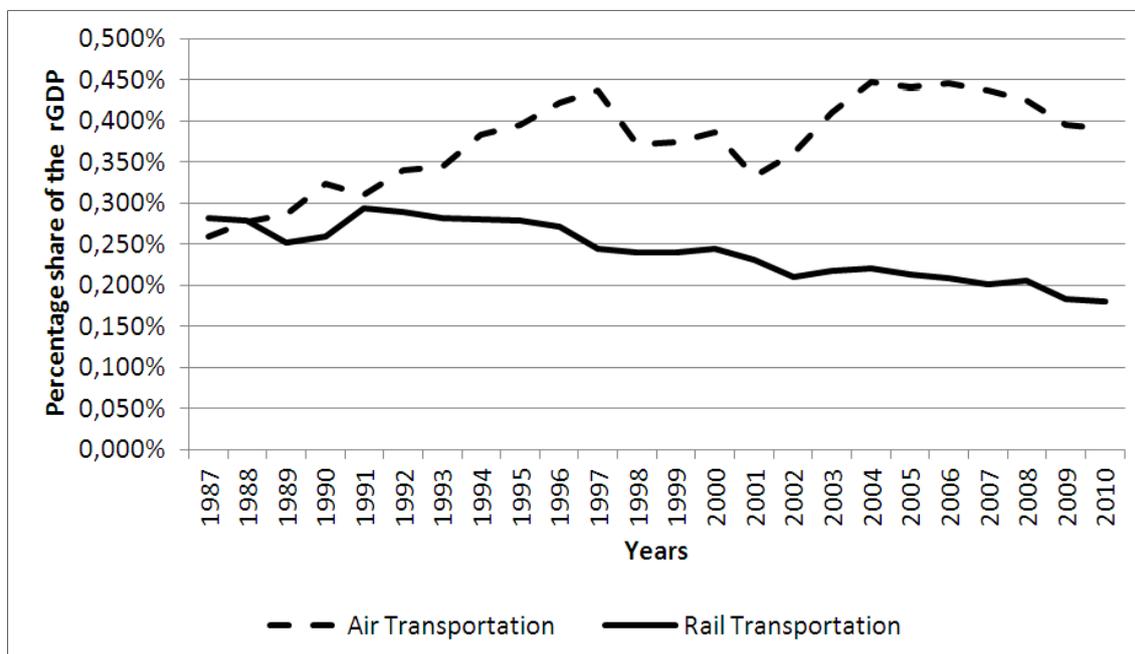


Fig. 2 Development of air and rail transportation

Source: Bureau for Economic Analysis of the USA; own processing

Figure 2 shows Schumpeter's process of creative destruction in specific sectors. This process takes place continuously, and due to the continuing introduction of new innovations, it will always remain so. Because of creative destruction, the economy as a whole does not stagnate long and it can further develop. A problem arises when the process of creative destruction is stopped or reduced through interventions from the state or supranational institutions. This will also reduce the healthy development of the economy in the capitalist system.

In the contribution, a further examination of one of the above mentioned sectors will be introduced; it will study in detail the economy through the impact of innovation waves. Due to the fact that in the period under review the highest increase was clearly showed in information technologies, we will focus on this sector in the economy of the United States.

3 INNOVATIONS IN INFORMATION TECHNOLOGIES

In order to better analyse how innovations affect the development of the market, we will focus on the crisis in the sector known as the "Internet Bubble". The crisis took place in the years 1996 – 2001, and it provides a good environment for the exploration of Schumpeter's theory in practice (Ofek and Richardson, 2003). The development of a new technology which is applied in the milieu of computers implies the possibility of a rapid expansion of the whole sector due to the new technology as such. In the contribution, selected options of innovations are measured according to various indicators, and their development is reflected upon in the observed period of crisis.

3.1 Five Cases of Innovation According to Schumpeter, and Their Measurement

The first case of innovation, as defined by Schumpeter, is the production of a new good that consumers do not know yet, or production of goods at a new quality. The second case is introduction of a new production method, which is virtually unknown in the given industry. In the latter situation, the foundation of the new industrial method may not be a new scientific discovery, but only a new way of its use (Schumpeter, 1987).

To measure these two cases of innovation we have used the information on the development of new patents and inventions in the United States of America. This paper focuses on selected patents according to the parameters of the United States Patent and Trademark Office. These are the components which constitute the main part of the activity of this office. Under the general term patents the author of this contribution understands three main components whose values are also measured on the basis of the data of the United States Patent Office. They are *inventions*, *utility models* and *industrial designs*. For a detailed analysis of this indicator (the number of newly registered patents), we have used a calculation of the change of newly registered patents in contrast to those in the previous year. This yields a completely new indicator which appropriately reflects the situation connected with patents.

The indicator is not to reflect the development of a number of patents in a given year or a long-term evolution of the total number of patents. It should reflect how intensively innovations gradually enter the market, and how they are applied. The period in which there is an increased risk of a new wave of innovation coming, and thus an increased risk of patent registration by someone else, brings pressure on the "producers" of patents. They are pressurised to register their inventions earlier than others to be able to take similar advantages of the entrepreneurial profit as the inventor does. The development of the described indicator is shown in Table 2.

Year	Number of registered patents
1994	2390
1995	4028
1996	304
1997	8084
1998	2930
1999	40924
2000	3458
2001	6378
2002	8040
2003	461
2004	2546
2005	-5609
2006	-23751
2007	38822
2008	-13385
2009	2340
2010	6681

Table 2: Newly registered patents in contrast to the previous year

Source: The United States Patent and Trademark Office; own processing

The third case of innovation, defined by Schumpeter, is opening a new market, respectively a market where until then the given sector was not represented, regardless of whether this market existed before. On the basis of macroeconomic aggregates, this point can be characterized differently. For the purposes of this article, we will focus only on the domestic market as a share of the information technologies of the total real GDP.

Through combining the development of these two aggregates, *the number of newly registered patents and the share of information technologies of the real GDP*, in a single graphic expression, we get a real picture of the evolution of these indicators in the years presented in Figure 3. If we look at the situation before 2000, we can see a value growth in the sector of information technologies of the real GDP. This percentage increased constantly, which is undoubtedly associated with its development. The growth of this share takes place due to a long-term development of the industry. Since the paper focuses on the crisis, which covers only a period of a few years, we can ignore the fact that the indicator is growing constantly; the speed of the growth should not be ignored though. If the industry is developing much faster than others, it may mean that it is just this sector where a dangerous recession starts to develop as a result of overestimation of innovation, supply of new innovators, and a rapid depletion of entrepreneurial profit.

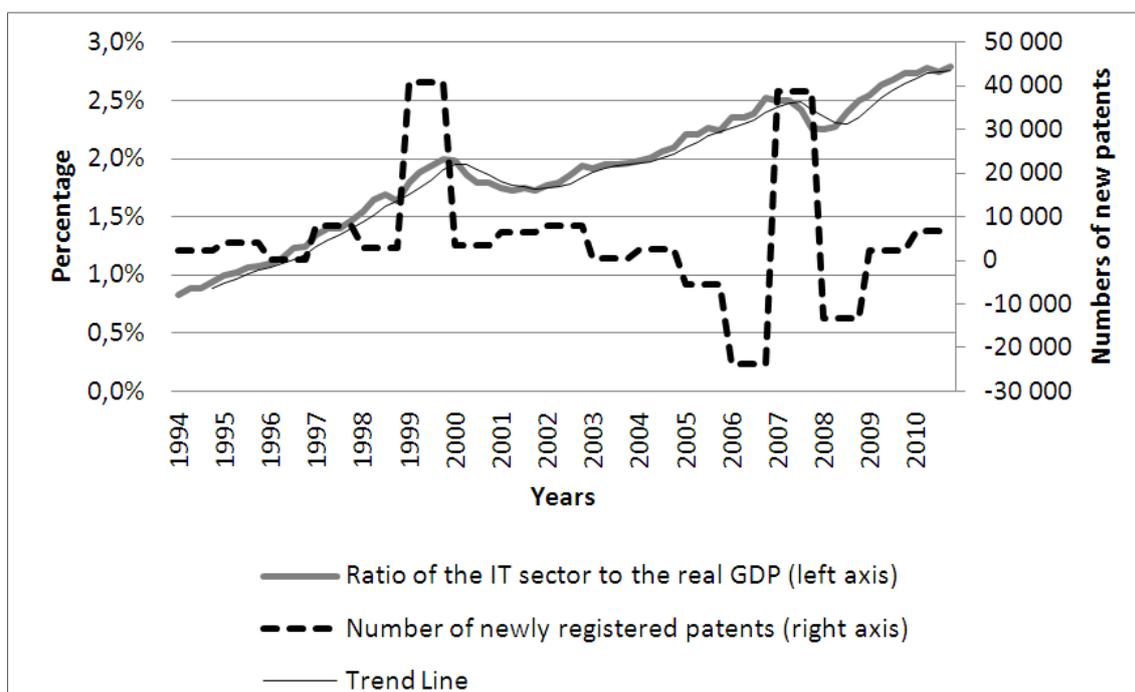


Fig. 3 Development of measured indicators of innovation

Source: Bureau for Economic Analysis of the USA, The United States Patent and Trademark Office; own processing

Until the end of the year 2000 the information technologies sector showed a growth rate of the share of the real GDP at clearly long-term higher values than the growth of the total real GDP. Even this period

could be understood as a signal that the information technologies industry was becoming overvalued and that an imaginary speculative bubble started forming to develop into the described crisis at the turn of 2000 and 2001 (Ofek and Richardson, 2003). Therefore, the industry started to overheat to some extent, and it commenced to indicate some problems in the future.

Figure 3 also captures the moving average of development of the share value of the IT sector of the real GDP, calculated for 4 seasons. Since the data are taken from the quarterly values, this development demonstrates the average of the last 12 months. Thus, it represents the trend line of the given indicator. Simultaneously, the graph demonstrates an indicator of changes in the number of newly registered patents, namely on annual data. It demonstrates a situation presented in Table 2, which shows that in 1999, one year before the peak of the crisis, there was an unusual increase in the number of newly registered patents.

Significant increases in the number of newly registered patents along with some overheating in the sector are the first indicators of problems. It is the situation of newly registered patents that is especially interesting. It very clearly indicates a desire of innovators to register their patent as quickly as possible to be able to reap benefits associated with the business profit as long as possible.

The fourth case of innovation, as defined by Schumpeter, is obtaining new sources of raw materials or semi-finished products - if this was previously unavailable or had to be produced first. It is difficult to determine this element in terms of measurement, and, therefore we retreat from it at the moment.

The last, fifth case of innovation case shows creation of a new type of organization, such as, for example, a monopoly (also through a trust). Creating a monopoly position is associated here with the primacy of the entrance of the innovation, whether it is understood as any of the above designated points, and thus unnecessary to quantify further at this moment.

By measuring of three basic points of Schumpeter's theory we get an overview of the development of these indicators of the crisis in the studied period; they give us a picture of how entrepreneurs behave in their sectors and how their business is associated with innovations, viewed through patents. What is interesting is the development of newly registered patents together with the development of the share of the given sector in the total real GDP, which in the period before the crisis summit shows significant deflections, and thus it may indicate a future problem of recession of the sector, which in today's globalized world can have consequences in other sectors.

CONCLUSION

Unlike Nicholas (Nicholas, 2003), who applies the theory on the data from the time of Schumpeter's life, thus focusing on the economic development in the first half of the 20th century, this contribution applies the knowledge to the turn of the 20th and 21st centuries. The reason why an application is delivered to the recent crisis is to show versatility of Schumpeter's theory and its uses even on innovations that Schumpeter never knew. The application proved to be successful, and it drew ideas of alternative theories near the current economic development.

An interesting issue is the development of the indicator which is in the article referred to as the *number of newly registered patents*. This simple indicator not only showed a significant deviation at the time of the 2001 crisis, but also in 2008. Here, too, a certain universality of the indicator to other crises is shown, when the 2008 global financial crisis erupted (Kraft, 2010). The above described indicator reveals that even in 2008 processes described by Schumpeter could be demonstrated.

Another of the aforementioned concepts, with which Schumpeter works, is the concept of creative destruction. The issue of entrepreneurial support programmes is associated with the effect of the destruction. An unsuccessful businessman, who in the context of creative destruction naturally ends his or her existence in the market, indicates that their part of the business profits has already been exhausted. When the failing innovators receive their support benefits, they get a confirmation of their view that their entrepreneurial skills and ideas are correct, and that they can create a stable and long-term gains. This consideration may just be biased by the inappropriate support, both financial and non-financial, which acts as an artificial evidence for the innovators proving to them their success. The moment when there is a further attack on their success in the form of further economic recession coupled with the exhaustion of the innovation wave, there appears a problem of a dual nature. Firstly, in times of economic recession, it is usual that the support from the state or supranational organizations decreases. Secondly, innovators are exposed to a further test of their ability to survive on the market. Yet, it is now with less support from third parties, and with a diminished ability to survive because they were not forced to change their thoughts and behaviour associated with their business since they mistakenly believed that their actions were correct. Consequences that the provided support may lead to are then more significant as the unsuccessful innovator has to leave the market sooner or later.

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**THE ROLE OF BUSINESS EDUCATION IN BUILDING
CULTURAL COMPETENCES: THE CASE OF CROATIA**

Iva Sedlić

Dalian Maritime University, China, iva.sedlic@gmail.com

Maša Magzan, Jagoda Poropat Darrer

Zagreb School of Economics and Management, Croatia

masa.magzan@zsem.hr; jdarrer@zsem.hr

Abstract

Being successful in the global economy requires knowing culturally-specific soft skills. In order to handle a challenging global workplace, the role of business schools is to develop and design intercultural programs that identify knowledge, skills and experience for the attainment of global competency. The focus of the study is business students from five different higher education institutions in Croatia. The study explores their attitudes towards intercultural education as well as cross-cultural sensibility.

Key words: *cultural competences, intercultural education, cross-cultural sensibility, business education*

1. INTRODUCTION

With the market expansion organizations are faced with one of the most important changes in its history, which marked the transition from a specific mono-cultural and ethnic community in the cultural pluralist environment. Doing business in the global market implies the existence of a multicultural identity whereby multinational companies and their managers in various ways adapted and conquer new markets. The transition from national to international markets requires adaptation and a new approach to business. The job description for managers, despite the new, changed circumstances remains the same. What is different is the way in which the global manager will perform the basic managerial functions. In order to succeed, the manager must adopt knowledge of the complexity of the international environment and the particular features of specific economic, legal, and political systems.

For this reason, the importance of interculturalism and cultural competences is increasingly growing. Interculturalism refers to support for [cross-cultural dialogue](#) and challenging [self-segregation](#) tendencies within cultures.⁴ Basic intercultural concepts include dimensions on which cultures and individuals fall at varying points on a continuum (such as individualism and collectivism), and the importance of values and how these drive behavior and manifest differently from culture to culture. Turbulence, unpredictability and cultural plurality of the international global market does not require managers with outdated ethnocentric approach and superior sense of their management practices, but highly conscious

⁴ Nagle, John. *Multiculturalism's Double-Bind: Creating Inclusivity Cosmopolitanism and Difference*. Ashgate Publishing, Ltd., 2009. P. 169.

managers who effectively adapt their own managerial style of leadership to the tradition of the country with which they do business, or the company they work for. Therefore, interculturalism involves moving beyond mere passive acceptance of a multicultural fact of multiple cultures effectively existing in a society and instead promotes dialogue and interaction between cultures.⁵

In order to understand, communicate with, and effectively interact with people across cultures, modern managers today have to continuously build their cultural competences. Referring to the ability to behave and communicate effectively and appropriately in multicultural contexts, cultural competences involve awareness of one's own cultural worldview, attitudes towards cultural differences, knowledge of different cultural practices and worldviews, and cross-cultural skills.⁶ Besides communication effectiveness, the basic requirements for cultural competencies become sensitivity and self-awareness, as well as understanding of the behavior of others as well as understanding the way they think and see the world.⁷

1.1 *The importance of cultural competences for global management*

Due to the significance of the role culture plays in their organization's profitability and overall performance, global managers today have to possess cross-cultural knowledge and a general understanding and adaptability of foreign cultures. Although the relevant literature identifies a wide range of terms referring to intercultural understanding and competencies such as "intercultural effectiveness" (Stone 2006, p.338); "intercultural competence" (Deardorff 2006, p.247) and "global competence" (Hunter 2006, p.270), for the purpose of this study the term "cultural competence" is used.

Cultural competences assume continually developing cross-cultural skills and understanding of the differences across cultures. Since it also comprises an awareness of one's own cultural worldview, cultural competence helps developing an ability to understand, communicate with, and effectively interact with people across cultures. It involves understanding characteristic beliefs and behaviors of certain social groups within a multicultural society that emphasize its uniqueness in relation to the dominant culture, ethnicity, race, religion, physical and / or mental ability, sexual and / or gender orientation. Developing competence refers to the adoption of the necessary skills to constructive action and the resolution of the issues that arise between cultures within a society.

Operationally defined, cultural competence is "the integration and transformation of knowledge about individuals and groups of people into specific standards, policies, practices, and attitudes used in appropriate cultural settings to increase the quality of services; thereby producing better outcomes."⁸ The importance of cultural competences reflected in one of the fundamental interests of management, refers to the expansion of the products and services in global markets in different parts of the world. For

⁵ Ibanez B. Penas, Ma. Carmen López Sáenz. *Interculturalism: Between Identity and Diversity*. Bern: Peter Lang AG, 2006. P. 15.

⁶ Mercedes Martin & Billy Vaughn (2007). "Strategic Diversity & Inclusion Management" magazine, pp. 31-36. DTUI Publications Division: San Francisco, CA.

⁷ Hrvatić, N., Piršl, E. *Kurikulum pedagoške izobrazbe i interkulturalne kompetencije učitelja*. Pedagojska istraživanja 2 (2), Zagreb 2005. (str. 258).

⁸ Davis, K. (1997). *Exploring the intersection between cultural competency and managed behavioral health care policy: Implications for state and county mental health agencies*. Alexandria, VA: National Technical Assistance Center for State Mental Health Planning.

many multinational companies, the main strategic goals are opening more companies, expansion of production and gaining competitive advantage in different parts of the globe. In this kind of business, it is not enough for management to dispose with mere possession of certain technical knowledge and high-quality performance of operational functions of business, but also the understanding of how the business world operates within a culture in which it operates.

In other words, the managers are expected to be the mediators between the two different cultures. Success in carrying out this task depends on the specific competencies that manager should possess in order to operate well in the international markets. In order to raise the general level of cross-cultural efficacy of the future managers, the role of business schools is to shift their focus from traditional business and economic programs and provide and designing strategies for effective intercultural education.

1.2 The Role of Business Schools in Providing Cross-Cultural Curricula

New task of management is to establish effective intercultural relations in the field of global business. To be effective in operating within a plural cultural market, one does not only need to be involved in understanding, negotiating and managing the differences (Heyward 2002; Stier 2006), but also has to find the way to utilize the rich diversity this brings to work and learning contexts. In order to prepare one to operate within culturally diverse global market, the basic form of training managers for intercultural relations requires developing programs for professional training based on cross-cultural principles. This means that intercultural curricula in business schools and related faculties should have objectives focused on the adoption of the basic concepts in the field of culture, understanding of the functioning of plural communities as well as encouraging flexible thinking and the development of cultural competences. Achieving the level of integration of diversity, both in the living and working environments, and switching from mono to pluralistic cultural perspective requires existence of the intercultural education at all levels of education.

The need for developing cultural competences among graduate students has been recognized by Freeman et al (2009). He claims that cultural competence skills are prerequisite in order for graduates to be successful in global business environment. Leask (2002); Ridings et al. (2008) and Stone (2006) identified cultural competences and skills as one of the graduate capabilities that must be demonstrable within degree outcomes. However, despite the importance that has recently been attributed to intercultural management and the development of cultural competence, research has shown that many graduates are still ill-prepared to face the global employment market and relatively few undergraduates gain international or intercultural competence in universities (Hunter, White & Godbey 2006). Academia has to be seen as the main driver of change; through the competence approach to curriculum design based on intercultural principles, with the introduction to modern teaching strategies, methods and forms of work to meet the needs of modern economic markets of European countries that today require a whole range of new skills and occupations of experts in various fields of management. Innovation would be that influencing on the educational policy which will allow not only the consistent implementation of intercultural principles in educational practice, but will as well indirectly influence those who create the demands and needs of the modern labor market in the field of management.

2. GOALS AND TASKS OF THE RESEARCH

In this paper, education is perceived as a central institution in all existing conceptualization of the interculturalism. The purpose of the research is an empirical analysis of the existence, intensity and direction of showing some (inter) cultural characteristics of individual students in business schools and

faculties of economics in the Republic of Croatia The possession of basic predisposition and the ability to receive intercultural content and tolerance towards others has been verified. The interculturalism is understood as an active understanding of different cultures, establishing positive relations of exchange and mutual enrichment. Assessment of intercultural predispositions should serve as an incentive for both, shaping new and the enrichment of the existing curricula for intercultural education in business schools. According to this objective, there are a few main objectives that can be derived from this research:

- Assessing the level of acceptance of intercultural values characteristic for European democratic and pluralistic society with regard to the degree of acceptance, identifying the level of students' intercultural competence;
- Exploring the similarities and differences in attitudes and the acceptance of certain values of the student of Zagreb School of Economics and Management and other B-school students;
- Laying the foundation for further development and improvement of specific business school curricular content in the intercultural aspects of management.

3. METHODOLOGY, METHODOLOGICAL SPECIFICS AND GUIDELINES FOR FUTURE RESEARCH

Data collection was performed by using a questionnaire. Students expressed their degree of agreement or disagreement with the statements using a scale containing five levels of intensity. Attitudes towards twenty five statements about values, derived from the value system recognizable as intercultural sensitivity were tested; levels of acceptance of the claim were compared between the Zagreb School of Economics students and students of related faculties.

The research was conducted on the sample of 117 respondents (68 male, 49 female). The research included five business schools and faculty of economics in the Republic of Croatia.– ZSEM (29), VERN (28), Faculty of economy in Osijek (20), Faculty of economy in Zagreb (20), Polytechnic in Slavonski Brod (undergraduate study of management) (20). The survey was conducted on undergraduate level (71) as well as on the graduated level (46).

The response of the respondents to the survey was positive; there were no significant problems in understanding the survey. Given that sample was randomly obtained, we can generalize our hypothesis on the entire population with a relatively high degree of reliability. After the appropriate logical tests, the data were entered into a computer and processed. The basis of this paper is the data obtained after processing and analyzing, preparation of analytical tables, graphs and the interpretation of the survey results.

Methodological remark refers to the quantitative approach, since the survey included insufficient number of respondents, and this number was not well distributed. In order to obtain more reliable results, it would be necessary to include a larger number of participants and properly distribute it among the students -those whose regular studies have not yet included the intercultural education and those who are attending or have completed some intercultural education course.

In this way, the rate of the responses neither agree nor disagree would probably be reduced. In this study, the rate of such responses was rather high and this could be interpreted in two ways - as an insufficient level of awareness or a simple reflection of an attitude. Percentage of neither / nor response would probably remain relatively high among young students and could be interpreted as a lack of awareness

and ignorance of the contents of interculturalism. It can be assumed that the percentage would decline proportionally with respect to the degree of involvement in the International management course or courses of similar content.

Guidelines for future research are related to the need for greater attention towards developing and implementing different methodological frameworks for studying social phenomena. Inclusion of non-statistical methods of inquiry and using qualitative research such as structured interviews and narrative descriptions together with quantitative approach could be used to better understand and examine social processes that might be missed by traditional quantitative measures only.

4. SURVEY RESULTS

Claims	
Interculturalism helps in understanding of your own culture.	3,89
Interculturalism promotes the development of national identity.	3,75
Interculturalism promotes tolerance in relation to the diversity of other cultures and peoples.	3,91
Interculturalism helps in gathering knowledge about cultures of other nations.	4,08
Interculturalism encourages critical thinking in social processes.	3,70
Interculturalism helps to combat prejudices about the history and culture of other nations.	3,86
Interculturalism helps coexistence of different cultures.	3,97
Interculturalism helps coexistence of different religions.	3,93
Interculturalism promotes learning of other languages.	3,91
Without interculturalism there is no democracy.	3,27
Without interculturalism Europe/China will not survive.	3,32
Without moral there is no interculturalism..	3,37
Without interculturalism there is only terrorism.	2,65
At university we do not study enough about interculturalism.	2,66
Interculturalism is studied as a new ideology.	2,90
Interculturalism is learned in the family.	3,39
Interculturalism is learned in university trough different courses..	2,74
Interculturalism could be only learned in primary schools.	2,41
Interculturalism could be only learned in secondary schools.	2,49
Interculturalism is learned through media.	3,32
Interculturalism is learned in your social environment.	3,49

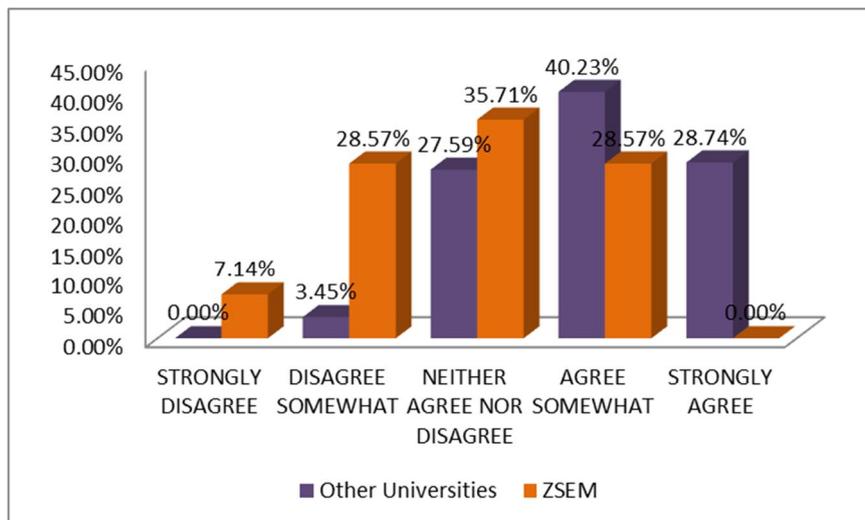
Interculturalism is learned in political party.	2,94
Interculturalism is learned in your free time.	3,27
Interculturalism is learned while traveling.	3,81
Interculturalism should be separate course in universities of economy and business schools.	3,33

Respondents showed a significant predisposition for acknowledging the value of interculturalism. Some values were not accepted in full, but a high percentage of students partially agree with them: interculturalism helps in understanding the culture of their own people (45.98%), encourages the development of national identity (47.13%), develops tolerance in relation to the diversity of other cultures and people (38.37%), helps learning about the cultures of other nationalities (36.38%), develops critical thinking about social processes (38.37%), represses prejudice against history and the culture of other nationalities (35.63%), improves coexistence between different cultures (40.23%) and religions (33.33%).

It is important to point out that the respondents might be opting for such claims only on the basis of their cognitive identification. In practice, this does not necessarily mean that, in the particular circumstances, students will respect their own judgment and act in accordance with them. Not once they have completely denied the claim that says interculturalism helps in gaining knowledge about other cultures. However, this does not mean that students are aware of all aspects of intercultural processes. For example, for the claim that interculturalism can help to understand one's own culture, a relatively high number of respondents have no opinion.

Such situation does not reveal that respondents have an equal number of pros and cons, so they are hesitant; it speaks more to the fact that most students are not sufficiently familiar with impact of the process of interculturalism to the understanding of the other cultures as well as of their own, consequently to its preservation rather than losing.

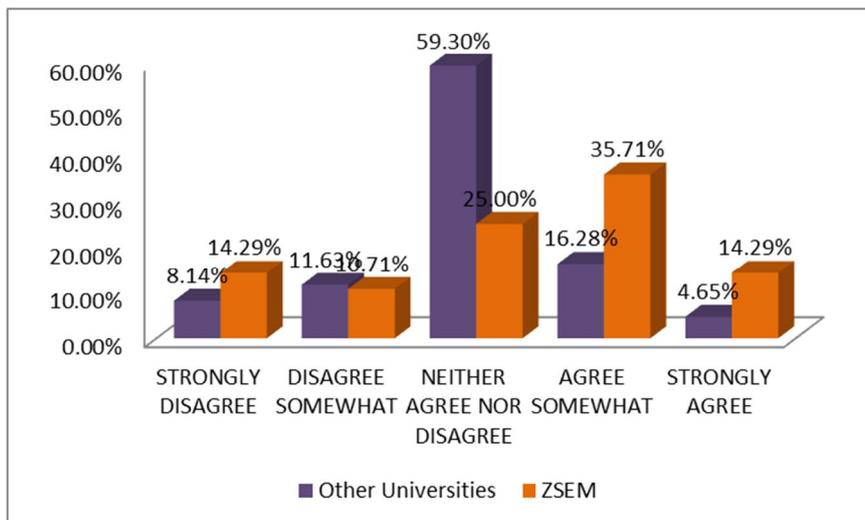
Significant differences in opinions between the ZSEM students and related faculties are visible in eleven claims. For example, the claims which are accepted to a greater percentage of the ZSEM students are 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 13, 20, 21, 23, 24, 25.



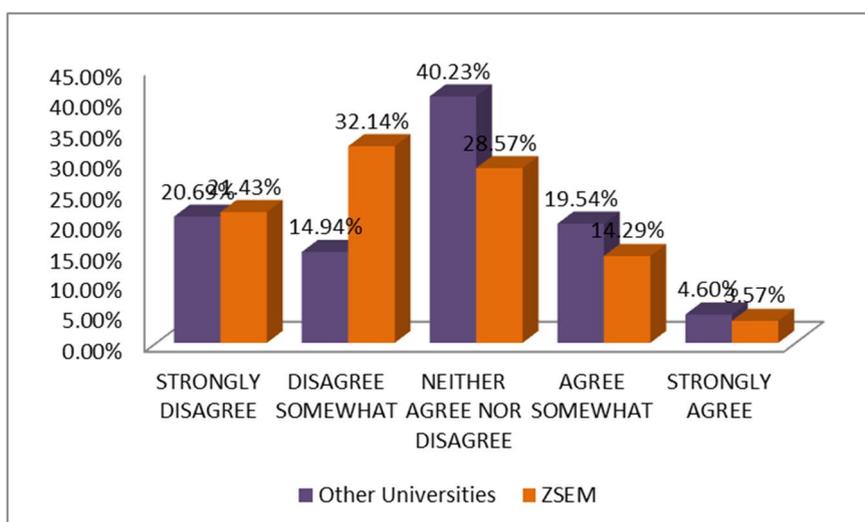
They disagree with the claim that the curricula teaches them enough about interculturalism, 21.43% of them do not agree, and 32.14% partially disagreed. Negative tone is increased by 38.57% of respondents with no opinion on this issue. There is an obvious difference in attitudes between ZSEM students and students from other faculties in claiming that interculturalism is taught as a new ideology, only 3.57% of them totally disagreed with this claim, as opposed to 19.77% of others.

In contrast to their colleagues from other faculties (28.74%), a small percentage of ZSEM students (7.14%) completely agree with the statement that interculturalism is adopted in the family while as much as 46.43% are hesitating in expressing any opinion on this. The difference between ZSEM students and students of other higher education institutions analyzed for the purpose of this study is also visible in the claim stating that interculturalism is adopted at the university through several courses. No ZSEM student agrees with this statement, as opposed to 28.74% from other universities confirming that this is true. Not a single ZSEM student agrees that interculturalism can be adopted only in elementary school, as opposed to the opinion of students from other institutions which think that this is true (32.18%).

Could interculturalism be adopted only in high school? Again, no ZSEM student confirms this claim in full, and 30.23% of students from other faculties do so. Again, no ZSEM students completely affirms that interculturalism could be adopted in parliament / congress as opposed to the other surveyed group (22.99%).



The percentage of ZSEM students interested in introduction of special courses with intercultural content in business school curricula is slightly higher: 14.29% of them agree completely, and 35.71% tend to agree with the need to introduce special courses. A quarter of ZSEM students have no opinion (25.00%) on this, which is a much smaller percentage than the percentage of respondents from other surveyed higher education institutions (59.30%) who have no reason to disagree or disagree with this claim. Such number indicates that the students, as future managers, are more than indifferent to the type and quality of education that prepares them for their future careers. There are differences in other claims as well, but those are not significantly high.



The percentage of students who neither agree nor disagree with the survey claims is rather high. It is very symptomatic that even 12 out of the 25 claims in total, have more than 30% of respondents who do

not have any opinion. Here is the percentage of students that have expressed no opinion on the following issues: no democracy without interculturalism (49.43%), without interculturalism Europe cannot survive (47.13%), with no ethics there's no interculturalism (42.53%) with no interculturalism remains only terrorism (43.68%), at the university we learn enough about interculturalism (40.23%); interculturalism is adopted in the family (46.43%); interculturalism can be adopted only in the high school (36.05%); interculturalism is adopted through the media (60.67%), it adopts in a social environment (47.13%), it adopts through parliament / congress (42.53%), it adopts through leisure time (43.68 %); interculturalism should be a special course at faculties of economics and business schools (59.30%).

The last percentage is particularly alarming. Such a high degree of students' indifference is not in line with the profile of professionals that faculties of economics and business schools are educating and preparing for the labour market. It is considerably lower among ZSEM students (25.00%), and it speaks in favor to need to introduce the students at the initial level of their business education of the importance and influence of cross-cultural principles in economic issues and management processes.

5. CONCLUSION

Post-industrial society is characterized by the development and spread of multinational and transnational companies, whose expansion should be followed by competent managers ready to perform managerial functions of planning, organizing, leading and managing human resources in a new, improved way. The basic prerequisite for carrying out such basic managerial functions is to understand the complexity of the international environment and specificity arising from the diversity of certain economic, legal, political and socio-cultural systems.

Comparing the results of this and similar studies combined with deliberation of such new challenges for managers, calls for rethinking the perspectives for development of intercultural management as a special area of management. The research confirmed that students, overall, have a positive attitude towards the offered values, especially those students which, during the study, had the opportunity to meet more frequently with courses with intercultural content; they show greater social closeness and greater interest in learning about the culture of national and ethnic backgrounds and, consequently, are expected to be better prepared for the global market. Given that the learning goals and cultural competencies are essential in verifying the qualifications on both, national and international level, there is no doubt that the acquisition of intercultural competences should be the first step to take into account when creating management and business studies curricula.

Due to its EU framework and orientation of Croatia as a knowledge society, building new and varied modalities of intercultural education and training for managers that help improvement of relationships and interactions between members of different cultures becomes an inevitable task for establishing communication directed towards effective cooperation and achieving business success. The research suggests that most respondents did not acquire a sufficient level of information and knowledge needed to create their own values. It should be noted that on a number of claims, one-third or more of respondents do not have an opinion, but provide the answer - neither agree nor disagree. Along with the important roles that society, media, family and professional experiences have in developing intercultural competence, emphasis needs to be placed also on higher education institutions and their responsibility in providing and designing strategies for effective intercultural communication.

In order to raise the general level of intercultural competences of students in business schools and faculties of economics that are necessary for effective management in the 21st century, a systematic and long-term implementation of the intercultural principles in the field of educating manager for

intercultural relations should be conducted. In other words, it is necessary to redefine the existing and to introduce a number of new non-economic courses, from the socio-cultural and communication fields to the traditional business and economic studies, as it is done in a number of European universities.

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**EFFECTIVENESS OF FINANCIAL SUBSIDIES WITHIN OPERATIONAL
AND COMMUNITY PROGRAMMES**

Michaela Báštěcká

Centre of Administration and Operations of the Academy of Sciences of the Czech Republic
The Faculty of Forestry and Wood Sciences of the Czech University of Life Sciences in Prague

Abstract

This paper is concerned with the effectiveness of financial subsidies within Operational and Community Programmes of the Czech Republic. European Union appropriated EUR 26,69 billion from its budget for the Czech Republic for the running programme period of 2007 – 2013. At the same time the Czech Republic can tender over EUR 50 billion, which is a total budget of the Seventh Framework Programme. The whole process of evaluation is also connected with the effectiveness which explores the use of public funds to increase the efficiency of this process. How can we evaluate these projects? How efficient and effective our projects are?

Key words: *Effectiveness, Efficiency, Evaluation, European Union, funding*

INTRODUCTION

European Union appropriated EUR 26,69 billion from its budget for the Czech Republic for the running programme period of 2007 – 2013. This amount represents 74 percent of the state budget of the Czech Republic in 2007. These finances are given to realize projects, so called operational programmes. Every Member State negotiates operational programmes with the European Commission, which are financed by the European Regional Development Fund (ERDF), the European Social Fund (ESF), and by the Cohesion Fund (CF). The finances are distributed through the funds which are intended for mitigation of economic and social differences between Member States and their regions. At the same time the Czech Republic, or more precisely research groups at universities or research institutes, transnational companies, small and medium-sized enterprises, public or governmental administration, and individuals from any country in the world, can tender over EUR 50 billion, which is a total budget of the Seventh Framework Programme. The Framework Programme is the main financial tool of the European Union to support research, technological development, and demonstration activities.

The Reallocation of finances from the European funds is unfortunately a very complicated incomprehensible and non-transparent process. There is a visible influence of political representation and lobbying for project selection. Another big problem is the evaluation of projects financed by public expenditure and public expenditure programmes. Assessing the effectiveness of financial subsidies is extremely difficult.

According to *The Evaluation of Socio-Economic Development, The Guide*, published by the European Commission, evaluation is a process in which we explore the use of public funds to increase the efficiency of this process. Previous shortened programming period 2004 - 2006 showed that the Czech Republic does not have extensive experience in the process of evaluation. In my opinion the situation has not improved much, we should still learn from the Nordic countries of Europe or the United States, where the tradition of an evaluation process is highly developed.

According to the above guide we should assess primarily the following criteria:

- relevance
- effectiveness
- efficiency
- usefulness
- sustainability

Relevance assesses how selected targets correspond to socio-economic problems which should be dealt with within the given call for providing the financial subsidy.

The term effectiveness represents the ability to produce requested benefit, i.e. effect. This means not to produce useless, unrequired or unimportant products or other benefits. We assess whether we achieved goals which were formulated by a call, the extent of success achieved or what sort of problems had to be solved.

The usefulness tells us to what extent the impacts meet the social or economic needs.

The sustainability means how the effects persist in the medium- and long-term time period after the termination of the financing from the public expenditure programmes. We consider the sustainability of institutional changes, and the sustainability of socio-economic impacts.

Perhaps most important criterion is efficiency. Generally, this criterion is the efficiency of injected resources and obtained benefits. It is therefore a ratio of inputs and outcomes, i.e. such use of resources where we achieve maximum volume and quality of products. In other words we can say it is the minimization of costs and maximization of benefits or the comparison of results and impacts with resources used.

In this context I would like to use the popular quote from Peter Ferdinand Drucker, the Austrian economist, who is considered the founder of modern management theory as a separate field: “*Efficiency is doing things right; effectiveness is doing the right things*”.

In my opinion, these five evaluation criteria should also include economy. The economy means the minimization of spent financial resources, that is, low consumption of resources, the prevention of unnecessary waste.

In the competitive environment, the source of success is achieving high effectiveness. The effectiveness increases profits, while the economy is especially important when lacking financial resources. In a typical market environment the correctness of allocation can be assessed by the ability to survive in a competition. When using money from public resources this market test is lacking, therefore the assessment of effectiveness in connection with the allocation of public resources is extremely important, but it is necessary to use different instruments for its assessment. Possible solution according to *The Evaluation approaches for particular themes and policy areas* and *The Evaluation methods and techniques* could also be the evaluation based on qualitative and quantitative characteristics.

In case of evaluating the productivity compliance with qualitative criteria, we consider primarily:

- the quality of provided goods/services,
- the securing of predefined standard of goods/services,
- the accessibility of goods/services for users.

If we monitor the evaluation of productivity using quantitative aspects, we analyze so called 3E (economy, effectiveness, efficiency).

Each evaluation brings a number of methodological problems. It is necessary to work on the presumption that:

- the evaluation options are limited to some degree,
- the state interventions into the economy can have both positive and negative consequences,
- the phenomena in the economic system and society are influenced not only by public expenses.

CONCLUSION

The importance of public expenditure programmes funding is in my opinion immense. In addition to financial support it primarily brings new opportunities, solutions, and innovations, increases competitiveness, and creates invaluable contacts and networks.

The establishment of suitable and widely usable methodology for evaluation of projects financed from public sources is a greatly exacting task. Certainly it would also be convenient to create methodology usable for the allocation of public funds in general, because currently only a formal aspect of the problem is considered, which means the compliance with the law, unfortunately not the efficiency and cost allocation.

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FINANCING OF THE PRE-HOSPITAL EMERGENCY CARE IN THE CZECH REPUBLIC

¹⁾ Miroslav Procházka, ¹⁾ Tomáš Halajčuk, ²⁾ Jiří Mašek, ¹⁾ Bruno Ježek, ¹⁾ Jan Vaněk

¹⁾ Faculty of Military Health Sciences, University of Defence, Třebešská 1575,

50001 Hradec Králové, Czech Republic

²⁾ Emergency Medical Service of the Hradec Králové Region, Hradecká 1690/2A,

50012 Hradec Králové, Czech Republic

E-mail: prochazka@pmfhk.cz

Abstract

The health care system in the Czech Republic is facing a continuous growth of public and private expenditures. The public is therefore focused on analyzing the cost adequacy and eligible funding forms of provided care. The situation in health care financing is also permanently studied by government and selected international organizations. Most of the current analyses are focused on system efficiency in each type of provided health care. Therefore it is important to evaluate the whole system part by part in as much detail as possible. Emergency Medical Service plays the key role in the pre-hospital emergency care and the article deals with the Emergency Medical Service in the regions of the Czech Republic during 2009-2011.

Key words: *Health care system, Emergency Medical Service, health economics, sources of financing, public budget, public health insurance*

INTRODUCTION

The integral part of each modern health care system is adequate providing of pre-hospital emergency care. In the Czech Republic (CR), this type of care is provided by Emergency Medical Service (EMS), which is, as specified by law, established by the regional government. Because of the small share of the whole public health insurance, financing of Pre-Hospital Emergency Care was at the periphery of interest. In 2011, the expenditures on EMS reached “only” 0.8 % of the total health care costs (Tomáš Halajčuk and Miroslav Procházka, 2012). In the article, the real picture of EMS in the Czech Republic is described, with the focus on the main differences across regions. All of the used data were obtained from public sources. All monetary values are presented in CZK, the exchange rate to 1 EUR was: 26.8 CZK in 2009, 25.6 CZK in 2010 and 24.5 CZK in 2011, all rates are dated on the 1st of July (Czech National Bank, 2013).

FINANCING OF THE HEALTH CARE SYSTEM IN THE CZECH REPUBLIC

The total expenditures on the health care system in the Czech Republic in 2011 amounted to almost 290 billion CZK, which was 7.6 % of the gross domestic product (GDP). Financing the health care in the Czech Republic is provided by the Bismarck system, based on the public health insurance principles. The main source of financing is created by health care insurance expenditures, from the 74.6 % in 2009 to 78.2 % in 2011 (see Figure 1). The next important sources are the public budgets (state, regional,

municipal) with 8.9 % in 2009 to 5.8 % in 2011 and also household and private expenditures with the share of about 16 % (UZIS CR, 2012).

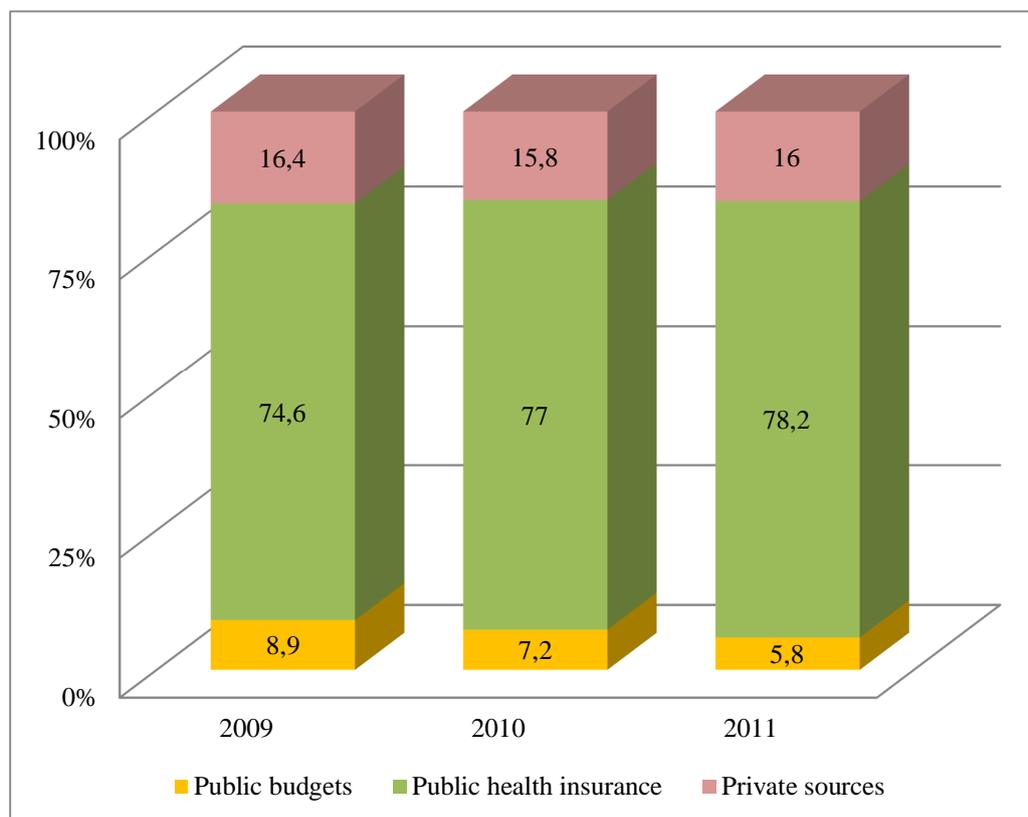


Figure 1 Health care expenditure by sources of financing (in %)

Source of data: (UZIS CR, 2012)

EMERGENCY MEDICAL SERVICE

The definition of EMS, together with its tasks, responsibilities and organization, is determined by a brand new law Act No. 374/2011 Collection of Laws of the Czech Republic on Emergency Medical Service, which explicitly states that "*Emergency Medical Service provider is an organization established by the region ...*". The next important fact about the EMS is that in each region it is possible to have only one EMS with exception of local inter-regional cooperation. Currently, there are 14 EMS providers in the Czech Republic, which fully corresponds with the number of regions. Unlike the other types of health care in the Czech Republic, pre-hospital emergency care is provided without direct payments from patients. However, there is also one exception from this rule which applies to persons from non-EU member states and out of public health insurance system. These persons pay the full price, which means all costs connected to their case.

FINANCING OF THE EMS IN THE CZECH REPUBLIC

The total expenditures on pre-hospital emergency care system in the Czech Republic supported by EMS were amounted to almost 5 billion CZK in 2011. The relative share of the total amount of health care insurance expenditures reached 1.7 % and the share of GDP was 0.13 % (Halajčuk and Procházka, 2012).

Emergency Medical Service has three sources of financing. Two main sources are the same for EMS as well as the health care system as a whole and consist of financing through the health insurance and public budgets (represented by the contribution of the founder, the appropriate regional authority). The third source of EMS financing is the income from the additional services (medical assistance to public events, training, direct payment from foreigners etc.). EMS has no direct payments from the households and individuals. The additional source, which is yet not fully possible to evaluate, is the new state contribution on crisis preparedness. This additional contribution is possible to use only for special activities and assets. For the reason that this contribution was not provided during 2009 to 2011, we will not take it in to account in this article anymore.

Considering the total volume of provided financial resources, the main EMS source is the regional authority operational contribution. This source constitutes approx. 63 % of the total EMS incomes. The second in importance is the payment from the public health insurance system with 34 %. The last 3 % are represented by additional services rendered by EMS provider, especially medical support (concerts and sport events), renting of own properties, education provided to organizations or individuals, etc (Halajčuk and Procházka, 2013).

Unlike the average income structure across health care providers, the main part of EMS income is created by public budgets and the secondary, still very important, part is created by resources from health insurance. By comparing the total ratio of EMS financial sources for the whole Czech Republic during 2009 – 2011 period (see Figure 2), it can be observed that the ratio is very similar, almost the same. When comparing this ratio of EMS sources with the ratio of total health care system (see Figure 1), a gradual increase of the public health insurance share can be seen.

The health insurance resources cover specific medical services provided by EMS. These services are trips and interventions of EMS crew including costs connected with the transport to the location of intervention and then to the medical facility. Payments from health insurance have to fully cover costs from the trip. EMS is also partially financed by a unique system of payments, which is not used by other types of health care providers. The system is implemented a contractual fee-for-service without the limitation of total volume. In practice, an EMS provider receives payments from the health insurance company for any health-care related activities they provide and declare. Furthermore, most of the insurance companies cover individual payments for selected material costs connected with the emergency medical care providing.

From the facts mentioned above, it follows that there is a comparatively high level of dependence of the EMS economic system stability on the regional budgets, which are fully related to the political decisions of the current regional government. Other operational and overhead expenses of an EMS provider, including the cost of “preparedness” of the provider during the time, when it is not paid for the emergency medical trip, are mainly paid from the founder’s budget.

REGIONAL FOUNDER CONTRIBUTIONS

Founder contribution on operation provided by the regional authority is mainly used for the EMS fixed cost payment. It is the greatest share and therefore also the most important source of EMS financing. The total amount is significantly different among regional EMS providers.

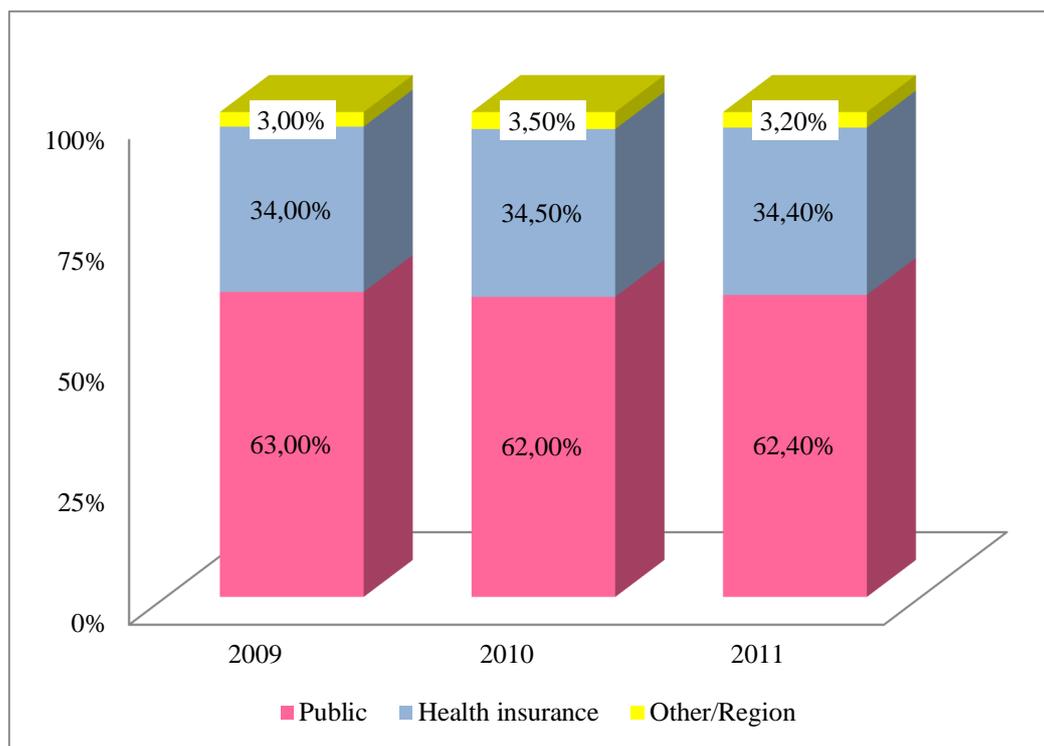


Figure 2 Sources of the EMS financing in the Czech Republic
 Source of data: (Emergency Medical Services Association, 2013)

The Czech Republic regions are marked by different parameters, which have strong influence on the actual pre-hospital emergency care support demandingness. This situation causes differences in financing between the regions. The main factors include the total number of inhabitants, land area, land geography, demographic structure, the network of health care facilities, etc. It is obvious that these specific characteristics determine decisions on the field of EMS financing by founder contributions. As was mentioned above, there are no minimal or maximal limits for calculations and providing these contributions is made on the basis of regional political decisions mostly based on the numbers from previous year and the EMS provider management skills in negotiations for better economic conditions.

Therefore, it is quite common to observe significant differences between regions in total EMS income and also in the ratio of income sources. The total income of the whole EMS in 2011 was 4,883,969 thousand CZK, from which 3,049,464 thousand CZK were the incomes from contributions, 1,680,218 thousand CZK from health insurance and 154,287 thousand CZK from other sources (Halajčuk and Procházka, 2012).

FOUNDER CONTRIBUTIONS TO EMS ACCORDING TO REGIONS

The founder contributions can be compared from several points of view. As the main indicator, the total amount from the founder contribution can be used, assembled with the other sources of evaluated EMS (see Table 1). There are significant differences when comparing the regions by the total founder contributions. The maximal contribution was received by the EMS provider of the Central Bohemian region with its 411,112 thousand CZK. The minimal contribution was received by the EMS provider of the Karlovy Vary region with 121,085 thousand CZK. It is obvious that this indicator does not reflect the significant differences between the regions. The indicator is, however, useful for time trends comparison.

Region	EMS total incomes in 2011 (in thousand CZK)			
	Total	Founder Contributions	Public Health Insurance	Other
Karlovy Vary Region	203,240	121,085	80,738	1,417
Pardubice Region	241,194	151,704	85,243	4,247
Hradec Kralove Region	244,982	154,571	84,685	5,726
Olomouc Region	247,764	155,574	87,098	5,092
Zlin Region	257,213	160,142	92,978	4,093
Liberec Region	269,084	167,575	93,070	8,439
Vysocina Region	269,141	167,196	93,731	8,214
Pilsen Region	372,837	260,197	94,440	18,200
Prague	381,649	226,107	138,546	16,996
Usti Region	395,376	220,390	167,930	7,056
South Bohemian Region	412,445	234,460	133,709	44,276
South Moravian Region	429,045	269,147	148,355	11,543
Moravian-Silesian Region	541,384	350,204	181,548	9,632
Central Bohemia	618,615	411,112	198,147	9,356
CR total	4,883,969	3,049,464	1,680,218	154,287

Table 1 EMS total incomes in 2011 (in thousand CZK)

Source of data: (Emergency Medical Services Association, 2013)

These time trends can describe changes of the total regional budget contributions between selected years. The greatest increase of the contribution during the observed period was reached by the EMS provider

of the Pilsen region, namely 24.34 % (46 million CZK) between 2009 and 2010 (see Table 2). The last significant increase was recorded in the Liberec region with 12.32 % (18 million CZK) between 2010 and 2011. However, it is necessary to clarify that between 2009 and 2010 there was a 2.2 % decrease. From the comparison it is partly possible to read the time trends of the total contributions. From the comparison between observed years and regional EMS it follows, who is more and who is less successful from the contribution increase point of view. A significant positive development is evident in the Pilsen region, a regular contribution increase can be seen in the Pardubice, South Bohemian Moravian-Silesian and Vysocina region. A decrease can be found in the Karlovy Vary region, where the decrease was not considerable, but regular. On average, an increase in trend of the regional offices contributions for EMS operation is obvious.

Region	Regional office contribution (in thousand CZK)			Index in %	
	2009	2010	2011	2010/09	2011/10
Karlovy Vary Region	137,000	126,943	121,085	92.66	95.39
Pardubice Region	143,057	145,330	151,704	101.59	104.39
Vysocina Region	147,568	152,522	167,196	103.36	109.62
Olomouc Region	152,026	149,379	155,574	98.26	104.15
Liberec Region	152,571	149,190	167,575	97.78	112.32
Zlin Region	155,140	156,070	160,142	100.60	102.61
Hradec Kralove Region	155,694	157,532	154,571	101.18	98.12
Pilsen Region	189,643	235,796	260,197	124.34	110.35
Usti Region	203,500	218,492	220,390	107.37	100.87
South Bohemian Region	205,438	220,000	234,460	107.09	106.57
Prague	229,552	235,400	227,822	102.55	96.78
South Moravian Region	248,655	248,642	269,147	99.99	108.25
Moravian-Silesian Region	313,256	324,787	350,204	103.68	107.83
Central Bohemia	429,158	403,453	411,112	94.01	101.90
CR total	2,862,258	2,923,536	3,051,179	102.14	104.37

Table 2 Regional offices contributions to the EMS during 2009-2011 (in thousand CZK)

Source of data: (Emergency Medical Services Association, 2013)

From the public financing point of view, the share of the total regional budget is a great indicator of regional politicians' willingness to take part in the EMS financing. This indicator is represented by the share of provided founder contributions on the total regional expenditures.

During 2009 and 2011, the regional budget expenses on the EMS were slowly increasing, specifically by 0.08 % annually (Tomáš Halajčuk and Miroslav Procházka, 2012). This situation should be considered in the circumstances of the actual regional expenses during the observed period, which decreased. For the comparison of the average expenses, a calculation without the Prague EMS provider is also mentioned. The reason is the extremely low founder contribution share on total expenses of Prague, which is caused due to extremely high total expenditures. The real number of this indicator in Prague EMS is 0.35 % share on Prague budget in 2011. This ratio makes several fold difference according to the rest of Czech Republic regions. On the other hand, the contribution makes the biggest share on regional budgets in the Pilsen region (1.87 % in 2011) and in Karlovy Vary region (1.83 % in 2011). Nevertheless, by this numbers it is impossible to talk about too high expenditures on the EMS. Without the Prague, expenditures ratio is possible to observe values from 0.97 % to 1.87 % on total regional budgets (see Table 3).

Region	EMS contribution share on the regional budget (in %)		
	2009	2010	2011
Prague	0.34	0.33	0.35
Central Bohemia	1.65	1.53	1.57
Moravian-Silesian Region	1.02	1.01	1.17
Usti Region	1.16	1.16	1.23
Olomouc Region	1.06	1.07	1.22
South Moravian Region	0.86	0.85	0.97
Liberec Region	1.70	1.34	1.76
Zlin Region	1.25	1.22	1.36
South Bohemian Region	1.34	1.42	1.58
Vysocina Region	1.33	1.37	1.59
Hradec Kralove Region	1.26	1.28	1.40
Pardubice Region	1.35	1.30	1.41
Pilsen Region	1.22	1.63	1.87
Karlovy Vary Region	1.84	1.76	1.83
Total average	1.24	1.23	1.38
Average without Prague	1.31	1.30	1.46

Table 3 EMS contribution share on the regional budget (in %)

Source of data: (Rozpočet veřejně, o. s., 2012)(Emergency Medical Services Association, 2013)

COMPREHENSIVE INCOME OF REGIONAL EMS

The legal status of the EMS providers in the Czech Republic as contributory organizations determines the founder claims on the comprehensive income. Opposed to commercial companies the main task is not to generate economic profit. The main indicator of an EMS provider economic management is the annual profit or loss. The optimal result of contributory organizations is a slightly positive annual balance. The reason is simple: it shows a successfully managed economy of the EMS provider and there is some space for negotiation about the contribution for next year.

Region	Comprehensive income in thousand CZK		
	2009	2010	2011
Prague	3,235	2,713	227
Central Bohemia	43	48	237
Moravian-Silesian Region	3,407	867	1,386
Usti Region	0	244	0
Olomouc Region	848	594	332
South Moravian Region	26	-147	-190
Liberec Region	14,077	3,035	64
Zlin Region	12	74	545
South Bohemian Region	264	71	370
Vysocina Region	645	0	0
Hradec Kralove Region	4,374	458	-13
Pardubice Region	0	0	0
Pilsen Region	70	11	10
Karlovy Vary Region	4,380	16	-9,713
Total	31,381	7,984	-6,745

Table 4 Comprehensive Income of EMS (in thousand CZK)

Source of data: (Emergency Medical Services Association, 2013)

From the comprehensive income of the EMS during 2009 - 2011 overviews (see Table 4), extreme numbers can be clearly identified, such as the maximal surplus of 14 million CZK in the Liberec region in 2009 or the maximal loss of 9.7 million CZK in the Karlovy Vary region in 2011. The extremely high annual surplus is probably caused by a high economic activity or inappropriate determination of the founder contribution.

The value of comprehensive income can also be influenced by additional founder contributions during the year according to the EMS provider management requirements. In these cases, only the consolidated balance would be published.

A loss of units or tens of thousands CZK is not a fatal for an organization with a budget of several million CZK, in fact, it is quite acceptable.

CONCLUSION

Emergency Medical Service in the Czech Republic is an important segment of the health care system, which is financed by several billion CZK from the public health insurance and also from budgets of regional authorities. Together with the increasing demand for health care services the pressure on rationalization of all health care providers, including pre-hospital emergency care providers, will grow. Nowadays, the issue of EMS financing in the Czech Republic is not properly analyzed and the presentations of EMS economic management declare many differences across the regions. The EMS system is in present form strongly influenced by good will of regional politicians and regional economic capabilities. Unfortunately, this approach breaks the rationalization not only of the pre-hospital emergency care system in the Czech Republic

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**MEGAPROJECTS AS CONSTRUCTORS OF THE MESOECONOMIC SPACES
OF THE CONTEMPORARY RUSSIA: POTENTIAL, RISKS, TRENDS AND PROSPECTS**

Inna V. Mitrofanova¹, Inna A. Mitrofanova²

¹ Institute of the Social, Economic and Humanitarian Researches
of the South Scientific Center of RAS,

Volgograd State University, Volgograd, Russia. E-mail: labser@volsu.ru

² Volgograd State Technical University, Volgograd, Russia. E-mail: mitrofanovaia@rambler.ru

Abstract

The experience of the functioning of the federal districts in Russia proves that it is necessary to increase considerably the quality of the middle and long term forecasts, to modernize the instruments of the strategic territorial management. The opportunities of the territorial megaprojecting are connected with its proactive potential and synergetic effect but the limitations are determined by the insufficient experience of the functioning in Russia of the regional development institutes and a relatively low quality of the risk management on the meso level of the national economic space. Russia and its regions need a new state regional and investment policy that would completely satisfy the needs of the investment community and that could be capable to increase the volumes of the financing of Russian territorial megaprojects to a degree as the constructors of the economic spaces of the regions and federal districts of Russia.

The article is prepared within the project «Multicriterion analysis of the investment attractiveness of territories for the management of the projects of the interregional importance» of the program of the fundamental research of the Presidium of the RAS «Fundamental problems of the modernization of a polyethnic region under the conditions of the tension growth» (2012-2014).

Key words: *strategic territorial management, megaprojects, financing, risk, innovation, efficiency, development institutions*

1. INTRODUCTION

Identification. Mega projects are the plans that:

- are capable to influence the economic landscape of the economic space of the territory;
- have the costs more than 1 mlrd \$;
- labour hours in the project make up 2 mln worker hours for the design and 15 mln worker hours for the construction;
- period of the realization is 5-7 years ore more;
- have a considerable dynamics of the assets;
- have additional costs for the infrastructure of the distant regions of the realization;
- have a synergetic and a multiplicative influence on the social and natural sphere of the territory.

Territorial megaproject as a tool of the strategic territorial management is an integrated targeted interregional program of the frontal and pendular or the nidal type substantially presenting the complex of the integrated subprojects united by a common conception and the goal (transformation of the economic space of the territory), allocated resources and the common organizational mechanism (development institutes) (Zhukov, 2012; Mitrofanova, 2010).

Subprojects of a territorial megaproject must be realized consequently or in a parallel way within the common life cycle and be directed to the attaining of a more considerable synergetic effect in comparison with the autonomous realization of local projects that are not attached to each other.

Types of territorial megaprojects:

- to achieve the general goal of the territorial megaprojects of the *pendulum type* the advantages of the territorial division of labour are used, an efficient interregional integration is organized being based on mutually complementary resources, scientific and economic opportunities of the neighbour regions;
- *frontal* megaprojects spread its influence on social and economic processes of large regional systems;
- megaprojects of a *nidal type* are directed to the formation of territorial clusters on the base of the creation of a common infrastructure, complex development and the use of the territorial combinations of natural and economic resources, specialization and the cooperation of the production.

The necessity of the development of the territorial megaprojects is determined by:

- paradigmatic changes of the space strategy and the transformation of the formed economic structures and territorial proportions;
- economic development of new territories located in extreme conditions;
- interregional and interzonal interaction between industries for the goal of the complex resource use of the multi aspect character and the creation of new territorial and manufacturing complexes and clusters;
- realization of the projects of the long term interaction with large scale economic, social and ecological consequences;
- integrated use of all the reserves of the intensification and the modernization, located in the sphere of both industrial and territorial development;
- use of the specialized institutional, organizational and economic, managerial lever for the solution of the territorial problems (Mitrofanova, 2010).

Thus the territorial mega project on the one hand is worth analyzing like a large project that has all the mentioned above characteristics, included into the federal, district, regional strategy or program. On the other hand megaproject can be selected as a separate format for the elaboration of the strategy of a particular region or district.

2. MATERIALS AND METHODS

Myths (potential). Over the last years in the world there is an increase of the scale, frequency and geographic spread of the megaprojects that are traditionally presented by large scale investment multiprojects of the infrastructural character including those ones that are connected with the creation of large objects: the transport infrastructure, the infrastructure of national and regional innovation systems, including infrastructural objects of the federal and regional nanotechnological nets, for instance, megascience centers – large research centers for the cooperative, with the participation of a

number of countries, elaboration and the production of new types of nanoprojects and nanomaterials including the training of the staff for nanoindustry.

Megaprojects work as catalysts for the development of the adjacent sectors: economy of a deep processing, services and knowledge become the base of the contemporary clusters, large consumers and suppliers of goods and services, centers of the interregional economic development (Inshakov, Inshakova, Mitrofanova, Petrova, 2009).

At the same time the foreign experience of the territorial megaprojecting demonstrated the excess of the cost of the largest projects by 50–100% and the forecasted demand turns out to be wrong by 20–70% and the freedom of the information on the megaprojects is limited as if we spoke about state secrets, weapons of the mass destruction, defense, espionage and terrorism (low transparency of the results).

The basis of the megaprojecting created in Russia by 2012 is the result of both: the initiative of the business and the consequence of the new state policy regarding the spatial development of the country. The largest part of the contemporary Russian megaprojects is focused on the industries of the economy reproducing the industrial and the raw material model of the development of the country. Among the megaprojects planned for the realization the plans in the sphere of the oil and gas complex, metallurgy and infrastructural industries dominate.

For the largest part of the regions and districts of Russia the development of the infrastructure and the industry is just a preparatory step in the realization of the projects of a higher processing and with a higher added value. A part of the Russian megaprojects is now oriented to the industries of the new economy: chemical industry, timber industry, tourism, sphere of the innovations, development.

From the point of view of the targeted, project approaches the strategy of the development of the mesoterritory (region, district) should include the realization of several large territorial investment projects. An important characteristic of the megaproject is the publicity and a high public response that requires a preliminary coordination of the interests of the authorities, business and the civil society through crowd sourcing technologies (Mitrofanova, Zhukov, 2012; Zhukov, 2011).

The “Strategy of the development” of a territory should include without fail the chapter “Large scale projects (megaprojects)”. The procedure of the development and the foundation of the choice of the scenarios of the development territorial megaprojects should appear as separate local prognoses the work with which should be realized by a special group of experts.

3. CONCLUSION

In contemporary Russia the structured territorial megaprojects approved by the organs of the state authority for the realization on the model of the state and private partnership exist for the sum over 150 mlrd \$. These are projects of the large scale development of new territories, social and economic development of which is on a level lower than average in Russia.

Megaprojects “Ural industrial – Ural polar”, “Belkomur”, “Integrated development of the Lower Priangarye”, “Integrated development of the South Yakutia” and other according to the idea of the developers are directed to the creation in problematic Russian region and districts of a new economic framework, creation of the premises for the dynamic development of Siberia and the Far East (Mitrofanova, Zhukov, 2012).

When selecting the projects that can be included into a territorial megaproject their interdependence and type are often not taken into consideration:

- projects “diverted by the policy”, that if rejected from the realization of the policy measures anyway would be realized in other regions;
- autonomous projects that in any situation would be realized in the supported region (districts);
- projects “initiated by the policy” that in the case of the presence of the support or the inclusion into the megaproject were not realized neither in the supported nor in other regions (districts).

At the analysis of the efficiency of the territorial policy autonomous projects should not be taken into consideration neither from the point of view of the revenues nor from the point of view of the costs. However this is practically ignored at the assessment of the efficiency of the megaprojects that are being realized today in Russia and the programs of the territorial development. The developers very often strive to overprice their cost due to the inclusion into them the autonomous projects and the decision about their realization does not depend on the stimuli stipulated by the megaproject or the system of stimuli of a program (Mitrofanova, 2009; Mitrofanova, 2010).

The uniqueness of every megaproject influences the origin of the typical and specific risks including macroeconomic, political, geographical, engineering, technical, financial, commercial, organizational and legal, tariff, taxation, competence, personnel and corruptive (criminal) risks.

Commercial risks present a set of hazards arising in the process of the realization of goods, works and services. The basic prerequisites of commercial risks are the volatility of the demand for goods, works and services, the limitedness of the suppliers, the complicated character of the supply chains, peculiarities of the physical properties of goods, works and services (portability, safety and so on). These risks usually arise from the specific conditions of the contracts of two parts participating in the process of the projecting and planning, construction and supply, purchases.

Key commercial risks usually are reduced to the peculiarities of the pricing and the order of the construction of the relations between the participants of the project and the market in the whole. Such risks are concentrated on two separate spheres – conditions of the contract, market conditions and their specificity. The similarity in the way of the leveling of these risks or their lowering to the acceptable level entails the necessity of a thorough structuring of the obligations of the parts and the provision of the sufficient guarantees and the insurance included into the contract clauses.

For the risk minimization of the unfavourable changes of the tariffs the managing companies of the megaprojects should construct long term relations with regional regulating organs of the Federal service on tariffs, insist on the use of the tariffs indexing mechanism. The risk of the unfavourable changes of the prices on the production of the projects are minimized by means of the conclusion of preliminary contracts concerning future supplies as well as due to the thorough analysis of the sales markets for the production by means of the diversification of the sales having the contest procedures on the selection of the suppliers.

Technical risks of megaprojects can be less scaled and as a rule, are narrowly specialized. At the same time this group of the risks is the largest one as it includes a large range of different threats that accompany the realization of the investment projects on all the stages – projecting, construction, application and entail both the structure of the financing and the liabilities of the third part (contractors, suppliers, operator and so on). Being the most widely spread and simple group of risks connected with the projects, technical risks are the most complicated hazards for the solution by means of the methods of the softening. They don't require just a thorough structuring of contracts but also considerable efforts for the introduction of an efficient control, detached observation and the checking of the works provision effectuated by the sides directly or indirectly connected with the investment projects.

The most probable technical risks of the territorial megaprojects are the following: 1) violation of the ecological norms in the process of the realization of the investment projects, the risk is minimized by the measures directed to the timely revelation of the activities that can damage the environment and the fixing in the contract the provisions about the responsibility for the violation of ecological norms, the managing company is following the realization of the measures on the revegetation of the spoilt land with contractors or subcontractors in compliance with the project documentation; 2) the non-fulfilment of the construction and the introduction of the objects into the exploitation by general contractors and subcontractors. The risk is minimized by means of the increase and the toughening of the criteria on the selection of the general contractors, project and research institutes, suppliers of the equipment and materials, inclusion into the contracts for construction of a number of the bank guarantees for the reimbursement of the advance money, rise of the fine sanctions for the break of terms of the works fulfillment and the delivery of the equipment, realization of the preliminary accreditation of the manufacturing plants, contractors and also by means of the incessant control for the realization of the contract liabilities and the use of the service of the technical control over the quality of the equipment; 3) the non fulfillment of the deadlines of the delivery of the basic manufacturing equipment by the suppliers, the risk is minimized by means of a thorough selection of the supplier and the conclusion of the delivery contracts on the following terms: the fixed price of the equipment is foreseen as well as the fixed terms of the liabilities fulfillment. The supplier guarantees the compensation of the damage arising at the delay of the equipment delivery and in the contract the mechanisms of the liabilities provision are stipulated in the form of fines and penalties. This type of risk is minimized also due to the fact the suppliers of the technological equipment are the companies producers of the equipment or official dealers of the given companies that allow to strengthen the control at the quality of the supplied machinery, services of the suppliers on its installation and the terms of the supplies; 4) unfavourable changes in the operational activity of the objects of the stage of the exploitation the risk can be shown in the excess of the operational costs, failures in the operational activity of the objects, the project power, the risk is minimized by the following actions: a thorough selection of the staff with the specialized working experience and the management in the sphere of the realization of the project, regular monitoring of the project realization, elimination of the dependence on the single supplier.

Political and macroeconomic risks to a smaller degree are subject to the regulation. These risks are outside the control of the managing companies and possible procedures of their minimization are limited. The corporations of the development interact with the organs of the state power of all the levels.

Geographic risks. An important factor is the specificity of the geographic placement of the objects. That's why when planning the activity the seasonal character and seasonal risks connected with a hardly accessible place or specific geographic position should be taken into consideration.

Organizational and legal risks are inevitable due to the changing legal environment. The legal and normative base of the Investment fund of the Russian Federation are being permanently changed, the changes into the "Law on Concessions", "Law on special economic zones" are being introduced, the normative base of the governmental companies and corporations is being constantly transformed.

The large scale projects that are being realized in Russia and the most important ones from them – integrated territorial megaprojects are faced with administrative and managerial risks as a result of the inefficient management, numerous responsible executors and so on. The investors need to have one responsible person presenting both the initiators (the business) and the responsible executor (one window principle).

Engineering risks determined by the routine character and a low quality of the engineering solutions are one of the most considerable hazards for all the megaprojects moreover when they are realized under

the conditions of the factual resurrection of the national engineering industry in Russia. And, despite the emergence over the last years in the Russian market of a number of large engineering and construction megacompanies of the international level, the quality of the services provided by them lags behind the world criteria.

In Russia during the latest 20 years there were no new enterprises and infrastructures and this fact lead to a serious degradation of the engineering. It is necessary to restore the engineering industry again and to create the net of the sectoral project organizations using the mechanism of the state and private partnership. However it should take place in close interaction with the leader of the world engineering for that it is necessary to liberalize a lot of things in the technical regulation and their town planning policy as the technical town planning norms adopted in Russia are tangle and considerably conservative, are being constantly complicated and the loss of complexity is being observed instead of the unification and simplification. Numerous harmonizations, expertise are needed more and more. It is necessary to approach the domestic engineering standards to the international ones for the progress achievement in this important sphere. Transparent instruments of the state support for the creation of the housing and municipal infrastructure, a special order of the land and subsoil disposal is needed within the realization of the integrated megaprojects of the territorial development.

Financial risks arise in connection with the financing of the contracts and the agreements concluded during the realization of the investment projects. Financial risks comprise the currency risk, the risk of the interest risk changes and the liquidity risk. The management of the financial risks should be realized in a centralized way. The risk of the interest rates changes is related to an eventual change of the cost of the servicing of the borrowed funds and can reflect on the financial results of the corporation. Only when having an irreproachable image the corporations can attract credit resources and to attract on favourable conditions with the use of the fixed and floating interest rates.

The liquidity risk is connected with the fact that the managing company cannot pay for its liabilities on the maturity date. That's why for example the department of the economy and finance of the managing company provide the centralized management of the liquidity. The liquidity management is realized by means of the use of the procedures of the detailed budgeting, maintenance of the pay position, monthly making the cashier plan of the budget fulfillment. For the liquidity management the reserves of the liquid money sufficient for the activity realization taking into consideration the possibility of the currency and interest rates changes risks.

Legal risk can arise as a result of the discrepancy of the normative and other legal acts of the managing company with the existing federal and regional legal norms and requirements or as a result of their non fulfillment. External factors of the violation of the system of the state norms and standards comprise the imperfection of the legal system (absence of the sufficient of the legal regulation, contradictory character of the legal acts of the Russian federation, its susceptibility to changes including the imperfectness of the methods of the state regulation or supervision, inconsistency of the methods of the government regulation, inconsistent use of the legal acts of the foreign state or the norms of the international law). For the minimization of the corresponding risks in the managerial company there should be the monitoring of the informational and legal systems with the goal of the contemporary registration of the current changes in the federal and regional legal space and the revelation of the laws that are being prepared and the projects of the normative acts of the federal executive authorities capable in the prospect to affect the activity of the managing companies.

Legal risks can be expressed in the opportunity of the origin of losses as a result of the non observance by the counter parts of the requirements of the normative legal acts and the signed contracts. In relation with the impossibility of the solution of separate arguable questions arising in the process of the

execution of the agreements by means of the negotiations there is the opportunity of the arising legal suits and as a result there is the risk of the adoption by a judicial body of an unfavourable solution for the company.

The consequences of the norms and standards violations in the activity of any legal entity are legal sanctions and the penalties of the regulating organs, considerable financial losses and the losses of the reputation as a result of the non observance of the laws, instructions, rules and the codes of the conduct.

Taxation risks are connected before all with potential changes in the tax legislation and also in the practice of the use of the existing legislation by the tax organs. The basic principles of the taxation as well as the order of the calculation of the specific taxes are set by the Tax Code of the Russian federation. The tax reform in Russia is in its final stage in connection with which the changes introduced into the legislation are only current ones and they deal only with definite question of the taxes calculation and do not lead to a considerable increase of the tax burden. However at the same time the potential risk of the discrepancy of the interpretation of the norms of the tax code between the taxation bodies and the tax payers that can also be referred to legal risks.

Besides as the first years of the realization of the Russian territorial megaprojects showed the first reason for their rebranding can become the risk of competences that can be manifested in the inaccuracy of the forecasts that even on the preproject stage can become the reason of the negative multiplicative effect and lead to the changes of the whole conception of a megaproject having considerably decreased its strategic effect and the importance (Mitrofanova, Zhukov, 2012; Zhukov, 2011; Zhukov, 2012).

The Russian megaprojects de facto form the demand for the innovations but mainly for the foreign technologies produced by foreign patent owners, foreign companies that in the best case have on the territory of Russia a secondary production. Thus Russian megaprojects today influence more the demand for foreign and not domestic innovations.

Today in Russia there are about 15 megaprojects of the federal level that are being realized and financed from the Investment fund of the Russian Federation. This number is not sufficient for the obtaining a systematic effect in the economy. The money from this fund and other state development institute are limited and in the near future the infrastructural development of Russia and its subjects will encounter with the deficit of the budget financing. The work concerning the active search and the attraction into the megaprojects of private and institutional international investors, consolidation of the efforts of new and traditional institutes of the regional development is indispensable.

Under the conditions when the federal authorities took a passive position in this question and the investment initiative is moved to regions. The most active regional administrations achieve large scale results in the realization of the large investment projects in their territories. However in every district there are problems of the systematic character, connected with the infrastructure and the industrial development that can be solved on the level of the interregional interaction when realizing the megaprojects (Жуков, 2012).

Megaproject “Ural Industrial – Ural Polar”: rebranding reasons. In the “Strategy of the social and economic development of the Ural federal district for the period up to 2020” the megaproject “Ural Industrial – Ural Polar” was declared to be the main direction of its realization.

The Ural megaproject included the complex of the interrelated measures concerning the creation of three basic blocks: the transport one, energetic one, natural and resource one. The nucleus of the transport infrastructure was supposed to become the railroad on the eastern slope of the Ural: Polunochnaya station – Obskaya stations that in total with the railroad lines that are being constructed would connect

on the shortest way the industrial Ural with the deposits of the natural resources of the Polar Ural, the zone of the oil and gas extraction, having provided the exit to the Northern Sea Route, to the city of Norilsk. The development of the deposits of the Polar and the Near Polar Ural was planned to replace the import of all the volume of the chrome ores, supplied into Russia by the magnesium, iron and phosphorites.

As the result of the project realization more than 50 new enterprises, 66 000 additional working places in the mining industry and in transport, 3 000 in the timber industry and 3 500 jobs in the oil and gas industry were supposed to be created.

The planned volume of the financing of the projects and the measures of the Ural megaproject is about 543,8 milliard rubles including 79,1 milliard rubles (14,5%) – the budgets of the regions of the Ural federal district, 359,7 milliard rubles (66,2%) are off budget funds. Investment fund of the Russian federation allocated 105 milliard rubles (19,3%) for the drawing up of the design documentation.

Thus according to the idea of the developers of the projects the realization of the Ural megaproject allowed to create in the Arctic and in the polar Ural a large territorial and industrial complex. The Ural megaproject was positioned as a leader in the realization of the innovative projects on the regional level capable of the introduction of the newest technical and technological achievements into the transport, oil and gas, energy industry. That's why in 2006 – 2010 the Ural megaproject was included into the main strategic documents of the country: long term program of the subsoil research and the reproduction of the mineral and raw material base, general plan of the power station placement, the strategy of the railroad transport development as well as the long term conception of the social and economic development of Russia.

In 2006 – 2011 the structure of the governing company of the Ural megaproject was formed on the principles of the state and private partnership. The regions of the Ural federal district in Russia were included into the list of the shareholders. The corporation "Ural Industrial – Ural Polar" has existed since 2006 but its real construction units appeared only in 2011. In 2006 – 2009 the only thing the governing corporation was busy with was only the project documentation. More than ten associated companies incessantly generated losses. Since 2010 all local projects that were realized within the general conception were separated into different blocks: transport one, mining and energetic one. In February 2012 the decision was taken about the transformation of the public company "Corporation Ural Industrial – Ural Polar" into the "Corporation of the Development".

Transport and geological exploration blocks were initially closely interrelated. The base of the Ural megaproject was developed by the Western Siberian scientific and research geological prospecting oil and gas institute. But the deposits for the development of which 8 milliard rubles were spent proved to be "fairy tales" as if told by the famous Russian writer from the Ural region, Pavel Bazhov. The picture of the numerous deposits connecting railroad branches with the industrial enterprises, new workmen's settlements and energy objects that was drawn by the management of the "Corporation Ural Industrial – Ural Polar" remained on the paper. As the result of the costly geological exploration works concerning the forecasted deposits of the mining raw material it became obvious that the prognoses were not qualified and they were grossly exaggerated. By 2010 the economic calculations gave the load base for the first main line only 5 mln tons from the 25 mln tons needed for its workload. That's why the decision was taken to give up the idea of the construction of the railroad along the eastern slopes of the Urals range between the stations Polunochnaya and Obskaya although it had been advertised before.

Today "Corporation of Development" is focused on the construction of the route Obskaya – Korotchaevo (Northern latitudinal route). This is a part of the unfinished project of the Soviet period –

Transarctic main. The budgetary funds will not be spent on this railroad main. Today this railroad allows transporting 3–4 mln tons of the loads and after the finishing of the construction the cargo traffic is expected up to 20 mln tons.

Rebranding of the Corporation “Ural Industrial – Ural Polar” was connected not so much with the enlargement of the directions of its activity as the deviation of the basic content of the Ural megaproject that lead to its rebranding. Its successor “Corporation of the Development” was transformed into the servicing company in the maintenance of the oil and gas complex of the Western Siberia, in the construction of the infrastructural objects – transport, energy and social ones (dwelling units, kindergartens, automobile roads etc).

The Ural megaproject in the development of the natural reserves of the Polar Ural during 6 years of its realization turned out to be the conglomerate of the local investment projects of the different spheres – starting from the optical fiber communications and finishing with the reprocessing of chicken eggs. The strategically important Ural megaproject was transformed into the conglomerate of the local investment projects that were not united by the common conception that many times weakened the complex integrated effect of its realization. In 2006 the Ural megaproject was declared to be a party project on the congress of the party “United Russia” and in 2011 the government of the Russian Federation excluded it from the number of the priority ones (Mitrofanova, Zhukov, 2012).

The South of Russia as the space of the realization of large scale projects: the results of the 2012. The possibilities of the stable social and economic development of the South federal district in Russia in the long term period are determined by the character and the completeness of the use of all the complex of its competitive advantages, favourable internal (regional) and external (macroeconomic and international) factors of the economic growth as well as the opportunities of the overcoming of the key problems of the regional development. Special places in the system of the factors of the regional development occupy the localized competitive advantages in territories of southern regions having a stable character and not depending on the external conditions.

The key competitive advantages of the Southern federal district include: the most advantageous in comparison with other territories of the Russian Federation natural and climatic conditions for life of people; comparably high attractiveness of the territory of the district (especially of the Krasnodar Kray) for the migrants presented by the economically active population from other regions of the country including the highly qualified people; exclusively advantageous geopolitical and geoeconomic location of the territory of the region determined by its frontier character related to its strategically important countries for Russia of the Caucasus macroregion, Ukraine and Kazakhstan and also the direct exit to the naval transport communications connecting the Russian Federation with the countries of the Mediterranean, Azov and Black and Caspian basins; comparatively developed and continuing to develop the transport infrastructure including a wide net of automobile roads with hard road surface, port infrastructure (naval and river transport), railroads, airports, pipelines net; presence in the territory of the district of a number of the developed and the developing cluster with a high potential of growth in different industries and sectors of the economy; considerable sizes of the internal (regional) market determined by a comparatively high quantity and concentration of the population; relatively low cost of the labour force, high level of the provision of the district by local construction materials.

The development of the southern regions in Russia will be considerably influenced (before all in the short term and long term period) also by the following factors preventing from the stable economic growth: poorly diversified industrial structure of the economy, comparatively low level of the labour productivity in the largest part of the key industries and sectors of the economy; a low innovative activity and insignificant presence in the district of the high technological types of the activity, absence on the

territory of the district of the leading innovative and educational clusters; a conserving discrepancy of the professional and qualification structure of the working force and long term priorities of the district development; considerable interregional and intermunicipal differences according to the degree of the economic activity and the standard of living of the population; relatively low level of the electric power coverage of the territory of the district; insufficiently developed engineering infrastructure of the district; territorial proximity to the regions with unstable social and economic situation, heightened threats of the terrorist activity and international conflicts (Inshakov, Inshakova, Mitrofanova, Petrova, 2009; Mitrofanova, Ivanov, Mitrofanova, 2012).

The problems of the social and economic development of the South federal district should be solved in the middle term period mainly on the basis of the use of different mechanisms of the state and private partnership. This will allow creating the necessary base for the realization of the priorities of the innovative modernization of the economy of the South of Russia for a long term perspective.

The year 2012 resulted in the lowering of the increase rates of the state investment of the economic complex of the Southern Federal district of Russia and the direction of the investments changes. If before the state took part in a large scale and directly in the construction of the Olympic objects, today the increase of the state investments into the infrastructure of the district as a whole is observed. Private investments keep slipping out of the megaprojects but the number of small cost projects in industries traditionally developed in the South of Russia is growing (Mitrofanova, Batmanova, 2012).

Closer to the finishing of the construction of the objects of the Winter Olympic Games 2014 there can arise an “investment gap” when after the objects are put into the operation there won't be an analogical volume of the investments into new projects. In 2012 this did not happen but the signs of the deceleration are obvious – increase rates of the basis of the real investment projects fell to the level of 1,2%.

All the units brought into the operation that are not connected with the Olympic Games in 2014 localized on the territory of the Rostovskaya oblast and Krasnodarsky kray. Out of the projects planned for the republics of Kalmykia and Adygeya in 2011 none was realized and their deadlines were postponed to a later date. In Astrakhanskaya and Volgogradskaya oblasts there are just single units put into the operation. The natural replacement of the investors that is being observed – is the index of the economic activity of a separate territory. In 2012 the base of the real investment project of the Southern Federal district was renewed by one half. Such a scaly rotation is connected with the realization and the consequent leaving the rating of number of the largest projects, the most part of which was more or less connected with the preparation to the Olympic games of 2012.

During 2011 the number and the total sum of the investment projects that are planned for the completion for the nearest one or two years was reduced. Simultaneously with that the declared cost of the projects needing for the completion three or four years was reduced and the sum of the projects requiring five and more years for the completion was increased. That's why in the nearest one or two years the investments into the regional economy most likely will be cut down.

In general in 2012 in the Southern Federal district among 50 the largest projects 14 real investment projects corresponding to the level of the territorial megaprojects according to the cost criteria (more than 1 mlrd \$) with a highly evident industrial direction were singled out. The support to the portfolio of the real investors in the South of Russia according to the cost was provided in the first turn by the units of the engineering and transport infrastructure and oil and gas industry where the main investor are the state and large holding structures.

Thus territorial megaprojects are required to become the basic key centers, points of the bifurcation of the territorial development giving the opportunity of the alternative choice under the condition of the

contemporary revealing of the possible risks. They in contrast to financial investments have a proactive potential, are focused on a specific material result that is supposed to have a considerable prolonged effect on the transformation of the economic space. The processes of their development and the realization imply large scale preplan researches, qualification of the developers and the executors, the efficiency of new ones and the activity of traditional institutes of the development, convergence of the state and private interests, public character, publicity, transparency, active use of the crowd sourcing technologies, a considerable social and integral effect.

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**THE POSSIBILITY OF ADOPTING THE INFLATION TARGETING POLICY:
THE CASE OF TUNISIA**

Mohamed Kadria

LAREQUAD laboratory & FSEGT, University of Tunis El Manar, B.P 248, El Manar II, 2092,

Tunis, Tunisia, E-mail: mohamed.kadria@gmail.com

Abstract

In this paper, we tried to examine and provide a clear answer on the possibility of the Central Bank of Tunisia to adopt the inflation targeting monetary policy. But the transition to the new optimum monetary framework remains a challenge in itself and requires the filling of certain pre-conditions for establishing its independence and transparency of the central bank, a flexible exchange rate regime, etc. To do this, we first tried to clarify the conduct of monetary policy in Tunisia and the progress made in this area for the application of this new strategy which allows more mastering inflation in a context of crisis and post-revolution. At transmission mechanisms, we conducted an empirical study of dynamic VAR models to conclude whether there is a stable and predictable relationship between monetary policy instruments and inflation, which this is considered a strong technical condition in favor of inflation targeting.

Key words: *Inflation targeting, mechanisms of transmission, Tunisia, dynamic VAR.*

1. INTRODUCTION

Certainly, New Zealand was the first country to adopt the inflation targeting policy since 1990, during which there has been a loss of controllability of monetary aggregates, instability of money demand because of innovations financial and capital account liberalization. A situation that has been deteriorating the intermediate objectives in indicators.

After, it was more industrialized countries and emerging countries adopt inflation targeting as an anchor for monetary policy with a reaction function which, in addition to reacting to the output gap and inflation, partially responds to the movements of exchange rates.

Indeed, valuable theoretical research (Bernanke and Mishkin (1997), Svenson (1997), Bernanke et al (1999), ...) argue that the formal application of the inflation targeting policy by the emerging central banks makes more credible the conduct of monetary policy. In addition, on the forehead empirical evidences, Ball and Sheridan (2005), Batini and Laxton (2007), Goncalves and Salles (2008), Lin and Ye (2009), and other state and show that the inflation targeting is optimally on macroeconomic performance in developing countries and emerging inflation targeters in terms of reduction in the level and volatility of inflation and the growth of production. Even in the face of shocks generated by the last size economic crisis and financial crisis, the central bank of inflation targeters were better equipped than others to cope with difficulties.

Such arguments have made many other emerging meaning to adopt the strategy of inflation targeting as a management system which monetary policy is mentioned Tunisia, where the monetary authorities continue to make considerable progress as time in the conduct of monetary policy, with the tracing of a final objective of price stability and through a strategy of choosing a growth rate of the money supply.

Therefore, it is interesting to study the possibility of Tunisia to make the transition to a new monetary policy framework, more flexible and effective in achieving its ultimate goal. But to adopt the inflation targeting policy, it is important to see if Tunisia has filled strict institutional and structural preconditions setting it up. In this research, we will analyze and judge the degree of independence of the Central Bank of Tunisia (CBT), the level of transparency of the forecasting system inflationary expectations and other pre-requisites, and lead, in addition, an empirical study to validate the dynamic existence or not of a stable and predictable relationship between monetary policy instruments and inflation.

However, this paper is organized as follows. The second section presents an overview of the inflation targeting policy. A presentation of the conduct of monetary policy part in Tunisia as well as verification of the conditions of implementation of inflation targeting is advanced in the third section. We will conduct an empirical analysis in VAR models to study the transmission channels of monetary policy in Tunisia and in particular, verify the presence of a stable relationship between monetary policy instruments and inflation as a necessary condition for the application of inflation targeting policy in Tunisia and this in the fourth section. We offer the policy implications and conclusions respectively in the fifth and sixth section.

2. THE INFLATION TARGETING POLICY: AN INVENTORY

The advantage of the credibility of fixed exchange rates and monetary targeting have lost their importance, since currency crises experienced during the 1990s and the existence of other sources of inflation, and therefore the conditions for maintaining these regimes have become much more stringent giving more priority to flexibility and strategy of inflation targeting.

2.1. Definition

The inflation targeting is a monetary policy framework that forces the central bank to ensure low inflation. According to Mishkin (2000), inflation targeting is not limited to an announcement of an inflation rate to reach for the next year, but rather it is a combination of five elements namely:

- A public announcement of an inflation target in the medium term;
- An institutional commitment that makes price stability the primary objective of monetary policy (which all objectives are subordinated), which assumes independence of monetary authorities;
- A floating exchange rate ;
- Capacity development of modeling and expectations of the central bank;
- A transparent monetary policy that communicates its plans, objectives and justifies his actions.

Add to that another element which is not much less than the previous i.e. the existence of a stable and predictable relationship between monetary policy instruments and inflation. In what follows, we will dissect this definition of inflation targeting policy and analysis, in particular, the pre-requisites of its implementation.

2.2. The institutional and structural prerequisites to inflation targeting

To enable central banks to apply optimal inflation targeting policy, it is assumed that a set of conditions must be met.

2.2.1 The institutional prerequisites

They are considered to be the success key factors of the adoption of inflation targeting and can be identified in the following three elements: independence, transparency and communication of the central bank.

➤ The institutional independence of the central bank

The central bank independence means that nobody has the power to interfere in the decisions taken by the central bank in the exercise of its statutory mission and / or reverse the course of decisions.

Indeed, the evaluation of the degree of independence was assessed by Cukierman (1992) and which manifests itself at three levels: legal independence of central banks, the rate of rotation of Governors and real independence. On the rate of replacement of the governor, he held that more the rotation rate of the governor is higher, and less the central bank is independent of political power. Thus, Cukierman, Webb and Neyapti (1992) come to appreciate that the turnover rate is much higher in developing countries than in developed countries.

In addition, there is an extensive literature on the relationship between monetary policy independence and its effect on macroeconomic performance (Grilli and al (1991), Cukierman and al (1992) and Alesina and Summer (1993)). Alesina & Summers (1993) state that a greater autonomy helps the central bank to engage in an efficient manner towards its goal of price stability within the framework of a study on sixteen developed countries between 1955 and 1988.

Moreover, Battini and Laxton (2007) propose six indicators to measure the degree of institutional autonomy granted to the central bank whose the most significant are:

- The absence of tax liability;
- The operational independence ;
- The main target (if not sole) of the mandate of the central bank's inflation.

The other three indicators are: A balanced fiscal balance, a low public debt, an indicator of the overall independence of the central bank both economically and politically.

➤ Transparency of the central bank

"Transparency implies that the central bank provides the general public and markets, openly, clearly and in a timely manner all relevant information on its strategy, its analyzes and policy decisions and procedures" (ECB report, 2007).

It is clear that the duty of transparency through the publication of periodic reports in which the central bank sets the future direction of monetary policy and explains the differences between the current rate and the target rate, makes the policy of inflation targeting most effective.

In other words, « La politique monétaire est plus efficace lorsque les marchés en comprennent les objectifs et le rapport entre ces objectifs et les mesures prescrites.» (C r o c e, E. and M.S . K h a n, 2000). So, we can say that the transparency, as consideration for the independence, is a support to the credibility.

2.2.2 The structural Prerequisites

➤ Advanced infrastructures

Battini and Laxton (2007) suggest measuring this dimension on the basis of three aspects:

- The central bank must be able to collect and use a certain number of data.
- It must establish a systematic process of forecasting.
- And finally, it must develop models able to conditional forecasts.

➤ A stable economic structure

Kurmann (2008) commits that it is important that prices are not indexed. Furthermore, dollarization and the sensitivity level of the economy to price and exchange rate should also be minimal. Are also expected that the trade balance response to an exchange rate variation are as low as possible.

➤ A healthy financial system

It is necessary that the financial system is stable enough to minimize inferences monetary policies. Batini and Laxton (2007) base their assessment of the financial system on three essential criteria to know the proportion of provisions created on risky investments, asymmetric currency and market stability.

About these prerequisites and in the emerging countries, several empirical studies have been made in this regard which one evokes the study of Batini and Laxton (2006) inspired by Ball and Sheridan (2005), performed on a list of 21 emerging countries adopting inflation targeting in which they added ten economies whose the monetary policy was different, in order was to determine if the conditions mentioned above are also important for the introduction of inflation targeting, as it was claimed. They concluded that these prerequisites were not so critical in the successful implementation of this plan. Therefore, they concluded that the success of emerging countries in the conduct of their policy futures inflation targeting must be accompanied by a pro-active management of institutional dimensions, and structural techniques.

➤ Additional decisions to make

The inflation targeting called a number of important decisions to implement the authorities:

- ❖ determine the parameter used to measure the inflation which is either the consumer price index or the GDP deflator ;
- ❖ define the target rate;
- ❖ choose between a punctual target rate and a target area;
- ❖ determine the horizon of politics i.e. the speed of inflation decrease.

However, emerging economies have repeatedly shown their difficulties in achieving these preconditions, Pétursson (2009). Indeed, it is true that many economists whose Gonçalves and Salles (2008), Lin and Ye (2009) and Batini and Laxton (2007) confirm the effectiveness of the inflation targeting policy in developed and emerging countries, thus emphasizing a lower level and volatility of inflation and also considerable output growth. But besides this, all studies remark that the effects of the policy of inflation targeting different considering the emerging and developed economies. This difference is mainly due to the emerging countries' not meeting to fulfill the institutional and structural pre-requisite already mentioned.

2.3. *The inflation targeting policy in emerging economies: A Challenge*

The inflation targeting policy makes monetary policy more effective in developing countries and emerging markets? This question open until today a debate among economists, and fulfill the implementation conditions of such a policy remains a challenge to be overcome in these countries. Calvo and Mishkin (2003) identify five fundamental institutional weaknesses related to emerging countries namely: Weak financial and fiscal institutions including prudential regulation and supervision of the

government, currency substitution and liability dollarization and vulnerability to sudden stops capital inflows.

While one can debate what constitutes a minimum standard required for each of the conditions mentioned, it is clear that, more a country is advanced in the implementation of these elements before the adoption of inflation targeting, most part of its monetary policy will be credible and macroeconomic performance will likely improve.

3. THE CONDUCT OF MONETARY POLICY IN TUNISIA

3.1 Becoming better comprehensible...

Since the amendment of its constitution in 1988, the CBT continues to make progress in his rule of conduct of monetary policy, particularly in terms of transparency with continuing minimization factor uncertainty. This new framework has a final goal, an intermediate objective and operational mechanisms and instruments for achieving these objectives. After the amendment of the Organic Law of the Central Bank (Law No. 2006-26 of 15 May 2006 amending and supplementing Law No. 58-90 of 19 September 1958 on the establishment and organization of the Central Bank of Tunisia), the ultimate and priority goal route in monetary policy aimed at preserving price stability or to stabilize the value of money. Regarding the choice of intermediate target, the CBT has chosen to correlate the money supply growth to nominal GDP. More specifically, the monetary aggregate target, since 1999, is the M3. This monetary policy framework is based, in addition to monetary aggregates and credit, on a diverse range of indicators (import prices, the output gap, subjacent inflation...) closely linked to inflation. Moreover, the money market has become the desired response of the CBT through a number of instruments (required reserves, operations at the initiative of the CBT, operations at the initiative of banks) to supervise bank liquidity and steer interest rates in the short term according to the objective of price stability and after giving an opportunity for non-financial economic agents to intervene and closing the discount window in 1986. More specifically, the CBT used the open Market operations in terms of regulation bank liquidity in arriving to contain the interest rate in a channel marked by the rate bidding (TAO, the minimum rate) and the reverse repurchase rate (TPP, the maximum rate). So, it is clear that this new policy privileges the action on the money market rate (MMR) which is used as both a structural objective and as the main instrument for the conduct of monetary policy.

3.2 ... and progress to make in adoption view of inflation targeting policy

The nature of the observed inflation in Tunisia is not only institutional type that is to say, it is not only monetary and the relationship between aggregate inflation target is no longer stable and solid (Boughrara and Smida, 2004). This therefore shows that monetary targeting is not the best strategy for mastering inflation in the country, which suggests Tunisian monetary authorities to adopt inflation targeting rule. But the transition to the new monetary policy framework is not as obvious in view of the pre-requisite institutional and structural above explained and should be mostly completed. In fact, greater transparency and optimal information of both in quality that quantity would help anchor inflation expectations of economic agents and to avoid skidding. According to the IMF, almost of the all mass of information provided to the public by the CBT are published with a delay of up to one semester, and there is no respect for a fixed periodicity of certain data and the lack of announcements about inflation rate and certain real variables (Minaoui and Smida, 2008). In addition, these authors compared announcements concerning the monetary aggregate target to the achievements during the period 1987-2006 and conclude that « la BCT n'est pas toujours parvenue à atteindre ses objectifs annoncés... Ces résultats doivent inciter à mettre en place un dispositif qui permet de mieux évaluer les initiatives des

autorités ». Given the importance of forecasting inflation for monetary policy framework and as specified by the CBT, great efforts are being made within the BCT to develop a device of analysis and forecasting inflation in the short and medium term that will serve as reference for decision making in monetary policy and a means of communication with the public by providing a means to assess and strengthen its policy, therefore, its credibility. Way to a more flexible context, the CBT is expected to further clarify its strategy, to explain more frequently the slippages of intermediate target and clarify further the role of interest rates.

In addition, Article 34 of Law No. 58-90 of 19 September 1958 regulating the operation of the CBT indicates that it is required to coordinate and lend "its support for the economic policy of the state". Minaoui and Smida (2008) state that "the independence of the CBT remains rather formal since it enjoyed de facto autonomy". With the revolution of 14 January 2012 experienced by the country, we believe that the CBT will perform its function and it will be independent in decision making. But, as stated by Diouf (1998), the recognition of the Governor in a central bank remains a guarantee of its autonomy. A signal that the rate of rotation of the BCT Governors, one of the criteria for evaluating the degree of independence of a central bank according to Cukierman (1992), is 0.2 or 11 changes on 53 years. One must say that the term of office of the CBT's Governor is six years renewable.

After analyzing the institutional framework of the CBT and the efforts made in this field and in order to ensure optimally the transition to an inflation targeting policy, we will focus on the progress to do at the structural level, economic and technically. Indeed, and as shared by most economists and experts mainly Tunisian, the crisis management post-revolutionary in Tunisia led to the assumption of a set of social and economic measures by the government to overcome various challenges such as employment, regional development, etc. and ensure economic recovery, causing an increase in the budget deficit to 6-7% in 2012 with a rate of public indebtedness, which affects 45% of the same year. As part of the good coordination between fiscal and monetary policy, the State shall direct its efforts towards reduce its budget deficit, which must be maintained at tolerable levels (3%) well as the indebtedness rate. This will require the development of the financial system by creating a synergy between the stock market, which still plays a marginal role in the Tunisian economy, and the banking sector well as a dynamic secondary market.

Concerning the exchange rates regime, the CBT says it was following a flexible exchange rates policy. This opens many questions among most specialists: Tunisia is not now floating de jure and manages de facto? Fear of floating there does not? As noted previously, one of the basic conditions for implementing the inflation targeting policy is to have a flexible exchange rate. If this is the case, much the better. Also, it should be noted the conflict between the two objectives i.e. the fight against inflation and protection of competitiveness that may arise, in certain circumstances, a relative time inconsistency of monetary policy conducted by the Central Bank (Chockri and Frikha, 2011).

In what follows, we will try to understand the transmission channels of monetary policy in Tunisia and in particular to see empirically if there is a relationship between stable and predictable instruments, specifically the short-term interest rate, and inflation.

4. EMPIRICAL ANALYSIS OF THE RELATIONSHIP BETWEEN MONETARY POLICY INSTRUMENTS AND INFLATION IN TUNISIA

4.1. Data and methodology

To clarify the relationship abovementioned, whose its stability is a guarantee for a better implementation of a strategy of inflation targeting, we were inspired by a variety of work (Qin and al. (2005), Elbourne and De Haan (2004) and Disyatat and Vongsinsirikul (2003), Soyoun and Roubini (2000), Cecchetti (1999)) in this area and in particular, we used a almost similar strategy to that used by Gottschalk and Moore (2001) which they have used the VAR methodology with the aim was to detect and appreciate the relationship between instruments, specifically interest rate of short-term, and inflation in Poland.

To do this within the framework of the Tunisian economy, we start from a set of quarterly data covering the period 1980Q1-2011Q2. Our specific model VAR is the following:

$$\mathbf{Z}_t = \Gamma(\mathbf{L}) \mathbf{Z}_t + \mathbf{v}_t$$

Where \mathbf{Z}_t is a column vector of stationary variables include the following variables: real GDP (GDP), monetary aggregate (M3), the consumer price index (CPI), the real effective exchange rate (REER) and the money market rate (MMR). Note that all variables are expressed in logarithmic form except MMR. The data are drawn from the database of IMF, International Financial Statistics (IFS, May 2012). Otherwise, $\Gamma(\mathbf{L}) = \Gamma_1 \mathbf{L}^1 + \Gamma_2 \mathbf{L}^2 + \dots + \Gamma_p \mathbf{L}^p$ is a lag operator in the form of polynomial matrix and \mathbf{v}_t is a vector of idiosyncratic errors, where $\mathbf{v}_t = (\varepsilon_t^1, \dots, \varepsilon_t^5)'$. These errors are not autocorrelated and are homoscedastic.

The precise econometric objective of our study is to get information on the size of the impact of different variables including the MMR on inflation which is reflected by the CPI. In addition, the change in the GDP variable is included to identify the supply shock, the inclusion of M3 and MMR in the VAR reflects the impact of monetary policy. As for the impact of exchange policy, it is represented by the REER variable.

Furthermore, our methodology consists, in the first place, to study the stationarity of all variables using the Phillips-Perron test (1988) particularly applicable in the case of time series. The second step is to determine the order p of the VAR process to remember. To this end, we consider various processes for VAR lag orders p ranging from 1 to 4. For each model, we calculate the Akaike information criteria (AIC) and Schwarz (SC) and hold the p lag that minimizes these criteria. Now, after determining the integration order of the variables d and the lag p , we must move to the identification of cointegrating relationships by using the Johansen test (1988). Based on the results of this test and after the estimation of the concerned model (whatsoever VAR or VECM), we detect and analyze the impulse response functions (IRF_s) of the CPI response to other variables shocks and precisely the MMR. We use the Cholesky decomposition to orthogonalize shocks and we will identify and construct our confidence interval using the Monte Carlo method. Saw that the impulse response gives us information only on the magnitude of the degree of transmission of MMR variations on the CPI and in order to assess the importance of the impact of monetary policy instruments in the fluctuation of inflation, we perform variance decomposition for the CPI.

4.2 Empirical Results and Interpretations

- Stationarity of variables and choice of the lag number of VAR process

The results of the stationarity tests summarized in Table 1 show that all variables are integrated of order 1 (I (1)) in level and are stationary in first difference. Moreover and based on the results given in Table 2, we will add watchlist added a number of lag $p = 4$ (according to the information criteria AIC, SIC and log-likelihood).

Table 1. Unit root test of Phillips_Perron

Series	In level	In 1 st difference
GDP	0.9948	0.0000*
M3	0.9841	0.0001*
CPI	1.0000	0.0000*
REER	0.5772	0.0000*
MMR	0.8688	0.0000*

Note: The null hypothesis for the Phillips Perron (PP) test is that the series are non-stationary i.e. there is presence of unit root. The values in the table indicate the p-values of this test. Using the ADF test, the results were the same.

* denotes that the null hypothesis of unit root is rejected at the 5% level.

The lag number p	AIC	SC	LV
1	-36.33071	-35.10197*	811.1103
2	-35.64772	-33.37220	803.6022
3	-37.46077	-34.11721	847.9458
4	-38.09739*	-33.66408	866.9478*

Table 2. Choice of the lag number of VAR (p) process

Note: LV denotes the log-likelihood; The asterisk indicates P order to retain according to the criterion used.

- Cointegration test and model estimation

After testing the stationarity of variables and determined the number of p lag model, we proceeded, as we have indicated, the Johansen cointegration test on our VAR model. The results of this test indicate that the null hypothesis H_0 of no cointegration relationship is accepted at the 5% threshold and therefore the VAR specification for $p = 4$ was chosen. The next step is to estimate the parameters of this process chosen previously in order to determine the IRF_s well as variance decomposition of the forecast error.

- Analysis of impulse response functions (IRFs)

Certainly, the study of the dynamic of the model, via the IRF_s, help us to judge and appreciate the channel or channels of high transmission's tunisian monetary policy and more specifically to see if there is really a robust, stable and predictable relationship between instruments (especially MMR) and inflation with a view to adopt the inflation targeting policy. In this respect, we will identify the different responses of all variables in the model in response to various shocks but we especially analyze the response of the CPI to MMR and REER shocks. It should be noted that focuses on the effects of the shock on 10 periods (that is to say 10 quarters) and that errors are generated by Monte Carlo with 500 repetitions.

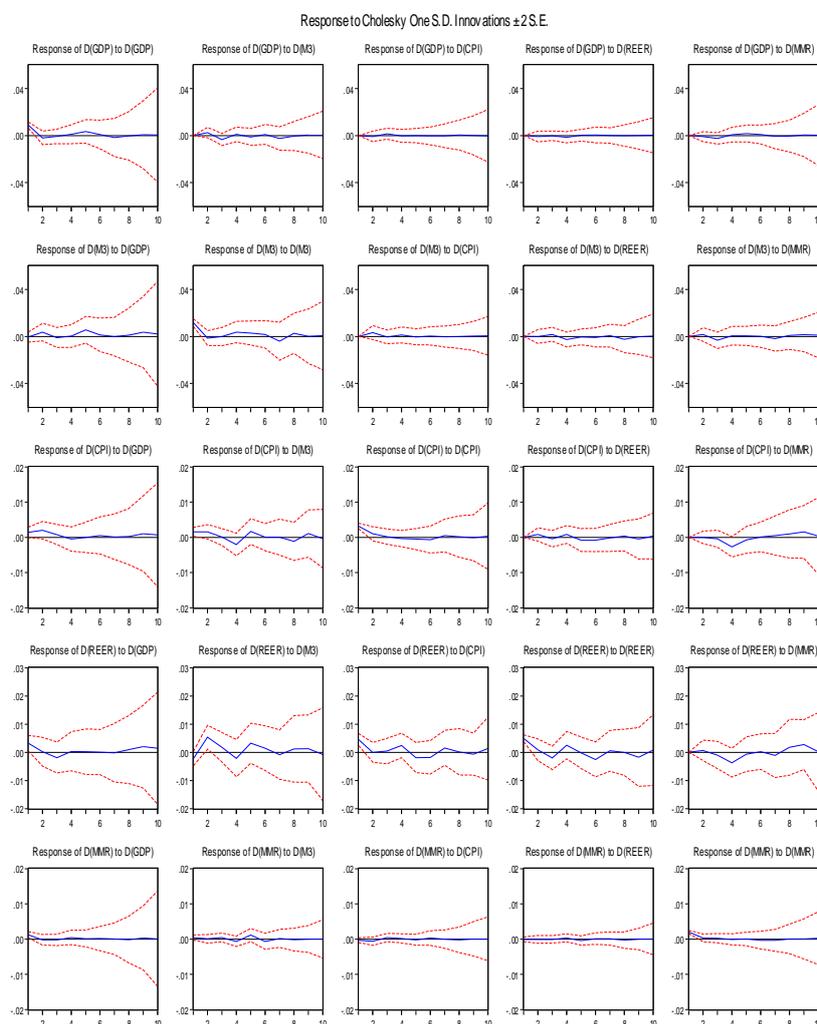


Figure 1 : The impulse response functions

Period	S.E.	D(GDP)	D(M3)	D(CPI)	D(REER)	D(MMR)
1	0.003830	14.01108	16.11218	69.87674	0.000000	0.000000
2	0.004761	26.72303	20.80761	49.63351	2.828034	0.007814
3	0.004862	28.09376	19.97645	47.68666	3.508774	0.734356
4	0.006023	19.01577	24.44146	31.48209	4.035257	21.02542

5	0.006359	17.06038	28.61659	28.90065	5.185083	20.23730
6	0.006469	17.12039	27.65647	29.14043	6.511276	19.57143
7	0.006513	16.92854	27.29509	29.33659	6.516023	19.92375
8	0.006696	16.09994	28.84825	27.82886	6.421679	20.80127
9	0.007042	16.72357	28.30876	25.19916	6.267903	23.50060
10	0.007111	17.30604	28.06922	24.92283	6.410707	23.29121

Table 3. Variance decomposition of CPI

Figure 1 present the results of impulse responses. Different graphs and in particular those relating to CPI responses to different shocks indicates that prices respond quickly, after three quarters, but weakly even inconsistently to the shock of the real effective exchange rate with attenuation of this shock on the long term. Concerning the prices response due to money market rates innovations, it can be judged as slow but significant (as soon as positive and negative early) and the relationship between the MMR instrument and inflation seems moderately high, persistent and always afraid its stability. It can be noted, moreover, that the CPI response to real output and money supply innovations is significant with a return to equilibrium in the long term.

- Variance decomposition

This study, based on the impulse response functions, can be completed as we have indicated by an analysis of the variance decomposition of the forecast error. The purpose is to appreciate the contribution of the various shocks (particularly the interest rate instrument) in explaining the fluctuations of the consumer price index for the Tunisian case and that is reported in Table 3. The results indicate that the M3, MMR and GDP shocks are respectively most important in explaining fluctuations in the CPI while the error variance percentage of the price index attributed to the real effective exchange rate shock is small. More specifically, the shocks of the money supply, interest rate, real output and real effective exchange rate explain, in order, (after 10 quarters) at a rate of 28%, 23.29 %, 17.3% and 6.41% the consumer prices variance. Note that the variance of the forecast error is due at a rate of 24.9% to its own innovation.

So, we can say that the analysis of variance decomposition corroborates impulse response functions and confirms the importance of the interest rate channel and the preponderance of aggregate demand, supply and demand for money in explaining inflation in Tunisia, whose even as it remains exposed to the external vagaries of international markets.

5. POLICY IMPLICATIONS

The empirical evidence presented in this work indicates the important role of interest rates as an instrument of monetary policy in Tunisia. However, the direct link between the exchange rate and inflation does not seem to be strong. So we can assert the existence of a stable and predictable relationship between the instruments, specifically interest rate of short-term, and inflation in the Tunisian case. This can be cited as an argument and a precondition for a future implementation of the inflation targeting policy in Tunisia given that the instrument interest rate well as money supply contain predictable information on the future evolution of inflation.

6. CONCLUSION

In this paper, we tried to give a clear answer on the possibility of the Central Bank of Tunisia to adopt the inflation targeting monetary policy. First, we clarified this monetary strategy and argued the arguments for its application and institutional pre-requisite and structural namely independence and transparency of the central bank, have advanced infrastructure, a stable economic structure and healthy financial system.

For Tunisia, the transition to a more flexible monetary regime which is inflation targeting remains a challenge in itself. Indeed, inflation in Tunisia is increasing in recent years for various reasons (lack of supply, continued depreciation of the dinar, the current account deficit ...) thus damning the purchasing power of Tunisians. Recognizing this, the CBT spares no effort to fight against inflation, which is considered its final objective for the conduct of its monetary policy, which becomes more understandable. At this moment, the CBT is in the process of targeting the interest rate to achieve its goal and it became more transparent vis-à-vis the public and more or less independent of political power. It is true that this is insufficient but the transition to the optimal monetary frame that is inflation targeting requires restructuring and adjustments at all levels. Progress to make yes, but which, at what levels and in what horizon?

In this regard, we insisted that greater transparency and optimal information both in quality that quantity would help in anchoring inflation expectations of economic agents and to avoid skidding. This does little infirm that great efforts are being made within the CBT in order to establish an analysis and forecasting inflation in the short and medium term device that will serve as reference for decision making in monetary policy and a means of communication with the public thus reinforcing its credibility. On this point it must be said that the Central Bank of Tunisia is called upon to further clarify its strategy, explain more frequent the intermediate target slippages and clarify more the role of interest rates. Also, to succeed such a strategy, the CBT must wake that its independence is preserved and enhanced. In addition, an easing exchange rate and a more flexible exchange rate regime should be carried out, while pointing out that Tunisia is oriented more and more towards a floating exchange rate regime and that this demarche seems to be irreversible.

Moreover, and in spite of all the external and extra effects of sovereign debt crisis and the post-revolutionary situation, the Tunisian state is under an obligation to reduce its deficits, making fiscal adjustments and should coordinate well with the "Guardian of the national currency".

After analyzing the pre-conditions for a future implementation of inflation targeting policy in Tunisia and advanced to do the progress towards the achievement of this objective, we were curious to verify another pre-required rather technical that institutional namely the existence of a stable and predictable relationship between the instruments, specifically the short-term interest rate and inflation. To do this,

we conducted an empirical study on VAR modeling with analysis dynamic passing by IRFs and variance decomposition. The results show the existence of a stable and predictable relationship between the short-term interest rate instrument and inflation in Tunisia.

Therefore, we can say that Tunisia is in the process of achieving progress in the fight against inflation and is also aware of the importance of inflation targeting as a framework for optimal controlling inflation, but the country which is our is not a good candidate in the short term and in this transitional phase, for the adoption of this strategy. This does not eliminate the possibility and capacity of Tunisia to apply inflation targeting over the medium and long term, if it continues to fill and satisfy the conditions of its implementation in the sense, can be, evoked proposed and suggested by this paper.

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**SALESPeOPLE AS A FACTOR INFLUENCING THE SHOPPING DECISION:
THE CASE OF MACEDONIA**

Nexhbi Veseli, Brikend Aziri, Teuta Veseli

Business and Economics Faculty, Ilindenska nn, Tetovo-Macedonia

E-mail: n.veseli@seeu.edu.mk; j.zekiri@seeu.edu.mk; t.veseli@seeu.edu.mk

Abstract

Salespeople are one of the most important factors influencing the buying decision, specially combined with the proper price and quality. Much has been written about the role and importance of the salespeople around the world, but still much has to be written when it comes to analyzing their importance from the costumer's point of view, especially in the case of the Republic of Macedonia.

The main objective of this paper is not only to provide an overview of the theoretical importance of salespeople, but rather to provide a practical support for such claims based on a concrete survey of 462 costumers from all parts of the Republic of Macedonia.

As will be mentioned later in the paper, the survey proves once more the immense importance of salespeople in making the buying decision nowadays. The communication skills, people skills as well as personal look are proved to be factors of great particular importance.

Key words: Salespeople, shopping decision.

1. LITERATURE REVIEW

It is very difficult, almost impossible, to imagine contemporary world without the many companies that offer their products and services to the general population or to some market niches. Obviously the success of companies depends among others on their ability to sell products and services. This is when salespeople enter the stage. Although companies nowadays have many ways to approach their costumers such as direct sales, telemarketers, resellers etc. The fact remains that many companies continue to function as sales-force intensive, that is their marketing and sales strategies rely mainly on salespeople.

The role and importance of salespeople for contemporary companies is multidimensional by its nature. First of all they need to understand the costumers, his wants and needs. They need to be able to provide added value for the costumer, or at least be capable to convince the costumer of an added value gained by bung the product or service. Therefore, it might be pointed out that communication skills are probably the most important of all skills that a successful salesperson should poses.

Although salespeople are present everywhere, even in ebusiness, it is very difficult to define what they actually do. Without any doubt salespeople have great responsibilities, but defining them can be a very hard job. In fact, what salespeople do depends mainly on "where and for whom they do what they do", that is it depends on the type of selling job. The analysis becomes much more complicated having in mind that the salespeople job in many cases goes beyond the selling function and includes client relationship, solver of costumer problems, intermediation and many other activities.

The salesperson is a company's most direct tie to the customer; in the eyes of most customers, the salesperson is the company. As presenter of company offerings and gatherer of customer information, the sales representative is the final link in the culmination of a company's marketing and sales efforts. (Cateora et al, 2011, p.496)

As presented in figure 1 according to Castleberry and Tanner (2011) six factors should be taken into account when describing sales job: The stage of the buyer–seller relationship, The salesperson's role, The importance of the customer's purchase decision, The location of salesperson–customer contact, The nature of the offering sold by the salesperson and The salesperson's role in securing customer commitment.

Figure 1 Factors in describing sales job (Castleberry and Tanner, 2011, p.14,15,16)

Factor	Description
The stage of the buyer–seller relationship	Some sales jobs emphasize finding and selling to new customers. Selling to prospects requires different skills than does selling to existing customers. To convince prospects to purchase a product they have never used before, salespeople need to be especially self-confident and must be able to deal with the inevitable rejections that occur when making initial contacts. On the other hand, salespeople responsible for existing customers place more emphasis on building relationships and servicing customers.
The salesperson's role	Some sales jobs focus primarily on taking orders
The importance of the customer's purchase decision	Consumers and businesses make many purchase decisions each year. Some decisions are important to them, such as purchasing a building or a business telephone system. Others are less crucial, such as buying candy or cleaning supplies
The location of salesperson–customer contact	Field salespeople spend considerable time in the customer's place of business, communicating with the customer face-to-face. Inside salespeople work at their employer's location and typically communicate with customers by telephone or letter
The nature of the offering sold by the salesperson	The type of benefits provided by products and services affects the nature of the sales job.
The salesperson's role in securing customer commitment	Sales jobs differ by the types of commitments sought and the manner in which they are obtained.

Futrell (2011) differentiates three main types of salespeople: traditional salespeople, professional salespeople and golden rule salespeople as presented in figure 2.

Figure 2 Classification of salespeople (Futrell, 2011, p.10)

① Traditional Salespeople	② Professional Salespeople	③ Golden Rule Salespeople
Do what they think they can get away with.	Do what they are legally required to do.	Do the right thing.
Guided by self-interests.	Take care of customers.	Find others' interests most important.
Attribute results to personal efforts.	Attribute results to personal efforts, employer, customers, economy.	Attribute results to others.
Seek recognition for efforts; sharing not important. Pride and ego driven.	Enjoy recognition, may share if it suits their purpose. Pride and ego driven.	Feel that an individual's performance is due to others, thus not motivated by pride and ego.
Money is life's main motivator.	Money is important, but not to the customer's detriment.	Service most important; money is to be shared.

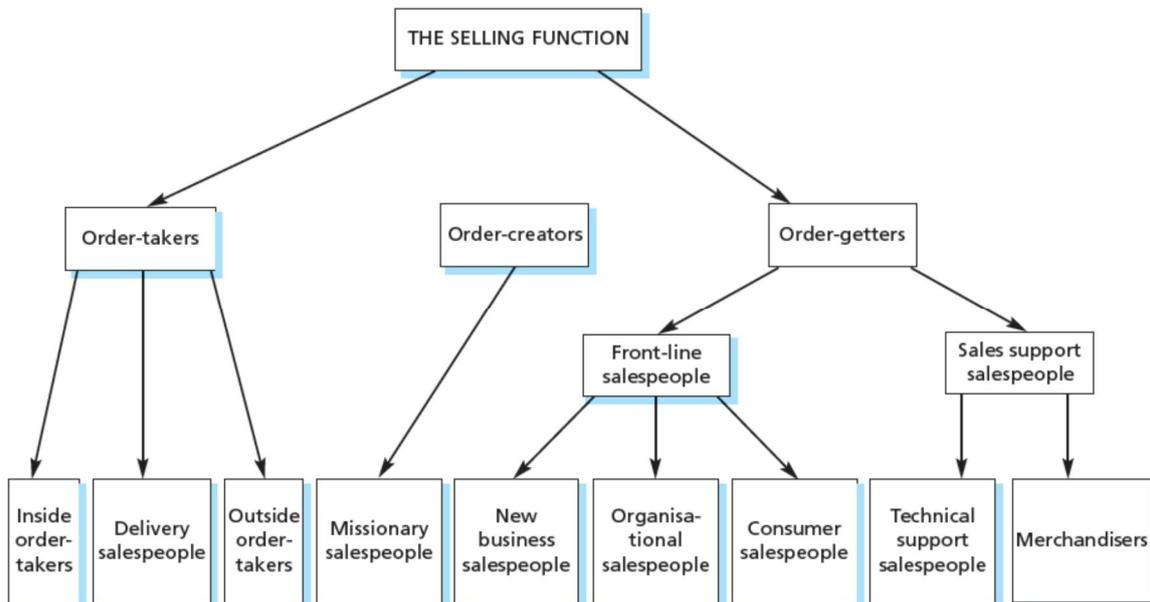
Jobber and Lancaster (2009) based on types of selling differentiate ten different types of salespeople classified in three groups: order-takers being salespeople that focus on already committed customers, order-creators being salespeople that address specifics and order-getters being salespeople that are focused on persuading customers to place orders. This classification is presented in figure 3.

Being the frontline emissaries for a firm, salespeople have a duty to be ethically and legally correct in all their dealings with their customers. Not only is it the right thing to do, it simply means good business. Long-term relationships can deteriorate quickly if customers believe that they have not been treated in an ethically proper manner. Unfortunately, salespeople sometimes get mixed signals from their managers or simply do not know when their behaviors might be considered unethical or illegal. Formal guidelines can help, but it is also important to integrate these guidelines into training programs in which salespeople can discuss various issues that arise in the field with their peers and managers. Most important, however, is for sales managers to lead by example. If managers are known to cut ethical corners, it shouldn't surprise them when their salespeople do the same. (Grewal, Levy, 2008, p.526).

What 'value' does the customer look for in a sales interaction? There are a variety of resources a salesperson might offer. For example, they might offer expertise about the product to make the shopper's choice easier. Alternatively, the customer may be reassured because the salesperson is an admired or likeable person whose tastes are similar and who is seen as someone who can be trusted. A long stream of research attests to the impact of a salesperson's appearance on sales effectiveness. In sales, as in much of life, attractive people appear to hold the upper hand. In addition, it's not unusual for service personnel and customers to form fairly warm personal relationships; these have been termed *commercial*

friendships (think of all those patient bartenders who double as therapists for many people). (Solomon et al, 2006,p. 327).

Figure 3 Classification of salespeople (Jobber, Lancaster, 2009, p.8)



2. THE ROLE OF SALESPEOPLE IN MAKING THE SHOPPING DECISION

In order to analyze the role and importance of salespeople in making the shopping decision, a study including 462 respondents in all major cities in the country was conducted. Respondents from both genders belonging to different age groups were included in the study. Table 1.

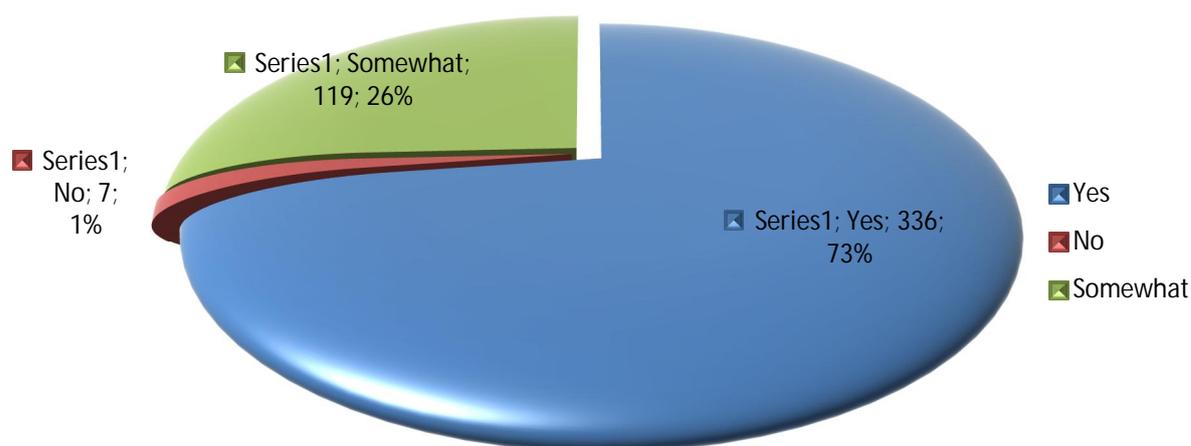
As can be noticed from the data presented in table 1 the sample is dominated by young respondents. In fact around 56% of respondents belong to the 17-25 age groups, and only 27% of the respondents are above 35 years old. On the other hand 56% of respondents are male and the rest 44% are female. The female respondents are slightly younger compared to the male respondents.

According to the survey the majority of respondents believe that the salesperson is one of the main factors that influence their shopping decision.

Table 1 Structure of respondents

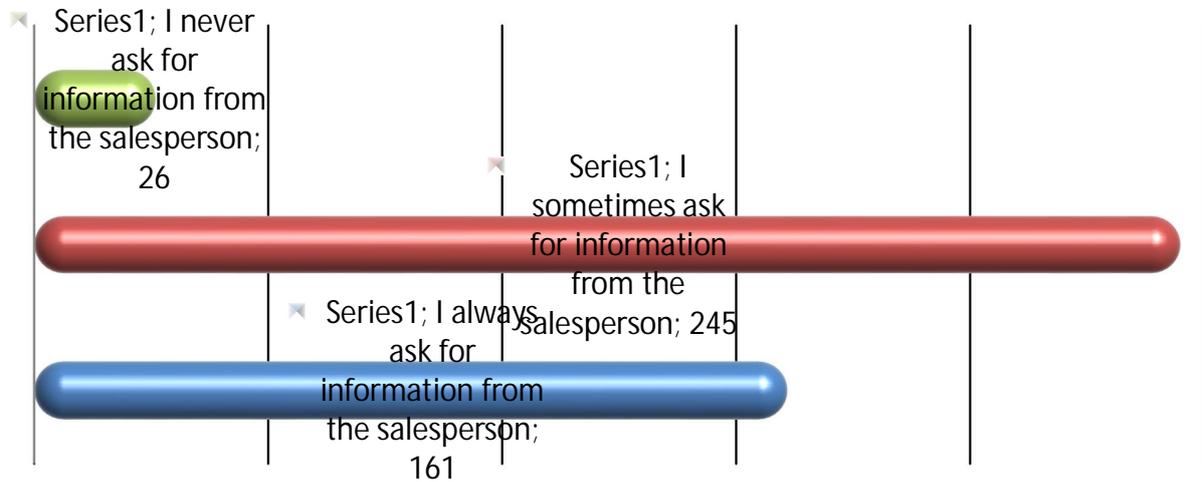
Age	Total	Male		Female	
		n	%	n	%
17-25	259	133	51.35135	126	62.06897
26-35	77	49	18.91892	28	13.7931
36-45	56	28	10.81081	28	13.7931
46-55	56	35	13.51351	21	10.34483
56 or more	14	14	5.405405	0	0

Chart 1 Respondents opinion regarding the importance of the salesperson in making the shopping decision



As can be noticed from chart 1, 73% of respondents believe that the salesperson is a factor of great importance when making a shopping decision and only 1% of respondents does not agree with this opinion. On the other hand 26% of the respondents consider the salesperson to be of a somewhat importance in making the shopping decision. Thus, it can be concluded that according to the study, there is an almost unanimous agreement that the salesperson is a factor that influences the shopping decision.

Chart 2 the salespersons role in informing consumers



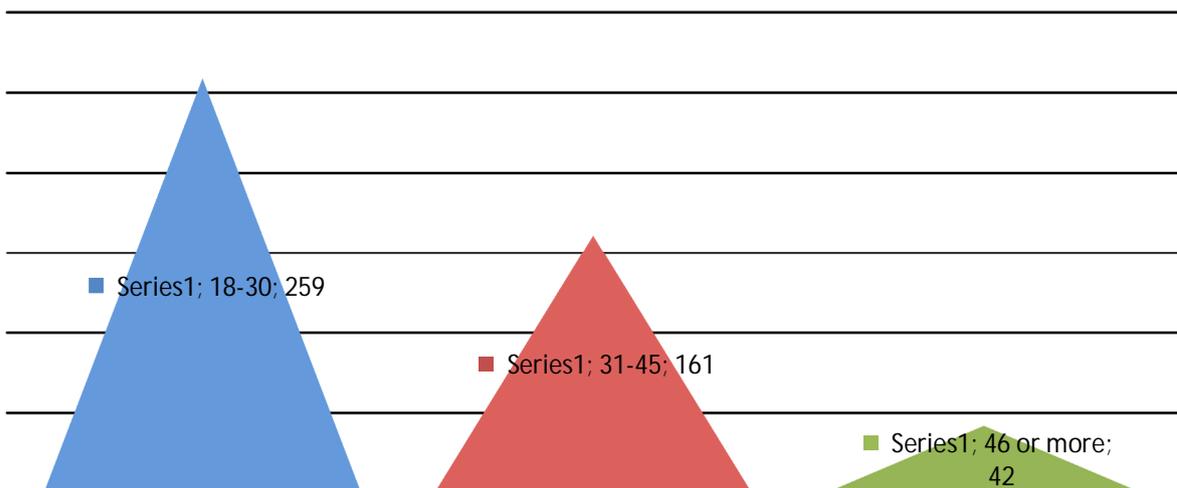
The study confirms that the salespeople play a vital role in providing information regarding the products and services for the costumers. This is proven by the fact that only 6% of respondents claim that they never ask for information from the salesperson. On the other hand a vast majority of almost 94% of respondents always or at least sometimes ask for information from the salespersons. Therefore, the salesperson must be a professional and posses proper knowledge regarding the products and services being offered. If the salesperson fails in providing the necessary information for the costumer, this will result in the creation of a sense of uncertainty for the costumer and the decision to buy will be harder to make.

Chart 3 The importance of the salesperson's look



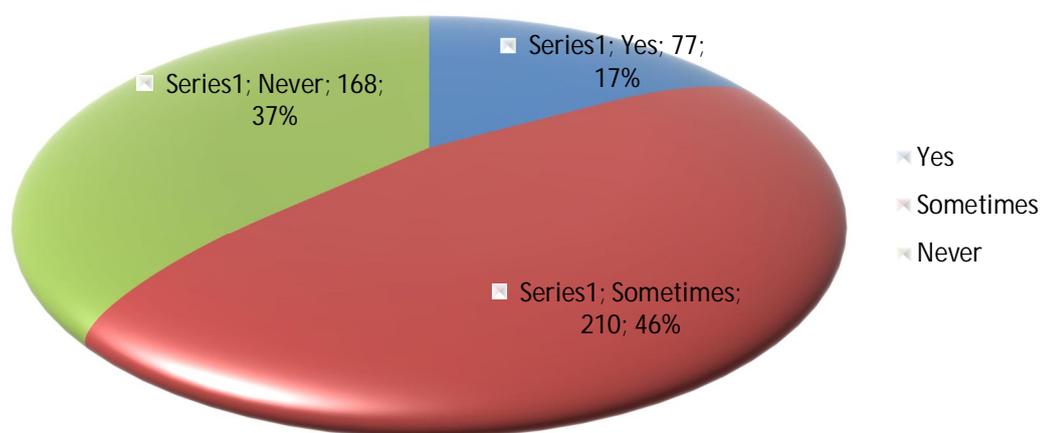
The external look of the salesperson is a factor influencing the shopping decision. In fact, according to the study only 16% of respondents have declared that the way have the salesperson looks in unimportant and the rest have declared that for them the way how the salesperson looks in very important or somewhat important.

Chart 4 Preferred salesperson age



As can be noticed from the data presented in chart 4, according to the survey, respondents in the Republic of Macedonia prefer younger salespeople. In fact over 56% of respondents consider that ideally a salesperson should be at the age 18-30 and only 9% of respondents believe that salespeople should be 46 years old or above.

Chart 5 Do people buy because of the salespersons good behavior even if the price is slightly higher than expected?



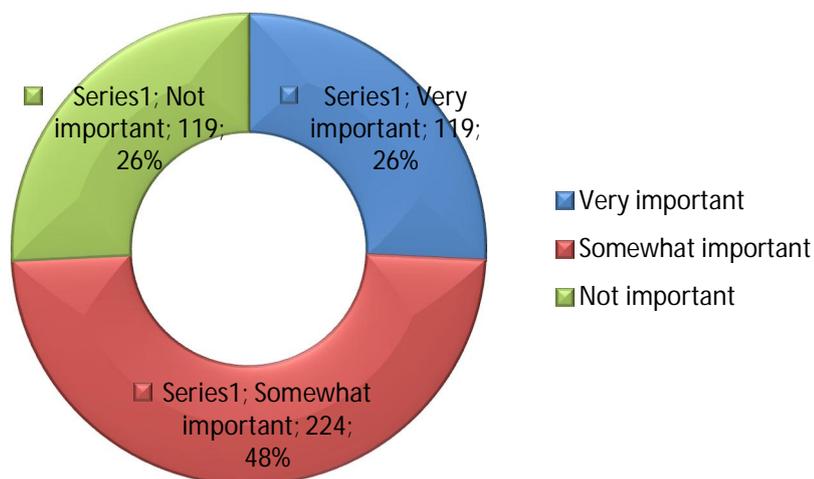
The importance of the salesperson behavior toward the customer is once more proving by the data presented in chart 5. Around 46% of respondents have declared that sometimes, even if the price is not exactly right for them they buy because of the good polite behavior of the salesperson. Even 17% of respondents have declared that they always buy if the salesperson has good behavior even if the price is slightly above expected.

Table 2 How do costumers react to non polite salespeople?

	n	%
I always leave the shop immediately	259	56
In most cases I leave the shop	161	34
I don't mind	42	9

While the politeness of the salesperson cannot influence 37% of the costumers to buy when the price is not right for them, over 56% of respondents leave the shop immediately when they are faced with a not polite salesperson. Thus, once more proving that salespeople should poses good people skills and behavior.

Chart 6 The importance of salespeople professionalism



As can be noticed from chart 6 the respondents place some importance to the professionalism of salespeople. Only 26% of customers share the opinion that the professionalism of the salesperson is not important to them.

CONCLUSIONS

The following conclusions can be made from the analysis:

- Salespeople are of great importance for contemporary business organizations.
- The salespeople play a vital role in providing information regarding the products and services for the customers
- The external look of the salesperson is a factor influencing the shopping decision
- Respondents in the Republic of Macedonia prefer younger salespeople
- Customers even if the price is not exactly right for them they sometimes buy because of the good polite behavior of the salesperson
- Customers prefer to leave the shop immediately when they are faced with a not polite salesperson.

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**THE VOLUNTARY HEALTH INSURANCE MARKET IN BULGARIA 2003 – 2012.
THE MOST POPULAR PACKAGE.**

Nikolay A. Popov, Natalia N. Shtereva-Nikolova

Medical University – Sofia, Faculty of public health, 8 Bialo More str., 1527 Sofia, Bulgaria

e-mail: niki.popov@gmail.com

Abstract

This article pertains to growth and development of the Voluntary Health Insurance (VHI) market in Bulgaria in the last 10 years. During the period, the market increases over 7 times. The analysis includes the most popular health insurance package offered by VHI funds. The package covers medical services of prevention, outpatient care and hospital care. We analyze the following financial indexes – market share, premium income, health insurance payments and the number of companies reported premiums for the package.

Key words: *Health insurance, voluntary health insurance, VHI*

INTRODUCTION

In Bulgaria there are two kinds of health insurance: compulsory health insurance and voluntary health insurance (VHI). With the Health Insurance Act of 1998 a **single** mandatory health insurance scheme was created (National Health Insurance Fund – NHIF) changes in the same law from 2002 created the possibility for the creation of many Voluntary health insurance funds. The main social role of the VHI fund is to meet the health insurance needs of the portion of the population that are not happy with the mandatory health insurance scheme. VHI funds are created on the principle of self financing. The contingent of health insured people (organizations) become clients by choosing a fund by their own free will (voluntarily) between the existing VHI funds in Bulgaria. Thanks to free market principles, the best fulfillment of the health needs of the population is possible only if the VHI funds provide the best quality of health services at an acceptable to the insured price with the least hassle.

The mission of VHI fund has many important medico-social, humanitarian, ethical interactions, and also has important economical implications for the client, his family and their work collective.

In the last few years the VHI funds were unsuccessful in the creation of a contemporary market of health services, despite the fact that there are 21 licensed VHI funds in Bulgaria. The reasons for this are; the lack of tradition in the field of health care, low income of the population, the redundancies of the health services provided by MHI and VHI for which the person has to pay two health insurance fees, the informal payments for health care in the hospitals, and ect. The VHI market is also hindered by injury insurance provided by some insurance companies and also by subscriptions to health services offered by some hospitals.

Statistical data

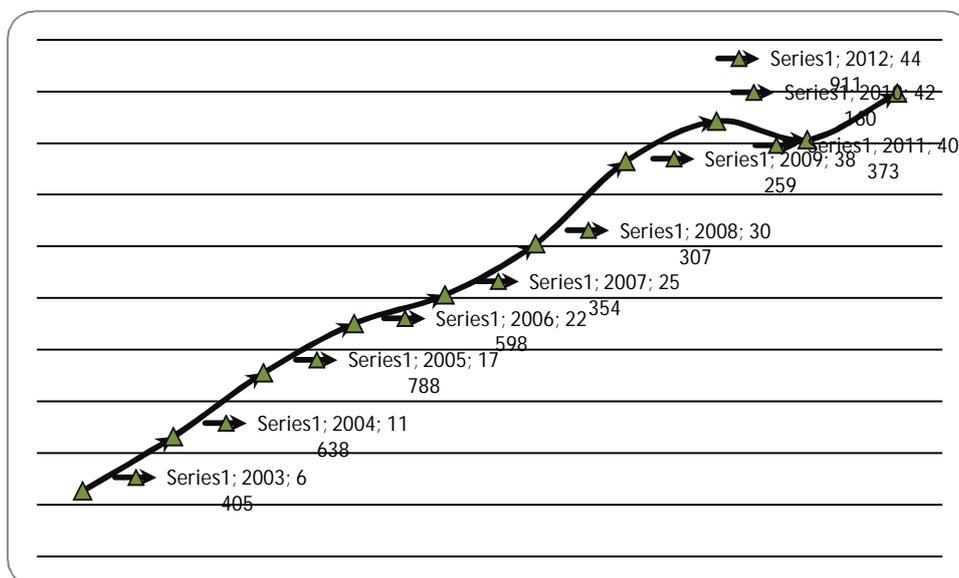
During the period 2003 – 2012 the number of worked and licensed VHI funds grew over three times (table 1). The number of VHI funds based on published reports by Financial Supervision Commission (FSC). They are the really working companies not just have a license.

Table 1. Number of VHI funds for the period 2003 -2012

Year	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Number of VHI funds	6	11	12	13	15	18	20	20	20	20

During the same period the market of VHI services grew over 7 times from 6,405 thousands levs in 2003 to 44,911 thousand levs in 2012 (figure .1). It is important to note that over 90% of the insured were in group contracts, in other words the increase is due mostly to contracts with corporate clients.

Figure .1 The VHI market - premium income in thousands of levs for the period 2004 – 2009.

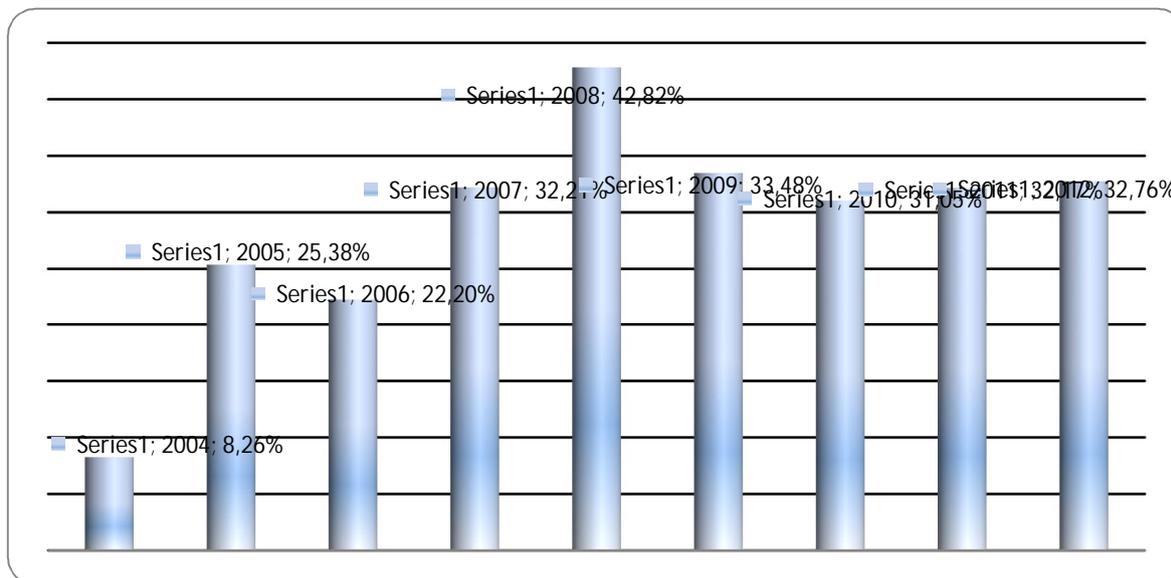


There is only one publication about the number of voluntary health insurance people and contracts. In the report of FSC to date 30.06.2010 the number of active health insurance contracts is 6,184 (including 3,372 newly concluded contracts during the period). The number of insured persons to 30.06.2010 is 200,886 (including 115,946 persons newly concluded contracts).

THE MOST POPULAR PACKAGE.

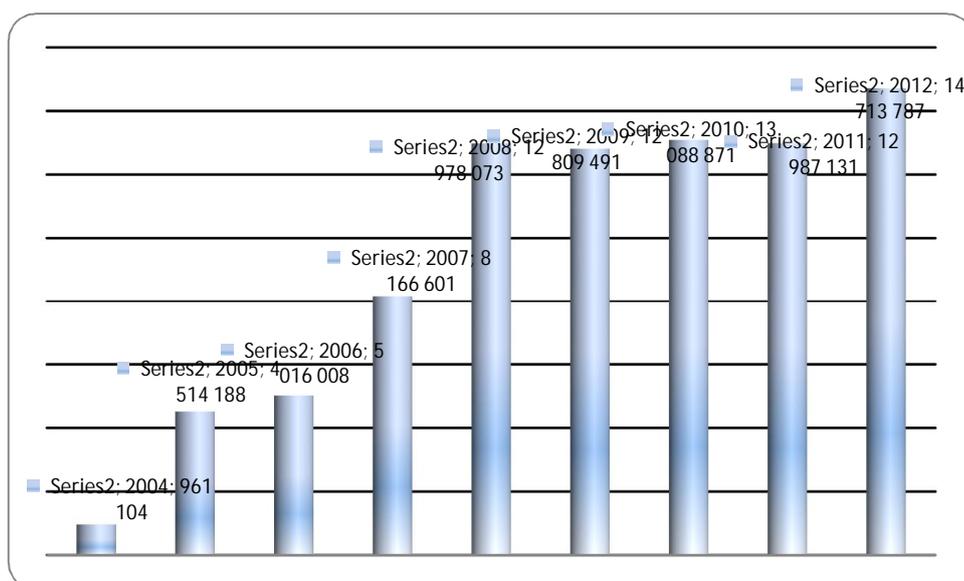
The research period covers 2004 – 2012. There isn't detailed official data for any different health insurance package for 2003. In the reports of FSC the most popular package is called "Other health insurance packages". These are combined packages including a wide range of healthcare products and services. These type packages are preferred by both corporate and individual customers, because they provide a full range of services from prevention, outpatient and inpatient care. In corporate health insurance contracts greater number of insured reduces the risk and the premium becomes more attractive and accessible.

Figure .2 Share of "Other health insurance packages" for the period 2004 - 2012 in %



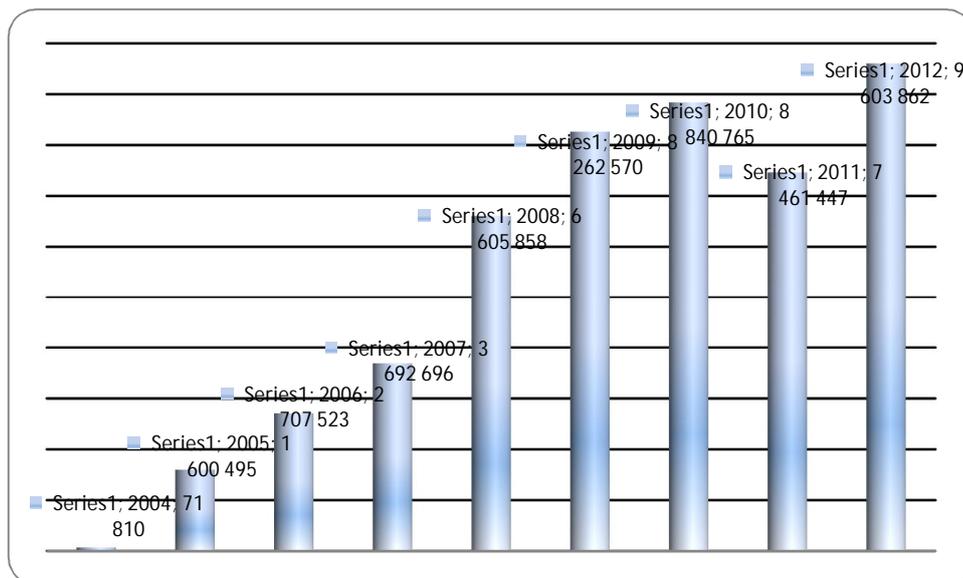
The share of "Other health insurance packages" of all activity on voluntary health insurance throughout the period is relatively stable. There is a pronounced peak in 2008. For the period the share was average 28.92% (figure .2). This is because the service is attractive and meets the needs of more people.

Figure .3 Premium incomes of "Other health insurance packages" for the period 2004 - 2012 in levs.



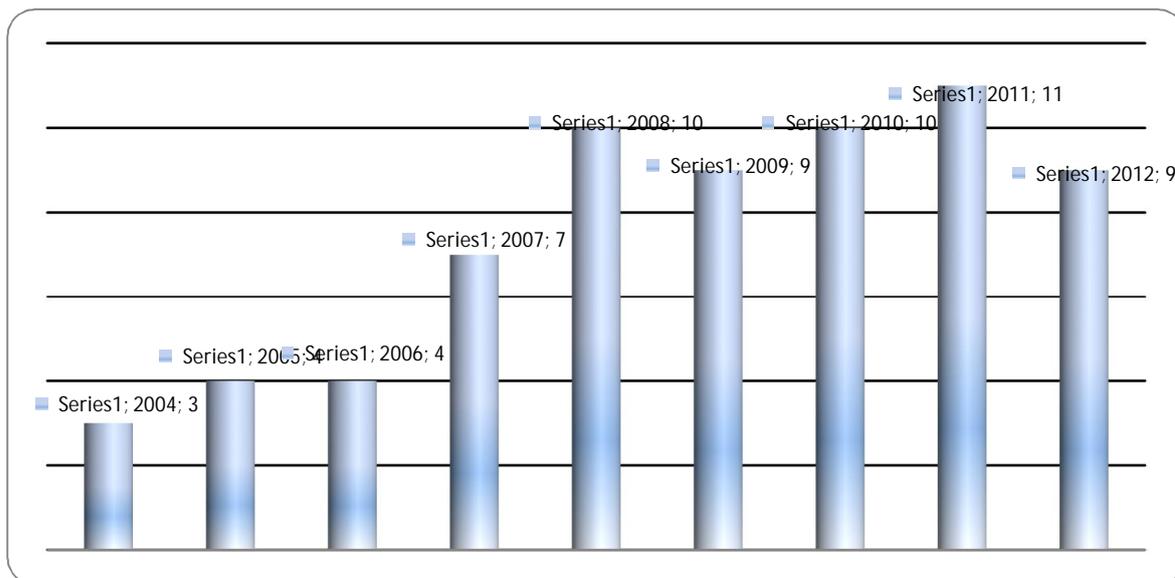
As seen in figure 3 during the period premium incomes by the "Other healthcare packages" follow the general trend of increase. In the last 5 years is stable around 13 million levs.

Figure .4 Health insurance payments of "Other health insurance packages" for the period 2004 - 2012 in levs.



Direct costs of the package (figure 4) grow symmetrically with premium. They follow the trend of increasing VHI over the years, reaching its peak in 2012. During the period the benefits paid are less than premiums.

Figure .5 Number of companies reported premiums for "Other health insurance packages" for the period 2004 – 2012.



Nearly half of all licensed and operating companies reported activities of “Other health insurance packages”. The highest number was in 2011, 11 companies (figure 5). These are companies with a large market share. This explains the high premium on the package.

The market of VHI has become stable and relatively predictable. It has an enviable yearly growth rate which can be seen by the overall growth of the premium incomes, not only for the four funds we concentrate on, but for the whole market. Despite its enormous growth rate, compared to the health spending in Bulgaria it is very small. The overall VHI market has nearly 2% of the budget of the National Health Insurance Fund.

This in its own way is a proof that there is a place in the market of health services that is being occupied more and more by VHI funds. The development of the VHI market in future is possible if we realize that the specific methods for reaching this aim include: increasing the financial power of the VHI market, implementing more and more tax breaks on the clients of VHI both individual and corporate clients, legislative amendments that would put a stop to the unlicensed health insurance conducted by some of the hospitals in the country (subscription treatment), and last but not least ending the unnecessary redundancies that hinder the VHI funds.

From this article it becomes apparent, that the VHI funds have not only the desire but also the potential to take up the responsibility for a large part of the health insurance and health needs of the Bulgarian population. The increased participation of the VHI will lead to an increase in the financial income of the health system, and by implementing a wise policy would balance the interests of all participants and in turn improve access to even better health services.

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**ADVANTAGES AND DISADVANTAGES OF CONTINGENT VALUATION
IN TERMS OF COMPULSORY HEALTH INSURANCE SYSTEM**

Nikolay G. Atanasov, Donka D. Dimitrova, Romyana G. Stoyanova,

Boryana A. Lefterova, Rositza T. Dimova

Medical University of Plovdiv, Department of Health Management, Health Economics and Primary
Care, bul. Vasil Aprilov 15-A, Plovdiv, 4002, Bulgaria

Abstract

The contingent valuation is a relatively new approach for determination of the value of public goods. It is used for the first time in the field of environmental economics. The contingent valuation is presented as innovative method of knowledge in to the health. The implementation of the method is connected with studying of the patient stated preferences and willingness to pay for medical services. The method of contingent valuation helps in taking efficient decisions and it improves the allocation efficiency of the health.

The purpose of the publication is to be formulated and to be discussed the advantages and disadvantages of this method. The study solves the following tasks:

- *Analyses of the contingent valuation instruments;*
- *Discuss the opportunities to implementation of the contingent valuation in Bulgarian health system in terms of compulsory health insurance.*

Key words: *health system, contingent valuation, willingness to pay, benefit-cost analyses, consumer surplus.*

1. INTRODUCTION

In the recent decades, economic science and practice face the need to improve the efficiency of public expenditures. This led to the development and elaboration of methods for financial and economic analysis and moreover it triggered empirical research in some social areas and especially in health care. Public health care in the recent decades was actually accused of contributing mostly to the increase of the burden of public expenditure, although many market elements have been introduced in its organization.

Purely market mechanisms are needed, but they do not dominate and do not transform public and social nature of the healthcare systems worldwide. In such conditions, most often defined as quasi- market, conducting economic analysis and in more narrow sense of such measuring financial efficiency is a major challenge. Uncertainty, high unpredictability of the outcome, significant external effects, and the information asymmetry are just some of the problems that cause inefficiencies and impose state regulation. One consequence of these market failures is that prices and values in healthcare as well as in other social systems do not fully reflect the costs and benefits for economic actors.

Related to this context is the main objective of contingent valuation - to measure the value of non-market goods by assessing willingness to pay. This group includes public goods. For various reasons they are

not meant for market exchange or for them there is market simulation and thus they have no economically justified prices.

In the present study our aim is to summarize and present the major advantages and disadvantages of contingent valuation applied in the context of mandatory health insurance in the Republic of Bulgaria. We consider it necessary to give first a brief description of the changes in the health system of the country in the last 10-20 years. It is against this background that we discuss the major theoretical and practical aspects of contingent valuation.

2. MAJOR ASPECTS OF HEALTH SYSTEM TRANSFORMATIONS IN THE REPUBLIC OF BULGARIA

During the period of transition from command-administrative to market economy Bulgarian health care suffered serious transformations. They result from the undertaken reforms at the end of the 20th and beginning of the 21st century. Briefly changes can be summarized as follows:

- **autonomy of "money" for health** – mandatory public health insurance, to a large extent independent from the state budget, holding a monopoly position on the market of institutional health financing and characterized by equally shared payment contribution of employer and employee;

- **democratization and public character of money management in health care** - public health resources are allocated to the units of the health system and managed with the participation of the government, the representative organizations of physicians, patients, employers and the trade unions;

- **inviolability and autonomy of patient choice** - patients freely choose and can change their provider, they are free to choose a specialist as well as a medical organization providing medical care;

- **financial and economic autonomy and independence of medical organizations** - the latter provide diagnostic, consultative, therapeutic and rehabilitation services in a competitive environment and are registered as capital companies liable to creditors with its assets;

- **equity of the types of property in health** - no restrictions about the form of property of the organizations providing health services and benefits to patients.

The reform was definitely democratic by character. At the same time it introduced in a formerly pay-as-you-go universal "Semashko" type system market elements ultimately meant to improve resource efficiency. Moreover, for a long period of time during the command-administrative economy, the "Semashko" system created the feeling in people that health services should be free and patients do not finance their treatment, neither by insurance payments more less so by direct out of pocket payments.

To complete the notion of the financial aspects of the Bulgarian healthcare today it is necessary to consider the dynamics of some quantitative, absolute and relative characteristics of healthcare costs.

Presented in Table 1 is data on the amount and structure of health expenditures by source of funding, according to the system of health accounts of the National Statistical Institute (NSI).

Table 1. Health system expenditures and sources of funding according to the system of health accounts (source NSI).

(Million BGN)

Year	Total expenditures	Public funding	Including:			Private funding	Including:			
			Government	Municipalities	NHIF ⁹		VHIF ¹⁰	Households	Non-commercial organizations	Companies
2003	2637,9	1609,5	638,0	181,3	790,2	1028,4	2,6	1004,0	20,6	1,2
2004	2839,1	1696,2	729,4	70,5	896,2	1142,9	5,6	1113,0	17,2	7,1
2005	3239,5	1940,7	769,8	82,8	1088,2	1298,8	9,5	1259,1	22,1	8,1
2006	3498,2	1961,6	496,5	89,0	1376,1	1536,6	12,6	1491,8	18,4	13,8
2007	3909,1	2194,9	528,2	101,2	1565,5	1714,2	15,3	1665,0	18,5	15,4
2008	4576,8	2572,6	685,4	123,2	1764,1	2004,2	21,1	1951,1	20,5	11,5
2009	4826,9	2622,4	722,3	135,8	1764,3	2204,5	21,7	2141,6	24,6	16,6

The monitoring of the total amount and the structure of expenses for health by sources of funding gives ground for the following important conclusions ¹¹:

- public resources represent a bigger share in the financing of the health system than private;
- the role of the central government and local public authorities, measured by their contribution to health expenditures is characterized by a sharply declining trend;
- the share of the NHIF expenditures in the total expenditures shows a clear upward trend - this is due to the priority funds financing and brings to the foregrounds the health insurance, its collection and relation to GDP;
- the weight of public sources decreases in the total health expenditures at the expense of increased private ones - if this trend continues private resources for health will catch up and may even exceed the collective.

Finally, it should be noted that the GDP share of total health expenditure is relatively low and similar to that of countries with medium level of income per capita. After the introduction of mandatory health insurance that share fluctuates around 7.5 %. In countries with highly developed health systems, it is known to reach up to 12 %, which is above the EU average.

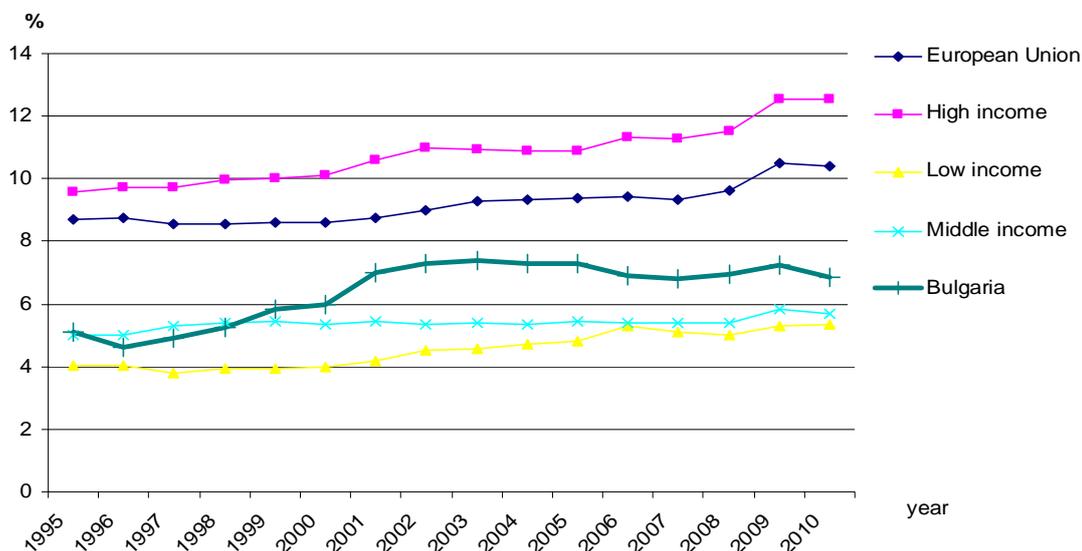
⁹ NHIF – National Health Insurance Fund

¹⁰ VHIF – Voluntary Health Insurance Funds.

¹¹ Health expenditure data by sources of funding and spheres of the health system are accessible through the site of the National Statistical Institute – www.nsi.bg.

The GDP share of health care expenditures in Bulgaria is shown on figure 1.

Figure 1. Health Expenditures, total (% of GDP), (Source: <http://data.worldbank.org/indicator/SH.XPD.TOTL.ZS/countries?display=default>).



Under these conditions, very often the opinions of patients indicate that level of health care is not satisfactory. Moreover - aggregated health outcomes are clearly inadequate because the country still has high levels of morbidity, mortality, lower average life expectancy etc.

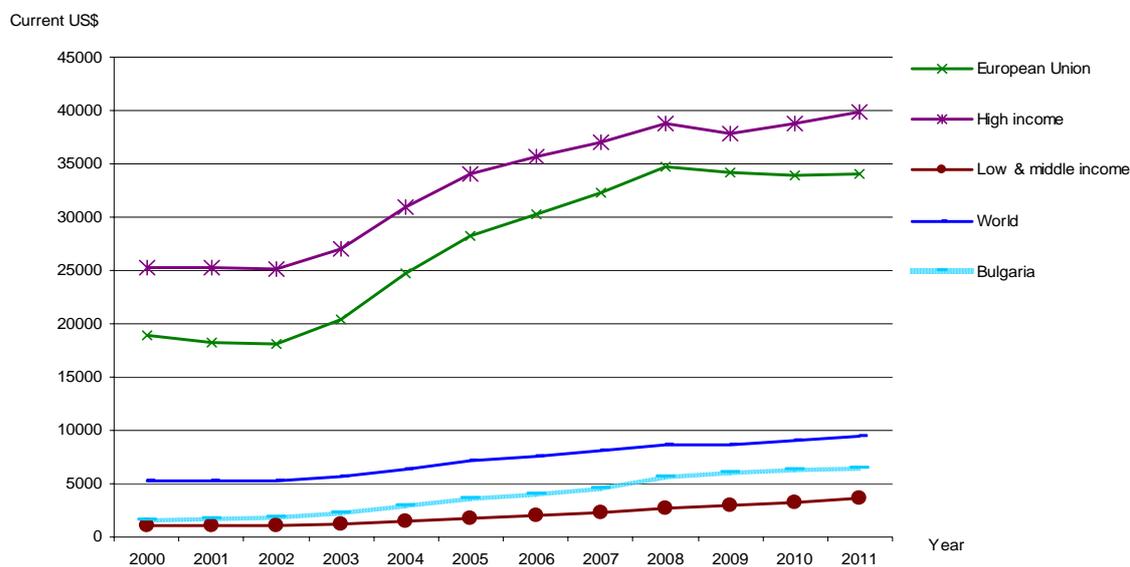
Dissatisfaction also established among medical professionals leading to increased emigration of doctors and nurses the recent years.

We could conclude that on one hand there were inherent and long formed "educated" public attitudes about the free character and non-payment of health benefits (in the "Semashko" system), while on the other - the need to improve the public health status by improvement of medical and economic efficiency of the system. Problems however exacerbated by the low standard of living in Bulgaria. Presented on figure 2 is the value of gross national income per capita of the Republic of Bulgaria compared to the EU countries, the countries the highest, middle and low income and the world by the International Bank for Reconstruction and Development.

The low income level prevents the development of a wider range of tools for health care financing, other than the public ones.

On this basis, we could formulate the hypothesis that the under current conditions conducting studies using contingent valuation and assessment of the willingness to pay (WTP) would be quite a difficult task unlikely to produce reliable results with the first attempt. Moreover - this method of goods valuation is not popular and probably similar studies in different areas of the economy are yet to come.

Figure 2. GNI per capita, Atlas method (current US\$), (Source: <http://data.worldbank.org/indicator/NY.GNP.PCAP.CD/countries/BG-7E-XT?display=default>).



3. THEORETICAL BACKGROUND AND APPLICATION OF CONTINGENT VALUATION.

Because of the nature of the assessed variable - willingness to pay or its alternative - the willingness to accept, the theoretical foundations of contingent valuation must be sought in the general theory of the market or, more precisely in the theory of consumer demand. Moreover, the assessment of WTP is used in determining the financial and economic efficiency of investments in the public sphere. From this perspective contingent valuation may be considered part or stage of the implementation of the "cost-benefit" analyses. At the same time, according to the fundamental theory of the market the so called consumer surplus, introduced for the first time by A. Marshal, is of key significance to the "cost-benefit" method. Consumer surplus is an expression of the benefits consumers receive, but do not pay for. It is due to the fact that market prices correspond to the marginal utility of consumption of the final part of the good - equalizing the marginal utilities of the "lost" income by the price paid, and the satisfaction gained from consumption. Therefore, the consumption of any fewer amounts of the good at prices that meets the condition of equilibrium would form consumer surplus. Essentially, the "consumer surplus" phenomenon results from the development of consumer demand theory (Savov et al., 1998).

The study of the willingness to pay is indicated as an element of the cost-benefit method. Some established authors in this area share the opinion that the study of willingness to pay for consumption of various health services is an area of development and innovation in the economic evaluation of health projects.

According Drummond et al. there are three categories of benefits that arise from health programs (Drummond, M et. al. 2007):

- Indeterminable benefits - associated with the individual assessment of improved health;

- Avoided future health care expenses;
- Increased productivity due to improved health status of individuals.

The study of the willingness to pay itself may be performed in two ways, depending on the purpose of the study - as retroactive or consumer-oriented approach and as preliminary or insurance-based approach. Retroactive approach aims to determine how much consumers would pay at the time of consumption of the service, and preliminary - what premium they would pay to insure or provide for certain health risks (Drummond, M et. al. 2007).

Still according to the same authors, relying on the research of K. Arrow of uncertainty and market failures in health care in summary there are three ways to evaluate a given good (Arrow, 1963; Drummond, M et. al., 2007):

- Determining the willingness to pay for certain health outcome;
- Determining the willingness to pay for treatment with uncertain health outcomes;
- Determining the willingness to pay for access to a health program in which future application and treatment outcomes are uncertain.

The main difference among the three approaches is the uncertainty of the health outcome. In the first two cases, the uncertainty stems from the supply side, while the third it is also associated with the demand side, because the respondents are not sure whether they will need the discussed treatment in the future.

Willingness to pay assessment should consider not only the health benefits but also non-health ones, and the extension of the effects on persons other than the direct consumers. Information available to patients is considered non-health source of benefits. It is well known that health care markets are imperfect, at least because of the presence of information asymmetry, and in some cases significant external effects. The latter are extended to persons other than those who directly consume certain goods. The impact of information is evaluated through choosing random groups of patients. Of each group is provided different amounts of information, and then the results about established WTP are compared (Donaldson & Shackley 1997). Immunization programs have strong external effects in health care. Assessment of the willingness to pay in such cases must take into account not only how much consumers would pay to protect themselves through immunization, but also how much they would pay for the immunization of another person, thus reducing significantly the personal risk of disease. Moreover, non-immunized individuals also realize benefits, because their probability of falling ill decreases significantly. These benefits are defined as indirect (Drummond, M et. al. 2007).

There is a wide range of research in the field of health, aiming to "value" patient preferences and health results of a therapeutic process. This is done by first using specific tools (visual analogue scale, standard lottery or time trade off) to establish patient's choice among a range of treatment scenarios offered by the doctor. The next step determines also the maximum amount that patients are willing to pay for the selected alternative. This approach measures the financial burden of disease or patients expenditures to improve their health. On this basis, the contingent valuation method provides another option for determining the efficiency by comparing the median or the mean WTP with the health outcomes. Thus the study of willingness to pay becomes part of the cost-effectiveness analyses. In this regard we refer to the study of Lieu et al. (2009) in which, patient preferences are specified using time trade off, and the willingness to pay for the choice - using open ended question. Next, the authors determine the value of a quality life year gained by using as "price" or potential costs of treatment the median WTP. Also interesting is the study of Leslie et al. (1995), including software designed for multimedia, interactive,

computerized survey aiming to establish patient preferences using standard lottery. Later, the platform is developed by also adding an option to define WTP (Flowers, et al. 1997).

We could differentiate into another group the studies of willingness to pay in health care, characterized by taking into account the quality of life and its domains in particular. In this case again it comes to defining patient preferences, according to the severity of effects on the quality of life domains, along with the attempts to determine the monetary value of the disease using a particular question about WTP. Such studies have been done by Hu et al. (2010), and Qureshi et al. (2006). They found a strong statistical correlation between the degree of deterioration of quality of life and willingness to pay.

4. SCENARIOS AND SUPPORT TECHNIQUES FOR DETERMINING THE WILLINGNESS TO PAY.

There are different scenarios for determining the willingness to pay. Essentially it comes to construction on the question itself in the questionnaire, which helps extract information about willingness to pay. Referring to this is the classification of Mitchell and Carson (1989), in which nine scenarios are divided into four groups according to criteria such as the number of questions (single question or series identical questions) and the nature of the assessment of the willingness to pay (actual value or a discrete valuation). Particular attention is paid to the following auxiliary techniques:

- open-ended/direct question;
- bidding game;
- payment card;
- take-it-or-leave-it approach;
- take-it-or-leave-it with follow-up.

An open-ended, direct question is the most feasible technique for measuring the willingness to pay, but is also considered as the most inaccurate. It is not made easy for the respondents in making decision, by asking them about the highest amount they are willing to pay. The use of an open-ended direct question is very likely to produce an unacceptable number of protest responses (zero), too large or too small values. In this case, respondents face the difficulty of having to make their decision based only on their information about the good, their own perception of its usefulness, as well as taking into account their financial resources. In some studies respondents receive explicit explanation that amounts they indicate should be consistent with their income, savings, and ability to pay for loans (Vernazza 2010). However, an open-ended direct question is not widely used for determining the willingness to pay. As an advantage we could mention its simplicity as technique and design providing direct immediate assessment of individual willingness to pay and may be used in questionnaires. It is necessary to note that more sophisticated techniques are applicable only in interviews. Another advantage, in spite of the numerous disadvantages of the open-ended question is that it helps to establish unbiased estimate of willingness to pay (Johannesson 1996).

More common is the "bidding game". The objective of this support technique is to simulate auction in which the respondent to bid, until reaching the maximum amount of money he/she would be willing to pay. The respondents are asked whether they are willing to pay certain minimum amount pre-selected by the researchers. If the answer is affirmative another question is posed about the willingness to pay a higher amount and if the answer is "no" - a lower etc. The bidding game is actually a sequence of

multiple identical, open-ended questions to determine the final value of willingness to pay. Various bidding algorithms are used, based on values pre-selected by the researchers and increasing in a certain order. The difficulty in this case, which is a prerequisite for bias, is the choice of the initial value, and the increase in the value of WTP asked by the interviewer. This is the main shortcoming of the support technique called "bidding game".

"Payment cards" are a support technique, which mediates the selection of respondents in a manner quite similar to bidding. The respondents are given cards which have written on a specific sequence of increasing amounts. They are asked to consider them carefully and divide them into three groups: the amounts that they would pay, the amounts of money that they would definitely not pay, and those that they hesitate about. Such a technique is used by Vernazza (2010) in determining the willingness to pay for molar treatment. An amount between the lowest of the group that participants would pay and the highest amount of the group they would pay for the consumption of the service is used as estimate of the willingness to pay.

Auxiliary scenario - "take-it-or-leave-it" was used to assess the potential costs of natural disasters and is also widely used in healthcare. The technique is implemented by questioning whether the respondent is willing to pay a random amount from those pre-defined by the researchers. Interesting in this case is the selection or determining of the pre-selected amounts. Estimates or values close to the actual production costs of certain goods may be used as such. On this occasion, we refer to the research of Guertin et. al. (2011) of the willingness to pay to eliminate the risk of restenosis following percutaneous coronary intervention. The authors use as possible values of WTP estimates of direct costs of most hospitals in Canada for carrying out the treatments and activities to provide a health service.

"Take-it-or-leave-it" technique is applies in two modifications. In the first a question is asked only once about a single, randomly selected amount form the amounts pre-selected by the researchers, and in the second version additional questions are posed to further refine the answer. It should be noted that this technique may be applied not only in interviews, but also in questionnaires. In this case, however, the questionnaires need to contain a structured question about the willingness to pay. The difference is only in the amount, that as noted need to be randomly selected. The question is dichotomous with answers - "yes, I am ready to pay this amount" or the alternative "no, I'm willing to pay." Variation is possible where, after the initial response, respondents are asked if their answer was "yes", if they are ready to pay a higher amount (again randomly selected from predefined) or if the answer is "no" if are willing to pay a small quantity.

Indicated as a shortcoming of this method is the bias resulting from the subjectivity in determining the initial set of amounts to be paid. Another problem with implementing this scenario is the requirement for a sufficient sample size. The reason is that econometric technique is used to obtain an assessment of willingness to pay, requiring appropriate representativeness of the outcome data. Perhaps the most often cited example of the application of the "take-it-or-leave-it" approach, considered "classic", is that of assessing the cost of damage to the environment after the oil spill caused by the Exxon Valdez tanker in the Strait Prince William Sound in Alaska in 1989. This is not by chance that contingency valuation was applied for the first time to assess the damage to the environment caused by the business in the oil spill method. Assessment of the environmental damage is performed by determining the potential expenditures of the respondents that they would be prepared to pay in the form of an additional one-time tax earmarking. In this case, the technique "take-it-or-leave-it" is implemented with two additional questions clarifying the choice (Carson et al. 1992). The authors used the outcome empirical data to construct a curve showing the percentage of respondents willing to pay the pre-selected amounts. The relationship is represented by an exponential curve, which has shown the smallest standard error.

Subsequently, a range of variables is described and classified, according to the strength and direction of their influence on the willingness to pay. An assessment is made of the median WTP (Carson, et al. 1992).

More recent studies have attempted to compare the effectiveness of both formats of "take-it-or-leave-it" - with a single question and the other with additional questions supporting respondent decisions. In this regard, we may refer to the study Antoušková (2012). For both techniques, the author develops and compares two different functions of WTP - Binary logit model, based on the acceptance or rejection of the initial offer and Ordinal model, based on primary and support questions. The conclusion is that Ordinary model in this study is more appropriate as the statistical correlation between willingness to pay and starting independent variables is more pronounced.

5. CONCLUSION

Ultimately, contingent valuation is a field of considerable scientific interest. This seems to refer significantly to healthcare. Perhaps in the future that interest will remain high, new fields of application will be explored and tools will be improvement.

We consider that the first problem and maybe disadvantage of the method is the complexity of the implemented tools - measuring what is difficult to measure or even practically immeasurable - the maximum amount of money that respondents are willing to pay remains a difficult task. It is therefore necessary to make choose correctly, taking into account the resources available to researchers, what scenario or what support technique and format of questions about willingness to pay to apply. The goal here is to obtain unbiased assessments, but not only. Assessment of willingness to pay should reflect the full costs and benefits.

As a second drawback we may point out the inaccuracy of the final assessment of the willingness to pay. In all cases, the final result is obtained by further statistical processing of the data, which in most cases is too complicated. It is possible to obtain large fluctuations of the responses as well as a large number of protest responses. In many cases there may no statistically significant relationships found between pre-selected variables as predictors and the willingness to pay. To overcome these problems, undoubtedly, it is necessary to verify that the relations and dependencies found correspond to established, recognized economic fundamental laws. This is essentially a certain validation of contingent valuation.

Another method shortcoming is that it reveals only a snapshot of the studied variables and their interconnections. Therefore, it is necessary avoid full generalization of results. Cases of established weak statistical correlations require new surveys using modified tools or increased number of respondents. All of this may increase the value of the research, as well as cause loss of time, which is a non-renewable resource for researchers.

Major problems in the application of the method have been a subject of critique in scientific publications. In this regard, the authors most often refer to the report of K. Arrow, R. Solow et al. (1993). Problems in implementing contingency valuation may be summarized in the following areas:

- contingent valuation may lead to results contrary to the rules of rational choice;
- unrealistically high estimates of willingness to pay may be established in cases when a program is intended to restore damages to the environment, characterized by plurality, not just one side or consequence;

- very few of the of willingness to pay studies have been performed presenting information about realistic budget limitations to the respondents;

- it is very difficult to provide quality information about evaluated programs and goods to the respondents, and it is not quite clear whether the respondents themselves are aware of this information, which ultimately forms the basis of their decision for willingness to pay;

- it is sometimes difficult to identify the boundaries of the market (where its margins are) in order to generate an assessment of the willingness to pay;

- respondents may succumb to their feelings and emotions about the social importance of the program or good, resulting in answers far from their actual ability to pay.

Another problem, particularly in the health care may arise in the evaluation of treatment, subject to co-payment by patients. In this case, respondents would be affected by the current information on the amount of co-payments, and would probably indicate amounts close to those levels. This would distort the assessment of the health service itself, as its value would probably be higher, at least because of the payment by "third party".

A problem of great importance especially in a system based on compulsory public insurance would be associated with the dominant perceptions and the attitudes of patients about health care being "free" or in a narrow sense that the use of such goods should not be paid for by the patients. In this context, questions about willingness to pay will not be accepted by the respondents and the percentage of protest responses would be great. Another unfavourable attitude of the respondents that would have to be overcome is the potential association of health care payment in favour of the healthcare organization with payments "under the table" which is essentially unregulated and represents a significant part of the informal economy in the sector.

It should be taken in account that despite the numerous shortcomings and difficulties in application, the contingent valuation method has in our opinion a fundamental advantage. Compared with other methods of valuation such as the calculative and the market, contingent valuation is user-centred analysis and practically explores user choices and interests. In other words, this method seeks the response from the demand side rather than supply, since the latter is practically monopolized by state institutions. Moreover, in this respect, there is hardly an alternative to contingent valuation. It is for this main reason, in our opinion, that the method has been evolving for the last few decades, and has earned quite a lot of popularity in the analysis of the effectiveness of health care expenditures.

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**CONTINGENT VALUATION OF THE PATIENTS' WILLINGNESS TO PAY
FOR DERMATOLOGICAL AND DENTAL TREATMENT**

Nikolay G. Atanasov¹, Hristo P. Dobrev², Ralitsa D. Raytcheva³, Maryana A. Alexandrova⁴,
Desislava G. Nocheva², Drozdstoy S. Stoyanov⁵

¹Medical University of Plovdiv, Faculty of Public Health, Department of Health Care Management,
Health Economics and General Medicine, bul. Vasil Aprilov 15-A, Plovdiv, 4002, Bulgaria

²Medical University of Plovdiv, Faculty of Medicine, Department of Dermatology and Venereology,
bul. Vasil Aprilov 15-A, Plovdiv, 4002, Bulgaria

³Medical University of Plovdiv, Faculty of Public Health, Department of Social Medicine and Public
Health, bul. Vasil Aprilov 15-A, Plovdiv, 4002, Bulgaria

⁴Medical University of Plovdiv, Medical College, Bratja Bukston 120, Plovdiv, 4002, Bulgaria

⁵Medical University of Plovdiv, Faculty of Medicine, Department of Psychiatry and Medical
Psychology, bul. Vasil Aprilov 15-A, Plovdiv, 4002, Bulgaria



Abstract

The determination of the value of public goods and their financial and economic evaluation is a major scientific and practical problem. Possible partial solution of it is applying the so-called contingent valuation, as is the practice in many countries with advanced health care systems.

Contingent valuation of the willingness to pay offers an alternative to the current compensation rates and converts them to measure the actual benefits and costs to consumers. The method is most commonly used in three areas – environmental economics, health economics and transport.

The article describes a project with an important practical application and significance, which will develop and approve tools for patients' willingness to pay assessment for health services in dermatological and dental care. Benefits of the project can be measured directly with information about health care needs for managers and effective management of resources at their disposal.

Key words: *contingent valuation, willingness to pay, health economics, non-market goods.*

1. INTRODUCTION

The paper presents the key issues treat of in the “Contingent valuation of willingness to pay in patients with skin conditions and dental diseases” Project, funded by the Medical University of Plovdiv. Multidisciplinary research team of ten academics was assembled to perform the project activities. The wide scope of the scientific fields of expertise, covered by the participants and involving – health care management and economics, social medicine, dermatology and dental diseases – contribute significantly toward achieving the project’s goals.

In Bulgaria the contingency valuation (CV), one of willingness to pay (WTP) approaches, frequently used and considered as a more appropriate method for evaluating the value of non-market goods such as health outcomes and improvements, is not widespread enough and its application in practice is insufficient. The “willingness to pay” approach, however, is a concept implemented in the clinical and economic studies of many authors in the past few decades. It is necessary and important to note that these studies had been performed in high income countries with diversified health care systems, including health insurance coverage models with multiple health care providers.

Economic theory deals with different classifications of goods, for example based on: their scarcity; their establishment location in the economy sector; their form of manifestation and etc. Depending on the location of their establishment goods are divided into two groups – market (private) and non-market (public). The rapid growth of the CV literature since 1960s demonstrates that the method can generally be used, admittedly, when taking into account both its advantages and disadvantages, as the only approach that to include what is usually referred to as the existence or passive use component of the economic value of a public good. A distinctive feature of public goods is that they do not produced, demanded and supplied under the conditions of perfect competition. On this basis, their prices are not economically well-founded, in other words they did not reflect all the costs and benefits in the process of production and consumption.

In recent years on this background stands out the topicality of the issues related to a feasible way of measuring the value of health services and goods, financial and economic performance of the health organizations’ activities and projects. The main goal of applying the contingent valuation of willingness to pay is to determine the highest price that a consumer of public non-market goods is willing to pay, and for the health care applications – the highest price a patient is willing to pay for treatment of a disease. On this basis, these consumers’, respectively, patients’ appraisals can be used to define the value of the goods.

The formation of market prices as a result of the market mechanism always falls to the attention of economists – at the time of straitening the fundamentals of classical economic theory, throughout the 19th century and till nowadays. In the early 20th century some scientists represented by the economists D. Clark and L. Hines argue and try to prove that in many cases the individual utility as a measure of the amount of wealth can not be measured by current market prices, because they do not take into account the accumulated non-utilized costs or benefits (gains) (Carson, 2005).

Studies in highly specialized scientific journals testify that only prices in a perfect market competition are equal to marginal production costs (Savov et al., 1998). They are Pareto efficient and accurately measure the actual costs and benefits of all economic activity in both the private and public sectors. Their application in evaluation and analysis of the financial and economic efficiency of public spending programs by the “cost-benefit” method guarantees the objectivity and accuracy (Brown & Jackson, 1998). The problem with the implementation of this approach is the complete lack of pure market activities in the public sector. Furthermore the health care market is not only imperfect, but it is highly regulated by the state, which is the reason to be addressed as “quasi-market”. In this case it is recommended so called “shadow prices” to be identified and used in the assessments. The latter are obtained by taking into account the characteristics of the market sector or more precisely are defined by a certain transformation of the current market prices (Stiglitz, 1996; Brown & Jackson, 1998).

Contingent valuation aimed at measuring the willingness to pay, actually offers an alternative to the current compensation rates and their application as a measure of the actual costs and benefits to consumers. This gives us grounds to classify the contingent valuation as innovative, experimental

approach in health care economics, which through undertaken surveys allows the determination of the value of treatment (in other words, the financial burden of the disease).

The scientific achievements of R. Mitchell and R. Carson, systemized in their book “Using Surveys to Value Public Goods: The Contingent Valuation Method” are considered very important for clarifying the practice of contingent valuation (Carson & Hanemann, 2005). Their work not only provides some insights about the theoretical basis of valuation of public goods, but also presents the questionnaire structuring models for WTP surveys (Mitchel & Carson, 1989).

2. THE CONTINGENT VALUATION METHOD AND ITS APPLICATION IN HEALTH CARE

The scientific literature review on the topic demonstrates that contingent valuation is widely used in three areas – environmental economics, health economics and transport (Carson & Hanemann, 2005). The researchers in the field identify several different survey formats that involve asking people different questions; and the way one links the survey responses to the measurement of WTP. These are the following:

- The first is the open-ended question format: the response directly reveals the respondent’s value of the compensating variation;
- The second format is the closed-ended – does not reveal the exact value of compensating variation, but it does provide an interval in which it must lie;
- The third format works with “bidding game” (BG) and “payment card” (PC) questions: BG asks a sequence of questions until maximum is found, it may suffer from lack of incentive compatibility and fatigue effects; PC indicates range of possible values, one of which is pointed out by interviewee. Both formats may have problems of starting point bias.
- The fourth format involves “standard gamble” questions: indicating possible scenarios for the treatment by assessing individual preferences (Gudex, 1994). The stated probability represents the value that the respondent places upon the intermediate health state (Oliver, 2004);
- The fifth format uses “time trade off” questions – respondents express their preferences towards treatment by comparing a period of ill-health with a shorter period in a higher quality of life;
- The sixth format requires answers categorized by the “visual analog scale” tool – an instrument that tries to measure a characteristic or attitude that is believed to range across a continuum of values and cannot easily be directly measured. It is first step for evaluation of the health states preferences.

We should emphasize that the last three instruments are used for determining of the patients’ preferences. This fact is quite important for the contingent valuation, because the consumers’ preferences are predictors of the willingness to pay.

Over recent years the methods of computer-assisted web interviewing (CAWI) have become immensely popular. CAWI is an Internet surveying technique in which the interviewer follows a script provided in a website. The questionnaires are made in a program for creating web interviews. The program allows for the survey to contain different types of questions and to include pictures, audio and video clips, links to different web pages and etc. The collected information is processed automatically.

There are two basic approaches for creating online questionnaires, and both are associated with the use of specialized software:

– The researcher creates his own survey – both computer skills and experience in questionnaire design are recommended.

– The researcher use templates – professional questionnaire templates and intuitive tools are available, when failing with the first approach.

The article of British scientists R. Smith (London School of Hygiene and Tropical Medicine) and T. Sach (School of Chemical Sciences and Pharmacy and Health Economics Group, University of East Anglia) “Contingent Valuation: What need to be done?”, published in 2009 in the Journal of Cambridge University “Health Economics, Policy and Law”, attracted a huge response. Their study demonstrates that in recent years the number of questionnaires assessing the willingness to pay of patients with various diseases has grown incrementally. For those covered by the period of 1985-2005, the number of publications on this problem is 265 and for the first five years of the new century, they are 186 or 71 % of the total. The annual number of studies has increased from 3 in 1985 to 38 in 2005; the countries with the highest number of such studies are the USA, UK and Canada. Of totally 265 observed publications on willingness to pay, the greater number is in the field of infectious diseases (53), followed by cancer (23) and cardiac disease (18) (Smith & Sach, 2010). Furthermore, Smith and Sach provide summarized data for:

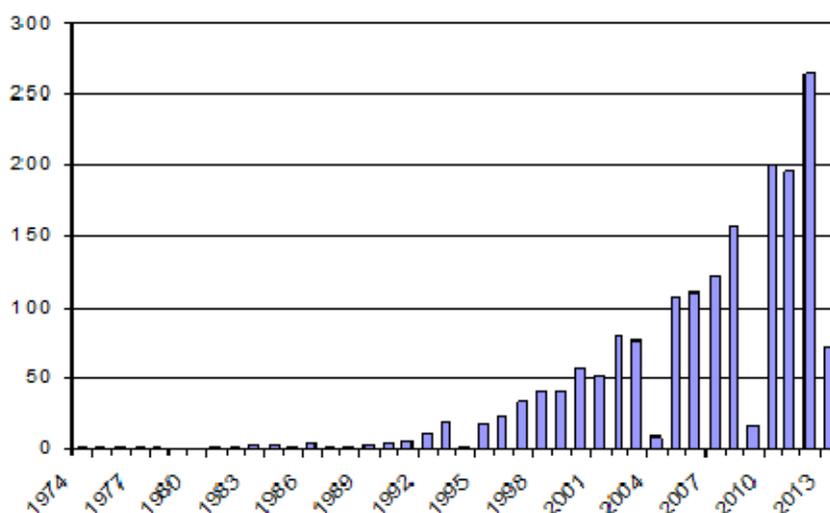
– Tested values according to the type of respondents;

– The questions format determining the willingness to pay;

– The report, drafted by the group of economists, led by Kenneth Arrow, for successful selection and application of contingent valuation tools (Arrow et al. 1993).

A brief review of the international medical scientific journals database – PubMed represents the annual number of articles in which the term “willingness to pay” occurs in the title or exists in the abstract. The data are presented graphically in Figure 1.

Figure 1. The annual number of articles assessing willingness to pay for health care services (data source: PubMed - <http://www.ncbi.nlm.nih.gov/pubmed>).



The figure denotes that since 1995 the number of the CV studies is growing rapidly. Extremely impressive is the number of articles for the year of 2012 (265). The data for 2013 is collected up to the end of March. Figure 1 illustrates researchers' increasing interest of contingent valuation method in health care over the last twenty years.

3. SOME RESULTS OF THE CONTINGENT VALUATION PRACTICES AT DERMATOLOGICAL DISEASES

Dermatological diseases area field with a numerous applications of patients' willingness to pay assessments. Different question formats are implemented in the surveys.

The questionnaire survey performed by Lieu et. al. attempted to determine the cost per unit of health outcomes gained (Lieu et al. 2009). The researchers concluded that the ratio "willingness to pay per QALY" vary significantly by gender, age, socio-economic status of respondents, as well as the history of the disease, which does not allow sufficiently reliable threshold to be set for the value of the health outcome.

In another study is used Dermatology Life Quality Index (DLQI) to prove the strong correlation between the payment attitudes and the measurements of quality of life of patients with skin diseases. Patients were willing to pay averagely between 1 253 and 1 986 SEK per month to treat psoriasis; averagely between 960 and 1 083 SEK for atopic eczema (at an exchange rate of the Swedish krona to the U.S. dollar at the time of the survey was 1 USD = 8.25 SEK) (Lundberg et al., 1999).

Researchers from Harvard Medical School found that there is no statistically significant difference of willingness to pay for the psoriatic arthritis treatment by age, gender, income level of patients, surveyed by eight indicators of health outcome index HR-QOL (Hu et al. 2010). The results of a similar study on the vitiligo patients at the University Clinics of Hamburg indicated strong correlation ($\chi^2 = 65.43$, and $P < 0.001$) between the willingness to pay and the DLQI levels. Strong correlation was also proved between the willingness to pay and both the duration of the treatment and the area of the affected skin (Radtke et al. 2009).

The CV method was applied on patients with a flat hemangioma (i.e. port wine stain), affected the face and causing considerable subjective discomfort. The patients received laser treatment (Schiffner et al. 2002). The results demonstrated correlation between the treatment's outcome of and patients' willingness to pay for it. The patients who appraised the treatment as "very good" and "excellent" were willing to pay €22 for single procedure and €370 for the entire course of treatment, while these who were less satisfied with the outcome estimated their willingness to pay at €12 per procedure and €145 for the entire course of treatment. Another correlation was also evidenced for some items of questionnaires, which assess quality of life "concerns/hopelessness", "helplessness" (CSDQ) and "social function" (SF-36).

The "willingness to pay" approach is applied to patients in order to assess their preferences for the type of medical examination. For example, Qureshi et al. (2006) found that 73 % of patients with skin psoriasis or a history of melanoma preferred due to the faster communication, to contact their doctor remotely through telemedicine than "face to face" through a standard medical examination. Patients, who chose the telemedicine, were willing to pay for \$25 (as a median from all responses) for this service.

4. MAJOR RESEARCHES OF WILLINGNESS TO PAY OF PATIENTS IN DENTAL MEDICINE

In the field of dental services the study on the factors that influence the willingness to pay for orthognatic treatment conducted by A. Smith and S. Cunningham (University College London) provokes a particular interest. Their purpose was to identify the factors that determine the level of willingness to pay and to compare results between: (1) patients undergoing orthognatic treatment; (2) healthy subjects and (3) actual costs for the treatment. Survey results show that there is a significant difference between the average willingness to pay between the two patients' groups – sick and healthy. Sick patients were willing to pay a \$2 750 more than the healthy individuals. It should be noted that the average total cost of treatment is lower than the average willingness to pay of the sick respondents and too close to the value obtained from the healthy persons (Smith & Cunningham, 2004).

The averages of WTP of uninsured persons for dentin regeneration are determined in another study by Birch et al. (2004) in the amount of \$262.70 and \$11 per month for the insured individuals. Furthermore, the authors attempt to establish the socio-economic characteristics of respondents and their health status as a significantly influenced by the levels of WTP for dentin regeneration. It is estimated that about half of the surveyed patients were willing to pay up to \$200 per tooth for dentin regeneration (Birch et al., 2004).

Leung and McGrath studied the willingness to pay for patients in need of dental implant and the influential factors (Leung & McGrath, 2010). Eighty four percent of the respondents were willing to consume the service. Gender (female), higher education and prior excellent condition of the teeth were significantly associated with higher willingness to pay, while the location of the missing tooth (front or rear) does not play a significant role. Patients were willing to pay the amount of approximately \$140.

In a similar study the preferences of the elderly was assessed, regarding the placement of dentures in order to improve their diet and increase their quality of life (Esfandiari et al., 2009). From 46 % to 70 % (depending on the prosthetics method) of people were willing to pay an amount exceeding three times the cost of the treatment. This percentage increases to 77 – 96 %, if monthly installments of payment were available. Total number of 86 % of patients considered that the state is obliged to cover at least part of the cost of the prosthesis.

The study of Tamaki et al. made a note worthy contribution to the topic (Tamaki et al., 2004).The researchers have shown that patients' willingness to pay for regular dental check-ups depends more on gender and age rather than income. Over 60 % of the patients shared identical willingness to pay and the amount was set at about \$20.

5. CONTINGENT VALUATION IN BULGARIAN HEALTH CARE

Contingent valuation method in Bulgarian health care is not sufficiently known. The same refers to the analysis of “cost-benefit” related to the precedent. In fact, the methodology of “cost-benefit” analysis in the public sector is discussed in more details by very few Bulgarian scientists. The first and most significant work in this area remains the book of R. Brusarsky (2000) – ““Cost-benefit” Analysis”. The lack of studies of Bulgarian authors in evaluation of public goods through surveys in order to determine the willingness to pay is sufficient.

Currently in the field of health care there is only one CV study, part of international project (ASSPRO CEE 2007), sponsored by the European Commission with the participation of Atanassova and Mutafova (Faculty of Public Health, Medical University of Varna) (2010). These authors found that 83 % of the

respondents (50 people) are willing to pay 463 BGL for childbirth. The attitudes of 76 % of the respondents were positive on surcharge from 100 to 200 BGL for semi-elective surgery. The interviewees were willing to pay the total of 350 BGL for emergency surgery per year. Half of the respondents agree to pay an extra charge less than 500 BGL per year for health care services provided by the state or NHIF (National Health Insurance Fund).

Academics, part of the present project team, have comparable researches in health sector. These studies are closely related to the financing system – assessment and analysis of the dynamics of the overall funding and its structural changes under the influence of crisis (Stoyanova, 2010; Atanasov, 2010). One of them also referred to some empirically established links between health expenditure of households, GDP and public expenditure (Atanasov, 2011). These three studies are indirectly related to the “willingness to pay” as long as they proceed upon a common basis for determining funding and the impact of the economic developments on it.

Publications, part of the project team authors’ previous background and examining the health needs assessment, policies based on empirical evidence and patient-centered approach in health care, could be attributed to the study’s problematic. The reason is that these publications have focused on patients’ values, needs, expectations and preferences in the process of receiving health care services (Dimitrova, 2011; Levterova et al. 2011; Hristov et al. 2010; Hristov, Stoyanov, Tornjova, Dimitrova, 2010).

6. PROJECT’S AIM, MILESTONES AND POTENTIAL BENEFITS

The project primary goal is to develop tools for evaluation and analysis of WTP of patients (in two areas with different financing structures). To achieve the goal the following groups of factors have to be taken into consideration:

- National health insurance system features and the structure of health care financing by differentiated sources;
- Respondents’ perceptions for value and utility of health care services;
- Respondents’ opinion about the disease impact on their quality of life;
- Socio-economic status of the interviewed groups of patients.

The core of the project incorporates surveys of two distinct groups of patients – with skin conditions and dental diseases. The survey questions will cover socio-economic and health status of the respondents (gender, age, education, average annual income, medical history, etc.) as well as their willingness to pay. The survey will be conducted in the Department of Dermatology and Venereology at University Hospital “St. George”.

The project duration is two years and its implementation will successively go through the following stages:

- Preparatory phase – includes the exploration of the widest possible range of literary sources related to the issues of contingent valuation and the problems of assessing and determining the willingness to pay; creating models of questionnaires, which will be initially tested for a small number of patients and adjusted if necessary in order to their validation (within a pilot study);
- To build a website – where the created questionnaires will be published;
- To determine the respondents groups (criteria for inclusion and exclusion, scope of diseases, number of respondents, etc.) and to conduct the final survey;

– To summarize process and analyze the results – the members of the project team have the knowledge, analytical skills and experience in the field of the questionnaire surveys. This stage of the project will be performed in the Department of Health Care Management, Health Economics and General Medicine, Faculty of Public Health, Medical University Plovdiv.

The project activities are backed up by the University premises. Licensed professional software is available for processing statistical information.

Finally, we believe that the potential benefits of applying contingent valuation can be measured in several ways:

- CV method put into practice provide a new insight into the financial burden of the disease;
- CV will develop further our awareness of the quality of life affected by illness and willingness to pay – quality of life study could be combined with an estimate of willingness to pay for a treatment;
- If certain reliable measures of the value of the medical services are established they could be applied in assessing the effectiveness of health projects;
- The information collected from the questionnaires can be used by healthcare managers to ensure effective management of resources, by choosing the most effective treatment options – this is possible because the evaluation of WTP can be performed simultaneously with the determination of patients' preferences.

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**ECONOMY OF KNOWLEDGE AS MEASURE OF THE PROGRESS
IN THE DEVELOPMENT OF HEALTHCARE PROFESSIONALS**

Pavlinka P. Dobrilova, Tsvetanka N. Slaveykova, Iveta M. Popova

Vratsa Branch of Medical University – Sofia, Bulgaria

Abstract

Socio-economic change and healthcare reform require medical professionals to constantly enrich and develop their knowledge and skills. Education became a distinctive feature of competitiveness, which requires building a learning environment that stimulates learning ability. As a result, the training of specialists in the healthcare system should be adequate to the requirements through various social, economic and political activities in order to measure the progress of healthcare professionals.

Key words: *knowledge, economy, healthcare professionals*

We live in a dynamic and economically advanced society whose continuous process of development enforced by the advance of science and technologies has lead to a number of new measures. As a result, in the economy, market, business and healthcare system alike, continuous innovative and socio-economic changes are taking place.

The healthcare reform developed rapidly and established new requirements to the competence and knowledge of medical specialists which, in turn, automatically became a measure of the progress and development of health professionals. Up-to-date and adequate knowledge and skills became necessary for two main reasons: the need to improve the quality of Bulgarian health care and reduce the time of the healing process on the one hand, and the need for medical nurses and midwives that are competitive professionals on the labor market. Therefore, the education and training of medical nurses and midwives now demands a new, different, more mobile, better informed, updated and market-oriented training environment.

Economy of knowledge is a new concept. Its contents generally include the advance of science and technologies and their impact on the economic and social life. It is an economy where information and knowledge are a major product and resource. Its name was made known thanks to Peter Drucker who used it in the title of a chapter of a book. It is his opinion that "people learn best when they teach other people". In the core of his ideas is the understanding that people are the most valuable resource of any organization. It is a key issue that knowledge and education should be discussed as a business products and assets that add value. Therefore, successful organizations are defined as organizations rich in knowledge and information skills measured as intangible assets. Their success is a lasting advantage achieved by a faster accumulation of new updated knowledge compared to their competitors.

Learning ability becomes a distinctive feature of competitiveness. This advantage is fragile and especially important in the establishment of a training environment that stimulates skills and knowledge. The knowledge management process is mist topical in business but it is undoubtedly useful in education as well. Economy of knowledge comes from the necessity to transfer new knowledge and skills demanded by the respective profession and meeting the needs of society. D. H. Hargreaves defines two major driving forces of the necessity of change in education:

- many countries now accept that the educational level of more and more people needs to be higher than before;
- It is an expanding idea that in a knowledge-based economy more people need to be more creative and this demands new approaches to teaching and creation of qualities like creativity innovation and enterprise (Kristeva, 2007).

In our country, the healthcare professionals are making their first steps in that direction. During the latest years, knowledge became the most valuable asset, with its own rules of existence and management. Each specialist is expected to have the skills and competences necessary for the job to have the right to perform the respective activity within his specialty. And every profession has specific feature and requirements to the person practicing it. These requirements are particularly strict for medical specialists who work on living people with, their illnesses, sufferings, treatment and prevention. (Popov, 2012)

The contribution of healthcare professionals to the development of the country's healthcare is ever more clearly recognized internationally. There is an agreement on the need of strengthening and extension of the functions and responsibilities of these specialists within the healthcare system. Nursing is an efficient resource of healthcare provision from an economic point of view. Therefore, the development of medical specialists should be considered an integral part of the general tendency of improving the economic efficiency of the healthcare system. (Yurukova, 2001)

The basis of the development of future healthcare professionals is their training which should embrace a sufficient volume of theory knowledge and practical skills, special moral and ethical principles, as well as training in teamwork and problem solving in specific situations. Any up-to-date training syllabus should focus on the holistic approach which perceives people as complex human beings with their accompanying medical and paramedical problems. The word "holism" comes from the Greek word "holos" which means "whole". According to B. Gyoshev and M. Veleva, the holistic approach studies all objects and phenomena as parts of a whole and tries to understand the wealth of their relationships with other objects and phenomena (Gyoshev & Veleva, 2007).

To introduce innovative methods of improving the quality of evaluation of students and adapting training in Bulgaria to meet European requirements, I. Koleva et al. prepared a modified model of Mishra & Koehler & Porter shown on fig. 1.

The authors introduce the concept technological-pedagogical-content knowledge which is a symbiosis of these three groups of knowledge by their integration into a unified whole without any domination by any of the groups.

The *pedagogical-content knowledge* takes into account the specific features of the training and the learning of the curriculum.

The *technological-content knowledge* take into account the relationships and mutual impact and influence between technologies and curriculum.

The *technological-pedagogical knowledge* shows how teaching can change by the use of specific existing technologies or components thereof in a different educational context.

This model considers training institutions as corporations producing a specific product (knowledge) which exist on the market as economic entities. The market affects them by its five forces: suppliers, substitution, competitive rivalry, users and entry of new producers (Koleva, Marinov & Yoshinov, 2012).

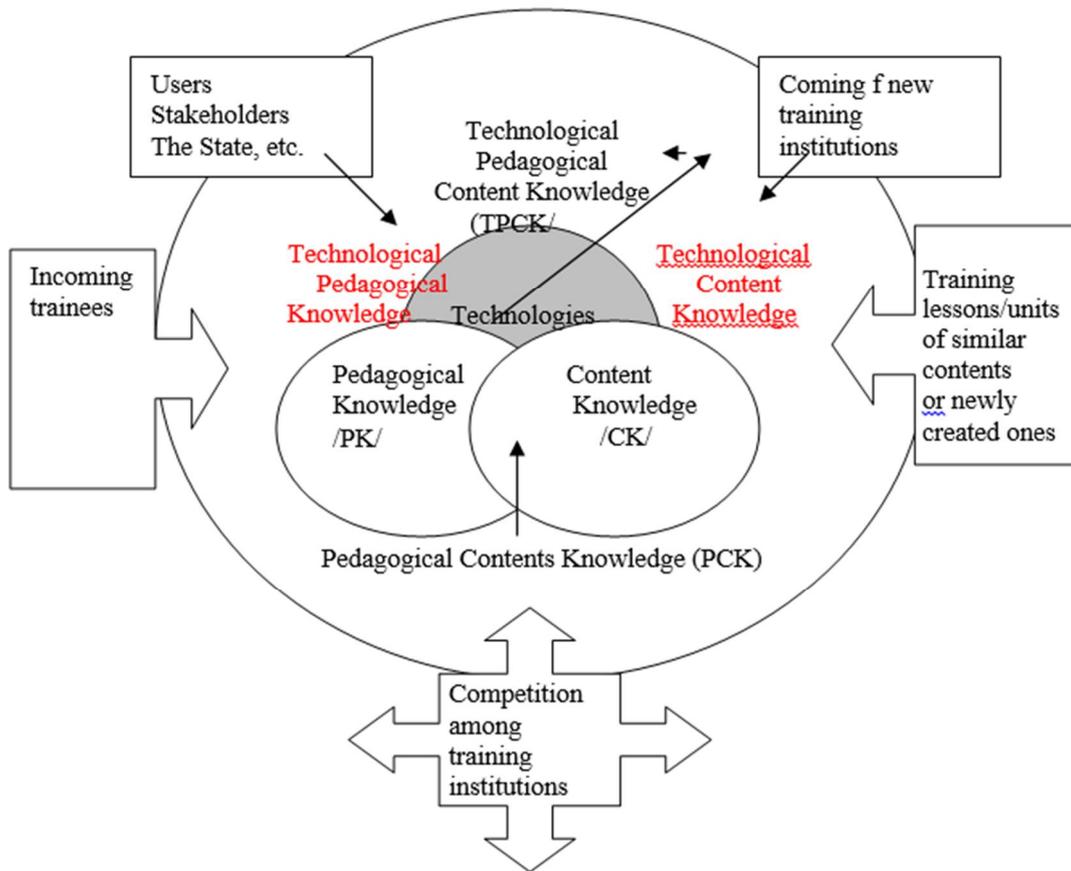


Fig. 1 Model of Mishra-Koehler-Porter

According to the EU Lisbon strategy, by raising the compatibility of economy and improvement of the population's national status we create a transfer to knowledge-based economy and establish in information society. The priorities of this strategy are:

- increase of investments in knowledge
- improvement of the competitiveness of European economies and encouraging older workers to continue working by lifelong learning
- company training
- healthcare improvement

To achieve this goal, a World Bank team developed a precise tool to evaluate, measure and analyze the economic development of different countries on the basis of economy of knowledge. This tool has 69 indicators that cover four major pillars:

- Favorable economic and institutional environment
- Developed information and communication structure

- Education and training – well trained human capital
- National innovation system

These indicators used for evaluation of knowledge are the basis of this analysis of the progress of healthcare professionals

ECONOMIC INITIATIVE AND INSTITUTIONAL ENVIRONMENT

The environment in Bulgaria is far from being favorable for the development of medical specialists. During the latest years, healthcare professionals are working in a continuously changing social, economic, political and cultural environment and they have to demonstrate high adaptability and competence. The atmosphere of economic restrictions and political changes places health specialists against new challenges and possibilities. Our experts say that healthcare administrations as implementers of healthcare policies were not capable of facing and making new out-of-the box decisions because they used ideas, methods and tools from the past times with their old needs, priorities and realities.

This is the atmosphere where healthcare professionals have to use their expert knowledge and experience to improve healthcare and assist the establishment of an effective health policy.

INFORMATION AND COMMUNICATION INFRASTRUCTURE

The healthcare sector today faces great challenges. Health is an information-intensive sector and information and communication technologies can greatly improve efficiency and productivity. The EU discusses a number of aspects of electronic healthcare in here main directions:

- research and development in support of several regional health information networks, tele-medical services and patients' personal healthcare systems;
- regulatory frame and standardization to guarantee competition, operative compatibility and privacy policy for personal data;
- encouraging of electronic healthcare and best practices.

Following the pharmaceutical industry and radiology, electronic healthcare is the third industrial pillar of health. This fast growing sector is the backbone of health systems re-engineering. Its development improves access to and quality of modern healthcare.

As a result of the information technologies, many of the functions of time-consuming manual data processing can be performed by automated systems.

EDUCATION AND TRAINING

Modern nursing is a highly qualified professional, formed in accordance with the theory and technology of Nursing. It performs a wide range of roles and functions, and is a full partner of the other health professionals - doctors, dentists, therapists and others. The increasing importance of the nursing profession is particularly evident in.

The healthcare reform that started in the year 2000 is still going on. The process of change meets huge difficulties, including the challenges facing the training of specialists working in this sphere. Society requires highly educated and qualified specialists who are in great demand by healthcare managers.

The accelerated rhythm of the change resulting from global economy, new technologies and demographic factors today is a well-documented phenomenon. Research is focused in the following five major issues related to people and organizations:

- Finding, keeping and developing exceptional specialists
- Finding and developing leaders of the next generation
- Establishment of sustainable organizations that are capable of fast change
- Creation of organizational environment which fosters high commitment and high-quality performance of employees
- Tying performance and rewards with the strategic priorities.

The ability to attract and keep qualified employees is a universal challenge to all organizations all over the world. Qualified medical specialists are the life force of healthcare that has to meet the needs and requirements of the people. The shortage of medical specialists is an important issue not only in our country but in other countries of the world.

The level of education is high, but not enough to reduce the rate of departure of health professionals. Rather, graduates meet all European requirements, which creates opportunities for access to the market of qualified medical professionals in the developed European countries. Working conditions of nurses and midwives are mentioned in Directive 77/452/EEC. According to Directive 2005/36/EC with effect from 20.10.2007., Which regulates the mutual recognition of professional qualifications called. regulated professions / those that require certain qualifications, as evidenced by the possession of a diploma or certificate / qualifications obtained in one Member State should be automatically recognized on the territory of all other Member States, they fulfill a minimum mandatory requirements described in relevant directives. However, Bulgarian citizens are still unable to benefit from the full range of rights of common labor market of the EU. According to the clause of the Annex to the Treaty of Accession of Bulgaria introduced a transitional period of seven years from the date of accession of the country in which the other member states are free to impose measures to restrict the access of workers from Bulgaria. Still some citizens need a work permit in some EU countries. They also include nurses and midwives (Slaveykova & Dobrilova, 2013) .

The managers of many organizations constantly increase their requirements to job applicants and these requirements now go far beyond the educational framework of the higher medical schools. Attention is paid to the use of information technologies, knowledge of foreign languages, etc. Undoubtedly, these are important tools that have already found place in the university curricula.

The ever growing global market of today, the demand of ever greater variety of skills is quickly exceeding the available supply. Even the best training of health specialists is no longer able to provide the validity of their education till the end of their professional careers. To keep in step with the novelties, they should continuously improve their knowledge and skills. Lifelong learning becomes a priority in healthcare. That brings about changes in the whole range of activities, including training and development.

Within the latest quarter of a century, no other professional training has experienced more intensive changes than the training of nurses and midwives in relation to the improvement of their qualification

due to the higher requirements of society, the increased number of chronic patients, the goals, strategies, resources and medical culture of the country.

Intellectual development as an essential component of a professional career spanning processes to improve education and acquiring new knowledge not only for the implementation of health care, but also for the planning, organization and management of the same.

Creating conditions for educational improvement reveals wider and more real opportunities to occupy higher positions, to build a career and increase material reward - a problem that the country is urgent to be solved in order to improve the implementation of health care quality perspective. Education is relatively long included in the professional development of the nurse, but seen in retrospect, it does not provide guidance on career development (Marinova, 2001).

The changes started in 1990 when training was extended to three years and the educational level, which at that time was vocational high school, went up to college level. In 1998 the educational and qualification degree changed to “specialist”. In November 2005, by a Regulation of the Ministry of Health some new changes came into force in the educational level of these medical specialists. They reflected the latest Directives of the Council of the European Union. The time of education was extended to four years and with it came the degree of “Bachelor”. That gave medical specialists access to master’s and doctor’s programs. The range of specializations also expanded and, by Regulation No. 34 dated 29.12.2006 on specialization within the healthcare system that came into force on 01.01.2007, more than 10 specializations were made available to medical nurses and midwives (fig.2).

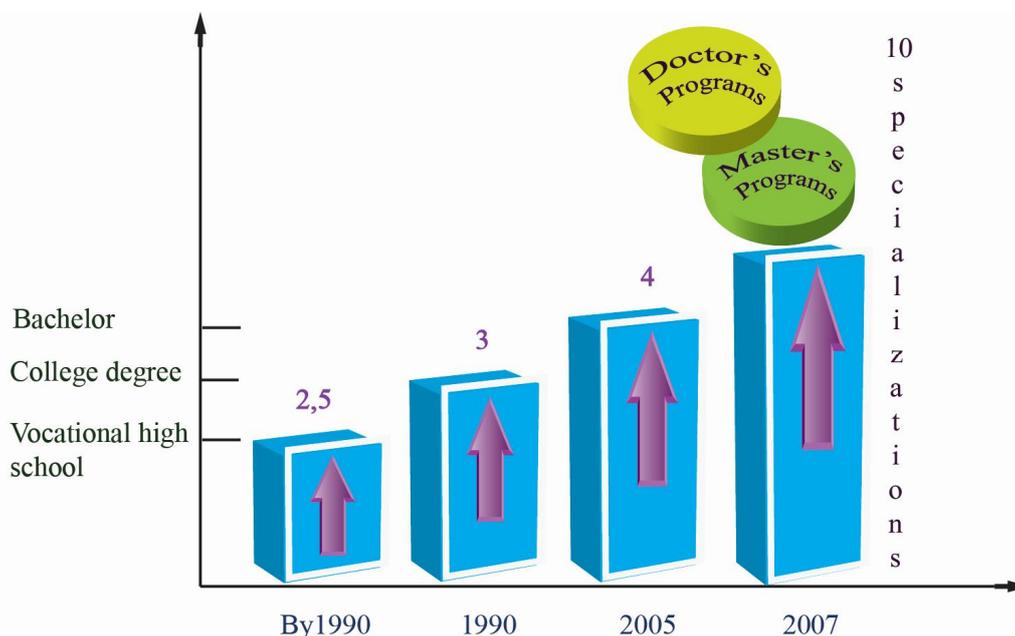


Fig.2 Professional development of nurses and midwives in Bulgaria

Economy of knowledge demands that the best organizations of the world should have a system program and process to guarantee that their employees are continuously updating their skills to comply with the changes in their work requirements.

Training and development are the last strategic function related to human capital which analyzes the management methods based on results. It is not easy to evaluate the return on training programs. Unlike other management-related functions where you can isolate and measure separate elements of the process, development activities are often influenced by other factors and very difficult to measure. We should also mention the role of the state which is important for this function. Some of our politicians define knowledge as a leading factor in the economic development of the country. “The triangle of knowledge is a science-business-state triangle. To have a network of efficient inter-relations and functions between these three important institutions, the state should certainly play its part because it is to guarantee the sustainability of this knowledge triangle of science, business and state in a continuous process of creation.”

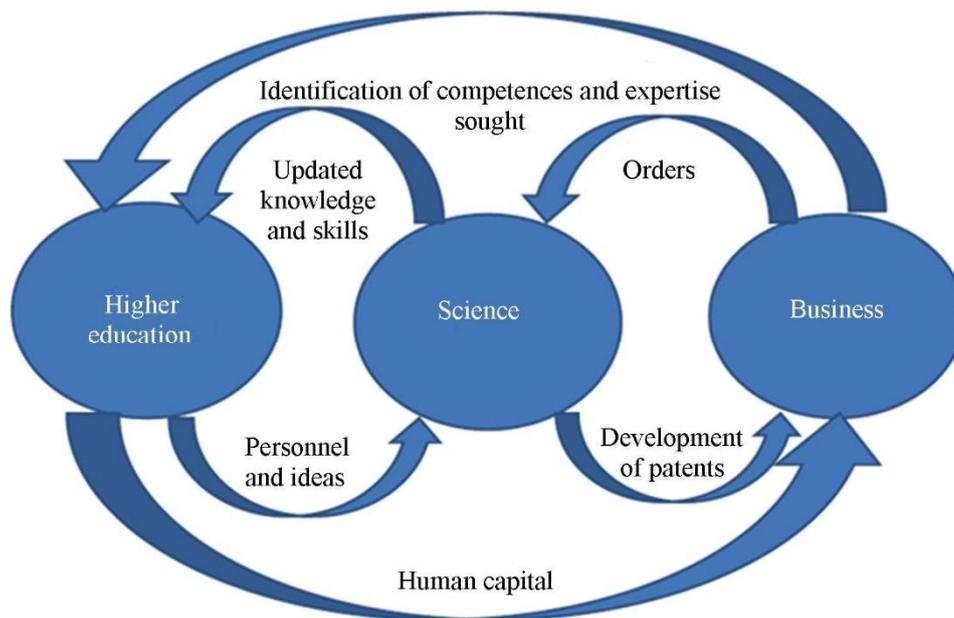


Fig.3 Bulgaria 2020 - education, business and state will work jointly in a continuous process

INNOVATION SYSTEM

The Lisbon strategy (2000-2010) had the ambition to make the European Union the most dynamic and competitive economy in the world and to provide a high-quality life for the European citizens by focusing on scientific research and development, education and all forms of innovation. By joining the EU Bulgaria found itself in a new situation and facing new serious challenges. The country had to create and environment for the upgrade of universities and research organizations, to attract business as main partner in the innovative system and to perform with limited resources for financial and human potential and physical infrastructure.

One of the most significant problems of science, research and innovation in Bulgaria is the long-time understanding of science as a social and not economic phenomenon. If science, research and innovation are considered an economic factor that assists the development of any modern economy, the issues

related to the poor performance of this sector on the international level, Bulgaria's lagging behind the competition and the low cost efficiency of the sector could be solved more easily.

The new EU strategy "Europe 2020" takes care of these problems. The new 10-year growth and development plan that started in March 2010 in Brussels and is in itself an approved economic strategy until 2020 aims at making Europe an "Innovation Union".

"Intelligent", "sustainable" and "inclusive" – these are the features of the three key drive engines of growth envisaged by "Europe 2020" and intended to encourage knowledge, innovation, education and digital society.

Based in everything mentioned above, it is clear that we should pay a special attention to the economy of knowledge because it is capable opening the road to health specialists for growth and progress. Finally, we can make the following conclusions:

- Economy of knowledge is a modern concept that has influence on training.
- The modern educational model is directly related and in some cases fully dependent on technological development.
- The labor market will demand highly qualified personnel.
- Establishment of information society.

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PSYCHOLOGY OF THE PROCESS OF CUSTOMER SATISFACTION

Renata Nováková

University of Ss Cyril and Methodius in Trnava, Faculty of Mass Media Communication,

Nám. J. Herdu 2, 917 01 Trnava, Slovakia, e-mail: re.novakova@gmail.com

Abstract

Although traditional quality management has focused on objective quality, it is customers perceptions of quality that really count. Therefore, for firms to understand how customer perceive their quality, they must measure customers satisfaction with their products or services. To do this effectively requires and understanding of the psychology of customer satisfaction. The most powerful predictor of customer satisfaction is the gap between perceived and expected quality (called disconfirmation). The paper deals with the problem of the process of satisfying customers, describes with the problem of the process of satisfying customers, describes with the emotional response of customers to perceived quality and highlights the challenges as the supplier to respond to these emotional reactions.

Key words: *Psychology, process of customer satisfaction, traditional quality management*

1. INTRODUCTION

Traditional approaches to the quality management that have been used by many companies up to now are mostly focused on internal processes. The attention is mostly paid to tolerances, the ratio of faulty products (in production companies, but this shall apply also for the companies providing services). These approaches are measurable by different, often exact methods by which the quality of outputs acquires an objective character. On the other hand, the minimum attention is paid in the quality management to the fact how the quality is perceived by a customer. If the customer perceives this – the so-called objective quality as poor, objective measurements of the quality are irrelevant. As a rule, the approaches of customers are not influenced by their knowledge, but psychological factors. Therefore if we want to measure the customer satisfaction, we must understand the psychology of the process of customer satisfaction.

Differences between the so-called objective quality and the customer's perceived quality may have disastrous consequences for the supplier's company. The question arises whether the quality perceived by the customer is a true quality indicator. Furthermore, the factor of time also plays its role in the process of the customer's perception of the quality. If e.g. the customer has good experience with a restaurant which he/she usually visits and ordered meal is not good, the perceived quality in this case is bad, but the generally perceived quality of this restaurant is good, although not so good as it was before. Therefore the issue of customer satisfaction is a complicated process influenced by psychological aspects.

2. THE PROCESS OF CUSTOMER SATISFACTION

Experts' opinions of the process of customer satisfaction are considerably different. One group of experts say that the process of quality perception and the process of customer satisfaction are interchangeable

processes; if the quality of outputs is good, also the customers are satisfied. The second group of experts say that these processes are completely different since the process of the quality perception is a rational approach, while the satisfaction is an emotional reaction or feeling.

The perceived quality influences the process of customer satisfaction. When a customer buys a top product and finds a negligible defect on it, though the perceived quality is high, the customer satisfaction is low, since the customer expected that the top product would be free of any defects, so he/she had high expectations. On the other hand if the customer buys a cheap product and this product is free from any defects, though his/her expectation is low, the satisfaction is high.

The word “satisfaction” comes from Latin and is composed of two words. “Satis” means “enough” and “facere” means to do or perform something. In other words the satisfaction could be expressed as fulfilment. In managerial slang the fulfilment means to eliminate or solve problems. In the process of satisfaction this means more than elimination of problems, in this process the best word to express its content is the term “pleasure”.

In the process of customer satisfaction the pleasure may be understood as a positive surprise. In managerial practice we often meet such expressions as “to please a customer” although the attitude of managers to such pleasure has a completely different content than the customer’s ideas. It is difficult to define pleasure exactly, because the basis for customer satisfaction is not defined. Generally we may say that the relation between pleasure and satisfaction of the customer is not linear. Furthermore, both the customer satisfaction, as well as his/her pleasure is considerably influenced by the customer expectations; the customer expectations are not measurable from the mathematical point of view according to which mathematicians would understand a certain average. If someone says that the product or service exceeded the expectations, it means that the outputs were better than the customer would suggest. The hierarchy of expectations may be expressed by the following scale:

- ideal;
- expectation “could be reached”;
- high expectations (“should be reached”);
- minimum acceptable;
- low expectations;
- The worst possible.

Ideal expectations shall mean such level of meeting the requirements that may occur only under the best possible conditions. The expectation “could be reached” shall mean such level that would be welcomed by the customer if occurred, but the customer does not believe that this could happen. Generally we may say that if the customer has the level of expectation formulated, the process of satisfaction is considerably influenced by this level.

In the practice of the process of satisfaction we often meet the situation when there is a discrepancy between the perceived quality and the expected quality. Such situation is called “the expectation discrepancy”. This discrepancy of expectation is a very important factor of the process of satisfaction. Even the customer satisfaction is often defined as the discrepancy between the reached quality and expectations of the customer. Such discrepancies make the basis for a SERVQUAL model – the model that attempts to express the relationship between the reached quality and the customer satisfaction. Generally the expectation discrepancy may have 2 forms. Negative discrepancy occurs if the perceived

quality is lower than expectations and positive discrepancy occurs if the perceived quality is higher than expectations.

The process of customer satisfaction is largely influenced also by economic factors, especially the price of products or services. Economic considerations suggest that the price is identical to the value of products or services; it is considered as a monetary expression of the value. Such approach is not accurate and may be accepted only in the case if the quality of the subject of purchase is not changed. In general we may say that the higher the quality of the purchased product or service, the higher the value. But also an inverse relation shall apply for this case – the higher the price, the lower the value. It means that the value is directly influenced by the quality and indirectly by the price. The product or service may have a relatively low quality, but in the case it is very cheap, its value is acceptable for the customer. An inverse relation shall apply for this case as well, that the product or service is very expensive, but if its quality is very high, the value again is acceptable for the customer. It is valid that whether the value of the product or service is acceptable for the customer depends on individual preferences of the customer.

The above-mentioned relations between the quality, price and value of the product or service will be manifested also in the content of economic usefulness of the product or service or in the relation between the quality, value and selection by the customer of the product or service which is being purchased. Usefulness can be considered as a certain form of quantification of “appropriateness“ of the product or service. The following shall apply: if the quality increases, so does the usefulness and vice versa if the price increases, the usefulness decreases.

Every customer has different ideas about the function of usefulness of the product or service, therefore different customers accept different decisions when buying the same type of goods. Usefulness or unusefulness of the purchased goods varies what is influenced by the type of the customer; it is different in case of the rich customers and the low income customers. The value for a customer could be then expressed by the following relation:

$$\text{Value} = \text{Quality usefulness} - \text{Unusefulness (inappropriateness) of the price}$$

This relation significantly affects the market segments as far as the quality of products and services concern. There are groups of customers who are willing to pay higher prices if the quality is high and they do not care about the unusefulness of the price in such case. On the other hand there are groups of customers who refuse to pay higher price for the quality due to the inappropriateness of this price for them.

Another factor to consider when making decision by a customer on the selection of the product or service is uncertainty of the customer in case of the lack of information about the purchased thing. If the customer has enough experience and information in a given segment of outputs, he/she has little doubts about the quality and can express his/her expectations. On the other hand, if the customer is inexperienced, his/her expectations are often vague. These facts may then affect the expected outputs. The graph of expected outputs is different in case of experienced customers and the variance of expectations is significantly smaller than in case of inexperienced customers. This is manifested on the fact that concerns of customers that the purchased outputs will be worse than the expected ones, have a stronger effect than on the other hand the ideas that outputs will be better than the expected ones.

The above-mentioned part of this lecture showed that the process of customer satisfaction is influenced by many factors and that decision-making by the customers in the process of purchasing is very complicated and to a certain extent it depends both on the perceived quality and the expectations of customers. Expectations have a direct influence on the perceived quality; the higher the expectations, the higher the perceived quality. The perceived quality is compared with expectations and the result of this comparison is mostly the discrepancy between the quality and expectations, whether the positive or negative one. If we evaluate this relation from the time aspect, we may say that the perceived quality updates expectations or produces expectations on a new higher level. The process of satisfaction primarily depends on the discrepancy of the perceived quality and expectations and secondarily on the level of expectations. It means that expectations have a direct influence on satisfaction. The higher the expectations are, the higher the level of satisfaction.

3. CONCLUSION

The most effective indicator of customer satisfaction is the discrepancy between the perceived and expected quality. This discrepancy may be negative (the perceived quality is worse than expectations) or positive (the perceived quality is better than the expected ones). Negative discrepancy results in the fact that customers are not satisfied by the outputs of purchasing while on the other hand if there is not such discrepancy, we may say of the satisfaction of customers. Positive discrepancy is often accompanied by the process of making pleasure to customers. At the same time we must emphasize that the customer must be satisfied primarily and only then we may speak about his/her pleasure. Finally we can make a conclusion that the perceived quality is an important factor of decision-making by the customer about the purchase of the product, but also about the repeated purchase made at the same supplier's. It is a decisive factor, but not the only one. When purchasing, the customer compares the usefulness of the purchased product or service with the competition. The conclusion may be that the customer during the purchase makes decisions also between the relation of the price and the quality.

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**ANALYZING THE CONNECTION BETWEEN THE EXPORT AND THE TRADE
BALANCE OF GERMANY AND FRANCE AND THE EXPOSURES OF GERMAN AND
FRENCH BANKS TO PIIGS COUNTRIES IN THE PERIOD 2005-2012**

Vasil S. Petkov

University of National and World Economy

Address: 1700 Sofia, Students Town

Abstract

The report analyzes the dynamics of the exports of Germany and France to PIIGS countries. It provides information on the distribution of the debt exposures of French and German banks by countries and sectors and looks at their potential exposures. Last but not least the report examines the connection between the export and the balance of trade and the foreign bank claims of France and Germany to PIIGS in the period 2005-2012.

Key words: *Banks, Exposures, Export, Trade balance*

The spread of the global financial and economic crisis in Europe ended the period of robust economic growth that started after 2002. Among the best performers during those five years were the smaller countries from the periphery of the Eurozone, like Ireland and Greece, while among the leading European economies, Spain's development stood out. In addition to the rapid economic growth, however, a number of already existing imbalances in EU Member States worsened during these years and new ones were accumulated, especially in PIIGS countries.¹² More precisely, they were reflected in foreign trade deficits, disproportionate development among different economic sectors (the financial sector and construction, in particular), chronic budget deficits, and the resulting build-up of public and external debt, among others.

The economic boom was largely related to robust investment activity, yet the rapid increase in final consumption, especially of households, also played a significant role. A substantial part of investment and consumer goods was imported which caused a widening in the foreign trade deficit in some of the Member States. PIIGS countries are among the most prominent examples in this regard. In 2007 the combined deficit of the five economies reached a peak of approximately EUR 105 billion. Only Ireland reported a surplus. Spain's deficit is worth mentioning as it exceeded EUR 70 billion or over three times higher than the one registered in 2003. The situation in Greece was similar, though not so aggravated. Over the same period the country's negative balance of trade expanded by more than 40 % and reached a little over EUR 30 billion. In 2007 Italy registered a deficit for the first time since the beginning of the new millennium amounting to EUR 8.6 billion. Most of the trade imbalances in these five countries

¹² PIIGS is an acronym composed of the first letters of the troubled Eurozone countries – Portugal, Ireland, Italy, Greece, and Spain.

were caused by intra-Community trade with Germany certainly being the main driver. The German economy's surplus in the trade with goods with PIIGS was constantly expanding in the period between 2003 and 2007, reaching EUR 54.2 billion.

Part of the PIIGS countries did not manage to take full advantage of the rapid growth to improve their fiscal positions and to reduce debt levels. In fact, they did just the opposite. Thus, they faced the real threat of default amid a global financial and economic crisis followed by a debt crisis. These processes, however, developed differently in the five economies. Chronic deficits and high and mounting indebtedness are typical mainly for Greece, Portugal, and Italy. In general, the Italian economy has always sustained high levels of government debt. Spain's woes are of a different nature and are related to the country's significant external debt, mostly of the non-bank private sector but of banks, as well, and its over-dependence on construction. The weak link in the Irish economy is the banking sector. The country found that saving its banks was an impossible task. Despite the different challenges PIIGS faced, the result was practically the same for all of them. So far, only Italy has not resorted to seeking some form of direct external assistance to save its economy. When studying the credit boom in PIIGS countries, it is again the active role of the core Eurozone economies that should be considered. Encouraged by high returns and the need to raise funds to finance local export, German and French banks directed substantial financial resources to these five Member States. The short-term effect was robust growth in both the periphery and the core of the currency union. However, this expansion later turned out to have too high economic and social costs which are not shared equally.

The abovementioned imbalances within the EU and especially in the Eurozone are certainly among the main factors underlying Member States' different ability to adapt to the turbulent economic environment after 2008. They are also at the root of the "two-speed Europe" phenomenon – with the core led by Germany and France, on one hand, and the periphery countries of the currency union on the other. This division has significant economic and social implications and a considerable influence on the (dis)integration processes in both unions. From this perspective, it is essential to determine, as far as possible, the specific role that leading EU economies have played in the build-up of the observed economic imbalances. This report aims to study the role of Germany and France in the accumulation of the trade deficits in PIIGS countries. It focuses also on the question whether the two Central European nations have followed a targeted policy aimed at lending to the five countries in order to finance PIIGS' import of German and French goods.

1. ANALYZING THE CONNECTION BETWEEN THE EXPORT AND THE TRADE BALANCE OF GERMANY AND THE EXPOSURES OF GERMAN BANKS TO PIIGS COUNTRIES, 2005-2012

1.1. German Exports to and Balance of Trade with PIIGS, 2005-2012

Germany's total export has followed an upward trend in 2005-2012 with a single annual drop of EUR 180 billion registered in 2009. EU Member States are the major trading partner of the country. The value of the export to these markets grew by EUR 124 billion on 2005 to reach EUR 625.7 billion in 2012. Nevertheless, its share in the total exports of Germany has been constantly declining. In 2012 the export to EU countries accounted for 57.1 % compared with 64.3 % in 2005. At the same time, the role of emerging economies as a driver of German exports has strengthened. Sales of German goods in developing markets saw a weaker decline during the crisis years than in advanced economies. Moreover, exports to emerging countries recovered at a significantly higher pace.

The share of PIIGS countries in German exports dropped by 4.9 percentage points in 2012 compared with 2005 to 9.4 %. In absolute terms, it decreased by EUR 8.5 billion. The export of Germany to these markets stood at EUR 102.7 billion in 2012. Its value was lower only in 2009, a dramatic year for world trade, when it amounted to EUR 98 billion. Among the countries from this group, only Italy and Spain stood out as more important trading partners while the share of the rest in total German export was insignificant.

Germany registered a positive **trade balance with the PIIGS countries** in 2005-2012 with Ireland being the sole exception in this regard (Table 1). Germany's surplus in the foreign trade with these markets reached a high in 2007, amounting to EUR 54.2 billion. Given the size of the economies of Italy and Spain and the established trade relations with them, it was not surprising that the country registered the biggest trade flow with them as well as the largest positive balance of trade. Since 2008 a contraction in the trade deficit with four of the PIIGS has been observed – one of the few positive consequences of the global financial and economic crisis. In Ireland, however, the deficit continued to grow until 2010. The positive balance of trade with Spain registered the largest drop in both absolute and relative terms, backed by the higher decline in German exports and the stable import of Spanish goods. The latter was true for the other four countries as well due to the fact that German growth is more sustainable and the economy has been less vulnerable to the economic shocks observed since the start of 2008. Domestic demand in Germany, including for imported goods, remained stable. Although it contracted in 2009, local consumption saw a rapid recovery and reached pre-crisis levels as early as 2010.

PIIGS economies suffered more severe shocks and recovered at a much slower pace compared with Germany. As a result the demand for German goods shrank significantly. This was especially true for investment goods. In times of crisis, they are the first to suffer a decline in demand. In addition, foreign capital inflows to these countries registered a substantial drop and banks limited lending to companies from the real sector, including to the successful ones, which hampered new investments.

In order to clearly outline the implications of the crisis we should divide the analyzed period in two separate ones, 2005-2008 and 2009-2012, respectively. We can then examine the export of Germany to PIIGS economies and the country's balance of trade with these markets in each of them. During the first period German export amounted to EUR 491.1 billion while in the second it stood at EUR 424.7 billion which was a decrease by 13.5 %. The trade surplus was EUR 189.4 billion and EUR 111.3 billion, respectively, or a 41.3 % decline.

Table 1 Germany's Export, Import, and Trade Balance with PIIGS countries (EUR Billion)

Countries	Indicators	2005	2006	2007	2008	2009	2010	2011	2012
Spain	Export	39.45	41.48	47.52	42.58	31.2	34.22	34.81	31.17
	Import	17.42	19.2	20.32	20.54	18.85	20.55	22.42	22.2
	Trade Balance	22.03	22.27	27.2	22.04	12.35	13.67	12.39	8.97
Greece	Export	6.27	6.64	7.49	7.72	6.52	5.85	5.07	4.69
	Import	1.75	1.98	2.02	2.03	1.7	1.9	1.9	1.8
	Trade Balance	4.52	4.66	5.47	5.7	4.81	3.95	3.17	2.9

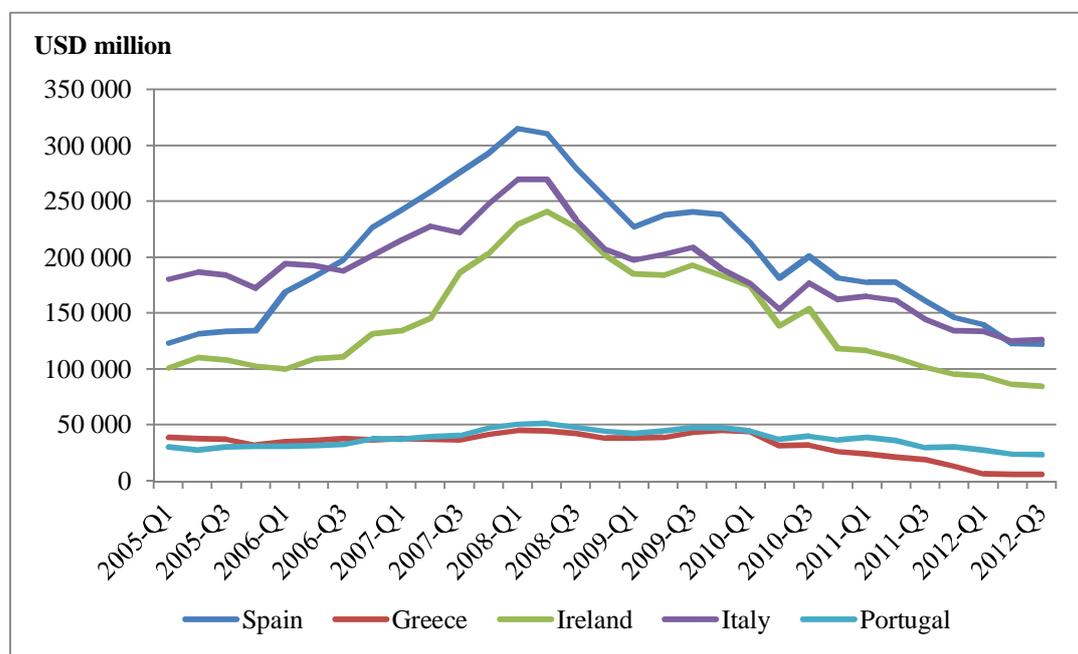
Ireland	Export	4.76	5.77	6.24	5.54	3.65	4.15	4.47	4.64
	Import	7.42	8.33	8.62	7.6	6.39	7.23	6.96	7.29
	Trade Balance	-2.66	-2.56	-2.39	-2.06	-2.74	-3.07	-2.49	-2.65
Italy	Export	53.4	58.86	64.39	61.91	50.48	58.59	62.04	55.99
	Import	35.57	40.98	44.79	47.09	37.54	42.25	48.07	49.27
	Trade Balance	17.83	17.87	19.6	14.82	12.95	16.34	13.97	6.72
Portugal	Export	7.31	7.32	8.33	8.13	6.19	7.77	7.03	6.21
	Import	3.92	4	4.05	4.03	3.46	3.99	4.7	5
	Trade Balance	3.39	3.32	4.28	4.1	2.73	3.78	2.32	1.21
Total	Export	111.19	120.07	133.97	125.88	98.04	110.58	113.42	102.7
	Import	66.08	74.49	79.8	81.29	67.94	75.92	84.05	85.56
	Trade Balance	45.11	45.56	54.16	44.6	30.1	34.67	29.36	17.15

Source: Eurostat.

1.2. Exposures of German Banks to PIIGS countries in the period 2005-2012

At the end of the third quarter of 2012 the exposures of German banks to PIIGS countries amounted to nearly EUR 281 billion. The amount rises to EUR 356.7 billion if we take into account the potential exposures which include, among others, derivative instruments and guarantees. They were more than two times lower compared with the record high of EUR 581.6 billion registered at the end of second quarter of 2008. The dynamics of lending were similar in the five economies: a robust growth until the first half of 2008 and a gradual decline afterwards caused by the crisis. Exposures to all economic activities decreased in each of these countries. The largest reduction in that period was reported by Greece, amounting to almost 85 %, followed by Ireland with 57 %. The smallest contraction was registered in Italy (42.8 %). At the end of the third quarter of 2012 the bulk of the exposures of German banks to PIIGS countries was concentrated in Italy (34.8 %), Spain (33.9 %), and Ireland (23.4 %). The rest was directed to Portugal (6.4 %) and Greece (1.5 %).

Chart 1 Dynamics of German Banks' Exposures to PIIGS Countries



Source: The Bank for International Settlements.

The economic turmoil has triggered a significant change in the sectoral breakdown of lending to the five countries. By the end of September 2012 German banks have reduced their exposure mainly to PIIGS' banking sector compared with the end of 2010.¹³ The contraction in these claims was the highest, almost two-fold (EUR 64.2 billion), in comparison with 25.8 % (EUR 20.4 billion) in the public sector and 14.7 % (EUR 27.2 billion) in the non-bank private sector. At the end of the third quarter of 2012 the non-bank private sector accounted for the largest share in German banks' exposures in all five countries. While this was a typical situation in Ireland, Spain, and Italy, in Portugal the banking sector dominated until early 2011. Thereafter, a strong outflow of capital was registered and as of 31 September 2012 the amount of German banks' claims was almost three times smaller. In Greece the bulk of the lending was directed to the public sector. At the end of 2011 its share was more than 50 % or EUR 6.7 billion on EUR 11.3 billion at the end of the third quarter of 2011. A sharp downward trend has been observed since the beginning of 2012 and at the end of September the exposures amounted to just EUR 234 million or 5.4 % of the total. In fact, Greece was responsible for more than half of the reduction in the exposures of German banks to the public sector in PIIGS countries.

The *Other potential exposures* entry which includes, among others, derivatives and guarantees, shows the amount of possible foreign claims of German banks that might emerge if certain events occur. The potential exposures amounted to EUR 75.7 billion at the end of September 2012. Thus, the total debt of the countries might reach up to EUR 356.7 billion.

¹³ BIS started publishing data on banks' exposures by sector in the fourth quarter of 2010.

Table 2 German Banks' Exposures to PIIGS Countries by the End of September 2012 (EUR Million)

	Greece	Portugal	Ireland	Italy	Spain	Total
Foreign Claims	4,311	18,074	65,617	97,827	95,158	280,987
Public Sector	234	4,915	2,153	31,641	19,572	58,514
Banks	52	3,943	10,451	21,752	28,404	64,602
Non-Bank Private Sector	4,025	9,217	53,013	44,434	47,183	157,872
Other Potential Exposures	796	7,005	22,662	42,207	3,077	75,746
Foreign Claims and Potential Exposures	5,107	25,079	88,279	140,033	98,235	356,734

Source: The Bank for International Settlements.

1.3. Conclusions from the Dynamics of the Trade Balance and the Exposures of German Banks to PIIGS Countries

After studying the link between the trade balance and the loans of German banks to PIIGS countries **we cannot claim that Germany has led a targeted policy aimed at lending to these countries in order to maintain a positive balance of trade with them. The reasons to believe that there is no obvious connection are as follows:**

- During most of the period between 2005 and 2007, growth in the exposures of German banks to PIIGS countries exceeded by a considerable amount the changes in Germany's trade balance with these nations. This gives reason to believe that the majority of the credit institutions were attracted by the high return on investment in these countries.
- The dynamics of the two indicators after 2008 also suggest that no clear connection exists between them. As a result of the global financial and economic crisis and the sovereign debt crisis after that, German banks slashed their exposures to the five economies from the Eurozone periphery. At the same time, the country kept reporting trade surpluses with them, albeit smaller.
- Greece and Portugal are not among Germany's major trading partners. They made up less than 5 % of the total balance of trade of the Federal Republic in the period 2005-2010. Given their low growth potential, their share in German export is unlikely to expand.

2. ANALYZING THE CONNECTION BETWEEN THE EXPORT AND THE TRADE BALANCE OF FRANCE AND THE EXPOSURES OF FRENCH BANKS TO PIIGS COUNTRIES, 2005-2012

2.1. French Exports to and Balance of Trade with PIIGS Countries, 2005-2012

Like Germany, France reported a nearly constant increase in total export in the period 2005-2012. The only exception was 2009 when a drop by EUR 71.4 billion or 17 % was registered. The leading trading partners of the country were EU Member States which absorbed over 60 % of French export until 2011. Yet, as in Germany, the dependence on the Single Market has declined since then and the share of intra-

Community supplies fell to 58.9 % in 2012 or 4.5 percentage points below the 2005 level. The significance of third-country markets is also backed by the fact that exports to them rebounded relatively quickly after the economic shock. As early as 2010 exports surpassed the 2008 record high and in 2012 they were EUR 30.5 billion or 20.1 % higher. At the same time, the export to other EU countries did not manage to reach pre-crisis levels. In 2012 it dropped by EUR 6.5 billion or 2.4 % compared to 2008.

The **PIIGS** are considerably more important partners for France than for Germany. Despite registering a decrease by 5.2 percentage points in 2012 compared to 2005, these countries' share in French export was still 15.9 %. Italy and Spain were among France's main trading partners (their share in the total export to PIIGS was 46.1 % and 42.2 %, respectively) while the other PIIGS countries had an insignificant share in the country's total export.

Substantial changes occurred in **France's trade balance with PIIGS countries** over the analyzed period and the turning point appeared to be the 2008 crisis. In the period 2005-2007 a surplus was persistently registered which in 2008-2012 was transformed into a deficit due primarily to shrinking export. For the entire eight-year period France had a positive trade balance with Greece (EUR 19.8 billion), Spain (EUR 14.6 billion), and Portugal (EUR 2.8 billion) while it reported a chronic deficit with Italy (EUR 27.2 billion) and Ireland (EUR 26 billion.). Trade with Spain was most heavily influenced by the global financial and economic crisis. In 2005 France registered a positive trade balance with the country, amounting to EUR 7.6 billion, while in 2012 it turned negative and stood at EUR 4.15 billion. This development was driven by two main factors: the tangible reduction in French export in 2012 compared to 2007, amounting to EUR 8.1 billion, and the growth, albeit weak, in imports by EUR 1.3 billion.

The relatively stable French economy supported a more steady domestic demand. This was also true for the demand for imported goods as well originating from its main trading partners – Italy and Spain. However, these economies faced more serious problems and thus, French imports to them fell which reflected in a worsening of the French trade balance.

Table 3 France's Export, Import, and Trade Balance with PIIGS Countries (EUR million)

Countries	Indicators	2005	2006	2007	2008	2009	2010	2011	2012
Spain	Export	35.85	37.97	37.91	34.13	26.99	29.36	31.02	29.78
	Import	28.28	30.14	32.67	32.87	26.85	30.38	33.34	33.94
	Trade Balance	7.57	7.83	5.24	1.26	0.14	-1.02	-2.31	-4.15
Greece	Export	3.12	3.29	3.77	3.71	3.11	2.72	2.78	2.31
	Import	0.53	0.76	0.62	0.63	0.5	0.6	0.73	0.62
	Trade Balance	2.59	2.54	3.15	3.08	2.61	2.12	2.04	1.69
Ireland	Export	2.82	2.71	2.94	2.73	2.21	2.11	2.14	2.26
	Import	5.94	5.77	5.92	5.68	5.52	5.57	6.07	5.42
	Trade Balance	-3.12	-3.06	-2.98	-2.95	-3.31	-3.47	-3.92	-3.16
Italy	Export	32.38	35.1	36.33	35.91	28.39	31.65	34.64	32.5
	Import	33.55	36.02	38.83	39.51	32.11	36.04	39.06	39.02

	Trade Balance	-1.17	-0.92	-2.49	-3.6	-3.72	-4.39	-4.42	-6.52
Portugal	Export	4.67	4.89	5.02	5.18	4.37	4.21	4.05	3.68
	Import	3.7	3.96	4.18	4.07	3.57	4.12	4.86	4.85
	Trade Balance	0.97	0.93	0.84	1.11	0.8	0.09	-0.8	-1.16
Total	Export	78.84	83.96	85.97	81.66	65.07	70.05	74.63	70.53
	Import	72	76.65	82.22	82.76	68.55	76.71	84.06	83.85
	Trade Balance	6.84	7.32	3.76	-1.1	-3.48	-6.67	-9.41	-13.3

Source: Eurostat.

2.2. French Banks' Exposures to PIIGS Countries, 2005-2012

French banks' exposures to PIIGS countries at the end of the third quarter of 2012 were EUR 100 billion higher than German ones and stood at EUR 383.8 billion. If potential exposures are included, they reach EUR 471.8 billion. The foreign claims declined by 36.1 % or EUR 217.2 billion compared to the second quarter of 2008 when they registered a record high. The largest drop was reported in claims vis-à-vis Ireland (67.5 %) and Greece (54.7 %). The other three countries saw a drop by around a third.

It should be noted that the exposures of French banks were, to a certain extent, less equally distributed among sectors compared to those of German banks as 72.6 % of the loans were directed to the non-bank private sector while the share of the public sector and banks was 14.3 % and 12.3 %, respectively. The distribution of claims among the five PIIGS countries was also uneven. **Italy** had the most significant share in exposures – 63.7 %. Considering the sectoral breakdown of the exposures to Italy, it should be noted that private borrowers accounted for almost three quarters of total exposures which were EUR 50 billion higher than the whole amount of French loans to the other four countries in PIIGS. Against the background of the Italian problems with public finances, the share of the public sector in total exposures is certainly expected to decrease from 25 % at the end of 2010 to 16 % at the end of the third quarter of 2012. Such a concentration of French banks' claims makes French banks heavily dependent on the state of the Italian economy and the solvency of the non-bank private sector.

The breakdown by sectors of French banks' debt exposure to **Spain** shows that the non-bank private sector accounted for over two thirds of the claims, followed by banks with 21.2 %. As in Italy, lending to the public sector contracted.

At the end of 2010 the bulk of the exposures of French banks to **Greece** was made up of loans to the public sector (56.5 %) and to the non-bank private sector (34.9 %). The share of the public sector became insignificant with the intensifying of the debt problems of the county and the write-off of sovereign debt. As a result, as of 30 September 2012 96.3 % of the claims were directed to non-financial private enterprises.

Ireland and **Portugal** had the smallest shares in the debt exposures of French banks to PIIGS. They amounted to 5.6 % and 3.4 %, respectively. It is worth mentioning that loans to these two countries were substantially smaller than those from German banks and this was most visible in Ireland where the exposures of French credit institutions were three times lower. The non-bank private sector had a prevailing share in the exposures in both countries. The main difference was the larger share of the public sector in Portugal (18.2 %) compared to Ireland (6.3 %).

Table 4 French Banks' Exposures to PIIGS Countries by the End of September 2012 (EUR million)

	Greece	Portugal	Ireland	Italy	Spain	Total
Foreign Claims	24,686	12,914	21,620	244,332	80,289	383,840
Public Sector	844	2,345	1,358	39,265	11,128	54,940
Banks	61	297	5,993	23,988	16,982	47,321
Non-Bank Private Sector	23,781	7,575	14,267	181,049	52,169	278,841
Other Potential Exposures	2,481	3,370	1,275	58,106	22,764	87,997
Foreign Claims And Potential Exposures	27,167	16,283	22,895	302,438	103,053	471,837

Source: The Bank for International Settlements.

*The values have been converted from USD to EUR using the official exchange rate for 28 September 2012.

2.3. Conclusions from the dynamics of the trade balance and the exposures of French banks to PIIGS countries

After studying the balance of trade and the exposures of French banks to PIIGS countries **we have no reason to claim that France has followed a targeted policy aimed at lending to these countries in order to keep a positive trade balance with them. The reasons for this conclusion are the following:**

- The change in the debt exposure of French banks over the whole period is significantly different than the one observed in the balance of trade.
- Given the small size of the economies of Greece and Portugal, their minor share in French exports, and the trade deficits registered with Italy and Ireland, we have no grounds to conclude that French banks have led a targeted policy aimed at financing PIIGS countries to increase national export.

3. CONCLUSION

The loans of French and German banks to PIIGS countries are influenced by a large number of factors which makes it difficult and even impossible to identify a clear connection between the balance of trade and the exposures of French and German banks to PIIGS. The possible reasons behind the intensive credit activity of German and French banks in the periphery of the Eurozone include the following, among others: the rapid development in part of the PIIGS before the effect of the global financial and economic crisis spread to their economies; the higher expected return on investment in these countries; the potential speculative character of some of the financing; the higher yields on the securities issued by the governments, banks, and the private sector in PIIGS countries compared with the low-risk German bonds. Last but not least, the lack of detailed statistical data on the exposures of banks from the two countries to the PIIGS is a significant obstacle to making a more reliable analysis. Information regarding their breakdown by sectors is available only since the last quarter of 2010. Thus, it is practically

impossible to make a more detailed research on the connection between the trade balance and the size of banks' exposures in the period of robust economic growth before the crisis of 2008.

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THE CRISIS IN CYPRUS – PRECONDITIONS, MEASURES, AND IMPLICATIONS

Vasil S. Petkov

University of National and World Economy

Address: 1700 Sofia, Students Town

Abstract

The report studies the structural problems and imbalances in the economy of Cyprus that are at the core of the crisis in the country which started to spread quickly following the write-off of Greek government debt. To address the economic turbulences the island nation has been forced to adopt measures which are long overdue and have serious implications, both economic and social.

Key words: *banking crisis, Cyprus bailout plan, macroeconomic imbalances*

The European debt crisis continues spreading to the periphery of the Eurozone and since March 2013 Cyprus has occupied the center of the events. Even though it makes up an insignificant share of the combined GDP of the seventeen members, the country shook the confidence in the currency union and once again questioned its integrity.¹⁴ Furthermore, a large number of overseas investors and depositors in Cyprus found themselves unprepared to deal with the shocks that hit the country. But all this has undoubtedly raised the question whether the course of events could have been predicted. In recent years the state of the economy has resembled a lot that in PIIGS countries and in this regard it might be said that to a large extent it was clear what the future had in store for the island nation.¹⁵ The high economic and social costs could have been avoided with the help of more timely and more decisive measures taken at an earlier stage by both Cyprus and the EU. On the surface, it may seem that they will be paid by larger depositors, most of them foreigners, but in the long run it will be the average Cypriot who will bear the brunt of the burden.

A number of factors give reasons to believe that the Cyprus crisis could have been foreseen. The most significant one is, beyond any doubt, the country's **oversized banking sector**. The banking system's total assets exceeded GDP over six times in 2011 (a year before that this ratio was even higher – over seven times). As early as 2006 and 2007 the assets of banks in Cyprus grew at a substantial rate – by 31.5 % and 16.8 %, respectively and reached a level of 362.4 % of the country's GDP in 2007 (Table 1). These values are close to those registered by leading European economies like Germany, the UK, France, Belgium, and Austria. It was clear even back then where Cyprus was heading for – development focused on the financial services sphere. When the island nation joined the Eurozone in 2008 bank assets expanded even faster, almost doubling compared to their 2007 levels. Adopting the euro as the national currency made deposits in the country much more attractive as it practically eliminated the exchange rate risk. Foreign depositors saw additional incentives in the high interest rates

¹⁴ In 2012 the GDP of Cyprus was EUR 17,886.8 million. The share of the country in the EU and Eurozone GDP was 0.14% and 0.19% respectively.

¹⁵ PIIGS is an acronym of the first letters of the names of troubled Eurozone countries – Portugal, Ireland, Italy, Greece, and Spain.

compared to other Eurozone members and the more accommodative requirements for disclosure of information about the source of the funds.

Table 1 Cyprus Bank Assets, 2005-2011

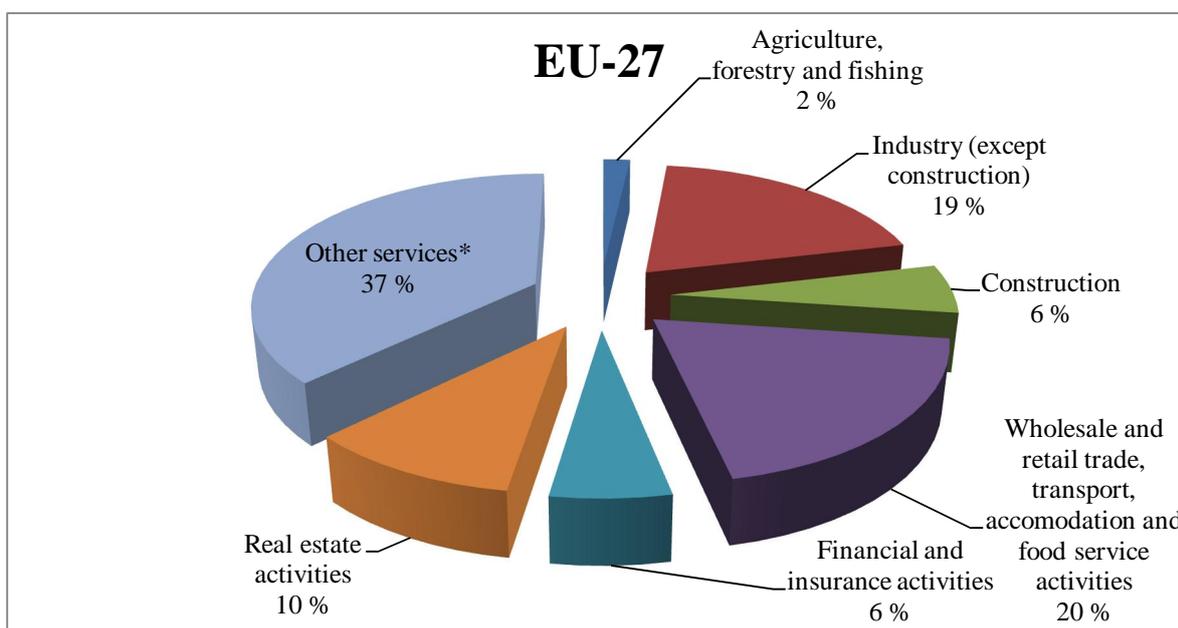
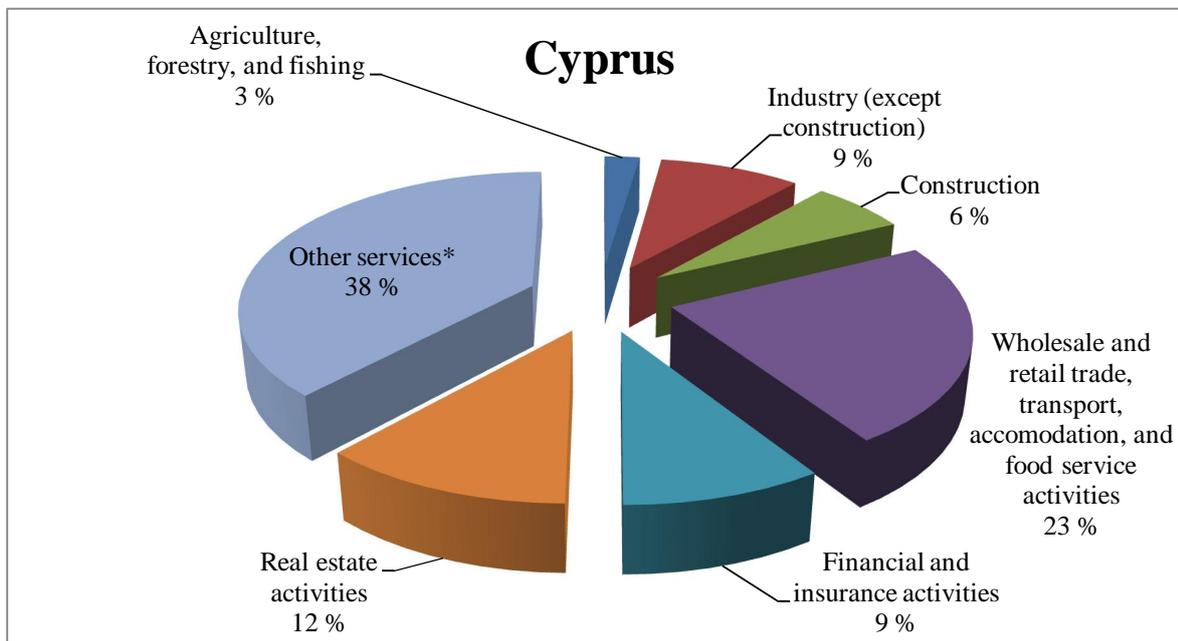
Year	Total Bank Assets (EUR Million)	GDP (EUR Million)	Bank Assets to GDP (%)
2005	37,517	13,598.2	275.9 %
2006	49,344	14,670.5	336.3 %
2007	57,622	15,901.5	362.4 %
2008	102,769	17,157.1	599.0 %
2009	123,505	16,853.5	732.8 %
2010	125,542	17,406.0	721.3 %
2011	111,734	17,979.3	621.5 %

Source: Central Bank of Cyprus.

In 2011 the only EU Member States which had a higher ratio of bank assets to GDP than Cyprus were Luxembourg (1,863 %), Ireland (820 %), and Malta (780 %). It was Ireland's inability to find on its own the financial resources necessary to recapitalize its banks that forced the country to seek external financial aid. In comparison, banks in Bulgaria hold assets roughly equal to the country's gross domestic output. Apart from this, **the excessive dependence of Cyprus on sectors such as tourism, construction, and real estate activities** (much like Greece and Spain) should also be noted. In general, the services sector makes up 82 % of the GVA in the island nation while in the EU this share is much lower – 73 %. At the same time, industry has remained relatively underdeveloped. This model of development proved unsustainable for a small economy like Cyprus. The share of manufacturing in GVA is significantly smaller than the EU average (5.9 % in Cyprus compared to 15.4 % in the Union).

Another structural problem of great importance is **the chronic foreign trade imbalance** that Cyprus has faced since before the crisis. The country has registered no trade surplus for more than seventy years (the last one was recorded in 1939). Since 2000 the deficit has stood at about 30 % of GDP while exports have been able to cover less than a quarter of all imports. The deficit is formed as a result of Cyprus's trade with EU countries (making up over 70 %). The geographical breakdown shows that imports exceed exports by the largest amount in the trade with Greece (accounting for approximately 20 % of the total deficit of Cyprus in recent years) followed by Italy, Germany, and the UK (around 10 % each). Among countries outside the EU, the biggest trade deficit is generally reported with Israel. The negative balance of trade reflects the structure of the Cypriot economy and further stresses the severe need for diversification by developing certain industries which are either export-oriented or can at least partially reduce the country's import dependence.

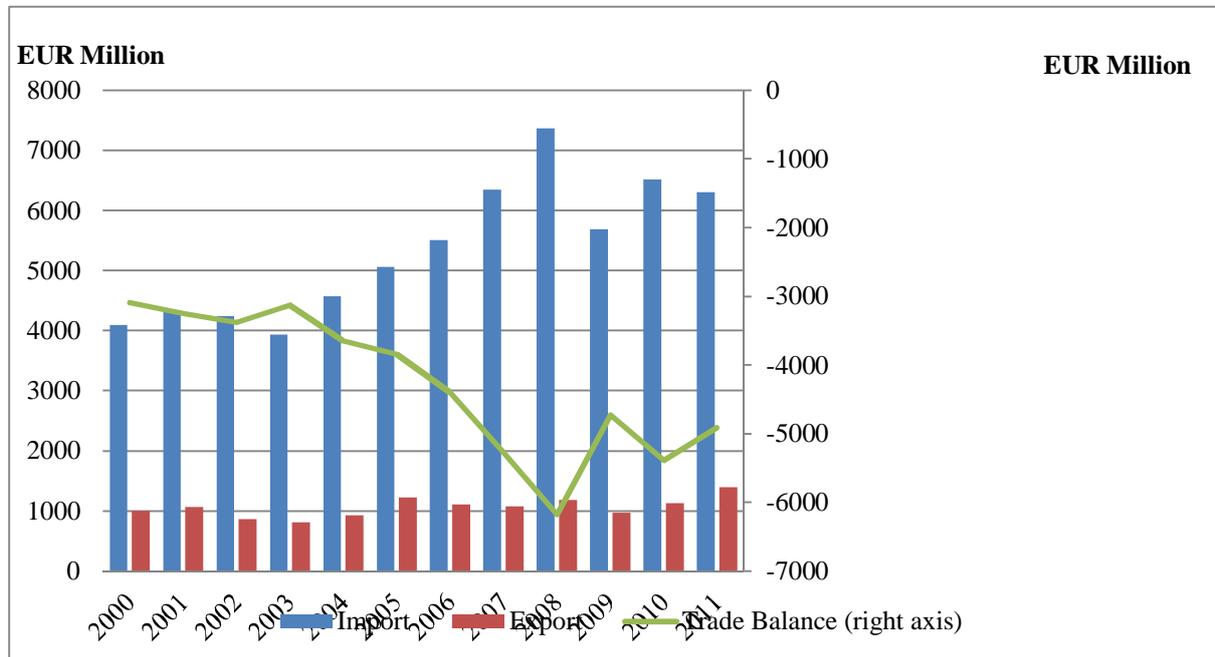
Chart 1 GVA Breakdown by Economic Activity in Cyprus and the EU in 2012



Source: Eurostat.

*Other services include *Information and communication; Professional, scientific and technical activities; administrative and support service activities; Public administration, defense, education, human health and social work activities; and Arts, entertainment and recreation; other service activities; activities of household and extra-territorial organizations and bodies.*

Chart 2 Import, Export, and Trade Balance of Cyprus, 2000-2011



Source: Cyprus Statistical Service Cy Σ TAT.

After 2004 import followed an obvious upward trend (Chart 2) which was caused to a large extent by Cyprus's accession to the EU. As the country became a Member State, a number of barriers to foreign trade were removed. The import kept rising until 2008 when it reached its peak. Cyprus's entry into the Eurozone probably also played a role in the rapid expansion of import. In 2009, however, the indicator suffered a downturn. This was the year when international trade witnessed a considerable contraction triggered by the spread of the global financial and economic crisis and Cyprus was no exception. On the positive side, the recession led to a decline in the trade deficit of the island nation by EUR 1.5 billion. As the crisis subsided, the import started to rebound gradually and reached EUR 6.3 billion at the end of 2011. Over the whole analyzed period export remained at approximately the same level. The reason behind this lack of fluctuations is the poorly developed industrial sector in Cyprus which prevents the country from registering higher export revenues.

In order to overcome the impact of the global financial and economic crisis, the country was forced to raise government expenditure significantly which triggered **an increase in its budget deficit and public debt**. The gross government debt of Cyprus as a percentage of GDP was decreasing until 2008 and even fell to a level of 48.9 %. After that, however, it reversed its trend and started growing rapidly to reach 84 % or EUR 15 billion at the end of the third quarter of 2012 (it amounted to 152 % in Greece, 127 % in Italy, 120.3 % in Portugal, and 117 % in Ireland).¹⁶ Against the background of recent events related to the crisis in Cyprus and the fiscal consolidation measures adopted by the Cypriot government, the

¹⁶In nominal terms the government debts of Greece, Italy, Portugal, and Ireland are EUR 310.2 billion, EUR 1.99 trillion, EUR 201 billion, and EUR 190.9 billion.

country's debt is expected to peak at 126.3 % of GDP in 2015. It should be noted that countries like France (89.9 % of GDP), the UK (87.9 % of GDP), and Germany (81.7 % of GDP) have also reported high levels of this indicator. They all fail to meet the 60 % Maastricht target. Bulgaria is among the best performers concerning this indicator, ranking second with a government debt to GDP of 18.7 %. The only country ahead is Estonia with 9.6 %.

Table 2 General Government Gross Debt of EU Member States, 2005-2011 and the First Three Quarters of 2012 (% of GDP)

Country	2005	2006	2007	2008	2009	2010	2011	2012		
								Q1	Q2	Q3
EU-27	62.8	61.6	59.0	62.2	74.6	80.0	82.5	83.5	85.0	85.1
Eurozone	70.3	68.6	66.4	70.2	80.0	85.4	87.3	88.2	89.9	90.0
Belgium	92.0	88.0	84.0	89.2	95.7	95.5	97.8	101.7	102.5	101.6
Bulgaria	27.5	21.6	17.2	13.7	14.6	16.2	16.3	16.7	16.5	18.7
The Czech Republic	28.4	28.3	27.9	28.7	34.2	37.8	40.8	43.5	43.5	44.9
Denmark	37.8	32.1	27.1	33.4	40.6	42.9	46.6	44.9	46.5	47.5
Germany	68.5	68.0	65.2	66.8	74.5	82.5	80.5	81.1	82.4	81.7
Estonia	4.6	4.4	3.7	4.5	7.2	6.7	6.1	6.7	7.3	9.6
Ireland	27.3	24.6	25.1	44.5	64.9	92.2	106.4	108.4	111.1	117.0
Greece	100.0	106.1	107.4	112.9	129.7	148.3	170.6	136.5	149.2	152.6
Spain	43.2	39.7	36.3	40.2	53.9	61.5	69.3	73.0	76.0	77.4
France	66.4	63.7	64.2	68.2	79.2	82.3	86.0	89.2	91.0	89.9
Italy	105.7	106.3	103.3	106.1	116.4	119.2	120.7	123.7	126.0	127.3
Cyprus	69.4	64.7	58.8	48.9	58.5	61.3	71.1	74.4	82.8	84.0
Latvia	12.5	10.7	9.0	19.8	36.7	44.5	42.2	44.3	43.0	40.4
Lithuania	18.3	17.9	16.8	15.5	29.3	37.9	38.5	42.7	40.4	40.6
Luxembourg	6.1	6.7	6.7	14.4	15.3	19.2	18.3	21.0	21.0	20.9
Hungary	61.7	65.9	67.0	73.0	79.8	81.8	81.4	80.0	78.9	78.6
Malta	69.7	64.0	61.9	62.0	67.6	68.3	70.9	73.7	75.6	73.1
The Netherlands	51.8	47.4	45.3	58.5	60.8	63.1	65.5	66.5	68.2	69.5
Austria	64.2	62.3	60.2	63.8	69.2	72.0	72.4	73.4	75.0	73.7
Poland	47.1	47.7	45.0	47.1	50.9	54.8	56.4	56.2	57.0	55.9
Portugal	67.7	69.4	68.4	71.7	83.2	93.5	108.1	111.9	117.4	120.3
Romania	15.8	12.4	12.8	13.4	23.6	30.5	33.4	36.3	35.6	35.2
Slovenia	26.7	26.4	23.1	22.0	35.0	38.6	46.9	47.0	48.2	48.2

Slovakia	34.2	30.5	29.6	27.9	35.6	41.0	43.3	46.4	50.1	51.2
Finland	41.7	39.6	35.2	33.9	43.5	48.6	49.0	48.5	52.0	51.1
Sweden	50.4	45.3	40.2	38.8	42.6	39.5	38.4	37.3	37.3	37.4
The United Kingdom	42.2	43.3	44.2	52.3	67.8	79.4	85.0	86.2	86.4	87.8

Source: Eurostat.

The external debt of Cyprus might also turn out to be a significant problem. Although it has remained stable since 2010, its levels have been too high – 4.5 times higher than the GDP of the island country. Not surprisingly, over 70 % of the external debt is concentrated in the hands of monetary and financial institutions (MFI). After 2010 the exposures of MFI (excluding central banks) started to decline but still maintained substantial levels. The increase in the debt of the government is also worth mentioning. After 2008 an upward trend began to take shape and persisted until as late as the first quarter of 2012. This growth was caused to a large extent by a loan received from Russia in 2011 amounting to EUR 2.5 billion. The fact that Cyprus is, to say the least, mired in debt to foreigners makes the economy highly vulnerable to external shocks.

Table 3 Cyprus's Gross External Debt, 2008-2011 and the First Three Quarters of 2012 (EUR Million)

Gross External Debt by Institutional Sectors	2008	% of GDP	2009	% of GDP	2010	% of GDP	2011	% of GDP	2012		
									I	II	III
General Government	2,357.7	13.7%	3,984.5	23.6%	4,553.6	26.2%	4,825.0	26.8%	6,740.1	5,800.8	5,997.3
Monetary Authorities	6,649.9	38.8%	7,302.7	43.3%	6,546.9	37.6%	7,991.5	44.4%	8,043.4	11,353.6	10,008.5
Monetary and Financial Institutions (Excluding Central Banks)	63,295.3	368.9 %	77,583.0	460.3 %	69,905.9	401.6%	63,703.2	354.3%	59,982.1	59,054.3	59,777.3
Other Sectors	1,834.0	10.7%	2,388.1	14.2%	3,455.3	19.9%	5,189.1	28.9%	6,362.5	6,596.4	6,686.4
Direct Investment: Intercompany Loans	2,622.6	15.3%	447.0	2.7%	1,155.9	6.6%	1,999.9	11.1%	2,411.5	1,825.2	2,049.8
GROSS EXTERNAL DEBT	76,760	447.4 %	91,705	544.1 %	85,618	491.9%	83,711	465.6%	83,539	84,630	84,519

Source: Central Bank of Cyprus.

The strong financial and economic links with Greece played a major role in the Cyprus crisis. The two biggest banks – Bank of Cyprus and Laiki Bank, hold a significant amount of exposures in the form

of Greek government bonds. In an attempt to provide a solution to the crisis with the Greek debt European leaders decided to adopt measures for its reconstruction with the active participation of private creditors as early as 2011. The reforms included the write-off of debt which resulted in losses of over 50 % being incurred by creditors. Eventually, they turned out to be even bigger for local banks – about 75 %. It might be said that **these changes were critical for Cyprus and made the crisis in the country inevitable**. Before the impairment, the exposures to Greek government debt of Bank of Cyprus and Laiki Bank amounted to EUR 2.08 billion and EUR 3.05 billion respectively. Subsequently, the combined losses incurred by both banks as a result of the debt restructuring exceeded EUR 4 billion.¹⁷ In addition to these exposures, the banks in Cyprus have provided Greek businesses and residents with significant loans which have become increasingly hard to service in recent years. As of 30 September 2012 Bank of Cyprus's loans and advances to Greek residents stood at EUR 9.47 billion (including those to corporates – EUR 3.3 billion, to SMEs – EUR 3.3 billion, house-purchase loans – EUR 1.7 billion, credit cards – EUR 0.2 billion, consumer and other loans – EUR 1.0 billion). The breakdown by economic sectors of the loans and advances was the following: Trade – EUR 1.3 billion; Manufacturing – EUR 0.99 billion; Hotels and catering – EUR 1.13 billion; Construction – EUR 1.0 billion; Real estate – EUR 0.657 billion; Private individuals – EUR 2.8 billion; Professional and other services – EUR 0.5 billion; Other sectors – EUR 1.0 billion.

As a result of the huge losses sustained due to the write-off of Greek government debt the banking sector in Cyprus faced the real threat of default. Initial estimates showed that saving it would require EUR 16-17 billion or roughly the same amount as the country's GDP. Later it turned out that the necessary funds would be EUR 23 billion. Finding that amount, however, is an impossible task for Cyprus and it had to resort to seeking external help. The condition set by the creditors – the IMF, the ECB, and the EC – is that the country provides on its own a considerable share of the necessary financing (EUR 5.8 billion which later increased to EUR 13 billion). To do this, Cyprus needs to implement various reforms, the main one being imposing a **one-off levy on deposits** over EUR 100,000 which may well reach 60 %. Smaller deposits, representing about 95 % of the total number, will not be affected. Cyprus will also have to close Laiki Bank and transfer all deposits below EUR 100,000 to Bank of Cyprus. The island nation has put a limit on transactions in order to prevent capital from flowing out of the country. Although the losses will be borne by larger depositors, we are still likely to witness a significant withdrawal of funds even by smaller investors. In addition, such measures will invariably push big foreign depositors away. The winners from the loss of confidence in the Cypriot banking system will probably be other European banks which will turn into a safe haven for depositors. **Doubling the tax on deposit interests** (to 30 %) and **raising the corporate tax rate** from 10 % to 12.5 % are among the additional measures to be taken by the government. These changes are unlikely to discourage many firms and most of them are not expected to resort to transferring their businesses abroad. Such actions will rather be caused by the economic uncertainty pervading the island country. Over the coming years Cyprus will implement a number of austerity measures including tax increases and expenditure cuts. This will inevitably have a negative effect on the economic life on the island. The economy is expected to contract by 8.7 % this year and by 3.9 % in 2014 as a result of the measures to overcome the crisis. The coming months are set to be extremely difficult for the Cypriots but they are a necessary evil on the country's path to overcoming the crisis.

¹⁷ In line with the financial statements of both institutions for 2011 the loss resulting from writing off Greek government debt was EUR 1,729 million for Bank of Cyprus and EUR 2,331 million for Laiki Bank. In the first nine months of 2012 Laiki Bank lost EUR 85 million, while Bank of Cyprus lost EUR 143.5 million.

The island nation will be forced also to introduce a number of other measures aiming to boost public revenue and, simultaneously, slash expenses. This will be achieved through stricter tax control, privatization of public companies (which will be carried out with 'coordination' by the European authorities), sale of state-owned assets, and an increase in some indirect tax rates. The list of companies which will probably be privatized includes the following: CyTA (the Cypriot mobile operator), EAC (the electricity provider of Cyprus), CPA (the port authorities in Cyprus), and Cyprus Airways. A bigger problem for the economy and the population will be posed by the expenditure cuts which will entail freezing salaries, reducing some social benefits, and limiting administrative expenses. Part of the measures have already been planned and will be implemented in the period between 2013 and 2015. Nevertheless, it is highly likely that they will not be sufficient which will call for imposing additional restrictions.

In order to overcome the dire consequences of these reforms, the country needs to put efforts into restoring confidence in its banking system. Thus, Cyprus has to go through a process of extensive restructuring, which includes decreasing the number of financial institutions, reducing the size of the banking sector, strengthening the supervising authorities, dealing with capital shortages, and improving liquidity management. The island nation should continue with its fiscal consolidation but this should not happen at the expense of economic growth. It should try to find ways to raise the efficiency of public expenses, enhance revenue collection, and improve the functioning of the public sector as a whole.

Structural reforms are necessary to make the country more competitive. At the same time, they should enable the economy to overcome the obvious macroeconomic imbalances. More precisely, these measures are connected with the adjustment of labor costs to the change in labor productivity and with devising a detailed plan for the development of the energy sector and the services market. Cyprus has to seek ways to diversify its economy by striving to move from a development driven only by the services sector to such based on manufacturing as well which would provide quite a good alternative for more sustainable growth. In this regard, a good opportunity is to shift the focus to the energy sector.

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HISTORY OF ACCOUNTING

Tímea Varró

Szent István University

PhD School for Management and Business Studies

Hungary, H-2100 Gödöllő Páter K. u. 1.

Abstract

Accounting is an information system which provides picture about the operation of business organizations. Book-keeping activities include the collection, recording, systematization and introduction of data concerning the assets and profit of a given business unit. The aim of data collection is to provide appropriate information to the interested decision-makers and controlling bodies.

This type of information was required in the ancient world, too, because even then precise records were made in the Sumerian and Mesopotamian cultures about the quantity of agricultural products and their relative values.

As the economic conditions developed, the information needs have also changed in the history and book-keeping should have permanently reacted to the changes. Just because of this the science of accounting has been constantly developing even in our days in order to be able to create an information base to support decision-making by recording processes according to the reality.

Key words: *appropriate information, change, constantly developing*

1. INTRODUCTION

Accounting is the area of business organization within society which is closely connected to the existing economic conditions and economic progress. The development of accounting was related to the emergence of private owners who performed producing, trading or other business activities. It is directly linked to the enterprise and entrepreneur through exchange relations, use of cash as general measure of value and the beginning of lending processes. (Tóth, 2010)

Accounting information system describes the operation of business organizations. The data regarding the assets and profitability of an economic unit (enterprise, cooperative, association, public institution, etc.) are collected, recorded, systematized and presented by the system in the frames of book-keeping activities. The aim of data collection is to provide relevant information for the interested decision-makers (chief executives, owners, creditors and investors) and controlling bodies (e.g. tax administration).

Accounting was developed as a tool which helps to measure the economic activities. The events affecting assets and results of the economic unit are recorded in the course of accounting activities. In order to base their decisions, the market actors require accessible, reliable and actual information about the property, financial and income position and tendencies of the enterprise. The above requirements in the economic and business sphere are ensured by the internationally applied accounting principles which are laid down in the accounting law. (Helgertné-Kurcsinka, 2004)

Due to globalization, these actors have had an increasing need for the harmonization of accounting, the common language of business management. The efforts to harmonize reports started in the early 1960s. In Hungary, the Act No. C of 2000 provides about accounting. This act lays down accounting rules in accordance with the related directives of the European Union and the international accounting principles, on the basis of which reliable and real picture can be given about the income generating capacity, property, changes in property, financial position and future plans of those who or which are subject to this law. (www.net.jogtar.hu)

Accounting can be defined in more dimensions and from more aspects. On the one hand, it is a tool of information, because – according to the accounting law – it provides information about the property of enterprise, the changes of property as well as about the efficiency of utilizing the property that is the income achieved by the entrepreneur. On the other hand, accounting is a practical activity which monitors, measures and records the movement and changes of assets, as well as profit. (Sztanó, 2006)

Accounting is a closed system, which gives information not only to the external stakeholders (tax authority, creditors, owners) but also to the management. Therefore accounting is not something for itself, but it serves as an assistant in recording, evaluating and controlling the economic activities. Its importance is also underlined by the fact that its origin can be led back as far as to the era before Christ. Of course, it has been changed and developed during the centuries by the development of and adaptation to the societies. It always bears the special features of the given economic, cultural and social environment.

2. HISTORY OF THE DEVELOPMENT OF ACCOUNTING

The first traces of accounting records are from before Christ. As time goes on, accounting has permanently changed according to the requirements of the given era, which have been affected by environmental, social and information needs, as well as the expansion of trading activities.

2.1. PREHISTORIC TIMES (until 4000 B.C)

According to Kardos (2011), the simplest form of accounting, as an information transmitting system is as old as the cave drawings. Cave drawings (Figure 1) can actually be explained as accounting records because they depicted who and how participated in hunting and it could be the basis of sharing the prey later. If we want to compare it to the procedure of the current profit division, it can be made as follows. Today in the course of profit allocation it is determined what is the share of state (corporate tax) from the profit of the business activities, what can be given as dividend to the owners and what amount is left at the enterprise for the internal financing of future investment projects, so what is the balance sheet profit. In regards to the cave drawings from the prehistoric times, the parallel can be set between the sacrifice offered for the different gods and the taxes of our days. The dividend was the prey they received for own consumption or use. The tools which were left for common use, accessible for everybody are the objectified form of net profit left at the enterprise. (Kardos, 2011)

Calculus (stones used for counting) which were found in Southern Mesopotamian archeological excavations can also be connected to accounting. According to Kardos (2011) these stones can be related to the emergence of food production at around 8000 B.C.

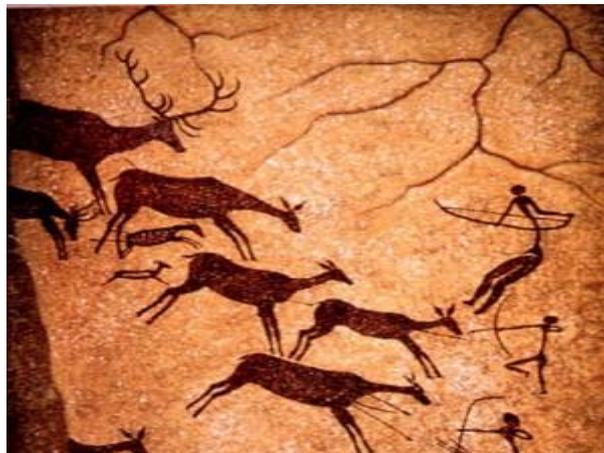


Figure 1. Prehistoric cave drawing

2.2. ANTIQUITY (4000 B.C – 476 A.D.)

There are archeological finds about accounting records from the era of 3500 B.C. The Sumerian – who had highly developed civilization in Mesopotamia, in the valley between Tigris and Euphrates rivers – made memos about the business processes, especially the quantity of annual cereals (bread). Such archeological finds can be seen in Figure 2.

There were „banks” even in this era and they exercised lending activities. The task of scribes were to keep records of business events, contracts and make register about assets. Failure to do so was punished by law. Therefore they fulfilled the role of today’s accountants. At that time scribes were respected by the public. (Alexander, 2002)

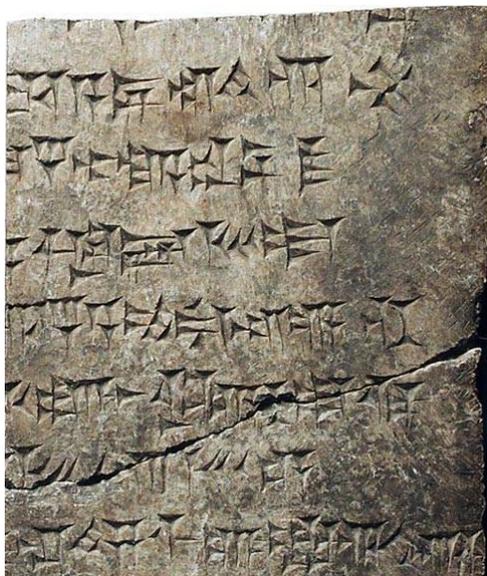


Figure 2. Sumerian clay tablet

The temples, emperors and other stakeholders of economic sector employed hundreds of scribes and they were highly reputed. A lot of papers put the beginning of written literature to this time and connect it to the development of book-keeping. Of course, the techniques of recording in this time were rather primitive and served mostly the registration of assets (inventory).

The use of papyrus scroll (instead of clay tablets) in the ancient Egypt made the recording of business processes more widespread and technically simpler. Due to the extensive treasury network, there were very diverse registers which functioned primarily as a kind of tax register. The memos in Egypt were numerical which enabled control and comparison. During this period, the person (accountant) who made the records about the economic events, had great responsibility because he could even be sentenced to death if the random regal control revealed errors or malpractice. Although the scope of memos was wider in this era than in case of Sumerian civilization, it cannot be concluded that logically related registers were kept. The development of the system was hampered by the high number of illiterate people and the competence of accountant, according to which they made only lists. (Alexander, 2002)

In the 5th century B.C in Greece, there were appointed accountants who made the control of civil and state expenditures by reviewing the financial transactions and certificates. The development of Greek accounting system was boosted by the introduction of coins and the emergence of banking institutions and lending activities. Banking was the most developed in the ancient Greece. The bankers kept registers (books) about the deals they made, the funds they landed or managed. They also dealt with money exchange. (Alexander, 2002)

In the ancient Rome, the basis of state and bank records was given by the household registers. At that time, the heads of the families kept daily records about their household incomes and expenditures, which were summarized monthly in a so-called cash-book. Keeping the records was especially important in Rome because regular reports had to be made about the property (assets and liabilities) and these reports gave the basis of taxation and civil rights. (Alexander, 2002)

In Rome the control of state expenditures and incomes was an extensive and complicated system managed by „inquirers” who supervised the operation of the treasury, paid the military expenses and kept the state books. The authenticity of civil accounting was ensured by permanent audits. The inquirers had to report to the Senate. The management of state treasury belonged to the competency of the senate. Emperors Julius Caesar and Augustus themselves also participated in the supervision of the Treasury of Rome. Augustus even reformed its operation.

The accounting „innovation” of the Roman Empire was the elaboration of annual budget which also contributed to the improvement of financial enterprises in the Empire. The expenditures were adjusted to the income and they implemented a taxation system which also considered the paying capacity of citizens.

2.3. MIDDLE AGES (476 – 1492)

The accounting records of the Middle Ages – in contrary to the centralized accounting procedures of the Roman Empire – were formed locally. While in case of Romans, the accounting regulation was the time of centralized legislation, in the Middle Ages it belonged to the authority of landlords. The emergence of estate and state treasury systems required the transfer of power above estates to the actual user of the estate. The task of accounting was to ensure the control of lower social layers by the owner of the estate. (Kardos, 2011)

Therefore the aim of accounting records was the division and control of private and state property considering the social layers of society. The records concentrated primarily on the property. In England, for example, William the Conqueror had the Domesday Book compiled in 1086, which included the hired and own property as well as the related taxes.

The oldest English accounting record is called Pipe Roll or Great Roll of the Exchequer. Part of it is shown on Figure 3. The Pipe Roll contains the income (annuities, fines and taxes) and expenditures of England for the period between 1130 and 1833.



Figure 3. Great Roll of the Exchequer

The content of the Domesday Book, the reports of sheriffs and other treasury information were also considered in the edition of the Pipe Roll. (Alexander, 2002)

Frankish King Charlemagne issued a decree in 795 in which he ordered to prepare a summarizing report about the royal estates and imperial estates at the end of each year. It corresponded to a property inventory. There was a special form for this purpose compiled by the church. (Kardos, 2011)

Accounting registers developed drastically during the Italian Renaissance. The quick expansion of trade required more detailed records and the determination of corporate output. The former introduction of Arabic numerals (13th century) based the regular registration of events. Arabic numerals were used for the first time in Italy in connection with business deals.

Luca Pacioli (mathematician, Franciscan monk, see picture 4) created the basis of the current modern accounting records and double-entry book-keeping system. He had diversified knowledge (in the field of literature, arts, business and sciences), he was also friend of Leonardo da Vinci.



Figure 4. Luca Pacioli

Pacioli published his fifth book titled „Summa de Arithmetica Geometria Proportioni et Proportionalita” in 1494 (only 2 years after the discovery of America) at the age of 50 (Picture 5). This work was made as the extract of mathematical knowledge and only one-fifth of the book dealt with accounting.

The book describes accounting in 36 short chapters. 16 chapters deal with the systems of books and invoices, while the remaining 20 chapters detail the special features of commercial accounting, such as: bank deposit, bill of exchange, barter transactions, expenses, sealing. (Kardos 2011) The last chapter is about book-keeping including asset inventory, order of accounting (logs, ledger, rules of double-entry book-keeping). He also introduces a primitive balance, as the closing document of ledger. (Majoros, 2010)

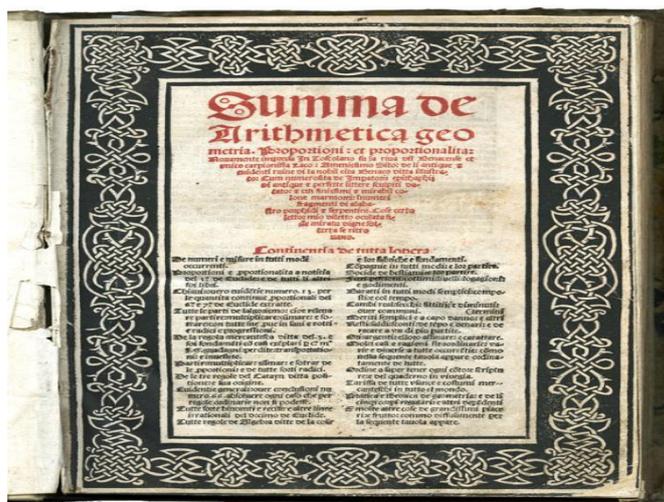


Figure 5. Summa de Arithmetica Geometria Proportioni et Proportionalita (1494)

In his dissertation, Luca Pacioli reviews the accounting procedures applied at that time by Venetian merchants. He also refers to the paper written by Benedetto Cotrugli in 1458 which was published as a book much later, in 1573. The title of this book was „Delamercatora et del mercatoreprefetto”. It should be noted that the development of the theoretical basis of double-entry accounting system can be attributed to Benedetto Cotrugli and not to Pacioli.

According to Pacioli, three things are necessary for the merchant to be successful:

1. enough money or credit,
2. good accountant, and
3. good accounting system which helps the correct evaluation of the financial situation. Before anybody starts an enterprise, it is suggested to make an inventory which contains all the business and private assets of the entrepreneur. The inventory should be made within a day, the assets should be recorded at their market value, considering also their mobility and value. The records are made in currency unit. (Alexander, 2002)

Pacioli recommends to record the events, called logs, in chronological order. In case of ledger accounts, the left side was called debits, the right side is for credits. The summary of ledger data is the general ledger statement, in which the debit account balances are put on the left side, the credit balances are written on the right side. Pacioli also declared that the work can be regarded correct if all the rows correspond on both sides. If there are differences, it refers to errors in accounting. (Alexander, 2002).

The development of double entry book-keeping method has three important advantages compared to the previous methods:

- the records are more wide-range and more organized,
- the double-entry method enables the control of authenticity and completeness in the ledger,
- the ledger tracks the quantity and value changes of assets and enables the statement of profit, property and capital.

By reviewing the operation of the current accounting system, it is obvious that the methodology of accounting and book-keeping has not changed too much since Pacioli.

2.4. MODERN AGE (from 1492 – to our days)

The Fugger family prepared the first balance sheet in 1511. This Augsburg balance sheet was compared by Matthäus Schwarz (chief accountant, studied in Venice) to his own book-keeping. The ledger was divided into two parts: „account book of persons and assets”, that is book of debits, and the Capus. In addition to these, he also prepared a „cost booklet”, in which the expenses and consumption taxes were registered, as well as a „secret book” which included primarily the profit and loss accounts.

The area of accounting further developed in the 16th century. At that time in Italy, Germany, France, the Netherlands and England records were already taken about corporate property, planning of liabilities and incomes. The first noteworthy textbook on accounting was written by mathematician Sartorius, published in 1592. (Kardos, 2011)

The Modern Age societies also required accounting records and new data registration needs also emerged due to the economic development. In the 17th century, the increasing trade gradually developed the periodical settlement and closing reports at the end of financial or calendar year. Cash books or logs

were introduced at that time. Since the activities connected with trade became more and more complex, the multi-log procedure was implemented.

By the end of the 19th century, the accounting system had further differentiated. The operation of cost-settlement system and the application of chart of accounts has come into the foreground. Trade sciences and business economics recognized and the legislation enabled the development of accounting by dividing it into financial and management accounting. (Kardos, 2011)

According to Kardos (2011), the historical development of accounting in the 19th-20th centuries should be reviewed separately because the environment, legal and social structure was completely different.

3. CONCLUSIONS

The information need of stakeholders have changed in the history by the development of economic environment. Since the emperors and leaders were always interested in the state of inventories, income and expenditure, therefore precise book-keeping, later accounting should have been elaborated. The historical review confirms that book-keeping played an important role even before Christ. Double entries in time series were made about transactions in the ancient Rome already. This accounting information was also used for determining the tax payment liabilities.

In the Middle Ages, Luca Pacioli and Benedetto Cotrugli wrote their ideas and theories about accounting. These were the first written works which discussed the subject of accounting in more or less details.

The description of corporate property, planning of liabilities and incomes emerged in the Modern Age. The tasks connected with data records further improved because, for example, the use of cash books was also introduced owing to the expanding trade.

The 20th century set new challenges to the accounting system. Relevant information was required for the analysis, evaluation and management of activities, the source of which was the accounting records. Globalization has also affected the area, because the transborder activities, the operation of multinational companies have stimulated the efforts to harmonize accounting registration and data records. The procedures have become international and induced the development of international standards (International Financial Reporting Standards – IFRS, United States Generally Accepted Accounting Principles – US-GAAP, etc.) which enable the comparison of economic performances of companies operating in different fields.

The organization and up-to-date operation of accounting procedures will remain important in the future, too. The reason is that more quicker and diverse information will be required due to the further development of corporate and financial processes as well as the globalization of activities. Since accounting registers events which already happened, the objectivity of data is unquestionable.

As regards the future, the accounting information system will probably integrated into the executive information system which operate these days as integrated resource planning systems. The integrated systems can produce not only financial accounting information but also provide management accounting and controlling functions. The whole corporate activity is built in the information system, thus enhancing the data flow, assisting efficient data recording and data retrieval, which can be a key factor in the quick reaction ability of companies.

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COMPARISON OF FINANCIAL ACCOUNTING AND MANAGEMENT ACCOUNTING

Tímea Varró

Szent István University

School for Management and Business Studies

Hungary, H-2100 Gödöllő Páter K. u. 1.

Abstract

Accounting is a practical activity, in the course of which information is provided. The task of accounting is to determine measure and provide financial information about a business corporation in order to support those who utilize this information in decision-making. The statement, measuring and publishing can help the communication of the corporation with external users. This branch of accounting is called financial accounting. If we speak about information required for well-based decision-making by internal users, it is called management accounting.

The „division” of accounting into two parts actually draws up that requirement to whom we provide information and who is the first to utilize the information. Consequently, the financial accounting should primarily fulfill the needs of users outside the company. Making the report serves basically this objective. Management accounting gives information for the heads of the company in order to support decision-making.

Key words: *information, financial accounting, management accounting*

1. INTRODUCTION

Accounting – which is an information system - was created as a tool which helps to measure the economic activity. Events affecting the assets and results of the economic unit are recorded in the course of bookkeeping activities. (Helgertné et al, 2004)

Accounting should provide information in different depths and structures, in different time intervals about the results and assets of the enterprise, the changes in the assets as well as about the impact of changes. It is inevitable for the operation of the market economy that the actors of the market have access to objective information about the property, financial and income status of the enterprises as well as the trends regarding these aspects. Accounting can perform its tasks and meet the expectations if - independently from the needs - it completely reveals tracks and communicates the changes in the assets of the company and their impacts. (Baricz, 2009)

In Hungary accounting is regulated by the Act C of 2000. This law puts the emphasis on fulfilling reporting requirements that is to provide reliable, authentic and real picture about the activities of the given company. It also requires the implementation of principles determined by law and the consequent regulations. (Internet-1)

When the principal guidelines of accounting are drafted, the report is being made and during bookkeeping, all the business units themselves should form the rules of methods and processes which are the most suitable for their conditions and business processes and are required for the practical implementation of accounting regulations. (Korom et al., 2005) The accounting system which was

developed and implemented this way ensures the real economic content of information and supports decision-making on the basis of real data (facts).

The provisions of the accounting law must be observed, therefore own accounting policy and corporate chart of accounts should be made for the operation of accounting information system. The objective of accounting policy is to ensure a system for the business organization, on the basis of which annual reports are made and provide reliable and authentic data and information. These requirements, however, can only be realized if the bookkeeping system of the enterprise meets the regulations of accounting principles and accounting law concerning bookkeeping and accounting documents. (Korom et al, 2005)

In our days, information is increasingly important due to the accelerating development and it has become a resource by our days. Information has a key role in business life, especially in the operation of a company. It is an inevitable resource for the company management because enterprises use as well as produce information. Information is an element of processes integrating the operation of the company. (Chikán, 2008)

Producing, conveying and utilizing information has a growing role to which information technology and the development of information systems also contributes. Those enterprises get advantageous positions in the business sector which are quicker to access the key information required for their decisions. By the expansion of modern electronic data processing, not the collection of information is the main problem – because it can be found in the different databases – but the production of information which is needed in the given situation of decision-making. Reliable, relevant and genuine data are needed because these give basic information for decision-making, therefore false and unreliable data will lead straight to failure.

The aim of enterprises is to operate efficiently. In order to meet the expectation of profit-making, they should closely follow their costs and – if necessary – intervene in the processes. The management turns to the corporate information system to find out the values and composition of expenditures as well as the direct costs required for production.

Therefore precise, exact and proper accounting documentation that is precise recording of economic events in the course of bookkeeping is inevitable for the efficient and successful work of management. Reliable and authentic picture about the companies can be ensured as well as actual data from the accounting system can be provided to the management only this way. Thus the requirements of financial and management accounting are met completely.

2. ACCOUNTING

The law on accounting requires that the entrepreneur pursuing double-entry bookkeeping must have accounting records about the assets and liabilities he treats, uses or owns, as well as the economic events he is concerned with which describe the changes in assets and liabilities permanently, clearly and in a closed system, according to the reality.

The entrepreneur using double-entry bookkeeping is obliged to use uniform chart of accounts. By putting the assets and liabilities, as well as the impacts on business actions of the business unit into a unified system, the aim of uniform chart of accounts is to help the development of accounting at the company and to ensure the basic information required for drafting the report according to the government decree issued on the basis of the authorization by the accounting act.

Information is needed at all the levels of management for leading, managing the enterprise and making executive decisions. The appropriate information base is inevitable for the planning, organizing and controlling of business activities at the company. The environment of the enterprise and the actors of the market want reliable information primarily about the assets, financial and income situation of the enterprise.

Accounting is the key information source within the company because starting from the data based on the required documents it collects and processes the information and meets:

- the information needs according to the legal provisions and as required for the introduction of the profitability of the enterprise, and
- the information requirements of decision-making process.

On the basis of the above, accounting can be divided into two branches in terms of content, namely:

- financial accounting, and
- management accounting.

The splitting is made according to whom the given accounting branch provides information and who utilizes the information in the first place. (Internet-2)

According to Tóth (1999), financial accounting can only partly meet the new management needs and expectations of executives required by the changing market economy, due to the following problems:

- legal regulations, primarily the external requirements should be met (authorities, owners, etc.) and not the information needs of management should be fulfilled. It has hardly been changed by the Act C of 2000;
- planning and analysis of plan-fact data is only indirectly supported because it bases on reporting the facts of the past period;
- it is unable to provide enough data for the strategic work;
- it calculates only with value data;
- it is always late with the information about the data of the past period, in contrary to the demand of executives concerning up-to-date information..

Due to the problems discussed by Tóth (1999), it was necessary to set up an executive-oriented management accounting which supports management more directly and is based on the internal accounting of the organization. By today this branch of accounting has become part of controlling tool system.

Management accounting aims to ensure primary information for the internal executives of the corporations, including controlling. It also includes goal-orientation, future-orientation and cost-awareness.

2.1. FINANCIAL ACCOUNTING

Financial accounting fulfills primarily the information need of users outside the enterprise by compiling annual reports about the assets and results of the enterprise. Therefore financial accounting is designed to inform the external partners of the company, market actors (owners, investors, suppliers, customers, government authorities, etc.) about their property, financial and income situation as well as changes. (Laáb, 2011)

Features of financial accounting:

- the principles and content of financial accounting are regulated by accounting law (Act C of 2000),
- the principles and content of financial report are also regulated by the accounting law,
- the financial report concentrates on the enterprise as a whole and the information is indicated mostly in value,
- financial accounting concentrates mostly on data regarding the past.

On the basis of the concept of financial accounting, basically three closely interrelated areas can be distinguished within accounting. These are as follows:

- chart of accounts,
- bookkeeping, and
- reporting system.

The chart of accounts is the starting point of accounting processes, it includes the documents which serve as a basis of data processing within bookkeeping. Moreover, it also includes the planning of these documents, regulation of their completion – because the precise filling of documents basically determines the reliability of processing accounting data and report.

The most important field of financial accounting is bookkeeping which includes the permanent, closed-system recording of economic events on the basis of accounting documents and the summary of records made during this process.

Reporting system is that field of financial accounting which focuses on information services. The reporting system includes those documents (balance sheet, profit-and-loss statement, etc.) which must be published in order to inform the stakeholders. The report system, of course, also includes those work processes which lead to the compiling of report and ensure that the report gives reliable and authentic picture about the property, financial and income situation of business organizations or enterprises.

Furthermore, financial accounting includes:

- evaluation, calculation of profit and loss,
- making inventory,
- control of information, auditing,
- publishing of report. (Kardos et al, 2007)

Data collected from the accounting information system affect further operation of companies, thus they should be reliable and real. It is ensured by the accounting principles laid down in the related law and the evaluation processes.

By observing the accounting principles, the economic events in the life of the company are recorded according to the reality. The economic processes can be fully traced in book-keeping, thus the results received can be led back to the underlying cause that is the affecting economic events. It is due to nothing but the consistently developed principles. It is obvious that there is a very close interaction between principles and the reflection of economic processes according to reality.

Evaluation is a key part of reporting because – in addition to the introduction of the asset at its value – it basically determines the picture about the income generating capacity of the company. The result of the company is the counter value of output decreased by the value of output according to the books. (Korom et al, 2005) It is clear that the results of the companies are substantially affected by the sum of mid-year and year-end evaluations of specific assets. Thus the values are truly reliable (and cautious) and reflect real values.

In order to maintain the economic operation of enterprises it is inevitable to permanently measure and control the efficiency, profitability and liquidity of their activities. The datasets from the accounting information system (financial accounting) are essential for this because the indicator systems are based on the data obtained from the accounting system. Therefore the data of accounting are major for the analysis, too. That's why it is important that the economic events are recorded by observing the principles and applying the evaluation processes because without these the picture about the enterprise is false and untrue which might significantly influence decision making if the decision-makers get false information.

2.2. MANAGEMENT ACCOUNTING

Permanent information is needed for managing the enterprise and making decisions. The available information can be utilized successfully if the executive have all the important pieces of information which support the decision. The financial accounting also provides some useful information for the executives, but it is often insufficient for the management. Therefore such a management information system is needed which ensures appropriate knowledge. Management accounting is part of it, and it is adjusted to the special features of the enterprise. As a consequence, the development and regulation of management accounting is the task of the entrepreneur. (Kardos et al, 2007)

One of the main tasks of management accounting is the analysis of corporate costs and systematization into a structure which supports both the strategic and operative decisions. This part of management accounting is often called cost management. Therefore the management, the executive board of the company collects information from this branch of accounting. Cost management is the main source of information for controlling, which is a management-supporting sub-system, because it coordinates planning, controlling and information supply tasks concerning the whole company. (Chikán 2001)

The cost-management supporting accounting should provide the information required for the business decisions of company management. Three areas of information utilization are distinguished by Laáb (2011) these are net cost calculation, measuring of profitability and support of planning and implementing tasks.

Since the management accounting provides information for the executives, it is important to determine what kind of information is needed by them. The limits of information should be set. Relatively small information can drive the attention of leaders to the processes, either to good or bad ones. The costs, of course, have clearly determinant role in this. Management accounting permanently monitors yields both regarding their quantity (quality) and value. It is a basic requirement, that the head of the company gets reliable information about the activities and products and the results should be measurable. It often happens that things do not go well, due to a number of reasons. Sometimes, the decision of executives is not properly based, thus it does not help the realization of objectives. Therefore it is essential to note the manager about the problem in due time, thus helping him in the correction of processes and solution of problems. Management accounting serves the required information for this. (Kardos et al, 2007)

Management accounting needs an information system which cannot wait for the monthly closing but uses the daily data of analytics in order to keep the executives permanently informed. It is just the

opposite of financial accounting which collects data and makes statements subsequently after the given period.

According to Zárda (2009) the function and tasks of management accounting can be summarized as follows:

- Supply of managers with information: regular information flow which enables the heads to react to the occurring problems and situations as quickly as possible;
- Management advising: it has key importance in connection with the economic consequences and implementation of management decisions and alternative ways of action;
- Forecasting, planning and control: most of management accounting is connected to the future and the preliminary determined systems, such as e.g. plan control, standard cost calculation and provides actual data for them. The management accounting groups should be actively involved in planning cost control and financial reporting systems;
- Communication: management accounting can be efficient if reliable and efficient communication system is connected with it, because only this system is able to provide information in clear and easily comprehensible form;
- Controlling information: the management accounting branch or group is an important information node, which is interrelated – send and receive information - with executives, staff, external environmental in some areas, thus it can control the information flow (from below) to the heads and (from above) to the staff.
- Information and training: management accounting branch or group should ensure that the users of information produced by them know the applied methods, their objectives and advantages.

3. CONCLUSIONS

Traditionally the basis of information system within the company is the accounting system, which records economic events thus the movement of assets can be traced. In addition to this, of course, the reporting tasks required by the accounting law should also be performed and the company-specific needs of management should be served in order to ensure the support of more efficient and economical planning and control. (Chikán, 2001)

Different requirements have led to the development of two branches of accounting: financial accounting and management accounting. These are compared in Table 1.

It does not mean that companies should have two separate accounting systems because – according to the accounting law – only one complete, closed accounting system can be set up within one business organization. It means only that appropriate attention should be given during the development of administration system to the specific features of the business activities and management needs of the given company. Of course, this should be made by strictly observing the requirements of the Act C of 2000. Its objective and task is to process the data regularly and provide information for the executives, owners and competent authorities as well as to closely observe the business management of the organization. Thus the management accounting cannot be an independent book-keeping system which operates parallelly within the organization together with the accounting system required by law. It can function only on the same information base, built on the financial accounting.

The main difference between the two accounting systems is the different group of stakeholders. All the other differences can be led back to this. Financial accounting provides information for the actors of the market, while management accounting gives relevant information to support the decisions of executives.

The differences between the two accounting systems can be seen in (Table 1):

- objectives and directions,
- processing system of basic data,
- time horizon,
- form of regulations.

Table 1 clearly shows that the financial accounting deals with recording of business events, compiling reports as well as tax return statements and special reports (to state authorities). Management accounting provides data to the executive board of the company for business management activities and strategic planning in order to help the rational and cost-saving utilization of costs and expenditures and to detect the sources of losses. (Tóth, 2010)

Table 1: Comparison of financial and management accounting

	Financial	Management
	accounting	
Target audience	external: creditor, authority	internal: heads, executive board
Aim	introduce past events to external stakeholders	support internal decisions, feedback about operational performance
Basic task	ledger management, compiling annual report, obligatory data service	cost and performance calculation, profitability calculations, plan-fact analysis
Recording the costs	according to law, by cost types, direct-indirect costs	according to management needs, direct-indirect, fix/variable costs, by customers, by activities
Time orientation	past	present, future-oriented
Attitude	accounting-oriented: reporting, controlling	management-oriented: decision supporting, controlling
Regulation	act regulates, reporting requirements	entrepreneur regulates and develops, its operation is based on the needs of executives
Information	appears in value	provides value data and volume data
Expansion	concerns the whole company	more detailed, focuses on smaller units, adjusted to specific decisions, highlights organization and values

Source: own edition on the basis of Chikán, 2001 and Chikán, 2008 and Kardos et al, 2007

The economic events should be accounted according to their actual economic content. If the accounting work is made by considering this, the principles are applied and the requirements imposed on accounting information system, that is the reliability and authenticity of information is guaranteed.

The data stock of accounting information system will be able to reflect the actual reality of economic processes and to provide objective and genuine information for the stakeholders.

The applications of evaluation processes considerably determine the output of the company, thus the degree of growth. The reality content of data recording and the information from the data contribute to the evaluation of economic processes thus to the development of business activities. The economic events are recorded according to the principles and evaluation methods laid down by the accounting law, thus these events are included in the data set of accounting information system and the data of decision-making information as a reflection totally corresponding to the processes which take place in reality.

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**REAL CONVERGENCE IN CENTRAL AND EASTERN EUROPEAN
EU MEMBER COUNTRIES**

Cristina Ciumaş

Babeş-Bolyai University, Faculty of Economics and Business Administration,

Teodor Mihali 58-60, 400591 Cluj-Napoca, Romania

Zoltán K. Karsai

Babeş-Bolyai University, Faculty of Economics and Business Administration,

Teodor Mihali 58-60, 400591 Cluj-Napoca, Romania

Abstract

The Monetary Union became reality when in 1999 the single currency has been introduced. The current crises have emphasized many of the structural weaknesses of the Euro Zone member states, the most important being the divergence in competitiveness of the economies. In this paper we investigate the evolution of the real convergence among five candidate states to join the currency bloc: Bulgaria, the Czech Republic, Hungary, Poland and Romania. As reference we also included Slovakia and Slovenia in the analysis. The studied variables are the following: 1) foreign capital flow 2) structure of the economy, 3) public debt, 4) level of GDP per capita, 5) openness of the economy, 6) real labor productivity and 7) external balance. The core question is: what kind of impact did the crisis have on real convergence for the analyzed countries?

Key words: *Euro Zone, real convergence, divergence in competitiveness, structure of the economy, vulnerability*

1. INTRODUCTION

The international financial and economic crisis from 2007 (hereafter international crisis from 2007) seems to have a prolonged aftermath in Europe causing many painful sufferings on an economical, political and social level. Every economy – regardless of being in a developed or emerging phase – was affected by the crisis, some of them more severely than others. The crisis started as one having its roots in the financial sector, which gradually unraveled into a very deep economic crisis. As the rebound of the economies – especially due to the private sector – delayed, public sectors started to feel the weight of the crisis through many distinct channels, some of them being the i) credit crunch, ii) reduced economic activity, iii) bailouts, iv) forces of market discipline, etc. At the time of this paper the aftermath of the international crisis from 2007 seems to be a debt crisis of the public sector, being most prominent in some of the Euro Zone member states.

One interesting aspect of the crises in Europe is how developing countries cope with the difficulties which they are facing. Every economy within the EU has as its main goal to achieve an economic development level similar to the likes of Germany, France or Finland. This is equivalent with stating that they seek real convergence towards developed economies. In the context of the common currency bloc and the divergences within the bloc, the crisis revealed the importance of achievement of real convergence.

The aim of this paper is to study how countries from Central and Eastern Europe are positioned today in terms of economic development compared to the beginning of the new millennia. Of course one particular point of this study is how the crises affected this process of real convergence. The final and probably most relevant point of the analysis is the definition of the variables and macroeconomic policies which help achieve development through a sustainable path. The analyzed economies are Bulgaria, the Czech Republic, Hungary, Poland, Romania, Slovakia and Slovenia. The last two countries are of a particular interest as they already adopted the euro, Slovenia in 2007, while Slovakia in 2009.

2. LITERATURE REVIEW

In the context of the current crisis real convergence became a topic with a great importance. An interesting view expressed by Frankel (2004) was the importance of trade patterns and cyclical correlations regarding the adoption of a currency area's currency. The key for a more prepared economic state for future member states would be a stronger trade link with the euro zone as this would in turn lead to growing cyclical correlation.

Weber (2005) emphasized the need of pursuing a credible stability-oriented policy mix during the process of nominal and real convergence. Monetary and fiscal policy should interact with each other and fiscal policy must contribute to a stability-oriented policy. One important factor which can lead to growing "convergence dividend" is the falling inflation rates and the resulting lower long-term interest rates, as the latter would open the possibility for enterprises to lead economic growth. As a definition for real convergence among economies, Weber assumes: (i) a synchronization of the business cycle, (ii) trade and financial integration and (iii) factor mobility.

Isărescu (2008) emphasizes the negative impact of wage hikes in excess of labor productivity in case of Romania, as the disparity between the two fundamental indicators will entail a fast-paced rise in prices, the weakening of domestic currency and external indebtedness. As a consequence, investments will suffer which in turn will delay the achievement of real convergence of the economy.

Király (2011) argues that as global deleveraging takes place, which means that CESEE¹⁸ countries in the post crisis world rely on external financing to a lesser extent than previously, the risk that real convergence slows down increases, unless these countries find more domestic savings to finance the catch-up process.

Some of the quantitative definitions of real convergence include the beta (β) and sigma (σ) methods as defined by Barro and Sala-i-Martin (1995), Martin and Sanz (2003) and Dobrinsky (2003). The obtained results of testing and measuring convergence are sensitive to the selected time horizon and period for the acceding countries (Dobrinsky, 2003). Moreover, the link between nominal and real convergence needs to be taken into account via the real exchange rate.

The main goal of emerging economies is to achieve a growth differential compared to advanced economies. According to neo-classical growth models - Solow (1956), Mankiw et al. (1992) – convergence can be achieved by increasing the ratio of capital per worker or by improving total factor productivity. This in turn will lead to a growth of output per employee (Martin and Sanz, 2003). Lucas (1988) argued that human capital with increasing returns is the main driving factor of economic growth.

¹⁸ Countries of Central, Eastern and Southeastern Europe

Martin and Sanz (2003) also investigated the impact of human capital on convergence within innovation-driven growth models: based on studies from Nadiri and Kim (1996), Coe and Helpman (1995) and Keller (1999), with focus on technology spillovers driven by trade and studies from Blomstrom and Wolff (1994), Baldwin et al. (1999) investigating technology spillover effects through foreign direct investments, the authors found that both the level and rate of investment in human capital prove crucial for growth.

3. METHODOLOGY

The relationship between the real GDP per active inhabitant and the selected macroeconomic variables is studied with the help of the classical linear regression model:

$$y_t = \mu_t + \sum_{i=1}^p \beta_i y_{t-i} + \sum_{k=1, j=0}^{q, m} \alpha_k \Delta x_{kt-j} + u_t, \quad t = \overline{1, n}, \quad (1)$$

Where y_t denotes the growth of real GDP per active inhabitant of the studied economy in quarter t , μ_t is the constant term, n is the number of quarters, $(p+q)-1$ is the number of explanatory variables, β_i is the coefficient estimate for the i th lag of the dependent variable ($i = \overline{1, p}$), Δx_{kt-j} represents the change in value of the j th lag of explanatory variable k , α_k is the coefficient estimate for the j th lag of explanatory variable k , while u_t is the error term in quarter t . The selected explanatory variables are as follows: *net FDI¹⁹ flow in the reporting economy, balance of the current account²⁰, public debt level and public deficit, openness of the economy, investment level and investment growth in the economy and finally, real labor productivity.*

The real GDP growth is assumed to follow an autoregressive process, hence we included lagged values of the dependent variables among the explanatory variables. Since a time series analysis is conducted, a great emphasis has been placed on the assurance that the studied variables are stationary. For the testing of the stationary property of a variable, the augmented Dickey-Fuller (ADF²¹) test has been used. Other relevant tests conducted during the model building process were the White Heteroskedasticity test, the Breusch-Godfrey Serial correlation LM test and the Bera-Jarque Normality test.

4. DATA AND EMPIRICAL RESULTS

4.1 Data

In order to have some preliminary view on how the key macroeconomic variables are related to one another, in this section we present their evolution in time for each analyzed country in a comparative framework. The analyzed period is comprised between 1999Q1 – 2012Q4. The variables have a quarterly frequency, which in this case ensures the largest sample size. The first studied variable is the one which comprises the most synthetically the process of real convergence, namely the real GDP per

¹⁹ Foreign Direct Investment

²⁰ CA

²¹ Augmented Dickey-Fuller

inhabitant. We reconsidered the content of this indicator and concluded that an even more appropriate indicator – without denying the validity of the former one – is the real GDP per active inhabitant.

Before analyzing in detail the above mentioned indicator, the evolution of the real GDP will be presented in short. Generally speaking, from the end of the 1990's we were the witness of positive GDP growth in the studied economies, which was halted by the international crisis from 2007. The lowest point reached for most of the countries seems to be in 2009.

A rebound of the economies did appear in the following two years (2010 and 2011), however the aggravation of the Euro Zone debt crisis put pressure on the fragile recovery, resulting in a stagnant economic activity in 2012. The least affected economy was Poland maintaining positive growth throughout the entire analyzed period. The key in maintaining a positive growth even in 2009 was the very high level of internal consumption compared to the other economies. Analyzing the main components of the GDP would lead us to the conclusion that all economies suffered especially from the decrease in investments, usually counterbalanced by the increase in net exports (as exports decreased less compared to the decrease of imports), while the consumption also decreased.

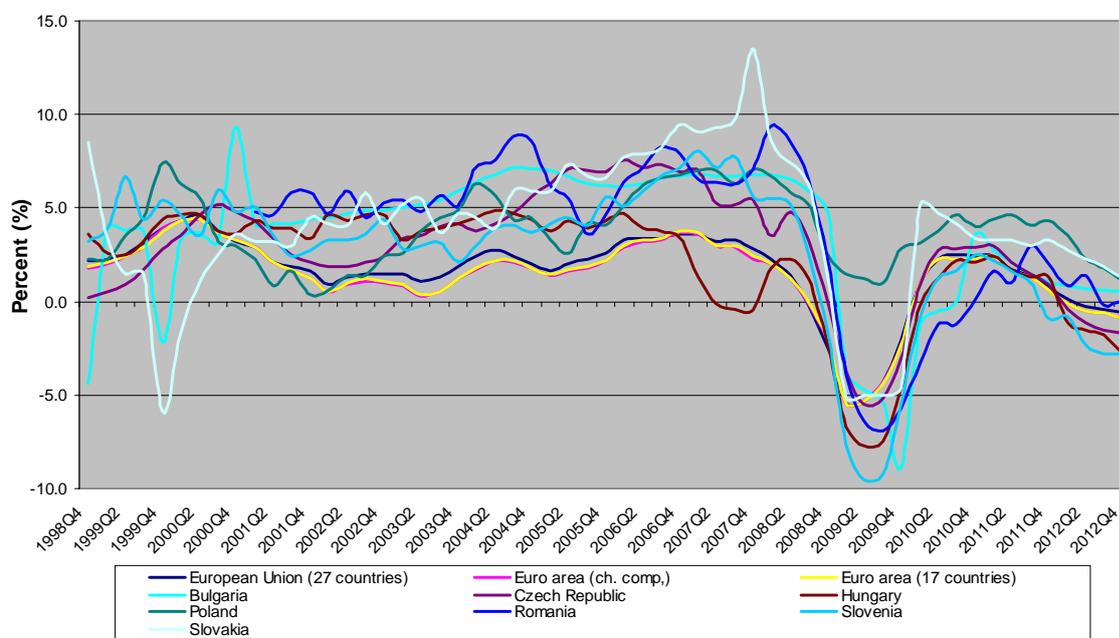


Figure 1. Annual real GDP growth

Source: Eurostat; Seasonally adjusted data (percentage change compared to corresponding period of the previous year)

Turning to the real GDP per active inhabitant, we will see a steady increase during the studied period. Figure 2. points out that the country with the highest values is Slovenia, while the one with the lowest one is Bulgaria. More interesting is the volatile evolution of the real GDP (Figure 3.), with Romania recording the most extreme value within the sample of countries. In 1999 Q2, the decrease by more than 10 percent came due to the increase of almost 10 percent in the number of the active population, while in 2002 Q1, the increase in real GDP was accounted to the decrease in the number of active population.

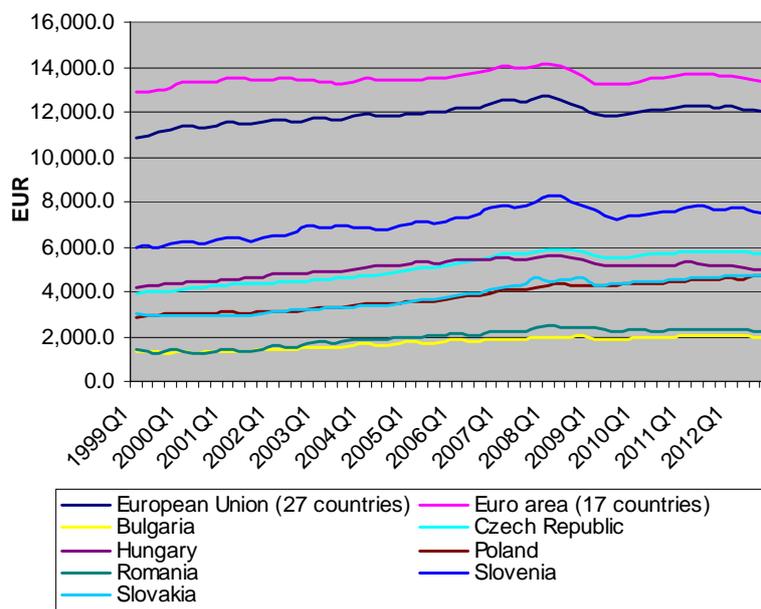


Figure 2. Real GDP per active inhabitant

Source: Author's calculation based on Eurostat data

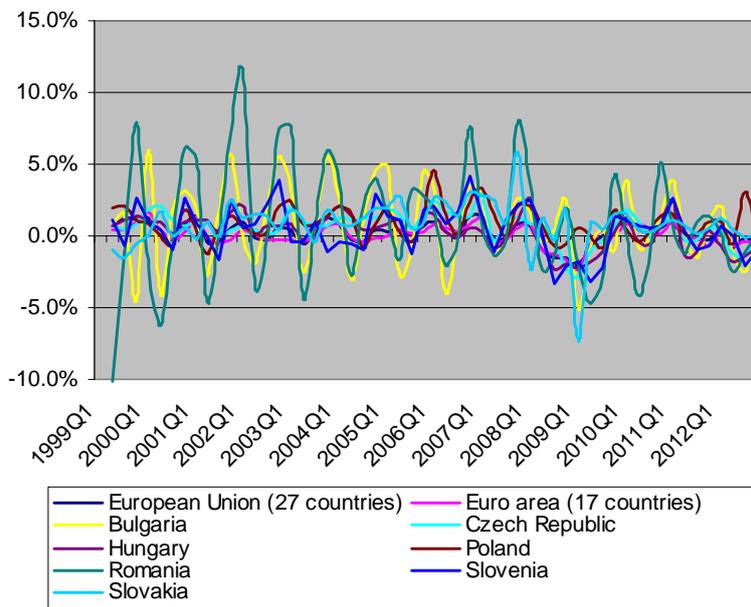


Figure 3. Evolution of real GDP per active inhabitant

Source: Eurostat; Seasonally adjusted data (percentage change compared to previous period)

The idea behind the new indicator for real convergence is based on the theory that GDP is produced by the active inhabitants of a country, hence if we intend to quantify the pure performance of an economy and if we want to compare the progress in terms of resource utilization (mainly labor force), the indicator based on the active population should have a more representative meaning. In our view the nominal GDP per inhabitant indicator should be considered as a measure of progress and welfare of the society as a whole.

Some of the potential explanatory variables of real convergence could be the following indicators: *FDI flow in the reporting economy, balance of the current account, public debt level and public deficit relative to GDP, openness of the economy, investment level in the economy and real labor productivity.*

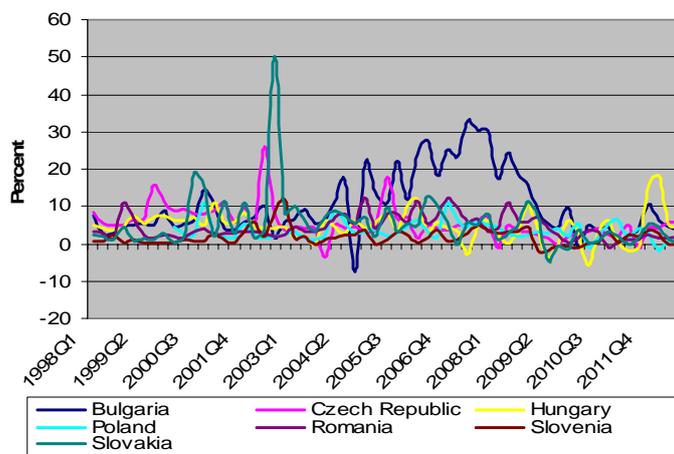


Figure 4. Net FDI to GDP ratio

Source: Eurostat

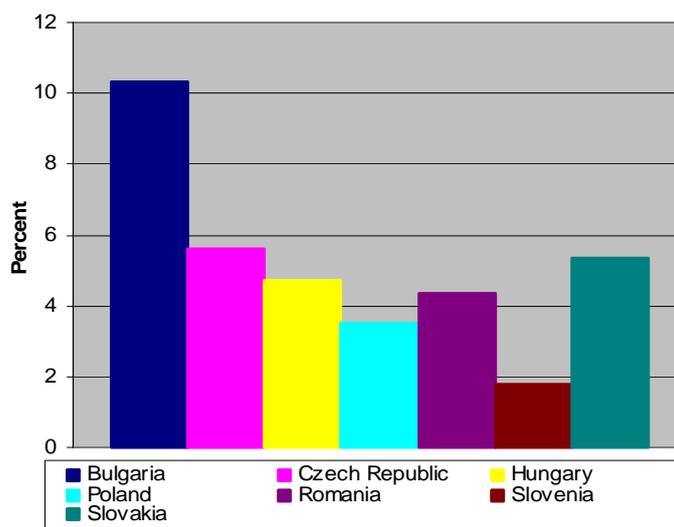


Figure 5. Average net FDI to GDP ratio

Source: Author's calculation based on Eurostat data

Figure 4. reveals the evolution of net FDI expressed in percentage of GDP between 1998 and 2012. One outstanding evolution is related to Bulgaria where the FDI inflow between 2004 and 2008 was substantially above 10 percent, in 2007 exceeding 30 percent. After the crisis started unfolding in 2008, the FDI dropped below 5 percent. Generally speaking, throughout the analyzed period only Bulgaria was able to secure an FDI flow above 10 percent. The other countries registered values around 5 percent, with only Slovenia having absorption below 2 percent (Figure 5).

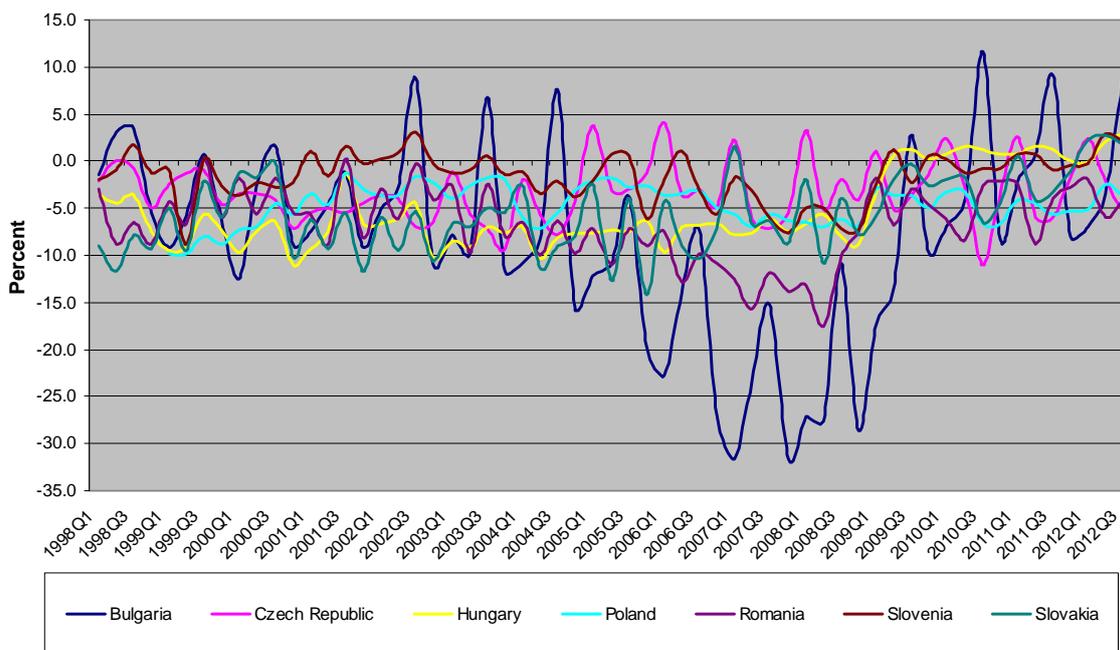


Figure 6. Current account balance (percentage of GDP)

Source: Eurostat

Looking at the external balance of the analyzed economies will show a general pattern of deficit accumulation during the analyzed period. It is in line with expectations that Bulgaria is the outlier with very large deficits during 2004-2008. By definition the Current Account should be a mirror of the Capital and Financial account, hence if Bulgaria had large deficits on one side, it should also have had similarly large surpluses on the other side, mainly represented by large FDI inflows. Romania was the other economy with deficits exceeding 15 percent of GDP, while the other economies usually registered values under 10 percent. After 2008 the current account balance started showing improvements for all studied economies, however deficit accumulation still persisted.

A very important set of variables is the one related to public finance: public debt and public deficit. On Figure 7. and Figure 8. respectively we can see the evolution of the two mentioned variables with values expressed relative to the GDP level. The pattern valid for the years prior the crisis was debt level maintenance, however in some cases – Bulgaria, Romania and Slovakia – debt level reduction was characteristic. The international crisis from 2007 changed the trend of debt levels for all countries and starting with 2009 debt levels started increasing rapidly.

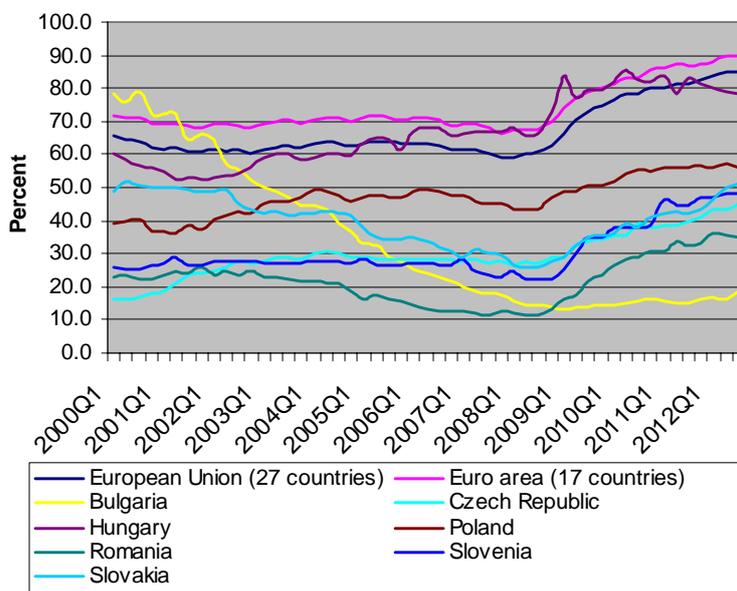


Figure 7. Government consolidated gross debt (percentage of GDP)

Source: Eurostat

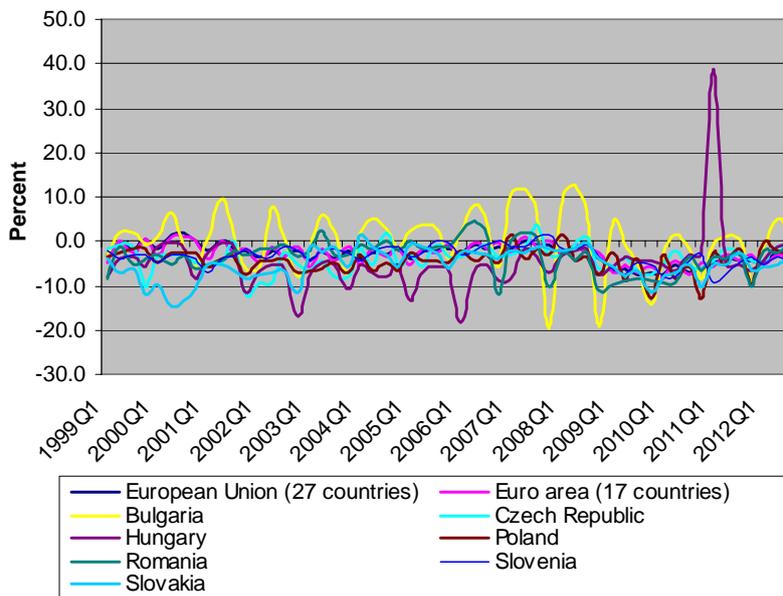


Figure 8. Public deficit (percentage of GDP)

Source: Eurostat

From debt level evolution we can inference on how public deficit evolved during the analyzed period as generally higher deficit levels will lead to an increase in debt levels while surpluses will lead to debt reduction. This is supported by the examples of Bulgaria and Hungary, the two extreme economies. Bulgaria had usually a balanced public finance, most of the time accumulating surpluses, while Hungary

had a public deficit characterized by overspendings. A very extreme value can be noticed for Hungary in the first quarter of 2011 – 38.73 percent – which is due to the “nationalization” of savings within the private pension funds accumulated up to that point for those citizens who opted to leave the second pillar of the pension system.

The openness of the economy is expressed by the sum of imports and exports relative to GDP level. Slovakia and Hungary are the most opened economies with levels above 180 percent in 2012, while the least opened economies are Poland and Romania with levels under 100 percent (Figure 9). The general trend for this indicator was an ascending one throughout the analyzed period, however this trend suffered a halt and a decline in 2009 as volumes of trading at global level were affected by the crisis. With the exception of Poland and Romania, for the other economies we could notice a very fast rebound in the trend of the variable measuring the openness of the economy.

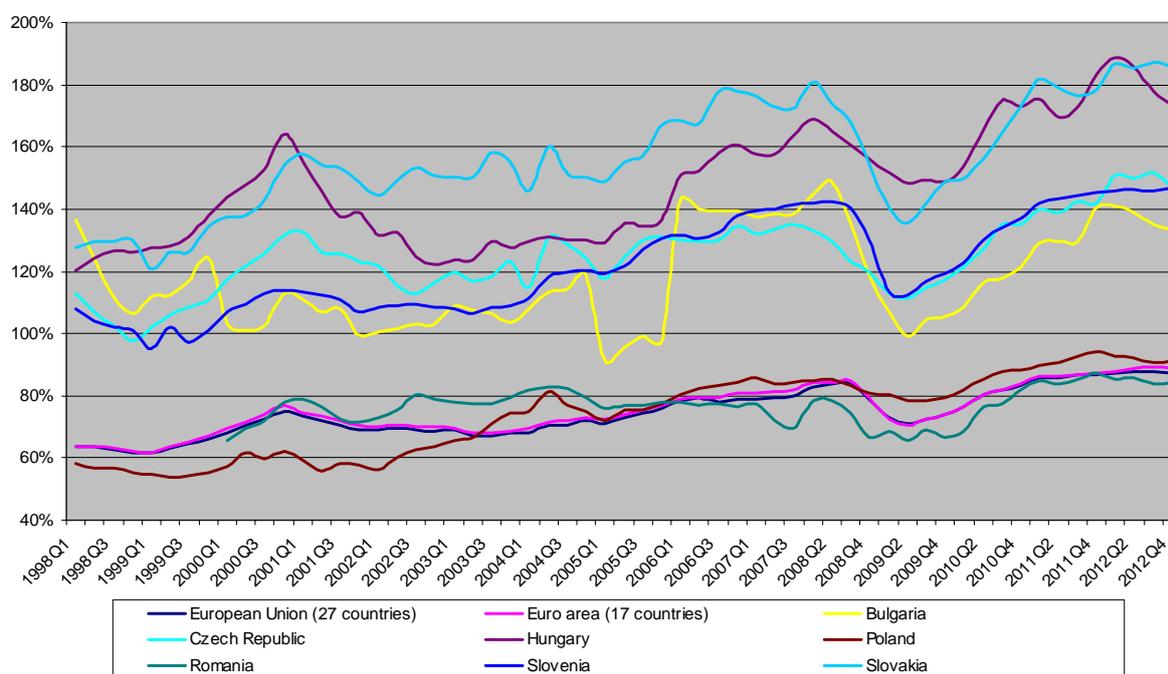


Figure 9. Openness of the economy

Source: Author’s calculation based on Eurostat data

Investments represent an important component in the process of convergence, at least this is what economic theory would suggest. Real investment evolution (Figure 10.) has a very volatile pattern. This volatile nature is most visible for Romania, Bulgaria and Slovakia. The biggest drop in investment rate can be seen in 2009 and since then, the average growth rate is under the average growth rate from pre-crisis years. To be more precise, all analyzed countries experienced a positive average growth rate of real investments, however after 2009 all countries, except Poland registered negative average growth rates. Another interesting aspect of real investment can be observed in case of Romania in the post-crisis years when volatility increased visibly, compared to pre-crisis years.

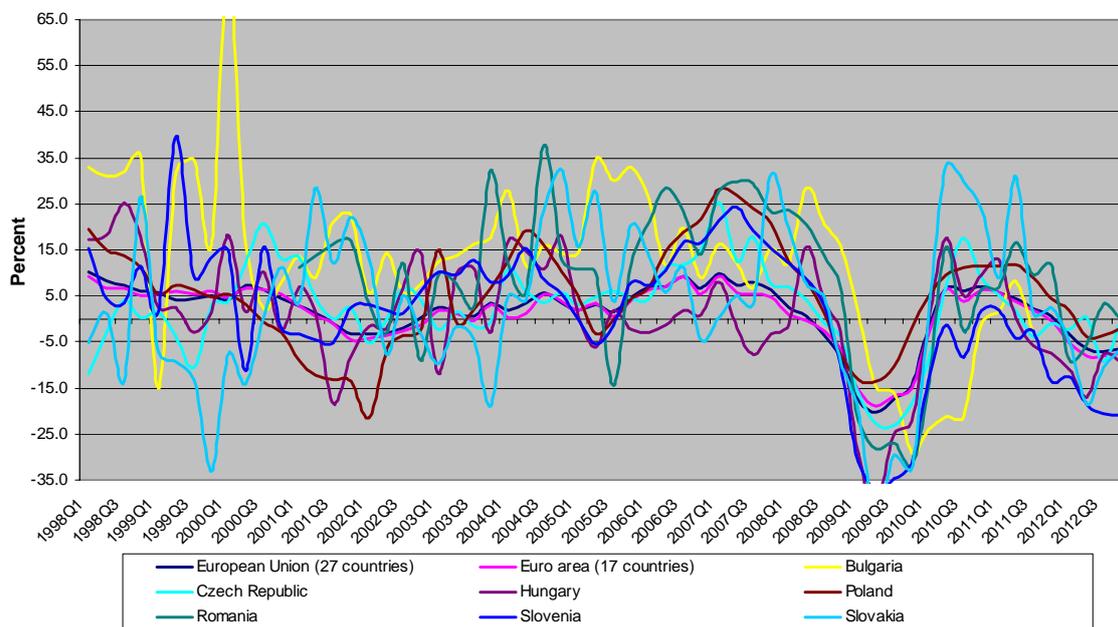


Figure 10. Growth of real investments

Source: Eurostat

The last independent variable is the real labor productivity. There would be more possible indicators to measure productivity, however we find the most synthetic one to be the 'Real labor productivity per hour worked'. Figure 11. reveals the level of productivity, while Figure 12. presents the change in productivity during the analyzed period. The Euro Zone is clearly a benchmark with a high productivity level, with Slovenia representing the closest follower within the group of emerging Central and Eastern European countries. Even Slovenia is capable of only achieving slightly more than half of the productivity level registered by the Euro Zone. Looking at the evolution of the productivity, we can notice a general convergence in case of all studied economies, as the growth rates are above the ones registered for the Euro Zone. There is however a difference in the speed of convergence among the economies. On average, Romania, Slovakia and Bulgaria were able to achieve the fastest quarterly growth rate, with an average of 1.27, 0.94 and 0.89 percent respectively. We do have to pin the fact that Romania and Bulgaria had the smallest productivity levels amongst the economies at the beginning of the analyzed period.

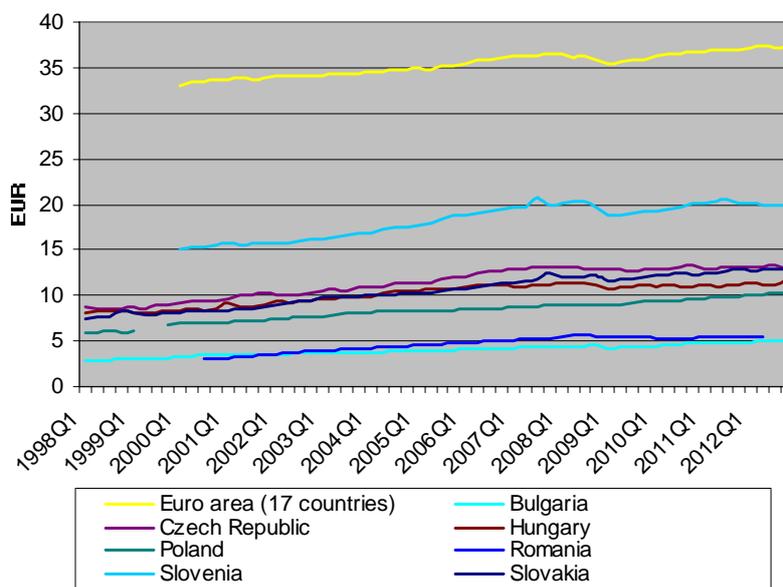


Figure 11. Real labor productivity per hour worked

Source: Eurostat

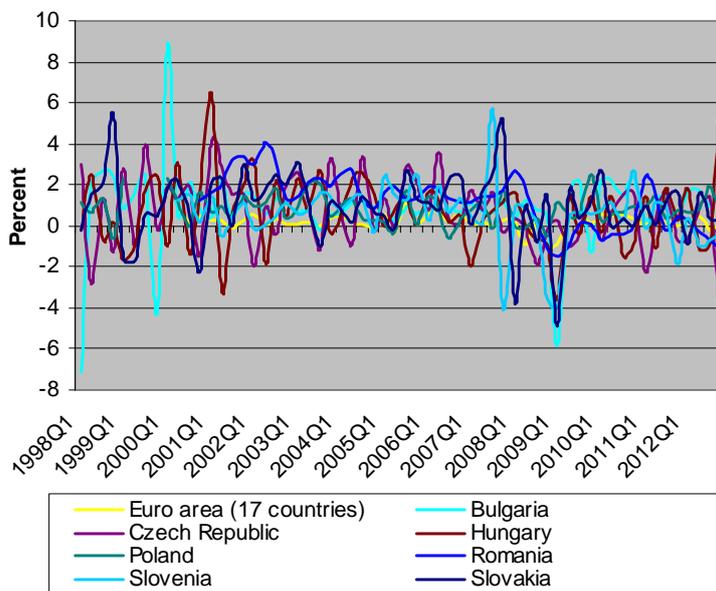


Figure 12. Evolution of real labor productivity

Source: Eurostat; Seasonally adjusted data (percentage change compared to previous period)

4.2 Econometric analysis

Table 1. presents the estimated coefficients and standard errors for each analyzed country. The dependent variable of the regression is the quarter on quarter change of the real GDP per active inhabitant. In terms of real convergence, the best performing economies – measured with the relative growth of real GDP between the beginning and the end of the analyzed period – were as follows: Poland, Slovakia, Romania, Bulgaria, the Czech Republic, Slovenia and Hungary.

In case of Bulgaria we found six significant variables in explaining economic growth. All variables have the expected sign. Bulgaria experienced a very large amount of capital inflow especially in the second part of the last decade, hence it was expected to see this variable as one with high importance in explaining the variation of the dependent variable. Both the current account and government deficit needs to be kept at sustainable levels, as high negative values will have a negative impact on growth as well, due to the accumulation of debt in both public and private sector. Labor productivity growth has a beneficial effect in the catching up process through its contemporaneous value, hence no significant amount of time has to elapse after improving the productivity level.

For the Czech Republic, besides the two deficit variables – CA and government –, the growth in investments, productivity and GDP evolution proved to be significant. Very interestingly, the government deficit variable has a negative sign. One explanation for this could be the fact that the government had a quite disciplined fiscal policy, very rarely exceeding the 3% threshold value expressed in both the Maastricht Treaty and Stability and Growth Pact. This would suggest that, with control over the expenditures, the Czech government could run a more expansive fiscal policy to stimulate real growth. However great emphasize must be placed on the control over expenditures.

		Bulgaria	Czech Republic	Hungary	Poland	Romania	Slovakia	Slovenia
Constant	Coefficient value	-0.002, (0.004)	0.002, (0.002)	0.027*, (0.015)	0.004, (0.003)	-0.0019, (0.006)	0.051**, (0.02)	0.018***, (0.005)
	Lag							
Net FDI to GDP	Coefficient value	0.11***, (0.036)		0.0008*, (0.0005)	0.09*, (0.052)		-0.03*, (0.019)	-0.28***, (0.08)
	Lag	t-4		t-4	t-4		t-1	t-4
Net CA def. to GDP	Coefficient value	0.16***, (0.035)	0.09***, (0.033)		0.23***, (0.064)	0.16*, (0.08)		0.25***, (0.09)
	Lag	t-2	t		t-2	t-4		t-2
Gov debt to GDP	Coefficient value	-0.12**, (0.048)						
	Lag	t-1						
Gov def. to GDP	Coefficient value	0.10***, (0.034)	-0.07*, (0.039)				0.11**, (0.048)	0.22**, (0.10)
	Lag	t-2	t-4				t-3	t-2

Openness of the economy	Coefficient value			-0.018*, (0.01)	0.08**, (0.036)	0.199**, (0.07)	-0.027**, (0.012)	
	Lag			t-4	t-3	t-1	t-4	
Investments to GDP	Coefficient value							
	Lag							
Investment growth	Coefficient value		0.03*, (0.016)					
	Lag		t					
Real labor prod. growth	Coefficient value	0.98***, (0.185)	0.14*, (0.078)	0.20***, (0.074)	0.62***, (0.17)	0.59***, (0.22)	0.69***, (0.09)	0.23*, (0.13)
	Lag	t	t-1	t	t	t-1	t-1	t
Real GDP per active inh. growth	Coefficient value	-0.21**, (0.096)	0.36**, (0.13)	0.33**, (0.13)	0.53***, (0.11)	0.74***, (0.07)	0.25*, (0.09)	0.29**, (0.13)
	Lag	t-1, t-4	t-1	t-1	t-4	t-4	t-4	t-4
Adj. R ²		0.68	0.51	0.41	0.53	0.71	0.62	0.29

Table 1. Results for the econometric analysis

Note: The brackets stand for standard errors. *** means 1% significant coefficients, ** means 5% significant and * 10% significant.

Hungary's catch-up was the slowest one amongst the studied economies and only a few of the studied variables were capable of explaining some of this process. Openness of the economy seems to have a negative effect on the Hungarian economy as the variable has a negative coefficient. One possible explanation could arise from the fact that the economy is relatively small paired with an also small population, hence a large exposure to the external sector could represent a potential vulnerability, given the importance of foreign capital and the large public and private debt. Labor productivity is significant through its contemporaneous value.

Poland is the best performing economy, however not just amongst the studied economies, but also in the entire EU. Opposed to Hungary, in case of Poland the openness of the economy seems to have a positive effect on convergence. Two important facts need to be emphasized at this point: the difference between the size of the two economies and the difference between the grade of openness. The Polish economy is approximately four times bigger and compared to its size only half as opened than the Hungarian economy. Foreign capital is essential for growth, however if we take a closer look at the

coefficient values, it will reveal that productivity growth and sustained economic growth will keep the momentum for the convergence.

Similar conclusions can be drawn for Romania as the ones valid for Poland, that is, though Romania is not as large as Poland, however the openness of the economy is relatively small, hence there is room for more exposure towards the external sector. This however has to be done with great control as the private sector accumulated significant debt – emphasized through a double digit current account deficit. Labor productivity and sustained economic growth are significant in this case as well. The high coefficient value for the real GDP growth is explained by the fact that in the prosperous years, the economy grew mainly on the basis of internal consumption financed through external debt.

Slovakia showed an important amount of improvement in terms of convergence, however this was founded mainly on external borrowing, similarly to Romania. During the last decade the economy became even more opened compared to the other economies. This could be the plausible reason for why the current account deficit and the openness of the economy have a negative impact on the convergence. After a certain point openness could have a negative effect on convergence.

Finally, Slovenia is the economy with the second slowest pace of convergence throughout the analyzed period. However, it was and remains the most converged economy to the development level of the Euro Zone. This is an important fact as it signals, that after a certain point convergence eventually will slow down and a new path will need to be discovered. This is supported by the coefficient values and the explanatory ability of the model.

5. CONCLUSIONS

The aim of this paper is to study the relevant factors of real convergence in the case of seven Central and Eastern European countries: Bulgaria, the Czech Republic, Hungary, Poland, Romania, Slovakia and Slovenia. The benchmark level for development is represented by the Euro Zone.

One of the overall conclusions is that all proposed variables – except Investments ratio to GDP – proved to be significant in explaining real convergence. There are two variables which consistently proved to be relevant in explaining real growth for all seven studied economies, namely *growth of real labor productivity* and *growth of real GDP per active inhabitant*. The latter variable emphasizes the autoregressive characteristic of GDP evolution. Given that the lags were generally one and four quarters for the autoregressive variable, the output growth is dependent on the short run on previous growth levels. On the other hand, the first variable indicates the importance of labor force in the convergence process, hence investing in human capital remains an important objective and tool as well for policy makers.

The cases of some economies – Hungary and Slovakia – proved that openness can be harmful, when passing a certain threshold value, hence great attention needs to be addressed towards exposure to the external sector.

Other vulnerabilities for the new member states remain, which is reflected in a slowing convergence in the aftermath of the crisis. These stem mainly from the large debt denominated in foreign currencies, the current account deficits and the worsening of their international investment position. As a consequence, in tackling exchange rate risks and in order to improve convergence, new member states should focus on ensuring sound public finances, stable financial systems, and macroeconomic stability. The large burden of public finances and the excessive deficits deserve a special attention and decisive action by fiscal authorities.

As future research it would be interesting to analyze the behavior and influence of the variables in the context of the Vector Autoregressive (VAR) framework, given that macroeconomic variables were employed in the conducted analysis. A potential different approach compared to the one used in this paper would be the modeling of real convergence with the help of the gap values of macroeconomic variables between the Euro Zone and Central and Eastern European countries.

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**FINANCING SME SECTOR IN BOSNIA AND HERZEGOVINA – CURRENT SITUATION
AND PROBLEMS UNDER FINANCIAL CRISIS**

Igor Živko, Željko Šantić, Branimir Skoko,

Faculty of Economics Mostar, University of Mostar

Matice hrvatske bb, 88000 Mostar, Bosnia and Herzegovina

Abstract

SME sector is crucial segment of national economy and present source of economic growth as in developed industrial countries as in emerging countries and undeveloped countries. Problems with SME sector is faced in business become complex under financial crisis. As crucial problem we can determine ensuring source of financing. Authors in paper analyze effect of financial crisis on SME sector, problems in financing SME and review of solution for challenge in financing this sector under crisis and post crisis period.

Key word: *SME, source of financing, problems, challenge, financial crisis.*

1. INTRODUCTION

SME sector play an important role in the economic development of each country. SMEs sector is positively correlated with creating new jobs and securing channels of regional development. According to estimation made by the OECD, SME as a form of business organization have share for 95-99% in the all forms of organization business in national economies. It also creates between 60-70% of the net new jobs in OECD countries (OECD, 2006). SME sector is recognized in professional and scientific literature as an instrument of competitiveness.

SMEs in their business are faced with the problem of how to ensure funding for inadequate offer of financial products and services, regulatory rigidities or the existence of gaps in the legal framework, the inadequacy of information that banks and SMEs "asymmetric information", limited assets that can be used as collateral. As the negative impact of the financial crisis, the problems of financing SMEs is being deepened especially with securing funding channels, reducing loans for investment, reducing working capital, and are more stringent lending conditions by banks. The reasons for this situation lies primarily in the poor economic outlook and the economy and the SME sector, stagnation interbank lending and rising equity prices (a spillover effect from the developed market in transition countries) and the constraints that represent the balance sheet positions of SMEs. SME sector is confronted with all these problems reported bankruptcy of many companies.

The paper analyzes the impact of the financial crisis on the SME business sector, primarily on access and funding issues and an overview of some of the solutions to the challenges of financing this sector in crisis and post-crisis period.

2. FINANCIAL CRISIS ON SME SECTOR

The financial crisis has left an impact on the SME business sector in the EU, as well as transition countries primarily through a decline in sales. The effect of the crisis cost money multiplies when the revenue decline occurring two key elements that SMEs exhibit business conditions recession:

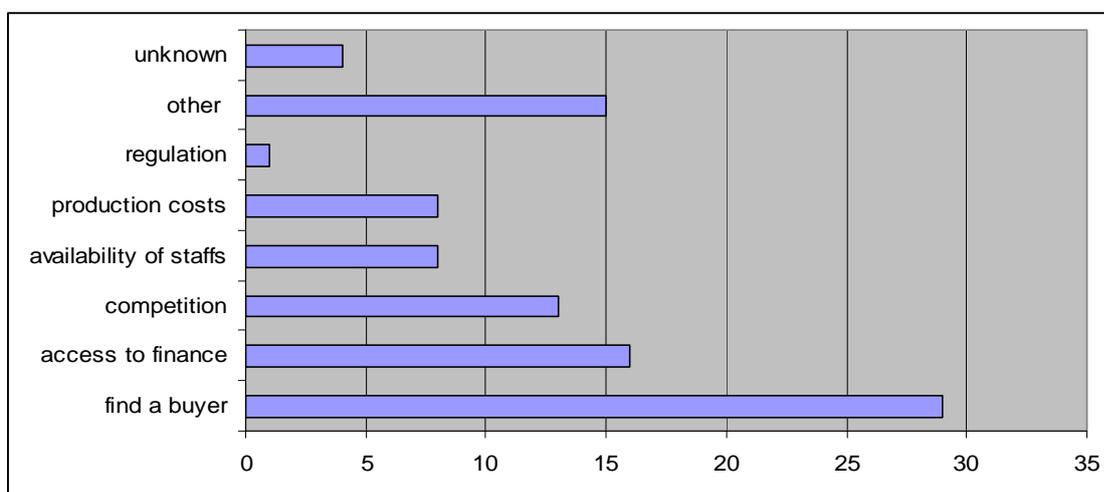
- extension of time receivables and an increase in inventories (higher costs of inventory management, loss of stocks) which has resulted in reduced liquidity
- increase the collection risk, insolvency and bankruptcy.

SME sector is faced with revised terms of business. Primarily reduces trust between business partners, and the emphasis placed on the need to obtain information on the risk of business partners and hedging instruments. SME sector as a result of the financial crisis, notes:

- reduction of investment projects
- reducing the demand for working capital and short-term loans, but less intensity of reduction for investment loans
- stringent criteria borrowing from banks in respect of guarantees and the amount of the loan
- increasing interest rates.

Research which was implemented by the ECB in 2009 shows various business problems SMEs among which dominates the problem of insurance markets, and limited access to financing (Figure 1).

Figure 1: Problems in business SME in EU



Source: ECB, (2010) Survey on the Access to finance of small and medium-sized enterprises in the euro area: second half of 2009, Frankfurt am Main, Germany

The answers to these problems in the theory are found in three fields:

- cutting costs in order to maintain the level of profitability and adaptation of production lower level of demand, this set of measures applies only to wage cuts, reduction in administrative costs
- seeking additional sources of liquidity through the extension of payments, depreciation, reducing dividends, etc.
- delay or halt investment projects (extension, renewal, etc.) and the process of mergers and acquisitions of small high-growing SMEs.

The fundamental source of financing for SMEs is certainly bank. The financial crisis and post-crisis period, SMEs are turning to other sources of funds such as leasing and factoring. Poor improvement in the use of external resources in the post-crisis period indicates: reduced demand by small and medium-sized businesses and the negative effects of the crisis on the availability of funding sources, ie, range of financial products and services. The reasons for this situation are: poor general economic situation, a situation where there are some businesses and reduced the willingness of banks to lend to businesses.

3. SOLUTIONS FOR THE CHALLENGES OF FINANCING

Options government to respond to the impact of the financial crisis depends on the width, namely availability of instruments of fiscal and monetary policy. At the same time it is difficult to take action in a situation of not existing complete database of information about: the number of companies, size heterogeneity of SME, forms and modes of action, industries in which SMEs operate, but also the effects of the measures taken so far. The possible responses to the impact of the crisis are anti-crisis packages that represent elements activities on three areas:

- stimulation of demand
- encourage lending
- labor market measures.

Table 1: Possible actions to mitigate the effects of the financial crisis

Area	Activities
stimulation of demand	consumer packages infrastructure programs tax policy
encourage lending	public credit guarantees direct public financing recapitalization of banks with public money to order special conditions of SME lending
labor market measures	reduce taxes on employment reduction contributions introduction of temporary programs for unemployed

Source: adopted from Visinescu, S., Micuda, D. (2010) Challenges Faced by EU SMEs in the Context of the Global Economic Crisis, Romania Economic and Business Review, Vol. 4, No. 2., pp. 192.

Measures that countries use to remove the problems of business sector SMEs are different from country to country, but they can be classified into the following three groups:

- support measures to sales, cash flow and working capital of the company
- measures to improve SME access to liquidity mainly bank loans
- SME measures in the management of investments to ensure adequate capacity for responding to possible reduction in demand.

The decline in sales and the disadvantage of bank loans leads policy makers to improve access through two loan offer (access to finance):

- the flats encouraged through the creation and expansion of the guarantee scheme for loans to SME lending (Zecchini, Ventura, 2006, 12):
 - mutual guarantee institutions' mutual guarantee institutions (MGI) "association of small businesses that are willing to share the risk of debt as a way to facilitate their access to bank loans
 - banks and other financial institutions that provide services to guarantee companies
 - public funds at the central or regional authorities offered guarantees, ie, insurance or reinsurance services to financial institutions that made loans to SMEs or MGI
 - or direct public funding
- on the discipline or sanction banks that were recapitalised with public money by placing it under a special administrative supervision or special procedures to handle a relationship between banks and SMEs.

Creation, expansion and diversification of the guarantee scheme including direct funding of public institutions is often used measure. This measure aims to sučeljiti is the fundamental problem, which can be explained by the reluctance of banks lending to SMEs, ie their restrictions in the form of capital requirements. The measure is an incentive to banks in lending to SMEs through the provision of bank loans. This measure attempts to solve temporary problems firm's insolvency. Although the measure is expected to be focused primarily on encouraging investment. Some countries in solving the problems that arise due to the different positions of banks and companies seeking bank loans appointed Credit intermediates "credit mediator".

Reducing the demand for results and samanjenjem investment in the SME sector which leads to a reduction in demand for long-term sources of funds. To prevent loss of competitive ability of enterprises must ensure and encourage strengthening of the capital base of companies or expand their production capacity through: grants (Germany) and loans (Austria, Czech Republic, Germany, Hungary, Spain). It is a measure proinvesticijskog acitivites.

As the macroeconomic situation exacerbated by the long-term problem of illiquidity companies can turn into a problem of insolvency. It is therefore necessary to take measures to strengthen the capital base of enterprises by strengthening cash flows, self-financing or other services related to the share capital.

Measures that can be taken to solve the problem in the form of the listed challenges in financing the SME sector which bears the financial crisis can be classified into:

1. stimulate sales, cash flow and working capital:
 - export aid (Austria, Czech Republic, Denmark, Germany, Italy, Luxembourg, Netherlands, Spain), the export guarantee funds
 - deductions in payment of tax liabilities (Belgium, Netherlands, France, Italy, Denmark), the abolition of tax (abolition of tax on reinvested profit) tax reduction²², differentiation of tax rates, tax refunds for exported goods, delayed payment of social benefits SMEs
 - facilitate payment procedures (France, Netherlands, United Kingdom) and guarantee claims
 - measures to shorten kašenjenja in payments to businesses and government
 - depreciation (amortization of investment projects)
 - factoring receivables
 - encouraging research and development and innovation of products and services (environmental, IT, energy)
2. facilitate access to sources of liquidity SME (bank loans)
 - the creation and expansion of credit and guarantee schemes (Austria, Belgium, Czech Republic, Finland, Germany, Great Britain, France, Italy, Greece, Estonia, Romania, Slovenia)²³
 - risk-sharing funding with private creditors
 - the introduction of credit mediators and monitoring (Belgium, France, Italy)²⁴
 - reorganization as a legal anti-crisis measures.
3. proinvesticijske measures (Austria, Czech Republic, France, Germany, Italy, Hungary, Spain)²⁵
4. strengthen the capital base of private equity and venture capital, "Venture Capital" (Austria, Denmark, Finaska, Hungary, Great Britain, Slovenia), mezzanine finance hybrid financing instrument which is a combination of equity and liabilities.
5. promoting business services and SME involvement in the development of relevant policies:
 - providing information on the SME sector, government measures
 - help SMEs in negotiations with banks
 - improving financial skills and knowledge of SME (training programs)

²² Japan decreased tax rate for SMEs from 22% to 18%.

²³ France guarantees 90% of loans, the UK and Korea 100%, Japan 80%.

²⁴ Credit mediator (mediator) monitors SME sector lending by banks through timely reporting and established rules of behavior of banks in lending to the SME sector. The mediator helps get rid of the problems that arise in the relationship between companies and banks.

²⁵ Finland models of public-private partnerships, international project Japan-Hungary Venture Capital Fund, the United Kingdom provide capital for Enterprises Fund worth 85 million euros.

- SME sector participation in policy-making in order to understand their needs and perspectives
 - constant communication and consultation with SME sector regarding the impact of the financial crisis and the effectiveness of measures and programs are emerging to help SMEs
6. promoting access to and exchange of timely information
- increase the transparency of bank lending by encouraging the timely publication of the structure of the loan portfolio of SME
 - creation of development agencies to coordinate SME development and growth of SMEs taking into account national, structural, industrial, technological, social and regional policy (SME financing programs from public funds, and self-employment activities, administration, coordination and monitoring of implementation of the program of support SME).

How can small and medium enterprises in the EU are defined as companies with fewer than 500 employees, an annual turnover of less than EUR 38 million, it is clear that in BiH almost all companies belonging to the SME segment. Measures listed thus gaining in importance with the need to coordinate efforts of the entity and the central government and the closure of the institutional and legal framework for SMEs.

4. SME SECTOR IN BOSNIA AND HERZEGOVINA

According to a definition set by the Law on Stimulation of Small Economy Development passed in the first half of 2006 (Low, 2006) according to which the small economy is made of subjects of small economy, natural and legal persons performing permanently activities allowed by the law for income generation or profit earning, including self-employment and family businesses linked to trades and crafts and other activities, registered before the competent body, disregarding a form of organization. Research is provided with aim to identified problems in operating SMEs in the Herzegovina – Neretva Canton. Research results that enterprises using borrowed sources of financing, during founding of an enterprise, are using mostly banks as a source of borrowed capital, namely even almost 52% of them, and after that 16,67% of them used suppliers and private persons in almost 13% of them. In structure of borrowed capital used by enterprises for current operations or during new investments, banks are again dominant as source with almost 67%, after them leasing companies with 9,33% and microcredit organizations with 6,67% share.

By analyzing problems making impossible or impeding access to sources of financing or making it impossible in adequate quantity and form or under favorable conditions, it has been established that numerous problems are as follows (Klepić, Živko, Grbavac):

- high interests,
- high banking fees,
- complex procedures for processing a credit,
- time of processing a credit is long,
- banks are requesting many documentation,

- request for collateral are high for security of repayment of approved credit,
- lack of private capital,
- lack of precise and quality financial reports,
- lack of quality information,
- lack of knowledge and experience from financial management, as well as reluctance of enterprises' owners to accept new partners who would invest a fresh capital in an enterprise and get a part-ownership in return.

The state should modify the legislative regulations and restructure institutions of support to development of small enterprises, as well as adjust and harmonize their work, thus facilitating the access to sources of financing to small enterprise. By modifying the legislative regulations and creation of favorable political and entrepreneurship climate a spectrum of various sources of capital would be stimulated, increased and enlarged thus facilitating the access to sources of financing to small enterprises and the capital would be available to them in adequate quantity and form and under appropriate conditions.

5. CONCLUSION

Small and medium-sized enterprises as a core segment of the national economy is a source of economic growth, dynamism and flexibility in developed industrial countries as well as in the growing and economically underdeveloped countries. Problems faced by SMEs during the normal operations become more complex in the conditions of financial crisis. A particular problem is the securing of financing SMEs for their business and the creation of appropriate policies and instrument of assistance to the sector by the central and regional governments. Based on the experience of other countries, particularly the analysis of man-made measures in developed countries, it is possible to recommend some measures that could be solved some of the problems of SMEs. The paper contains measures of improving liquidity, working capital to promote the involvement of SME sector in the development of government policies and strategies.

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**PROBLEMS OF REGULATION OF TOURIST ACTIVITY IN THE CONTEXT
OF SOCIO-ECONOMIC DEVELOPMENT OF THE REGION**

Olga V. Zaborovskaia

State Institute of Economics, Finance, Law and Technologies, Roschinskaya, 5, Gatchina, Russia

Abstract

The article discusses the possibility of raising the competitiveness of the regional economy on the basis of the potential of the tourist activity. The analysis of strategic documents, devoted to regulation of tourism development, is submitted. The regional cluster policy, focused on creation of tourist clusters is considered as the important direction of support of tourism in regions. Importance of involvement of public organizations in tourism regulation is noted. The review of the regional tourism clusters is presented. The article pays particular attention to the development of agro-tourism as an important area of preservation of human potential of the region.

Key words: regional economy, tourist activity, regional cluster policy

1. INTRODUCTION

Under current conditions, considerable attention is paid to improve the competitiveness of the regional economy, the specific areas that define the structure of management. Thus, as a rule, primary attention is given to various industries and technologies, first of all, with innovative capabilities. These industries include oil refining, chemicals, optical products, biotechnology, nanotechnology and others. In general, enhancing of innovation capacity of the regional economy can release the labor force.

At the same time revenues of employees of innovative companies are significantly increasing. These trends lead to the fact that an innovation economy initiates the development of services - both in connection with the restructuring of management, and with increasing importance of leisure time, and because of the need to ensure an adequate level of employment.

It should also be noted the high level of regional disparities in the economic space of Russia, a particular feature of which is the prevalence of the regions with a low level of competitiveness (This concerns, unfortunately, the most of the regions). Thus, according to estimates prepared by the consulting firm "Bauman Innovation" and the Institute of Regional Policy, assessed the competitiveness of Russian regions, based on the evaluation of their competitiveness and sustainability of regional development. AA rating was assigned to regions that showed both high economic potential and have the potential sustainability. According to the estimation, in 2008 as the leading regions were identified only two regions - Samara and Krasnodar region.

Interestingly, regions which traditionally are considered as economically developed - St. Petersburg, Leningrad Region, Moscow, raw materials regions, do not have absolute leadership, because of the problems with the environment, social infrastructure, etc. An alarming fact is that 60 regions do not have the potential of competitiveness (not classified as A). Despite the fact that the data refer to 2008, in general, this trend has continued into the present.

So, in 2012, the Eurasian Institute of Competitiveness, in collaboration with Strategy Partners Group and Sberbank of Russia had prepared a report on the competitiveness of Russia 2012: Regions on ways to improve performance. It compares the development of Russian regions and other countries (note that the size of the Russian regions are comparable to most European countries), as well as the relative positions of the regions are arranged in terms of their competitiveness. The report states that "the economic welfare of the region by international standards yet remains true only for Russian capitals and centers of extraction of natural resources. Other Russian regions show rapid growth, but still inferior from Eastern European region in terms of security. For less developed Russian territory, they are broadly consistent with the level of well-being similar to the less developed regions of Europe".

In view of these trends and negative trends urgent task is to find ways to improve the competitiveness of the region, taking into account the features of the present stage of development of Russian society and the need to improve the quality of life of the population.

2. THE NEED TO FIND NEW COMPETITIVE ADVANTAGES FOR THE DEVELOPMENT OF THE REGIONAL ECONOMY

A long time in Russia in the period of reform the concept of inter-regional equalization was dominated, whose implementation in practice was shown in the current system of intergovernmental transfers. Its economic content essentially consisted in the removal of additional revenue from donor regions, their centralization and subsequent transfer for recipient regions. However, this did not lead to an effective solution of the problem, in fact, for regions with high efficiency of the economic system taking revenues was a disincentive, as part of recipient regions occupied dependent position, not trying to develop its own capacity of regional economies. Moreover, the negative trend was the reduction in the number of donor regions (though, the quota of region-donors was constituted about one-eighth of the total number)/

The growing contradiction of regional development has changed the approach to the state regional policy, which was accompanied by institutional changes. Thus, in 2004, established the Ministry of Regional Development, and in 2005 a Concept Strategy of social and economic development regions of the Russian Federation was adopted, which is based on the principles of polarized ("focus") development. The Concept proposed the selection of regions - "locomotives" of growth who can change the principles of "alignment". The Ministry was proposed typology of socio-economic development of the Russian Federation. In each region industries will be allocate as areas of economic activity that can become points of growth for the entire regional economy.

This concept is the basis for the development of mechanisms to improve the regional economy, achieving a high quality of life, based on the cluster approach.

Thus, for a significant number of Russian regions, there is a problem of search and activation of factors of competitiveness, which would not require significant investment inflows, thus would have the opportunity to attract the private sector to finance, as well as the involvement of the public. It appears that such a factor for the region could be the development of the tourist activity. Primarily, this is due to the significant tourist potential most of the territories of the Russian Federation. Note that in Russia there is a huge amount of natural and cultural resources that can serve as sources of tourist interest.

So, according to experts portal ProHOTEL.ru, «historical, geographical and natural resources allow each of the North-West District to do the hospitality industry one of the main items of the revenue side of the regional budget». Pskov, Novgorod and Vologda are the regions of high potential for historic tourism (including educational tours), as well as rural tourism. Arkhangelsk, Murmansk and Nenets could

develop the Arctic, environmental, recreational, ethnographic tourism. The Kaliningrad region has access to the Baltic Sea. Karelia could be the center of attraction of environmental, sport and rural tourism. The potential of tourist activity has been underestimated. If Saint-Petersburg traditionally attracts about five million tourists a year (which, by the standards of European tourist destinations, also hardly sufficient), all the other regions of the North-West - hundreds of thousands of tourists. A similar pattern is typical for other federal districts.

According to VA Shidkih, "Russia is one of the world's leaders of the number of natural and cultural heritage and has a high tourist and recreational potential. Its territory has unique natural and recreational resources, objects of national and international cultural and historical heritage. There are many important economic, cultural, social and sports events. In many regions there is a wide range of potentially attractive tourist sites and facilities. The extensive range of tourist and recreational resources of the country give a good possibility to develop almost all types of tourism, including beach, cultural, educational, business, active, health and eco-tourism, as well as sea and river cruises, rural tourism, etc".

3. MODERN FEATURES OF STATE REGULATION OF TOURIST ACTIVITY IN RUSSIA

Currently, all levels of government and administration pay significant attention to the development of the tourist activity in Russia, for several reasons.

The main ones are, in our opinion, the following:

1. The government policy of modernization and innovative type of economic development was adopted by that is associated with significant changes in all spheres of public life, and it aims to achieve high quality of life. On the one hand, this creates new requirements for human capital (the education, skills, cultural level, health, etc.) and, on the other hand, involves the expansion needs of the population for services.
2. Finding new ways to overcome regional disparities inherent in the Russian economy, based on the principles of "Reaching" and not "leveling". This is reflected in the new paradigm of regional policy concerning the use of the cluster approach and the selection of regions - "engines of growth".
3. The role and the importance of services in a modern economy, including at the regional level. The sphere of service creates new needs associated with leisure, tourism and education, also it is the primary means to meet the existing needs of the population.
4. The combined effects of tourism activities on the quality of life - both in terms of new jobs, increased tourism enterprises payments to the budget, and from the point of view of development of related business sectors.

A number of legal acts and other documents concerning tourism development, both at the federal and regional levels. So, now operates tourism development strategy in the Russian Federation for the period up to 2015. Of particular note is the concept of the Federal Target Program "Development of domestic tourism in the Russian Federation in 2011 - 2018 years", approved by the RF Government. This concept is very important for the development of new guidelines for tourism development. It noted that "the process of formation and development of the tourism industry as an important sector of the territorial specialization is currently not possible only through the use of market mechanisms with no real support and active participation of state in coordinating, which is a catalyst for the formation of public-private partnerships, including the effective cooperation of all authorities, tourism business, academic and public organizations in the implementation of large-scale tourism projects and programs aimed at the

development of tourist attractiveness of the regions, the increase in domestic and inbound tourism flows, improving the quality of tourist products ". The adopted concept can identify a number of positive points:

- The active orientation of state regulation of tourist activity on the target-oriented approach, which is a recognized tool for improving the effectiveness of public funding;
- Selection of promising regions for the development of certain types of tourism (beach, cultural, educational, business, active, health, environmental, cruise, rural, trailering, etc.);
- Recognition of the prospects of the formation of tourist and recreational clusters, including taking into account the inter-regional interactions;

Use a scenario approach in the analysis of solutions for the public support of tourism (the concept includes two funding options and three scenarios, a joint funding program to support tourism, state or federal budget and extra budgetary sources);

- The recognition of the most effective script associated with primary funding the most promising in terms of inbound and outbound tourism areas;
- Proposals for the development of activities aimed at information support the tourism industry.

At the same time should be allocated and some controversial moments of concept. So, of course, the mechanism of public-private partnerships can successfully be used for the development of tourist activities, but this requires further elaboration of the legislative framework on the partnership.

Further, we can not agree that the important thing is the interaction of state and civil society in the management of tourism, but the mechanism of interaction of public and state organizations in the program is not described. The emphasis of the program is self-regulatory organizations that develop their own standards of quality of service, rules of their support and monitor their compliance. In this form, as specified in the program, self-regulatory organizations in the tourism industry are not available.

However, in tourist activity organizations of business combinations already exist and produce a unified position in relation to tourism in general and for its directions/ Their opportunities should be taken into account when developing the program. So, there is the Russian Union of Travel Industry - the largest industry association, which includes tour operators, travel agencies, hotels, health resorts, transportation, insurance, consulting, IT-companies, educational institutions, the media, public and other organizations in the field of tourism, in which includes more than 650 organizations. As noted on the official website of the organization, the PCT - a member of the World Tourism Organization (UNWTO), the Chamber of Commerce of the Russian Federation and the Russian Union of Industrialists and Entrepreneurs, the All-Russian Public Organization of Small and Medium Business "Support of Russia".

The main functions of the Russian Union of Travel Industry (RUTU) at present are: the development of legislation in the sphere of tourism, protection of fair competition, the regulation of problematic situations, improving training, innovation, promotion of tourism. Current activities of the organization is associated with the implementation of various projects for the development of tourism and its information support, including in the online environment.

Thus, this is a very strong public organization which fully able to develop in-house standards and regulations. It seems that the potential of the RUTU would be appropriate to use in the above program, and in general to decentralize control.

This organization is actively cooperating with the Council of the Federation in the field of legislation, as well as with the Ministry of Sport, Tourism and Youth Policy. For example, in 2010, the RUTU

participated in a meeting of interagency working group Minsportturizm (Department of Development of tourism) which was devoted to the development of tourism for children, seniors and students, and in 2011 at the request of the Ministry the RUTU submitted proposals to the draft comprehensive plan for the development of tourism for kids, students, senior citizens.

In addition, the Union also participates in the standardization process. In preparing the standards of tourism services, project development standards GOST R "Services of accommodation. The wait staff accommodation facilities. General requirements ", GOST R" tourism services. Guided tours. General requirements ", GOST R" tourism services. Small accommodation facilities. General requirements ", GOST R" tourism services. Services of travel agents. General requirements. "

You can also note the unions that is in its infancy, but which in the future could also work with regulatory agencies. For example, this Association for the development of agritourism (Agro Tourism Association), the National Association of Rural Tourism , the Association of Tour Operators of Russia and many others.

Serious doubt is caused by one of the target indicators of the program, the "tourist volume of paid services to the population." It appears that the growth of this indicator is not always indicative of the high quality services, and may signal a rise in prices for services. Further, another of the target indicators is: "the number of employees in the tourist companies." It does not connect with the level of qualification of workers.

4. THE DEVELOPMENT OF AGRO-TOURISM AND HUMAN POTENTIAL OF THE REGIONAL ECONOMY

It should also be noted that, although the development of rural tourism in the concept is mentioned, among other types of tourism, its potential for saving human potential of rural areas is undervalued. At the same time, rural tourism can contribute to staying young people in rural areas, to solving the problems of rural unemployment, including the employment of women and older people, generates healthy leisure activities, social opportunities for rural people. Agro-tourism promotes gradual involvement population in the service sector. Agro-tourism has particularly large impact on the human potential of agrarian regions, because the quality of human capital as a whole determines the possibilities of regional development.

In terms of the impact on human potential, agritourism:

- 1) Facilitates the creation of new jobs, employment of indigenous rural population to service tourists. Increases the chances of employment of women, including those with young children.
- 2) Prevents the outflow of young people from rural areas.
- 3) Increases revenues of local budgets, as well as income.
- 4) Facilitates the transition from essentially subsistence economy (when the population lives on family farms) to income in cash, hence, increases the access of rural people to the social and cultural values.
- 5) Generates a mini-cluster around objects agritourism (trips, arts and crafts, eco-friendly agricultural products, transportation, bathing facilities, canteens, etc.), that is, creates intraregional growth point. There can be combined kinds of tourism (e.g., along with sports, extreme, cognitive, etc.)
- 6) Creates a healthy form of recreation for the indigenous population.
- 7) Provides social perspectives for children, increases the demand for education.

I.e. human capital is not only preserved, but also acquires the growth vector. But all this is only possible with the support of the state. The development of rural tourism can be successful if the regional authorities are able to support the construction or upgrading of infrastructure. Infrastructural facilities (roads, etc.) can not be built by from local budgets because of their low income. Support from the regional authorities can only be fully successful in donor regions (regions with a high level of competitiveness). As shown above, these regions are minority. That why it is necessary to support the agritourism by federal program (or, e.g., program of the national project for the development of rural areas).

5. ORGANIZATIONAL ASPECTS OF SUPPORTING THE DEVELOPMENT OF TOURISM

Analyzing public support for tourism development in the Russian Federation, it should be noted questionable, in our opinion, combination of the roles of sports management, tourism and youth policy, which was until recently concentrated in one ministry. Now the Federal Agency for Tourism transferred to the Ministry of Culture. The Ministry of Sports was specialized. This subordination is generally logical and closer to the specifics of tourism. However, we believe that it is appropriate to separate the Ministry of Tourism. The modern tourism activity is associated not only with cultural tourism, and there is no certainty that the other areas of tourism will receive the attention and development. This would give the signal for the regions to do specialization of functions for managing tourism, where, following the federal example, there are combining functions.

Thus, the analysis of information about tourism regulation in the regions-the subjects of the Russian Federation which is represented by the official website of the Federal Tourism Agency (Rostourism) showed that in most regions of all federal districts specialized management functions tourist activity are absent. Some examples: The Ministry of Youth, Sports and Tourism of the Arkhangelsk region, Committee for Culture, Tourism and Archives of the Novgorod region, Committee on Physical Culture, Sports, Tourism and Youth, Moscow Region, Committee on Physical Culture, Sports and Tourism of the Leningrad Region. There are some exceptions: the Agency for Tourism of the Kaliningrad region, the Tourism Committee of the Moscow City Department of complex development of resorts and tourism of Krasnodar Region Tourism Agency of the Republic of Dagestan; Agency for Tourism of the Irkutsk region, Republican Agency for Tourism of the Republic of Buryatia (just ten regions of specialized tourism management).

Information support of tourism needs to be improved. Available information, despite of its abundance, is very fragmented and need in synthesis and analysis. This, as noted above, is concerned information about all kinds of public organizations in the tourism sector (associations and unions). However, a retrospective analysis of the content of the official website of the Ministry of Sport, Tourism and Youth Policy of the Russian Federation has shown that the presented information is very scarce, compartmentalized. Information does not give a complete picture of the directions of state regulation of the activity of the regions in support of tourism (e.g., regional concepts and programs tourism, regional priorities, etc.). There is no serious analysis of the regional experience of the individual types of tourism, little consideration of the potential of civil society organizations in helping the authorities.

Interestingly, the rather extensive data on regional tourism and recreation cluster, as already existing, and emerging, are presented on the website of Regional Development of Russia (the site of Minsportturizm do not even given references to this information). Now the agency of tourism has site in the new ministry, but it is impossible to find appropriate and relevant information. This information is available at <http://russiaturforum.com/news/288.html>, so the search is difficult. For example, there are

information that, in April 2012, a number of Russian regions were made a presentation of its tourist potential in Berlin Project (Russian Tourism Roadshow 2012, organized by the Federal Agency for Tourism).

The Concept of Tourism Programme in Russia indicates that "in many regions of the Russian Federation developed the concept, strategy and regional tourism development program for the medium term. The concepts of Regional tourism development approved and implemented in eight regions of the Russian Federation, 52 are targeted programs and 17 regional programs are in development". However, a summary of these concepts and strategies could not be detected either on the website of the Federal Tourism Agency (Rostourism) nor the Ministry of Regional Development.

The site Rostourism, however, one have found Order of the Federal Tourism Agency of 11.07.2007 № 66 "On approval of the typical structure of the regional (municipal) Tourism Development of the Russian Federation", and information about one of the regional strategies (Nizhny Novgorod Region). There also is presented regional Investment projects of tourist-recreational orientation. In this case, the cluster approach to regional development is actively promoted by the Ministry of Economic Development, the site which you can find guidance on implementation of cluster policy in the Russian Federation. In addition, there is information on emerging and developing regional clusters of tourist-recreational orientation, as well as a number of special economic zones of tourist-recreational orientation (e.g., "Altai Valley" in the Republic of Altai, "Baikal harbor" in the Republic of Buryatia, North Caucasian tourist cluster). However, these types of events do not relate to each other and the information on such clusters and zones on the site Minsportturizma do not have links with other official websites of the Ministries.

This indicates a weak coordination within the very government authorities, not enough quality information supply management (in particular, the lack of relationship between government sites, such as links, makes it difficult to implement a systematic approach to the management of tourism activities in the region.)

6. REGIONAL TOURISTIC CLUSTERS

The cluster approach is to be realized in the third scenario of the development of tourist areas (in the concept there are the different scenarios, analyzes their advantages and disadvantages). It is noted that in tourism "cluster approach involves concentration within a limited area businesses and organizations involved in the development, manufacture, promotion and sale of tourist products, and activities related to tourism and recreation services. Formation of tourist and recreational clusters will provide the best conditions for the development of tourism infrastructure and the scope of related services". These clusters, according to the developers of the program, will be performing a kind of testing ground for developing the organizational and economic mechanism of interaction between the state and private business, the development of individual tourist destinations within regions, and in case of success of their experiences can be offered to others regions in the Federation. In addition, tourism clusters become "points of growth" of the regional economy, also they encourage the development of other industries, provide productive employment and income growth.

Currently, under the framework of the Federal Target Program "Development of domestic tourism in the Russian Federation (2011-2016 years)" a number of clusters formations are presented. Identified pilot sites in the Program (which are located on the unique in its qualities and characteristics tourist areas have considerable tourist potential, great opportunities and prospects for further development and growth):

- Yaroslavl region
- Ivanovo region
- Pskov region
- Rostov region
- Ryazan region
- Altai.

In the territories of the regions will create the following tourism and recreational clusters:

- "Golden Ring" in Yaroslavl region
- "Reach" in Ivanovo region
- "Don" and "Splash" in the Rostov region
- "Ryazan" in Ryazan region
- "Belokurikha" and "Golden Gate" (Biysk) in the Altai region.

The program provides the establishment of inter-regional tourism clusters:

- Great Volga
- Golden Ring of Russia
- Silver Ring of Russia
- Eastern Ring of Russia

It should be noted that Russian law also allows the creation of tourist-recreational special economic zones. In particular, in contrast to other types of special economic zones, tourist and recreational areas may occupy the territory of several municipalities and can even completely occupy the territory of the administrative-territorial unit. It appears that such zones can be an effective tool for implementing the cluster approach and speeds up the formation of clusters. The information of Ministry of Economic Development (data of the site) about special economic zones of tourist-recreational orientation is systematized in Table 1, 2, 3.

The activities of the Russian Union of Travel Industry also contributes to the implementation of the cluster approach in the development of tourism (see, for example, the standard of the RUTU of September 2011). The program of measures to improve the business in the tourism sector in the program would include:

- The development of contractual relations in the market of tourist services;
- Creation of trading platforms, programs of mutual benefits and preferences, "cooperation competitors" based on the RUTU;
- Establishing a system of standards, regulations, controls;
- Actively participate in the training, retraining and advanced training of tourist industry;
- Creation of a single database for training and re-training of the tourism industry.

Table 1: Special economic zone of tourist-recreational orientation (according to the Ministry of Economic Development)

Characteristics of touristic cluster	Types of Tourism
Altai Republic, "Altai Valley"	
<p>Zone area - 856.86 hectares</p> <p>Altai Republic - amazing mountain region, diverse, varied and delicious beautiful. Clean air, majestic mountains, numerous rivers, lakes and waterfalls create conditions for the development of all types of tourism.</p>	<p>Hotel complexes, eco-tourism, sports and adventure tourism, recreational tourism, business tourism, boating, SPA-tourism, balneology tourism (mineral water)</p>
Republic of Buryatia, "Baikal harbor"	
<p>Zone area - 3282.60 hectares</p> <p>Lake Baikal - the deepest and oldest lake in the world's largest natural reservoir of fresh water. Surface area of 31 722 km², which is approximately equal to the area of countries such as Belgium, the Netherlands or Denmark. According to scientists, the age of the lake is about 25 - 35 million years old, reaches a depth of 1642 m Baikal water is remarkably pure and saturated with oxygen, transparency reaches 40 m around Baikal Siberian taiga, mountains and steppe. The region provides the conditions for the development of all types of tourism. Located in the heart of Russia Baikal annually attracts more than 800 thousand tourists from all over the world.</p>	<p>Hotel complexes, eco-tourism, sports and adventure tourism, recreational tourism, business tourism, boating, SPA-tourism, balneology tourism (mineral water)</p>
Altay, "Turquoise Katun"	
<p>Zone area - 3328.11 hectares</p> <p>Altay incorporates the diversity of Siberian nature - from the mirror lakes and rapid rivers to arid steppes and plains, from pristine taiga, to alpine meadows and mountain peaks covered with glaciers. Rich Altai and mineral springs. Thousands of tourists annually visit this rest corner of Russia.</p>	<p>Hotel complexes, eco-tourism, sports and adventure tourism, recreational tourism, business tourism, boating, SPA-tourism, balneology tourism (mineral water)</p>

Table 2:- Special economic zone of tourist-recreational orientation (continuing)

Stavropol, "Grand Spa Yutsa"	
<p>Zone area - 843 hectares</p> <p>Stavropol region traditionally known for its mineral springs and mud. Medicinal natural resources make the region the best spa resort in Russia. Stavropol region has great potential for the development of resorts and health centers.</p>	<p>Hotel complexes, eco-tourism, sports and adventure tourism, recreational tourism, business tourism, boating, SPA-tourism, balneology tourism (mineral water)</p>

Irkutsk region, the "Gateway to Lake Baikal"	
<p>Zone area - 1590 hectares</p> <p>Lake Baikal - the deepest and oldest lake in the world's largest natural reservoir of fresh water. Surface area of 31 722 km², which is approximately equal to the area of countries such as Belgium, the Netherlands or Denmark. According to scientists, the age of the lake is about 25 - 35 million years old, reaches a depth of 1642 m Baikal water is remarkably pure and saturated with oxygen, transparency reaches 40 m around Baikal Siberian taiga, mountains and steppe. The region provides the conditions for the development of all types of tourism. Located in the heart of Russia Baikal annually attracts more than 800 thousand tourists from all over the world.</p>	<p>Hotel complexes, eco-tourism, sports and adventure tourism, recreational tourism, business tourism, boating, SPA-tourism, balneology tourism (mineral water)</p>

Table 3: Special economic zone of tourist-recreational orientation (continuing)

Kaliningrad region, "Curonian Spit"	
<p>Zone area - 282 hectares</p> <p>Kaliningrad - Russian national parks, sandy peninsula, located in close proximity to Europe, shares the salty Baltic Sea and freshwater Curonian Lagoon. Unique destinations, unique beauties of landscapes - the pine forests are interspersed with white quartz sand beaches and dunes. Favorable climatic conditions allow resting on the spit in the period from May to November. In 2009, the Curonian Spit 450 thousand tourists have been visited.</p>	<p>Hotel complexes, eco-tourism, sports and adventure tourism, recreational tourism, business tourism, boating, SPA-tourism, balneology tourism (mineral water)</p>
Primor, "Island of Russian"	
<p>Primorye attracts tourists and diverse natural bay beaches. Rich vegetation, proximity to Japan, to organize yachting marina and boating organizations make the island a good place for a tourist complex. In 2012, on the island of Russian was hosted APEC summit.</p>	<p>Hotel complexes, eco-tourism, sports and adventure tourism, recreational tourism, business tourism, boating, SPA-tourism, balneology tourism (mineral water)</p>
North Caucasus, North Caucasus tourism cluster	
<p>North Caucasus region with beautiful nature</p>	<p>Hotel complexes, eco-tourism, sports and adventure tourism, recreational tourism, business tourism, boating, SPA-tourism, balneology tourism (mineral water)</p>

The above measures are essentially a prerequisite for the formation of strong and stable clusters in tourism especially for the development of cooperation. Building relationships of cooperation between

enterprises is now one of the most promising areas of strategic development in many industries. Prerequisites for the formation of cooperative relations in tourism are:

- The benefits of growth of activity and the possibilities of using experience of each other ;
- Greater opportunities for innovation;
- Reduce risk on capital and, consequently, increase the investment attractiveness of travel agencies and tourist facilities;
- The total risk reduction of tourist activity;
- Ability to defend the collective interests in relation to statutory regulatory legislation;
- Strengthening information support.

Thus, in our view, improving the efficiency of the cluster approach for development of tourism requires the formation of specialized departments of government at all levels, streamlining and coordination of information flows, and increased participation of non-commercial organizations, especially in the regulation of tourist activity.

7. CONCLUSIONS

1. In modern conditions, the potential of tourism for the development of the regional economy is one of the important ways to improve the regional economic policy. It is related to the tasks of innovative modernization and high differentiation of regional development.

2. Russia has considerable potential for tourism, which is one of the competitive advantages of regions, but it is used not enough. This is, first of all, due to the lacks in the organization and management of tourism.

3. Government regulation and support of tourism is now enhanced, there are a variety of programs and concepts of both the federal and regional levels. They contain a number of positive points and give new directions in the development of tourism activities.

4. In the adopted strategic documents of tourism regulation insufficient space is given to the possibilities of self-regulation whith using of capacity of existing non-commercial organizations.

5. Particular importance for the development of regional economy has agro-tourism, which has a significant impact on the human potential of the region. For the lagging regions and areas of the agro-industry agro-tourism is capable to simultaneously solve social and economic problems. However, this is not possible without the active participation of federal, regional and local authorities.

6. The cluster policy is actively developing in modern Russia. In some regions identified tourism clusters. However, they still have the potential and latent character, that is, are in the process of becoming.

7. In tourism management at the federal level, there are organizational issues related to the underestimation of tourist potential opportunities for economic development. This is reflected in the lack of a specialized ministry, in non-system management information.

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DETERMINANTS OF CUSTOMER RELATIONSHIPS IN THE MARKET OF ELECTRONIC SERVICES IN THE PODLASIE PROVINCE IN POLAND

Urszula Widelska¹, Grażyna Michalczuk²,

¹Faculty of Management, Białystok University of Technology,

Wiejska Str. 45 A, Białystok 15351, Poland

²Faculty of Economics and Management, University of Białystok,

Warszawska Str. 63, Białystok 15067, Poland

Abstract

The aim of the study is to identify and present the extent of the impact of selected factors of building relationships with customers in the field of commerce and electronic services in the Podlasie Province in Poland. The conclusions were supported by the results of quantitative and qualitative research contained in the report “Starters of the Podlasie Province economy. The sector of commerce and electronic services” conducted by the IBiA VIVADE sp. z o. o. by order of the Provincial Labour Office in Białystok, which was co-created by the author of this paper.

Key words: *customer relationships, relationship marketing, market of electronic services*

1. INTRODUCTION

E-commerce and e-services are symptoms of the contemporary socio – economic development. The Internet is increasingly being used by customers to make purchase and sale transactions. For companies it is important space for building relationships between partners of the exchange. Today, the Internet is also the primary communication tool.

The aim of the study is to identify and present the extent of the impact of selected factors of building relationships with customers in the field of commerce and electronic services in the Podlasie Province in Poland. First of all, the analysis takes into account marketing aspects of the surveyed companies. The development of an organization focused on building relationships with customers is in fact specifically involved in the process of marketing management of a modern enterprise.

The conclusions were supported by the results of quantitative and qualitative research contained in the report “Starters of the Podlasie Province economy. The sector of commerce and electronic services” conducted by the IBiA VIVADE sp. z o. o. by order of the Provincial Labour Office in Białystok, which was co-created by the author of this paper (Widelska, 2012).²⁶

²⁶ The main goal of the study was to identify trade and electronic services sector as an area of growth and innovation of the Podlasie Province as well as to indicate and analyze the sector as an area in which the global economy has great potential for development, and in the Podlasie Province is not present, or is present in embryonic form. Specific objectives were focused on: finding the main determinants and barriers to development occurring in the field of electronic commerce and services, presenting forecasts for the future of development of trade and electronic services in the Podlasie Province, taking into account the risks and opportunities for development, providing objective and comprehensive information necessary for enterprises for strategic planning and defining their competitive position, providing information on the state and structure of employment and wages in the sector. The research process was completed in September 2012.

2. THE ESSENCE OF THE CUSTOMER RELATIONSHIPS

It could be argued that the modern consumers do not buy the product in the strict sense, but pay for the satisfaction of their needs. The market success of the company does not depend solely on the good market offer. A modern business reality forced the implementation of the philosophy that it is necessary to look for products for customers and not customers for products (Strobacka, 2001). The adoption of this way of thinking is mostly a consequence of changes in the external environment. The company's environment has become a dynamic one. This means that the needs of consumers are changing more often over time, and the competitive struggle is intensifying. Capturing these changes is essential to make the right marketing decisions by companies.

Nowadays, the importance of relationship marketing is increasing. The relationship marketing is the process of building close relationships with existing and new customers. It consists in a constant dialogue between the bidder and the purchaser, conducted at a specific time. It may also involve the collection of information and analysis on customer behaviour (Feliszak, 2004). The appropriate selection of marketing methods and tools related to the achievement of customer satisfaction can decide on the competitive advantage (Chlipała, 2005). There are six aspects of relationship marketing that distinguish it from the traditional perception of marketing (Dembińska-Cyran, 2004):

- the perception of the product;
- a relationship between product and service;
- the essence of business activity;
- value for the customer;
- benefits;
- the competitive advantage tomorrow.

In the relationship marketing, the product is not a product itself, understood as a marketing instrument, but a relationship which a company creates with the customer. The product cannot be defined in isolation from the relationship. The distinction between the product and the service blurs. Relationships with customers concern all processes and activities that take place after the sale of the product and during its use. Unlike in traditional marketing, the essence of business activity is not limited to the sale of products which are demanded by the market but the use of skills of the company to build a relationship with customers, leading consequently to building its competitive advantage. In the traditional marketing the company's activities are to deliver value to the customer, whereas in the relationship marketing, the value results from the relationship formed between the customer and supplier. According to the relationship marketing, relationships with customers are to be profitable, which means that it is necessary to identify profitable customers and create such cooperation which will be beneficial for both parties. Creating lasting relationships with customers requires the ability to offer more and more new products and services, which is also the result of the skills of collecting information about target markets. The relationship marketing contributes to building a competitive advantage and thus to the profitability of the company and reduction of operating costs, also based on the knowledge of customers. Unfortunately, the accumulation of knowledge about customers is not easy. The information about customers, necessary from the perspective of the creation of an offer, includes the knowledge of (Bielski, 1999):

- demographic, social, psychological and economic characteristics of current and potential target markets,

- expressed needs and preferences,
- lifestyles, systems of values and their changes, patterns,
- consumers' buying behaviours and their determinants, trends of changes, decision-making mechanisms, patterns of conduct in the purchasing process,
- the image of the company in the opinion of consumers,
- consumers' attitudes to product features, their adaptation to the needs, the degree of satisfaction of the needs by the company's products, and in the case of trading companies an evaluated width of the product range,
- an evaluation of the sales systems,
- perceptions of prices by the buyers, the degree of their acceptance by potential customers,
- the adaptation of promotion instruments to the expectations of consumers, evaluation of the effectiveness of individual instruments and the whole of promotional activities of the company,
- the degree of consumers' knowledge of the company and its products,
- consumer loyalty, the reasons for attachment to the company and its products.

The source of knowledge is wide itself. Also there are many areas of learning customers' behaviour and their opinions in relation to the formation of offer as well as the development of its reception in the process of use and purchase. The importance of knowledge about the customer and the importance of customer knowledge in the process of implementation of the marketing function results from the specific circumstances of the company's environment. Companies deal with a faster and faster growing number of products and competitors, which means that there is no shortage of products but the customers. The customer has more choice than ever before, and more and more information about the purchased goods. This makes a certain selectivity of suppliers, because in such conditions only the "fittest" bidders can survive. Monitoring the level of customer satisfaction must be followed in relation to the level of customer satisfaction of the competition (Kotler, 2004).

The relationship marketing is in a strong relation to the relational capital. It reflects the intangible resources of the organization, based on the interactions (connections) with groups (entities) of the environment, among which the most important role is played by customers, but also suppliers, competitors and partners understood in a wide sense. Effective management of the intangible area of the company can bring it many benefits. This includes the possibility of (Mendryk, 2007):

- an increase in the probability of gaining approval for business activities;
- strengthening the positive image of the company in the market;
- creation of a solid foundation to build high reputation, which is reflected in the financial benefits (increased sales, profit);
- obtaining essential resources and establishment of a basis for the creation of unique value generating resources.

Building relationships with customers has become the basis of modern enterprises' operations. The relationships determine the strength of relationships with customers, thus becoming the basis for communication skills, but also force the continuous monitoring of the behaviour and needs. Such activities are not only the result of a certain managerial philosophy, but a prerequisite for making a profit

by companies. It should be emphasized that building relationships with customers goes beyond the traditional methods of meeting their needs. Broadly understood e-communication would be an example, and thus building relationships with customers online. The specificity of such relations with the customer is reflected by the specificity and development of the e-commerce and e-services, which is the basis for further discussion in this paper.

3. TRADE AND ELECTRONIC SERVICES SECTOR IN THE PODLSIE PROVINCE

The prevalence of e-commerce and e-services is a symptom of the contemporary socio - economic development. Currently, the Internet is not only a place to make purchase and sale transactions, but also space serving building relationships between partners of the exchange. Moreover, it is an essential tool of communication of the company with the environment.

E-services are services the provision of which is done over the Internet and is automated (may require little human participation) and remote. An e-service is different from services in the traditional sense in the lack of human participation on the other side and its provision from a distance (Flis, 2012). Electronic commerce (e-commerce, e-trade) should be understood as the transactions conducted over computer networks, based on the IP protocol. In the exchange of goods and services they are ordered by the network, but the payment and the ultimate delivery of the ordered goods or services can be realized outside the network. E-commerce is related to transactions between companies with individuals, government institutions and other public and private organizations. Orders received by telephone, fax or e-mail are not a part of e-commerce.²⁷

The characteristics of the e-commerce and e-services in the Podlasie province can be made through the analysis of selected indicators, such as:

- Number of enterprises using the Internet at work,
- The level of the use of IT in enterprises,
- The structure of enterprises by the speed of the Internet connections,
- The level of purchases made by companies on the Internet,
- The percentage of employees in enterprises that use computers at work,
- The number of enterprises purchasing on the Internet,
- The number of websites owned by companies,
- The percentage of companies selling online.

Referring to the number of enterprises using the Internet at work, in 2011, 88,000 out of the 92,000 non-financial firms in Poland used the computer at work, most of them with an access to the Internet. In this respect, the Podlasie Province performs better, because 1,990 out of the 2,051 businesses are computerized, which is above average for Poland (see Table 1).

²⁷ Based on the CSO data, http://www.stat.gov.pl/gus/definicje_PLK_HTML.htm?id=POJ-5934.htm [dated on 20.01.2013].

Table 1. The use of ICT in Poland and the Podlasie Province in 2007 and 2011

	Poland		Podlasie Province	
	2007	2011	2007	2011
The percentage of enterprises using computers	95.2	95.7	90.1	97.0
The percentage of enterprises using computers with an access to the Internet	91.7	93.9	85.5	95.6
The percentage of employees in enterprises and using computers	34.7	42.3	27.6	37.1
The percentage of employees in enterprises and using computers with an access to the Internet	26.1	35.2	20.8	30.6

Source: U. Widelska, K. Dębkowska, J. Kilon, J. Marcinkiewicz, A.M. Walicki, A. Raczkowska, *Sektor handlu i usług elektronicznych [Trade and electronic services sektor]*, op. cit., p. 28.

In the years 2007-2011 a significant improvement in the equipment in computers in companies of the Podlasie Province was made. Also the quality of the Internet connections does not differ from the national average; whereas the change in the structure of employees using a computer at work (including with an access to the Internet) is noticeable. Due to this fact the Podlasie Province was not and is still not equal to the national average, which is associated with a large share of agricultural activity in the region (see Fig. 1).

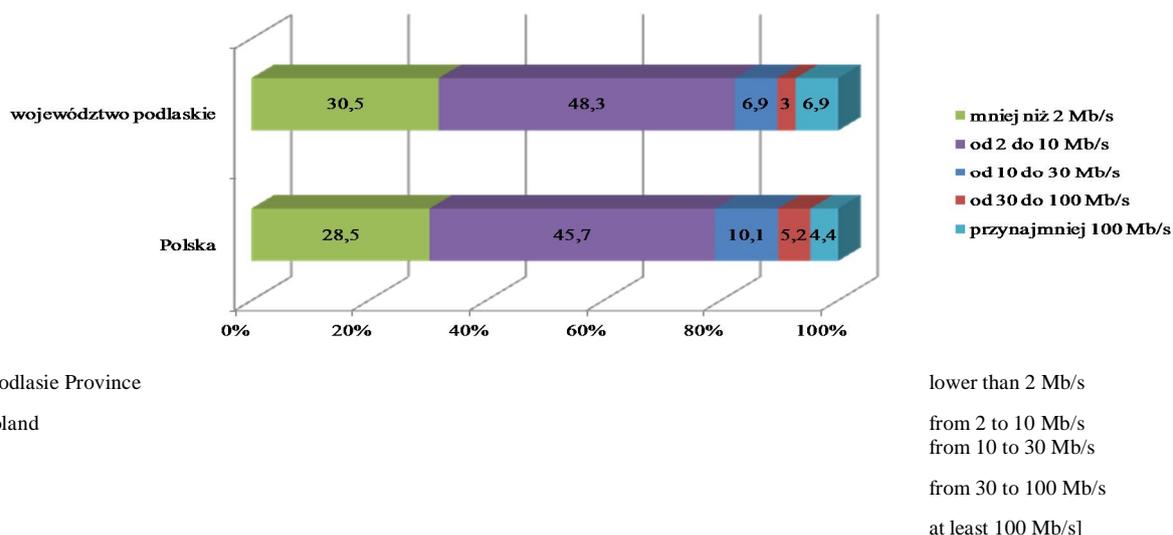


Fig. 1. The structure of enterprises by the speed of Internet connections

Source: As in Table 1, p.28.

The 13.7% of companies in the Podlasie Province made purchases over the Internet. This is not a satisfactory indicator. In 2011, 16.4% of Polish companies made purchases over the Internet. For most of them, the share of orders placed electronically did not exceed 10% of the total value of purchases.

The highest percentage of orders placed electronically (44.5%) were among the companies employing more than 250 people.

The Podlasie Province compares unfavourably with the rest of the country in terms of the number of training institutions dealing with computer courses. Out of the 2,255 national training institutions registered in the Register of Training Institutions only 60 are located in the Podlasie Province.²⁸

Referring to the communication role of the Internet, it is important to refer to the number of companies that have their own websites. Web presence is becoming an essential tool for the identification of the company in the market. Over the last five years not only changes in owning websites by enterprises could be observed, but mostly in their use. As shown by the CSO data, the percentage of companies using a website to present the offer and price list of products in the Podlasie Province has doubled (see Table 2).

Table 2. The use of a website by enterprises in Poland and the Podlasie province in 2007 and 2011

	Poland		Podlasie Province	
	2007	2011	2007	2011
The percentage of enterprises with a website	53.2	64.7	50.0	63.9
The percentage of enterprises with a website for an easy access to product catalogues or price lists	28.9	46.9	26.2	49.9
The percentage of enterprises with a website to enable ordering or booking on-line		11.6		19.1

Source: As in Table 1, p. 35.

The percentage of companies selling online for over 5 years has quadrupled, but still more than six times as much as increased sales revenues of conducted sales by companies over the Internet. The Podlasie Province against Poland looks correct (see Table 3).

Table 3. E-sales companies in Poland and the Podlasie Province in 2006 and 2010

	Poland		Podlasie Province	
	2006	2010	2006	2010
Percentage of enterprises engaged in e-sales	2.5	10.0	2.6	11.9
The total net value of sales over the Internet (million PLN)	52572	324781	947	3223
The percentage of net sales revenues obtained over the Internet	3.1	11.0	3.0	8.1

Source: As in Table 1, p. 35.

²⁸ *E-Podlaskie - kierunki rozwoju Społeczeństwa Informacyjnego Województwa Podlaskiego Obszar: e-biznes [E-Podlasie - directions of the development of the Information Society in the Podlasie Province Area: e-business]* http://si.wrotapodlasia.pl/pl/Baza_wiedzy/var/resources/2/242/18/prisepodlaskie1.pdf, pp. 22-29.

Referring to the economic situation of companies of the analyzed sector in the Podlasie Province, based on the results of quantitative studies²⁹, most of them evaluate their economic condition as average. According to 32% of the entities participating in the survey, the condition of companies in the examined sector is good, and only 10% of respondents rated the factor studied as very good (see Fig. 2).

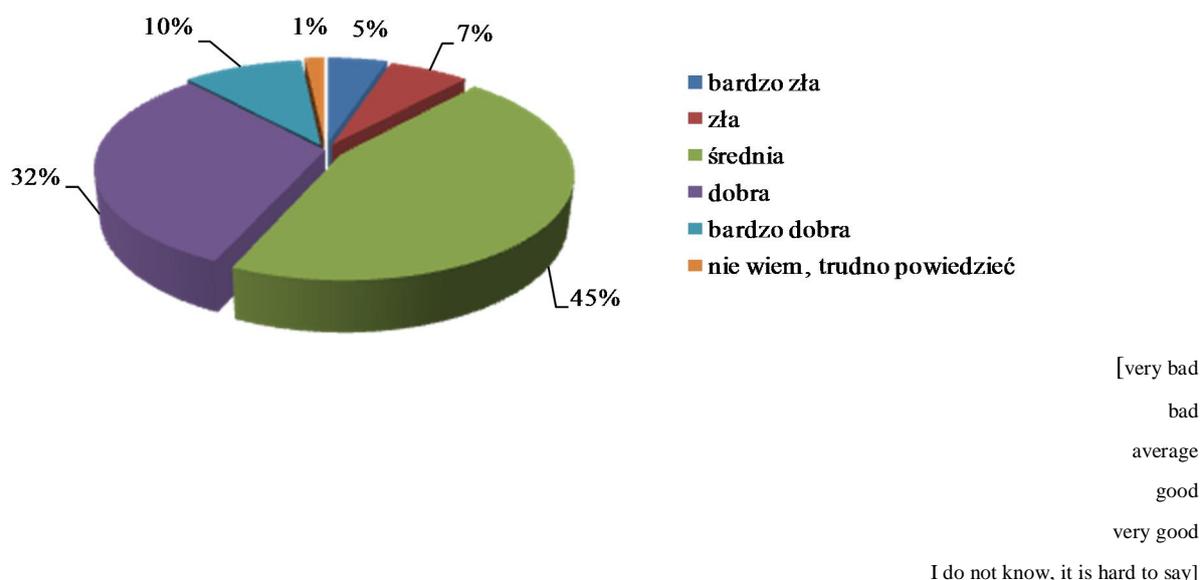


Fig. 2. The economic condition of the surveyed entities in the opinion of the respondents

Source: As in Table 1, p. 39.

In the process of qualitative research³⁰ additional determinants of the economic condition of the companies of the analyzed sector were distinguished. According to the entrepreneurs, the situation of enterprises of e-services sector in the Podlasie Province is largely determined by the economic specificity of the region. The most important reasons in this regard were the following:

²⁹ The study has covered 60 companies belonging to the section: C, F, G, H, I, J, K, L (PKD [Polish Classification of Activity] 2007), for which the activities in commerce and electronic services are primary or secondary activity. This study was treated as a survey. A surveyed sample should not be regarded as a representative sample, because it was neither large enough nor random. The selection of items for a sample took place in an intentional manner. The results were not related to the population and static inference methods are not applied, which require a random sample. This approach resulted primarily from the inability to determine the general population. The information obtained was referred in each case to a sample of companies. The study was carried out in the period from June to September 2012. The study was performed using the CAWI technique using a questionnaire on a sample of 60 entities which declared operating in the e-commerce or online services sector. More than two thirds of respondents were entities of a sub-section of e-commerce (mainly on-line shops). The remainder were companies declaring the provision of electronic services.

³⁰ For the implementation of qualitative research the following methods were used: the focused group interview (FGI), and in-depth interviews (IDI). The panel was conducted among representatives of trade and electronic services. The purpose of IDI interviews was to identify good practices in the development of enterprises in the trade and electronic services sector.

- the structure by entities of the local economy based on small enterprises, expressing a limited demand for advanced electronic services,
- an unsatisfactory level of technical infrastructure,
- a low level of innovation of companies in the Podlasie Province,
- the structure of the local economy based on traditional industries, limiting the demand for e-services,
- an unsatisfactory level of promotion of the region, based mainly on cultural and natural values,
- an unsatisfactory level of competitiveness of companies in the Podlasie Province,
- unused potential of the Podlasie Province as a commercial region,
- an unsatisfactory level of intellectual capital in the region, and thus lack of specialists in the field of specialized electronic services,

An attention was paid also to the internal aspects, crucial to the improvement of the economic situation of entities operating in the analyzed sector in the Podlasie Province. It was emphasized that many companies are in a difficult financial situation, but the most affected are those entities that provide easy electronic services to the needs of the local economy. Companies whose activities are based on innovative services aimed at the needs of the domestic and international markets are in a much better financial position. In the course of the discussion it was also pointed out that the success of companies of the analyzed sector was largely based on an unique innovative idea. It was emphasized that creativity and an innovative idea is particularly important in this area, which most often can determine the level of achievement of economic benefits.

The situation of the e-commerce and e-services sector in the Podlasie Province is determined by the specificity of the region in which these companies operate. The Podlasie Province is associated as a region with a low level of absorption of innovations. Expenditures on research and development in the province in 2010 accounted for only 0.26% of the outlays in the country. The expenditures on research and development per capita are among the lowest in Poland (Dębkowska, 2011). However, the assessment of the economic situation made by the companies participating in the survey shows that the analyzed industry can be considered as a growing and developing one, affecting the change in the image of the Podlasie Province.

4. IDENTIFICATION OF SELECTED FACTORS OG BUILDING RELATIONSHIPS WITH THE CUSTOMER IN THE MARKET OF ELECTRONIC SERVICES IN THE PODLASIE PROVINCE AS BASED ON THE RESEARCH³¹

Referring to the issue of the relationship with the customer in the e-commerce and services sector, the aspect of B2B and B2C relationships should be taken into account. In both cases, the dynamics and the scope of the relationship are determined by the popularization of the Internet as communication space, and a place of making transactions.

Socio – cultural and psychographic factors, primarily changes in lifestyle led to the development of e-commerce and the development of e-services. This is mainly due to the need to ensure appropriate time

³¹ Prepared on the basis of U. Widelska, K. Dębkowska, J. Kilon, J. Marcinkiewicz, A.M. Walicki, A. Raczowska, *Sektor handlu i usług elektronicznych [Trade and electronic services sektor]*, op. cit.

management by consumers and the rate of adaptation to civilization changes, manifested in a strong technical and technological progress in many areas of everyday life. The changes are of a global, not a local character. They constitute a major relational determinant. Almost every market entity must take into account their range by diversification and extending offers to include electronic services. Shopping on the Internet become popular (see Table 4). Also the system of using the network to build relationships with customers related to the improvement of information flow system becomes widespread. For example, more than 8.6 million Poles aged between 16 and 74 made purchases over the Internet in 2011, which accounted for nearly 30% of the population. Compared to 2007, the percentage of Poles ordering or buying online increased by 14 percentage points. The largest, by more than 20 percentage points increase in the share of people who shop over the Internet was recorded in the age groups between 25-34 and 35-44, as well as among the self-employed. Among the people who shop over the Internet, young people (up to 43 years) dominated, with higher education, living in big cities, and because of the professional activity: self-employed or belonging to a group of pupils and students. The men were shopping more often during the period over the Internet than women (GUS, 2012).

Table 4. **Percentage of people aged 16-74 shopping online in selected European countries**

	2009	2010	2011
UE-27	28	31	24
United Kingdom	58	60	64
Norway	54	53	57
Germany	45	48	54
Poland	18	20	20
Slovenia	14	17	20
Spain	16	17	19
Czech Republic	12	15	16
Hungary	9	10	13
Portugal	10	10	10

Source: epp.eurostat.ec.europa.eu

In addition to global factors in building relationships with customers in the commerce and electronic services sector also local and regional factors are of great importance. Polish entrepreneurs perceive barriers to the development of e-commerce sector, among which the most frequently are mentioned the following (PARP, 2009):

- the legal system lagging behind technology changes (93% of responses)
- a low level of knowledge of current and potential entrepreneurs about information technologies and inability to use e-services (84%),
- customers accustomed to traditional forms of services, inability to use e-services (77%),

- concerns about the dangers of the Internet, including concerns related to the protection of personal data (75%),
- insufficient support of the e-services by the state (68%),
- reluctance of banks to give loans to companies offering e-services (58%),
- the costs of starting and running the business providing e-services (56%),
- barriers to access to the EU funds (49%).

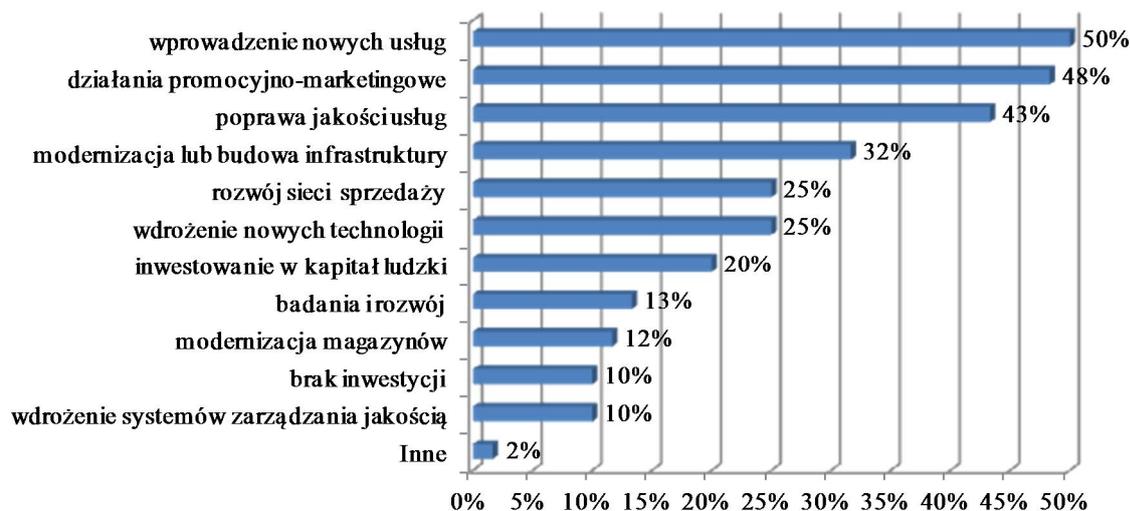
The development of relationships with the customer is conditioned by the level of socio-economic development, but also by the level of customers' knowledge. The most common reason for the use of the Internet by Polish consumers was (PARP, 2009):

- sending and receiving correspondence via e-mail. In 2011, more than 50% of the population aged between 16 and 74 and over 81% of the Internet users were using e-mail.
- searching for information on goods and services. In the period of 2007-2011 among persons aged 16-74 the percentage of people searching the web for information about goods and services increased from 27.3 to 44.5.
- reading or downloading magazines online,
- making use of banking services,
- selling goods at auction.

Referring to the local aspects, as indicated by the results of quantitative research, enterprises of the trade and electronic services sector of the Podlasie Province in the past three years invested in new services, promotional and marketing activities, improvement of the quality of services, modernization of or building infrastructure. 25% of respondents invested in the development of the sales network and the implementation of new technologies (Fig. 3). Investing in marketing activities leads to a conclusion that the companies of the analyzed sector recognize the need to strengthen the relationship with the customer. In addition to strengthening the technical and technological sphere, strengthening relationships with target markets is the main tool of building competitive advantage.

Surveyed companies in the area of building relationships with customers perceive both global and regional determinants. In the research process socio – civilization determinants have been identified as an important determinant of the demand for electronic services, including consumers' propensity to innovation in a broad sense. Broadly defined electronic services become popular not only in everyday life, but also become an important and inevitable alternative for business. The FGI research has shown that the mental barrier is important, which restricts the operation of enterprises not in the sense of information technology itself, but in the use of widely defined virtual space to achieve their business objectives. The discussion highlighted that the development of the e-services sector is an important factor in the development of regions and economies. It was also indicated that in the Podlasie region there are companies established that are creating a new quality of electronic services, recognizing complex and new needs of target markets in the area of e-services and e-commerce. Currently, the point is that they are not only professional, but also unique. Attention is drawn to the fact that, like in any other area of business activity, the idea, uniqueness and originality matter, but also being the first. Raising customer awareness is a prerequisite for building lasting relationships with customers, shaping their knowledge about the products and brands.

According to the participants of the FGI study, an important determinant of the demand for e-services is the image of the Podlasie Province as an economic region. This concerns largely B2B relationships. Electronic services are innovative services, functioning in the public awareness as new ones. This is often in contradiction to the stereotypical image of the region which is perceived from the angle of natural and cultural values. Strengthening the relational aspect of cooperation with partners from Poland and abroad requires a change in the image of the region.



[introduction of new services
 promotional and marketing activities
 qualitative improvement in services
 modernization of or building infrastructure
 implementation of new technologies
 investment in human capital
 research and development
 modernization of storehouses
 lack of investment
 implementation of quality management systems
 others]

Fig. 3 Trends in investment of enterprises of trade and electronic services sector over the last three years

Source: As in Table 1, p. 90.

5. CONCLUSION

The problem of building relationships with the customer in the e-commerce and e-services sector is complex. This is due to the multiplicity and diversity of the factors determining the scope of such relationships. Enterprises of the e-commerce and e-services sector in the Podlasie Province would be an

example. Building relationships with customers is dependent on global factors, but also on local ones. The very fact of the informatization of the society and widely understood civilization development is not the only condition that forces a new approach to building relationships with target markets. Differences in the rate of changes in the context of a global and local level may cause difficulties in the process of building relationships with customers. However, the use of networks to strengthen relationships with customers is certainly the basis of the market competence of modern enterprises and institutions, regardless of the place of their operation.

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**TRANSFORMATION OF MANAGERIAL ECONOMIC THINKING IN GLOBAL
TURBULENCE VIA CUSTOMER VALUE-BASED ORIENTATION**

Natalia Zagorniak

Business Administration Department, International Institute of Business,

Brest-Litovskiy highway, 8A, 03179 Kyiv, Ukraine

Abstract

In this article the modern approaches to a problem of increase of value creation efficiency for companies, customers and society are studied as based on introduction of business-models and related to forming economic competence of a manager in the age of turbulence. The theoretical background of customer value orientation in shaping of organization's strategy is studied with a sign of meeting interests of the stakeholders via corporate social performance. Conclusions are drawn taking into consideration the credibility gap existing between business and society in post crisis times concerning necessity of refocusing the strategic thinking from enhancing of the shareholder's value to increasing of the customer value of the company's products as the main determinant of sustainable growth; also practical proposals are made.

Key words: *product's customer value, turbulence, corporate social performance, managerial economic thinking, corporate social responsibility, business-model, strategy*

1. INTRODUCTION

It is known that socio-economic transformations are always connected with the changes of economic consciousness of people. Exactly a human economic behaviour forms economic relations both on micro- and on macro level as well. As changes in a cultural sphere are always more slow, than in economic and institutional, economic behaviour of citizens of any country usually does not fit the situation, as it was stressed by Akerlof and Shiller (2009), specifying on existence of causal relations between the recent financial crisis and non-rationality of economic conduct of millions of people all over the world. Economic development of a country is being mediated by the «productivity» of economic conduct of its citizens, which manifests in entrepreneurship, tax, financial spheres and attitude toward corruption. The social consequences of financial crisis also ruined relations between business and society. Special emphasis given to the social and ethics aspects of activity and shortage of consumers' trust direct organizations to raise efficiency of strategic decision-making. Progress is achievable by introduction of focusing at a consumer approach, which building partnership with customer and helps the organization to retain consumers. The approach so gives to the management transparent and clear direction toward financial efficiency of organization. Today's understanding of role of business in solution of social problems raised doubts concerning ethics of its frank profit orientation. The soul-searching set ground for both researchers and experts not only to revise the influence of corporate social responsibility on financial effectiveness, but to reconsider the financial capability of strategies of providing of social efficiency of activity for a firm as well. Thereupon backbone of managerial economic thinking transformation makes clear understanding of customer value of a product that is in fact exactly the value precepted by a customer, and provides the firm a link between its efforts in the field of social

responsibility and financial results. It is the customer's evaluation of perception of value that determines efficiency of activity of a firm in long-range outlook, and its ability to survive. Today the applied aspects in research of economic conduct on the basis of integration of knowledge in the spheres of economy and management are especially important.

2. CUSTOMER VALUE-BASED ORIENTATION TO STRATEGY SHAPING

In our times the fundamentals of theory of customer value of a product have been actively used by many authors in applied economic disciplines (Amit & Zott 2001, Brandenburger & Nalebuff 1996, Forbes & Metha 1978, Monroe 1990, Prahalad & Ramaswamy 2004, Rockefeller 1986, Zeithaml 1988). Magomedov (2004, p. 78) determines the customer value of a product in accordance with its possibility to provide satisfaction of a specific need of a particular group of customers (segment), and estimates the customer value as the highest price which a customer is ready to pay for the product without any regret for.

Problems of business' responsibility for development of the society attracted attention of such outstanding scientists as Drucker (1954), Porter and Kramer (2006), Freeman (1984). Friedman (1970) stressed at connection between responsibility of business and its profitability. Also the problems of social responsibility of business in details and specific aspects of relations between social efficiency and strategy of organization were studied fundamentally by Bechetti, Hasan and Ciciretti (2009), Maas (2009), Wood (1991). Conception of corporate social responsibility as «responsibility of firms for their influence on society», as it was determined by the European Commission in 2011, is a manifest of recognition of its practical and strategic capability (European Commission, 2011).

Researchers investigated the general issues of relations of business with the related parties and elements of mechanism forming corporate social responsibility in the context of organization management. Taking in consideration the diversity and contribution of the researches in realm of corporate social responsibility, it is important to state that the need to substantiate potential influence on increase of customer value of its particular means aimed to help society and ecosystem to solve actual problems still remains.

It is necessary to study the theoretical basis of customer value-based orientation to development of organization strategy in accordance with principle of respect for interests of wide spectrum of stakeholders as it is applied to realization of means of corporate social responsibility in business practice.

Customer determinations of the value can be grouped as following:

- Value is low price;
- Value is what I want from a product;
- Value is quality which is got in exchange for price paid;
- Value is what I get in exchange for what I lose.

Rockefeller (1986, p.43) explained that the customer value is determined in accordance to perception of a potential buyer as he evaluate benefits from acquisition of the new product to be higher than his expected losses related to acquisition and consumption of this product. Thus the value of product as it is perceived by a customer can be delineated as following:

Perceived Value = Perceived Benefits – Perceived Sacrifices

The modern approach in strategic management is to focus upon customers that have two implications for strategic decision making. First, it suggests that a firm can establish partner relationship with customers and enhance its ability to retain a customer. Obviously, customers vote their money for the best of accessible value propositions. Second, here in the concept of «customer» it is necessary to include buyers, end and intermediate users, distributors, internal users and employees which use the result of the previous stages of production, and also all, who possibly get any benefit or loss from the consumption of products offered to the market by the firm. Thus customer value is the result of subjective evaluation which is carried out taking into account opinions of stakeholders.

The concept of comparative customer value is used in research on problems of managerial economics and management to underline taking into consideration of total losses of a customer (including all possible charges and losses) and existence of competitive products and services (substitutes). By the word “comparative” attention is drawn to that fact that a customer elects the method of satisfaction of his need not in isolation, instead, the choice is made relative to reference next best alternative product. So value perceived by any class of customers is the result of strategy. It is clear that in use the objective and well founded determination of value from the management’s point of view is insignificant as compared with subjective and “inexpert” evaluation of a customer in accordance with his own perception of value. To help managers to incorporate customer viewpoint in strategy shaping activities means to essentially enhance managerial economic competence through clear understanding concept of perceived value as the degree to which a potential buyer feels that the gains of a particular offer exceed his personal possible losses associated with its adoption and consumption or use. An “ideal” product or the “lowest price” product are not winning proposals, because a customer carefully weighs both expected benefits and possible losses, related to acquisition and consumption of every alternative, thus different combinations of levels of benefits and losses can create feeling of the same level of value of a means satisfying his need.

Thus, possible grouping of alternative methods to provide customer value of a product are the following:

- Proposal of a product with high price and prominent characteristics in comparison with reference product consisting in superior technology, quality, construction or implementation, exclusive comfort, saving of maintenance charges and so on. These prominent properties can be supported also by the stimuli that do not depend from this product directly, nevertheless are capable to affect the decision to buy. Among the stimuli is reputation of a producer, manufacturing country, opinion of an independent expert, well known brand. Losses that are not tied to the product price (establishment charges, introduction in an action, service, and exploitation, replacement of the product and cost of the special training) in this case also are higher than related to acquisition and consumption of reference product. At a glance this method can be described as big gain for big price;
- Proposal of a product that in comparison with the reference provides for a lower price and at lower nonprice losses provides extra properties along with some indirect stimuli which characterize the proposal advantageously. At a glance this method can be described as extraordinary value;
- Proposal of a product of “me too” sort, that is expansion of assortment line or successful imitation of known brand. The price of the product and other charges of customer are substantially low in comparison to reference product. At a glance this method can be described as comparable benefits for considerably less losses.

The applied aspects of customer value for a successful management was underlined by Drucker (1954), being confident that the only one true goal for a business is creation of customer. That a firm thinks about own products is not important, especially for the future or for success. What a customer thinks

about the purchase, in what he sees its value,- here that has a significance, determining sense of the business, its direction and capability for success. Thus consumer value is one of crucial determinants of market success or failure for a product and for a firm itself.

Customer value-based orientation to strategy shaping consists in attracting the consumers using the following methods:

- By reinforcement of relation between benefits and value;
- By extraordinary value proposal;
- By reduction of link between sacrifice and value.

3. TRANSFORMATION OF MANAGERIAL ECONOMIC THINKING

In recent literature academicians underline that because globalization and technology are the main forces that created a new level of so called “interlocking fragility” in the world economy that is why modern business is entering a strange age of turbulence, which creates the same impact on us as natural turbulence (Kotler & Caslione 2009, Greenspan 2007). That laid the foundation of postulate that continuous turbulence bringing chaos, risk, and uncertainty, is now to be understood as the normal condition of industries, markets, and companies; the most important consequences of turbulence are vulnerability and opportunity (Kim & Mauborgne 2005, Kotler & Caslione 2009, Prahalad & Ramaswamy 2004). Thus, if modern managers would not react to such a significant influences transforming economic thinking at all, that will result in their failure to ensure defence means against risk and uncertainty from the one side, and to use opportunities given by the situation, – from the other.

Usually, at the time of instability the firms tend to act cautiously, reducing innovative activities and marketing, and place high emphasis on survival. The most significant consequence is that investments will be suspended to „quiet” future. To solve the problem of business development on background of tides in business activity with the permanent threat of chaos in global economy, managers must reject the conservative notion that any slump is preceded by growth, and vice versa. Obviously, successful transformation of managerial systems and strategic thinking must be directed by sound understanding of logic of the firm, the way it operates and how it creates value for its stakeholders (Casadesus-Masanell & Ricart 2010, p. 103), that is known in literature as a concept of business-model (Amit & Zott 2001, Casadesus-Masanell & Ricart 2010, 2011, Magretta 2002, Osterwalder & Pigneur 2010, Shafer, Smith & Linder 2005, Zott & Amit 2007, 2008). Being based on clear understanding of customer and his perceptions of benefits and sacrifices, in accordance with economic logic of providing value at acceptable costs, a particular business-model represents the “content, structure and governance of transactions, designed so as to create value through the exploitation of business opportunities” (Amit & Zott 2001, p. 511). According to this definition, content of transactions consists of products and information, resources and capabilities; structure characterizes the participants of exchange, their relations and selected method of implementation of operations; governance is characterized as control of flows of information, resources and products, legal form of a firm and stimuli which are relevant for the participants.

Obviously that today it is a customer who remains a key figure for any organization as a source of its practical income. The credibility gap that still exists between business and society ruins to a certain extent its energies undertaken to recuperate from the recent crisis. On the other hand such a problem generates opportunities of a new sort related to introduction of corporate social efficiency into strategy shaping.

Corporate social efficiency is defined as configuration of principles of social responsibility, processes, and also policies, programs and results that are measurable and are used by business-organization in its relationships with society (Wood 1991, p. 692). In accordance with these social and ecological initiatives as potential determinants of business value are directly tied with corporate social efficiency. Corporate social efficiency relates to the result of actions taken by organizations in order to strengthen their positive influence on society (Maas 2009, p. 7).

Thus, as stimuli, intentions and products are related to producers, so the influence is related to direct customers and other interested parties (stakeholders) (Freeman 1984). Influence should be determined as influence of organizations on society in economic, social and environmental spheres; stakeholders are groups or individuals, that are considered to be influenced notably by activities, products or services of an organization, or they are capable to affect ability of organization to realize its strategies successfully (Maas 2009, p. 8).

Possible instruments to provide positive social influence for an organization are grouped as following:

- Philanthropy and related activities (donations; volunteering of employees; ensuring of collection of donations that customers are interested to make for third parties; charity events; promotion for social services and so on);
- Introduction of relevant methods or practices enhancing control of level pollution of the environment; reducing energy consumption; ensuring observance of employees' rights; debar the firm from deceptive advertising; investing in safety and protection of labour and so on;
- Changing product's characteristics properly (organic ingredients; superb quality; reduced energy consumption; debar from particular ingredients and so on).

As far as perception value by a consumer is affected by of external factors related to his environment, so far his receptivity to particular social and ecological problems depends on level of education, intellectuality or life experience. Thus in customer perception of benefits is possibly to emphasize such aspects as benefits which tied to a customer directly, and also benefits which tied not only to him as well. Such explanation gives us prove to divide the benefits offered as benefits getting of that by a customer does not require, or requires to engage in a third party. For example, organic food is marked out through proposition of benefits that are tied to the consumer personally and do not require bringing in any third parties to get. The consumption of organic food allows to a particular customer to build the unique status and to realize his own attitude demonstrating indifference toward environment to the audiences important for him. So via acquisition of these products a customer is able to display his own social responsibility and to live in accordance with ethics principles. It is clear that for the customer actual receiving of the mentioned benefits is related to engagement of a third party.

Applying principles of customer value-based orientation into practice of strategic thinking it is expedient to take into consideration the fact that philanthropy and introduction of particular business practices are sources of benefits, receiving of which for the customer is mediated through a third party, then via changing characteristics of the product it is possible to strengthen perceived attractiveness of proposed combination of benefits, which are got by the customer as directly and with participation of the interested persons as well. It is important that consumers tend to evaluate higher the benefits which they are able to get directly. That is why consumer value of a product, the benefits of which are related to some ecological and social aspects and perceived as almost equal to that offered by a reference product, versus losses (price, for example) that are substantially higher, then losses associated with alternative proposal, will be lesser regardless great success achieved by its producer in the field of social responsibility. The needed shift in managerial thinking is towards providing of synergy for the set of means of corporate

social responsibility in order to build so-called responsible brand which is actually able to promote perception of benefits by customers as consequences of social initiatives of the organization.

It is important to pay relevant attention to such instruments of corporate social responsibility as social investments, social partnership, corporate communications and social accounting which will help to prevent conflicts of interests with stakeholders, and also will be instrumental in reducing of transaction costs, profitability increase (Freeman 1984, Friedman 1970), and sustainable development. Customers' awareness about social responsibility of the organization and their positive attitude toward results, attained by it in this sphere, are capable to add to its products such perceived benefits, as positive and improving reputation. As for specific progress achieved by the firm, it will be capable to save operating costs, increase sales and reach notable customer loyalty enhancement, reduce fluctuation of personnel, promote personnel loyalty and motivation. In external environment it will result in reduced pressure of supervisory organs, facilitation of access to investment resources and improvement of financial indexes of the firm.

4. CONCLUSIONS

Although during previous three decades the competitiveness construction of world business confidently rested upon strategy, today attention of CEO of prominent companies is shifted onto conception of business-model, its invention, introduction, modification, innovation. For the age of global turbulence managers need not only these new structural blocks, but also new economic thinking as well. Taking into consideration probability of drastic and unexpected changes, the best turn of strategic thinking on its move towards ensuring sustainable development of business is to direct main efforts not only on rapidity of reaction and protection of areas that are sources of problems, but also on taking advantages framed in change.

Moving focus in strategic thinking from increase of shareholders value towards respect of interests of wide spectrum of stakeholders is of current importance. The problem is important today because it is actually impossible to ensure sustainable wealth growth for a firm's owner without increase of its product's value perceived by customers. So customer as the source of its practical income is the key figure for any organization. The deficit of trust that still exists in relations with society hinders business in its efforts to back up from the recent crisis, giving at the same time variety of opportunities to be drawn into activities associated with corporate social efficiency.

Corporation's strength should be enhanced through philanthropy and related activities, including support to undeveloped regions, initiatives tailored to homeless populations and their urgent needs and support preventing and end homelessness, promotion of educational programs and so on.

As for key determinants of success concerning corporate management achievements are possible via reduction of bonus payments to top management; in sphere of providing of equal opportunities it is stay of women or representatives of national minorities at top positions; in the sphere of improvement of relationships with personnel it is enhancement of programs of defence of health and labour protection; in the field of ecology it is increase of sales contribution from innovative products, that provide energy-savings or propose related to ecology benefits; as for defence of human rights sphere strong positions should be achieved through initiatives establishing of relationships with the certain categories of people with special needs.

Most of a firm's efforts must be directed at its product. The criteria of firm's strength are quality including introduction of long-term, detailed and complex program of quality, innovations and researches, and the purpose for its mission that serve products tailored to indigent populations.

Taking into consideration the experience of using Domini 400 Social Index, it is important to introduce a criteria of ranking of business organizations in accordance with their strength and weaknesses in the aspect of corporate social responsibility, achievements in the sphere of corporate social efficiency. The problem of respect for national characteristics remains of current importance also.

It is possible to fill up the gap between managerial practice and its theoretical base formed with managerial economics by special attention to economic thinking of a manager and directions of forming his economic competence as basis of economic conduct which will be instrumental in growth of efficiency of management in the age of turbulence.

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THE EFFECT OF FARM ECONOMIC, SOCIAL-ECONOMIC AND INFRASTRUCTURAL INDICATORS ON ARABLE LAND PRICES AND RENTAL FEES IN HUNGARY

Sergey Vinogradov, Zsuzsanna Tóth-Naár

Szent István University, Faculty of Economics and Social sciences, Institute of Economics,

Law and Methodology, 2100 Gödöllő, Páter K. u. 1.

Abstract

On the basis of results achieved by implementing the multivariable methods the authors have proved that the infrastructural, farm economic and demographic indices have no significant impact on arable land prices or land rental fees in Hungary. These results lead to the conclusion that the local demand-supply conditions, the individual attributes of the given land unit – which are not expressed in land quality index – have considerable impact on arable land prices.

Key words: *arable land rental and sales prices, principal component analysis, hierarchical cluster analysis*

1. INTRODUCTION

The change to market economy forced the privatization of production factors (among them the land) and the restructuring land ownership and land use. As the result of the compensation and land privatization processes that were started in the early 1990s, the private ownership of arable land was restored in Hungary. The reformed land ownership system was very fragmented, the average size of land owned by one person was hardly 2 ha. As opposed to this, the land use system was strongly concentrated: the average size of agricultural area cultivated by private farms increased by 54% between 2000 and 2010 and reached 4.6 ha, while the corporate farms had 337 ha agricultural areas on average in 2010 (ÁMÖ, 2010). In general it can be stated that the arable land in Hungary is not owned by those who cultivate it, that is the land ownership and land use is clearly separated.

Following the EU accession, the European Commission has granted Hungary the extension of transitional period for the acquisition of agricultural land Hungary (prohibit land purchases by non-resident EU citizens and any form of foreign or domestic legal entity) for ten years (until 2014). The allowance of land acquisition by corporations by a similar extent than by private persons (integrated on the basis of ownership) could intensify the land market. In the rental system also the renting right could be pledged, for which the collateral would be the income of the producer and the creation of the rental right transference. By the land purchase of foreigners the land market could be consolidated, however, the bargaining power of the domestic producers would decrease. By the intensification of the land market the increase of the land prices and rents might speed up; the competitiveness, the profitability of the Hungarian producers will decrease as well as the chances of purchasing land (Biró 2009).

Considering land use in Hungary the number of private farms reduced 40.8% to 567 thousand, while the number of enterprises grew 23,8% to 8.6 thousand between 2000 and 2010. Average land use of agricultural land at private farms is 4,6 ha in 2010, growing rapidly (28.7%) in ten years. Enterprises cultivate 322,6 hectares on average. The concentration process goes on along with the growing ratio of private farms producing for market. Taking into consideration the distribution of land use by holding

size, it can be seen that most of the private farms (73%) use less than 1 hectares, these part-time farms serve basically subsistence purposes, they keep a few animals mostly for their own consumption and not for income earning. Their owners are usually not employed in agriculture but in other sectors, are old-age pensioners or unemployed. The small size private farms cultivated with traditional methods cannot provide sufficient income. A solution can be making products with greater added value and finding complementary income sources.

Renting farmland is typical and shaping factor in land use due to the separation of owners and farmers. The rental rate for agricultural land is the highest among the average and better quality arable land (62.0%), while the rental rate of lower quality arable land 4.8 percent less.

Among the categories of the holdings the land use of cooperatives is almost totally (93%) based on land lease. Tenancy has also defined role 85.3%, in case of agricultural enterprises without legal entity, and exceeds 60% at agricultural enterprises with legal entity. Agricultural entrepreneurs (depending on full- or part time status) are renting 44 to 36 percent of the cultivated land, while the primary producers are renting the quarter of their cultivated area.

The Lorenz curve was applied to provide a graphic representation of the degree of inequality of agricultural land distribution. The area between the Lorenz curve and the line of perfect equality represents the degree of concentration.

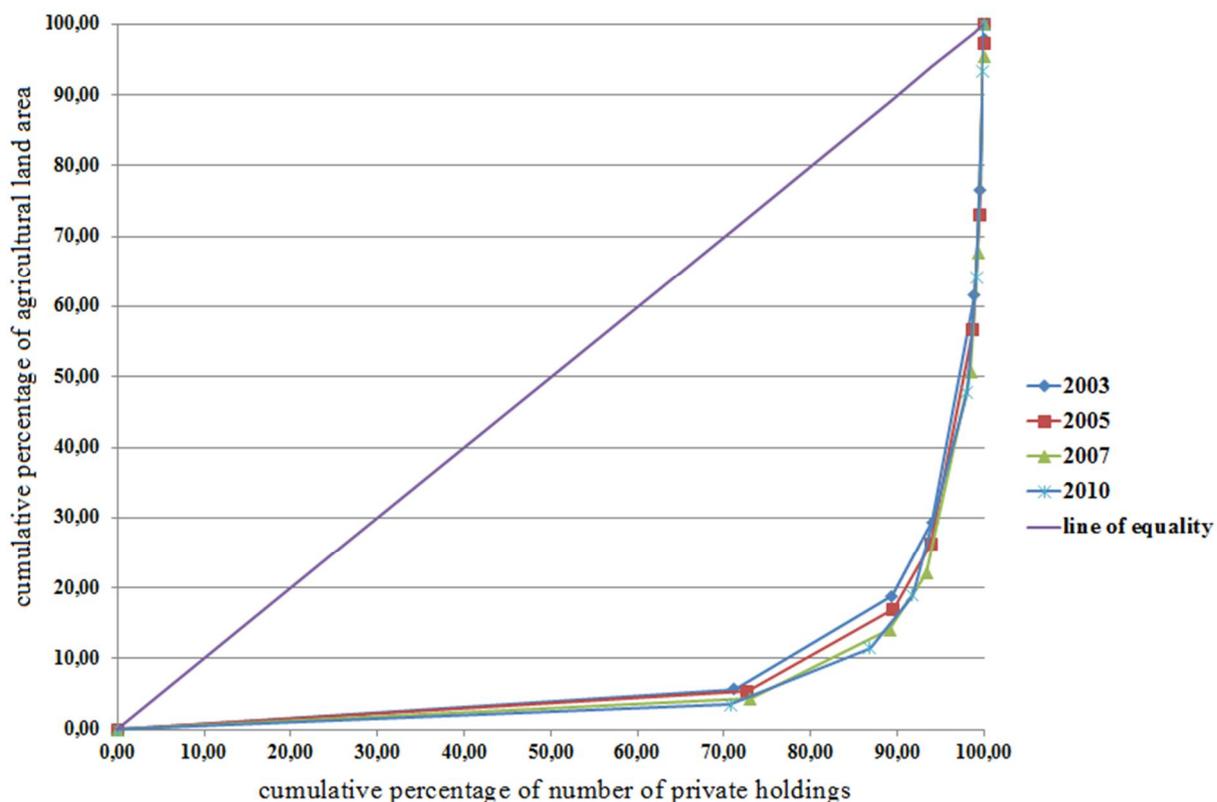


Figure 1. Lorenz curves of agricultural land use structure in case of 'single holder' (individual or family) farms

Source: own calculation based on data from Hungarian Central statistical Office (2011)

The degree of inequality in the agricultural land use is high for both of farm types but in case of individual farms it is higher and increased between 2003 and 2010. 13.2 percent of number of individual farms cultivated 88.5% of agricultural land area used by individual farms in 2010 (Figure 1.).

The steady growth in prices, which were seen even during the years of the depression, continued in the first half of 2012 as well. Based on the values of the FHB Agricultural Land Price Index, until the end of the first half of 2012 land prices rose by nearly 11%, from last year's index value of 202,3 to 224 this year (Figure 2).

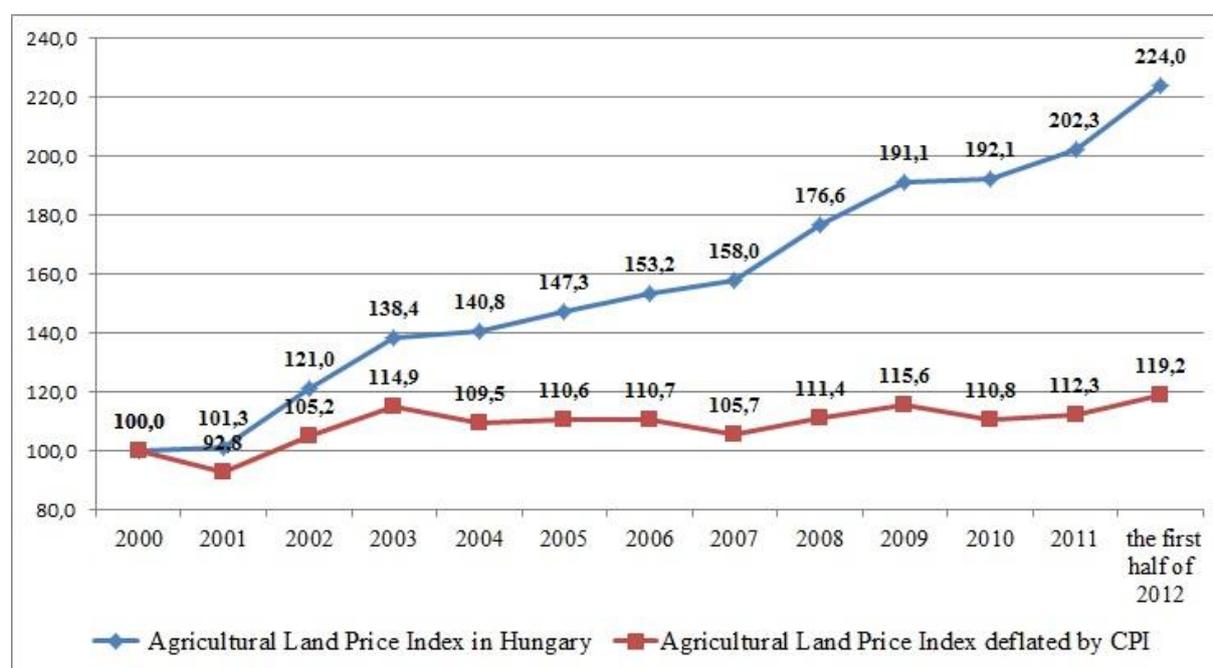


Figure 2. The evolution of Agricultural Land Price Index in Hungary

Source: FHB Index calculations, FHB Mortgage Bank Plc (2013).

2. MATERIALS AND METHODS

The data required for the research and the gold crown land quality indices³² were provided by the Enterprise Analysis Department (operator of Test Farm System – FADN) of Agri-Business Research Institute (AKI).

The authors picked the net value added defined in FADN (Keszthelyi-Pesti 2008, 7-8. p.) as an appropriate index for the evaluation of profitability situation of farms dealing with field crop production. The net value added (NVA) is the difference of output (production value) produced by the farms and

³² Golden Crown – land quality index used in Hungary. The Gold crown system introduced in Hungary in the second half of the XIX century.

the value of products and services used for production – current production input – increased by amortization.

The intensity of crop production was examined on the basis of total size of sowing seed, fertilizer, pesticide and fuel costs.

The farming data and the gold crown values were available in micro-region division. The farming data of years from 2004 to 2010 were averaged in the form of simple mathematical average for the analysis.

The land prices and land rental fees for 2010 were also taken from the Test Farm System.

The demographic situation of geographical units was evaluated by the population density index (number of inhabitants per one square kilometer), the social-economic situation by migration balance (difference of numbers of constant immigration and emigration per permanent inhabitants, calculated per thousand) and the unemployment rate (percentage rate of the unemployed within population aged from 18 to 59). The single settlement basic data required for the calculation of the above listed derived data are from the Settlement Statistical Database System (T-Star) of KSH (Central Statistical Office).

The accessibility of geographical units was evaluated by Access index, while the extension and quality of public road network was evaluated by Transport index. The idea of Access index was given by the work of Faluvégi (2004) in which the author analysed the accessibility of microregions by reviewing the factors which affect the settlement of foreign capital. The basic data used for deriving the indices came from the Digital Topographic Database in the form of map objects.

The treatment of geographical information data and the construction of maps was solved by the use of ArcView GIS 3.2a program of ESRI (Environmental System Research Institute).

When forming the Transport index – by weighted averaging of values of partial indices – we put the distance to railway with 30%, the distance to main road with 30% and the distance to motorway with 40% weight. The Transport index evaluates the transportation conditions of examined geographical objects (microregions, micro-landscapes) on a scale from 0 to 100%. The value of the index near 0% refers to the underdeveloped road network, while the near 100% value means developed transportation infrastructure.

The analysis of traffic conditions shows that the transportation infrastructure of two Southern regions – Southern Transdanubia and Southern Great Plain – is less developed compared to the other parts of the country, and their microregions show greater heterogeneity.

In the construction of Access index, put the distance to the closest county town with 20%, the distance to Budapest with 35%, while the distance to the Western border (Hegyeshalom) with 45% weight. The near 100% value of Access index refers to the more favourable, while the value near 0% to the less favourable economic-geographical location.

The result of grouping the microregions according to Access Index clearly shows those microregions east of the River Tisza, the accessibility of which is the worst, while the economic-geographical situation of the two Transdanubian regions and Central Hungary is the most advantageous.

The analysis of accessibility and traffic conditions is very important from the aspect of foreign capital attraction: those microregions where the value of both indices is low cannot really be considered when speaking about the increasing demand of foreigners on land after 2014.

The data processing and statistical analyses were made with the help of IBM SPSS Statistics 21.0 for Windows statistical software package.

The relations among indices involved in the examination were analysed with *multiple regression analysis* and correlation calculation. The results of applying these methods were verified with *principal component analysis* within multivariate methods and *hierarchical cluster analysis* made on the variables. The multivariate analyses – in contrast to regression analysis - do not highlight any of the examined variables but they enable the exploration of relation system between variables in case of variable groups. Here we could examine, for example, whether the indices describing the social-economic infrastructure of a region form a coherent variable group with land market categories (price or rental fee of arable land, land quality indices).

3. RESULTS

The first examination aimed the survey of factors which significantly influence arable land prices, on the basis of farm management, social-economic and infrastructural indices. The relationship between land quality measured in Gold Crown and net value added weak-moderate, $r=0,43$. Indirectly it allows to conclude that the ratio of returns on land has decreased within the income of crop production. By analyzing the competitiveness of agricultural and food industry production, Módos et al. (2004, 13. p.) came to the same conclusion, that is the weight of advantages from natural qualities diminishes very much compared to other factors.

On the basis of values of linear correlation co-efficients we cannot speak about statistically proved relation between land prices, land rental fees as well as infrastructural (indices of transport, accessibility), social-economic (migration difference, unemployment rate) indices and population density.

The arable land price of 2007 was put as a target variable in the first regression model. Out of the explanatory variables only one index, the rental fee had significant impact. The explanatory force of the model, however, is small: the rental fees contribute to the explanation of dispersion of land prices to a degree of 15.8%. A land rental fee higher by one euro corresponds to an arable land price higher by six euros on average. The author would draw the attention to the fact that the direction of causal relation found between the two examined indices can be turned round: it is not only that the higher land rental fees are built in the higher arable land prices but also the opposite side of this process, when the value increase of arable land prices resulted by the changing market conditions evokes the strong growth of rental fees.

The impact of land quality, the profitability of farming as well as the social-economic and social indices have not been proved significant.

The outcomes of our examination have been confirmed by the similar results reached by Naár-Vinogradov (2008) from the examinations made on the basis of her own database: she could not reveal strong relation between GC and market arable land price either. Research in Latvia (Bastiene-Saulys, 2005) has proved that the arable land price on the market is in weak-moderate relation ($r=0,35$) with fertility scores. The relation, however, between standard arable land price and fertility is stronger.

The results led to the drafting of another hypothesis, which says that the national-level research revealed the common features of geographical units only as regards the factors influencing arable land prices, because these prices are formed in relation to local conditions.

The land quality measured in GC value contributed to the explanation of variability of rental fees to a extent ($R^2=36.8\%$).

The output of the second running is a four-factor model, in which the land quality measured in GC value has the strongest impact on the land rental fees.

It is interesting that the relation between the accessibility index and the rental fee is opposite: a rental fee lower by 32 eurocents on average belongs to an index value higher by 1%. have to note, however, that this conclusion cannot be extended to company level because the observation units were statistical microregions.

The arable land of higher quality by one gold crown costs the tenant more by 2.8 EUR per hectare on average.

The results of other research (Szűcs 1999) also reveal that close correlation between land quality and rental fee cannot be demonstrated in every case. In authors opinion, it can also be due to the fact that not the profitability of farming is stressed in land rental fees but the bargaining position of the landlord and the tenant: big land users of the locality can join forces against the many land-owners in order to keep the rental fees low. The rental fees are greatly influenced by the direct land-based subsidies, too: the landlords want to have more and more share in the subsidies going to the land user, and – last but not least – the size of the rental fee depends on the accessibility, irrigation possibilities of the area, etc.

As regards the prices of arable land, on the basis of results of national-level research our hypothesis has been proved only partly acceptable. This hypothesis said that the land quality has only a moderate impact on arable land prices because the impact of land quality measured either in gold crown has not been proved statistically significant.

The development level of infrastructural environment and the social-economic situation has no significance regarding the arable land prices.

Out of the factors influencing land rental fees, the impact of land quality The impact of profitability of crop production is weaker, but statistically traceable.

On the basis of results achieved by implementing the multivariable methods the authors have drawn the following conclusion: corresponding to the results of regression research made at national level, the significant impact of infrastructural, social, economic and demographical indices on arable land prices and land rental fees cannot be proved. Although the arable land price was put in the same group with land rental fee as well as land quality and net value added, in case of regression examinations only its relation with land rental fee has proved to be significant which can also mean that the profitability of land quality and crop production is built in the arable land price indirectly, through the land rental.

According to results of Principal Component Analysis the first three principal components may be regarded significant. Based on the *principal components loading matrix* (Table 1.) the relationship of the first principal components to the variables Unemployment rate, Migration balance, Access index, Transport index and Population density index may be taken to be significant. Consequently, we can say these five macroeconomic indicators constitute a mutually correlated variable set.

The second principal component may be related to the consumption of Rental fee, Land quality index, NVA and Price of arable land.

The third significant component is quasi-Intensity of crop production. Concluded that

Variable groups obtained as a result of the cluster analysis are fully consistent with the results of the PCA (Figure 3.)

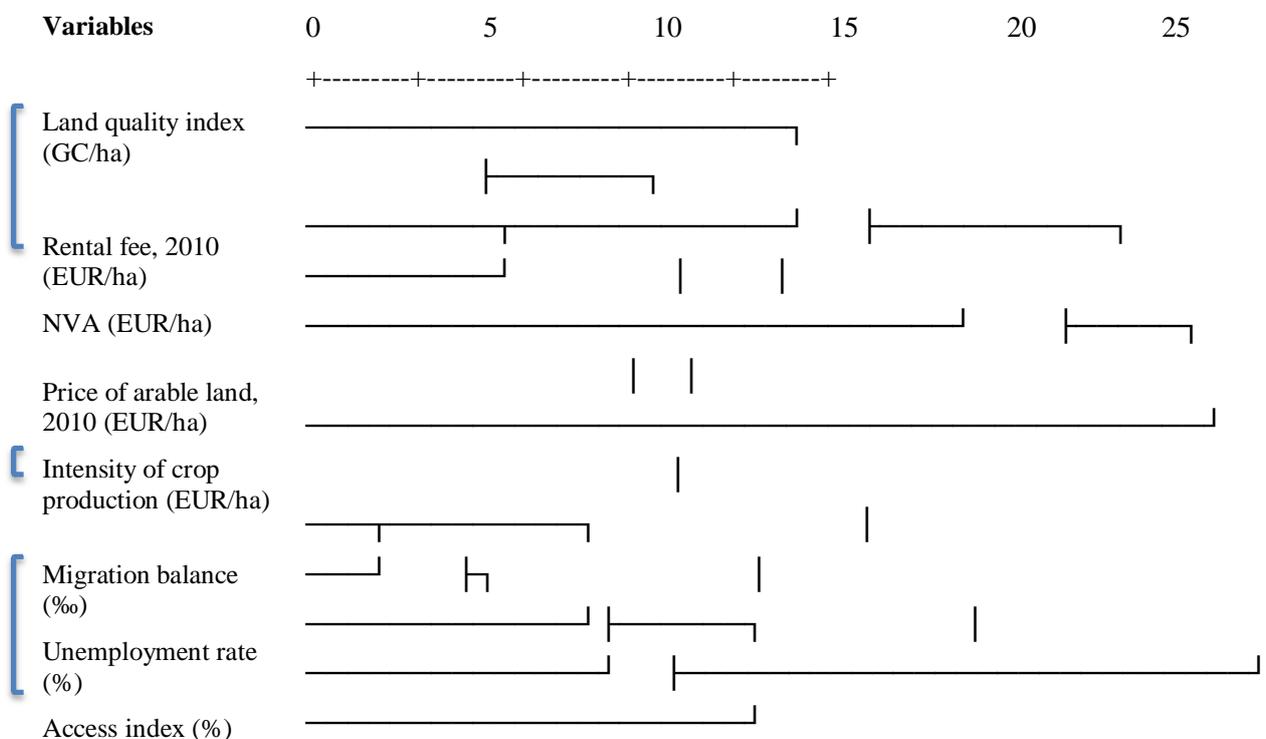
Table 1. Summary of PCA results

Variables	Component Loadings		
	1.	2.	3.
Unemployment rate (%)	-0.872	0.224	0.037
Migration balance (‰)	0.798	-0.276	0.082
Access index (%)	0.726	-0.326	-0.063
Transport index (%)	0.684	-0.226	-0.083
Population density index (inh./km ²)	0.648	-0.195	0.166
Rental fee, 2010 (EUR/ha)	0.257	0.826	-0.090
Land quality index (Gold Crown/ha)	0.218	0.693	-0.295
NVA (EUR/ha)	0.247	0.624	0.374
Price of arable land, 2010 (EUR/ha)	0.254	0.569	0.174
Intensity of crop production (EUR/ha)	0.141	0.322	0.732

N=142, Kaiser-Meyer-Olkin measure of sampling adequacy: 0.786, Bartlett's test: $p < 0.01$, the three first PCs explained 81.2% of the total variation in the dataset

Source: own calculations

Rescaled Distance Cluster Combine (using Ward's Method)



Transport index (%)

Population density
index (inh./km²)

Figure 3. Dendrogram of hierarchical cluster analysis of land market measures, infrastructural, farm economic and demographic indices in case of Hungary

Source: own calculation

On the basis of results achieved by implementing the multivariable methods the authors have drawn the following conclusion: corresponding to the results of regression research made at national level, the significant impact of infrastructural, social, economic and demographical indices on arable land prices and land rental fees cannot be proved. Although the arable land price was put in the same group with land rental fee as well as land quality and net value added, in case of regression examinations only its relation with land rental fee has proved to be significant which can also mean that the profitability of land quality and crop production is built in the arable land price indirectly, through the land rental.

4. CONCLUSION

Further consolidation of agricultural land ownership and land use in Hungary are expected in medium terms. Further progress can be achieved on long term basis, when relevant regulations of general land consolidation will be improved within the frame of Land Consolidation Strategy.

Development of land market will be in progress as the results of medium and long term achievements in the progress of land consolidation.

Major changes are expected in land policy, when derogation period of time passes (2011 or 2014) and Hungarian land market will be open for foreigners as well.

Hungarian land policy is basically adapted to the situation, further development of land market can lead to the land policy better suited to circumstances within the EU.

Land use and land ownership developed on diverse way after the privatisation of Hungarian agriculture, small scale agricultural holdings need to be consolidated, medium- and large scale farming enterprises use land mostly in consolidated circumstances.

Voluntary, spontaneous land consolidation can provide some local results, state-involvement has to promote and facilitate nation-wide, comprehensive consolidation.

On the basis of results of hierarchical (Forward method) regression analysis only the relationship of price of arable land with land rental fee has proved to be significant, which can also mean that the land quality and profitability of crop production is built in the arable land price indirectly, through the land rental fee. It leads to the conclusion that the local supply-demand conditions, the specific features of the given land unit have considerable impact on arable land prices, although these are not expressed either in gold crown value. These features are the accessibility of the area, its size, structure, irrigation possibilities, etc.

Based on the results achieved by implementing the multivariable methods the authors have drawn the following conclusion: corresponding to the results of regression research made at national level, the significant impact of infrastructural, social, economic and demographical indices on arable land prices

and land rental fees cannot be proved. Although the arable land price was put in the same group with land rental fee as well as land quality and net value added, in case of regression examinations only its relation with land rental fee has proved to be significant which can also mean that the profitability of land quality and crop production is built in the arable land price indirectly, through the land rental.

According to the opinion of Hungarian land brokers (Fűr, 2010) Hungarian and EU prices will get nearer to each other in the coming years. According to our conservative estimate, prices will go up at least 2-3 times in the next 2-3 years in Hungary. That means 30-40% per annum, the compounded interest taken into account. This income is remarkable comparing to the 10-20% income of alternative investments.

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**SPECIAL TAX REGIMES APPLIED AS TAX SUPPORT TO INDIVIDUAL
ENTREPREUNERS AS SPECIAL SUBJECTS OF ENTREPRENEURIAL ACTIVITIES
IN THE RUSSIAN FEDERATION**

Victoria Poliackova

Financial university under the Government of the Russian Federation, Russia, Moscow,
Leningradsky Prospekt, 49

Abstract

This article is aimed at analyzing the specific features of economic operations conducted by individual entrepreneurs in the Russian Federation and at characterizing the special tax regimes established for Russian entrepreneurs to simplify their business activities and maximize their profit in accordance with the effective restrictions prescribed in Russian laws.

Key words: *individual entrepreneur, taxation, standard tax regime, special tax regime, simplified tax system, patent tax system, unified agricultural tax, unified tax on imputed income for certain types of activity.*

1. INTRODUCTION

Small and medium-sized businesses play an important role in the economy and employment. Support for small and medium-sized businesses is part of Russia's social policy for job creation and improvement of life quality. Development of small businesses helps fill the market with goods, works and services, making it possible to overcome monopolism, promote competition, and apply innovative solutions in the production process. As of January 1, 2010, more than 2.5 million market participants, including individual entrepreneurs (69%), operated in the Russian trade sector. Among all Russian industries, the trade sector is the leader in job creation: in 2009, there were about 12 million employees, or 17.8% of Russia's total employed population³³. At present, the Government provides active financial and tax support to small businesses. Let us analyze the specific features of individual entrepreneurs' functioning in Russia as special market participants, as well as the special tax regimes established by the Government to provide tax support to their business activities.

2. INDIVIDUAL ENTREPRENEURS AS SPECIAL SUBJECTS OF TAXATION

In accordance with Article 23 of the Civil Code of the Russian Federation, a Russian citizen has the right to engage in business operations without creating a legal person beginning from the date of their official registration as an individual entrepreneur.

³³ The Strategy for the Development of Trade in the Russian Federation for 2011–2015 and for the Period Ending 2020, approved by Order of the Ministry of Industry and Trade of the Russian Federation No. 422 of March 31, 2011. ConsultantPlus.

For individuals, the essential indicators of entrepreneurial activities in Russia are as follows:

- 1) Citizenship of the Russian Federation;
- 2) State registration of a citizen of the Russian Federation as an individual entrepreneur;
- 3) Commercial nature of activities – generation of profit;
- 4) Systematic nature of activities;
- 5) Independent property liability.

As of February 1, 20013, according to data from the Federal Tax Service of Russia, there were 3,912,158 individual entrepreneurs (IEs) in the Russian Federation³⁴. In Russia, there are 4,539,349 operating legal entities. Most of them (3,604,539) are limited liability companies, which is the most common form of commercial legal entities in the Russian Federation.³⁵ Interestingly, the number of IEs and LLCs is currently about the same in this country.

In this context, it is interesting to discuss the existing environment created by the Government for business operations conducted by IEs and LLCs.

Table 1. Differences in administrative and tax environments for the conduct of business under the IE и LLC regimes

IEs	LLCs
1. Specific features of accounting records maintenance	
IEs are not supposed to maintain accounting records (submit balance sheets/profit and loss statements to tax authorities).	LLCs are supposed to maintain and submit accounting records irrespective of the form of taxation.
2. The registration procedure	
<p>The registration procedure for IEs is simplified – IEs are supposed to register at their place of residence.</p> <p>In addition, IEs are not required to have:</p> <ul style="list-style-type: none"> ✓ The articles of association; ✓ An authorized capital; ✓ A seal; ✓ A settlement account. 	<p>LLCs are registered at the legal address of their head offices.</p> <p>LLCs are required to have:</p> <ul style="list-style-type: none"> ✓ The articles of association; ✓ An authorized capital (of at least 10,000 rubles); ✓ A seal; ✓ A settlement account.
3. The registration procedure for subsidiaries and the entitlement to the simplified tax system	

³⁴ The website of the Federal Tax Service of Russia: http://www.nalog.ru/gosreg/reg_fl/ip_stat/.

³⁵ The website of the Federal Tax Service of Russia: http://www.nalog.ru/gosreg/reg_ul/reg_ur_lic/.

IEs are not required to register their subsidiaries when they operate in several locations, and they retain their entitlement to the simplified tax system.	LLCs are required to register their subsidiaries; in this connection, they lose their entitlement to the simplified tax system.
4. Scope of activities	
IEs must not to be engaged in: <ul style="list-style-type: none"> ✓ Production of alcohol; ✓ Alcohol wholesale and retail (this does not apply to beer or beer-containing products); ✓ Insurance (i.e., operate as insurance carriers) or pawnshop business; ✓ Tour operator business. ✓ 	Companies may be engaged in any types of activity in accordance with Russian laws.
5. Promptness of current business operations	
Simplicity of making business decisions: it is not required to adopt any special documents.	Current business operations are supposed to be recorded.
6. Extent of liability	
IEs are not liable for their debts, including tax liabilities, with all their property even after the termination of their businesses.	Founders of LLCs incur liabilities within the scope of their authorized capital. After their liquidation, LLCs' obligations are extinguished.
7. Simplicity of business dissolution	
Simple dissolution.	A more complicated administrative procedure for business dissolution.

Citizen entrepreneurs carry out their entrepreneurial activities in their own names and at their own risk. In their own names, they enter into economic agreements and conduct transactions with legal entities and individuals aimed at making profit. In addition, they may appear in courts of justice and act as independent taxpayers. Therefore, entrepreneurs must register with a tax authority as taxpayers and pay all charges, taxes, and dues provided for by law.

Even though individual entrepreneurs are individuals, they are considered to be equal participants in entrepreneurial activities.

It is noteworthy that the rules prescribed in the Tax Code of the Russian Federation ("The Tax Code") are applicable to citizens who carry out entrepreneurial activities, having not been registered as individual entrepreneurs. Therefore, all taxes applicable to entrepreneurs will be collected.

3. TAXATION REGIMES APPLICABLE TO INDIVIDUAL ENTREPRENEURS

Taxes from individual entrepreneurs are collected by applying either a standard or special taxation

regime. What income of a taxpayer is taxable and what tax rate applies for taxation purposes depend on the choice of a tax system.

Therefore, an individual entrepreneur achieves a standard or special tax status depending on the taxation regime applied by a taxpayer.

The standard tax regime is the main one and applied automatically, if an individual entrepreneur files an application to a tax authority to be transferred to one of the special tax regimes.

The main taxes payable by an entrepreneur under the standard regime are as follows:

- individual income tax (IIT);
- value added tax (VAT).

Special tax regimes are established by the Tax Code and applied in the cases and under the procedures prescribed in the Code and other laws on taxes and dues (Article 8 of the Tax Code). Let us discuss their specific features.

4. SPECIFIC FEATURES OF SPECIAL TAX REGIMES

To support small and medium-sized market participants, including individual entrepreneurs, the section titled “Special tax regimes” was added to the Tax Code by Federal Law of the Russian Federation No. 187-FZ of December 29, 2001. The main specific feature of any special regime is to establish a single tax that would substitute several effective underlying taxes under the standard taxation regime.

Let us innumerate the types of special tax regimes applicable to individual entrepreneurs:

1. Simplified tax system (STS).
2. Patent-based simplified tax system.
3. Unified agricultural tax (UAT).
4. Unified tax on imputed income (UTII).

All the above tax regimes are aimed at simplifying individual entrepreneurs’ business activities as much as possible.

Let us discuss every special regime separately.

4.1. Simplified tax system (STS).

The simplified tax system is one of the most common taxation regimes for small businesses. An individual entrepreneur can be transferred to STS upon application on a voluntary basis. There are some legally prescribed business areas that do not make individual entrepreneurs entitled to apply STS.

They are as follows:

- Production of excisable goods;
- Extraction and sale of materials other than common commercial minerals.

In addition, this tax system is not applicable to:

- Notaries engaged in private practice;
- Lawyers who establish legal offices and other forms of legal practices;

- Individual entrepreneurs who have transferred to the tax system for agricultural goods (UAT).

However, it is applicable only if certain criteria are met.

The Tax Code prescribes three criteria for the transfer to the simplified tax system and its application:

- 1) Income level – not exceeding 60 million rubles a year;
- 2) Average number of employees – not exceeding 100 people;
- 3) Net book value of fixed assets – not exceeding 100 million rubles.

An STS-applying entrepreneur who exceeds the criteria must report within 15 calendar days upon expiry of the reporting (tax) period to the relevant tax office about his/her transfer to the general taxation system.

Taxable item:

- 1) Income;
- 2) Income decreased by expenses.

The choice of a taxable item is affected by business expenses, i.e. the presence of fixed and justified material costs that directly affect profits. For the sphere of production, for instance, it is more reasonable to choose such taxable item as income decreased by expenses. With low costs, for example, in the service sector, it is advisable to choose income as a taxable item.

The tax rate depends on the taxable item:

- 6% – for “income” as a taxable item;
- 15% – for “income decreased by expenses” as a taxable item.

The tax rate may be decreased to 5% by laws adopted by the constituent entities of the Russian Federation.

To calculate the single tax, a company’s sales income and non-sale income are taken into account. The income amount is multiplied by the rate of 6%. With the “income” chosen as a taxable item, an individual entrepreneur is entitled to decrease the income amount (the advance payment) by the premium paid to the Pension Fund and other extrabudgetary funds, yet no more than by 50%. It is an important factor when individual entrepreneurs have no hired employees. In this case, the tax (the advance payment) may be decreased by the total amount of insurance premiums paid for oneself on the basis of the underwriting year cost.

With the “income minus expenses” chosen as a taxable item to calculate the tax, they deduct expenses from the income amount and multiply the result by the rate of 15%. It is important that the income may be decreased by not all of the expenses. The list of expenses by which the income may be decreased is prescribed in the Tax Code. For instance, such expenses are as follows:

- acquisition, modernization, and production of fixed assets, as well as further construction, further equipping, rehabilitation, modernization, and retooling of fixed assets;
- repairs of fixed assets (including leased fixed assets), etc.

While studying the list of tax-decreasing expenses, one can make the conclusion that they are directly connected with individual entrepreneurs’ business activities. For instance, fines and penalties for nonfulfillment of economic agreements are not on this list.

The minimum tax rule is applicable to entrepreneurs who choose the “income minus expenses” as a taxable item: if at year-end the amount of calculated tax is less than 1% of the income earned for a year, they pay a minimum tax of 1% of the actual earned income.

The tax is not paid by a lumpsum payment. The individual entrepreneur must first make advance payments for the reporting periods (Q1, H1, H2, and 9 months) and then, based on these payments, pay the tax itself for the tax period (calendar year).

STS-applying individual entrepreneurs are supposed to:

- make advance tax payment – within 25 calendar days from the last day of the reporting period (Q1, H1, H2, and 9 months);
- pay the tax based on the results of the tax period – on or before April 30 of the year that follows the tax period (calendar year) which has ended, i.e. within the period established for filing the tax return.

Let us give an example discussed by the Federal Tax Service of Russia with regard to calculation by the STS-applying individual entrepreneur of his/her advance payments and tax (for the “income minus expenses” as taxable item). The conditions for calculation are given in the Table 2 below.

Table 2

Period	Income, rubles	Expenses, rubles	Tax base, rubles
January	600,000	460,000	140,000
February	840,000	650,000	190,000
March	720,000	500,000	220,000
Total for Q1	2,160,000	1,610,000	550,000
April	930,000	880,000	50,000
May	640,000	560,000	80,000
June	810,000	680,000	130,000
Total for H1	4,540,000	3,730,000	810,000

1. Let us calculate the amount of advance payments.

The amount for Q1 is 82,500 rubles:
 $550,000 \text{ rubles} \times 15\%$.

2. Let us determine the amount of advance payments.

The amount for H1 is 121,500 rubles:
 $810,000 \text{ rubles} \times 15\%$.

3. Let us calculate the tax amount.

Taking into consideration the advance payment made on the basis of the results of Q1, 39,000 rubles

are supposed to be paid for H1:
121,500 rubles less 82,500 rubles

4.2. Patent tax system.

This special tax regime may be applied only by individual entrepreneurs, if they conduct their business activities in the region where the patent tax system is adopted by the laws of the relevant constituent entity of the Russian Federation.

In the standard case, the patent tax system provides for exemption of entrepreneurs from several taxes. This system is voluntary and can be applied together in combination with other tax regimes. The document that entitles an entrepreneur to apply the patent tax system is a patent on one of the types of entrepreneurial activities with regard to which the patent tax system is adopted by the laws of the relevant constituent entity of the Russian Federation.

The list of types of the entrepreneurial activities taxable under the patent tax system is limited. For instance, they include:

- Veterinary services;
- Retailing through stationary outlet chain facilities, with each facility having a selling area not exceeding 50 square meters;
- Catering services provided through catering facilities having a service area not exceeding 50 square meters;
- Hairdressing and beauty services;
- Passenger motor transportation services.

The tax amount payable under the patent tax system does not depend on the actual income earned (or not earned) by an individual entrepreneur. It is determined on the basis of the amount of potential income established for each type of business activity by the laws of the constituent entity of the Russian Federation. The Tax Code prescribes the following general rule: maximum potential annual income should not exceed 1 million rubles, while minimum potential annual income should not fall below 100 thousand rubles. However, there are exceptions to this rule. The indicated income may be increased by the laws of the constituent entity of the Russian Federation in the following cases:

- If entrepreneurial activities are conducted in a city whose population exceeds 1 million;
- When an individual entrepreneur is engaged in certain types of entrepreneurial activities (for example, repairs and maintenance of motor vehicles, motorcycles, machines and equipment; renovation of residential facilities and other structures).

The tax is calculated by multiplying the rate of 6% by the potential earnable income of the individual entrepreneur. The calendar year is considered to be the tax period.

An individual entrepreneur may obtain a patent for a term of 1–12 months within a calendar year, with a patent issued from any date. To obtain a patent, the individual entrepreneur is supposed to submit an application to the relevant tax authority domiciliary 10 business days before the beginning of intended application of the patent tax system. If an individual entrepreneur plans to conduct business activities in a different region, the application may be submitted to any tax authority of the relevant constituent entity of the Russian Federation.

Depending on the period for which a patent was obtained, the tax is paid within the following time

period:

1) If a patent was obtained for a term of 1–5 months, an individual entrepreneur is supposed to pay the tax amount in one payment within 25 calendar days after the patent becomes effective;

2) If a patent was obtained for a term of 6 months and more, an individual entrepreneur is supposed to pay the tax in 2 payments:

- 1/3 of the tax amount within 25 calendar days after the patent becomes effective;
- 2/3 of the tax amount within 30 calendar days before the end of the period.

Let us give an example discussed by the Federal Tax Service of Russia with regard to calculation of the tax amount depending on the patent period³⁶.

For example, an individual entrepreneur holds a patent that comes into force from January 25, 2013. The type of activity in question is furniture repair services. The potential earnable income is 240,000 rubles. Depending on the patent period, the tax is paid in different periods.

1. A patent is obtained for 4 months:

In this situation, the tax must be paid in one payment on or before February 19, 2013, in the amount of 4,800 rubles.

Tax amount for a year = potential income × tax rate = 240,000 × 6% = 14,400 rubles

Tax amount payable for 4 months = 14,400 / 12 × 4 = 4,800 rubles

2. A patent is obtained for 8 months:

Tax amount for a year = potential income × tax rate = 240,000 × 6% = 14,400 rubles.

On or before February 19, an individual entrepreneur must pay 1/3 of the tax amount (4,800 rubles).

Tax amount payable = 14,400 / 3 = 4,800 rubles

The remaining part must be paid in the amount of 9,600 rubles on or before August 27, 2013.

Tax amount payable = 14,400 – 4,800 = 9,600 rubles

4.3. Unified agricultural tax (UAT).

If an individual entrepreneur produces agricultural goods, it is optimal to choose UAT, because only 6% of the difference between the income and the expenses is payable under this regime.

An individual entrepreneur who does not produce agricultural goods, but is engaged in primary processing or further (industrial) processing, is not entitled to apply UAT.

When applying UAT, the important limitation is that agricultural goods of own production are supposed to account for at least 70% of the total income from the sales of goods (work and services). Incomes obtained in kind are taken into account at contract prices based on market prices. They pay the tax from the profit earned by an individual entrepreneur from all types of business activities. The profit is the difference between the income and expenses for a year (half a year). The Tax Code limits the list of expenses that are taken into consideration while calculating UAT.

³⁶ The website of the Federal Tax Service of Russia:

http://www.nalog.ru/create_business/ip/in_progress/usn_patent/step4/

The tax rate is 6%.

UAT amount (advance tax payment) = tax base × tax rate.

Tax base = income earned for a year (half a year) – expenses incurred for a year (half year).

UAT payers:

- Make advance payments based on the results of the reporting period – on or before July 25;
- Tax amount based on the results of the tax period (calendar year) – on or before March 31 of the year that follows the tax period (year) which has ended.

Now, using the example given by the Federal Tax Service of Russia, let us calculate the amount of advance tax payments and UAT³⁷.

Let us assume that an individual entrepreneur is engaged in farming and selling chickens. The Table 3 below shows the income and expenses.

Table 3

Period	Income, thousand rubles	Expenses, thousand rubles
January	100	90
February	120	100
March	80	50
April	90	40
May	150	70
June	110	50
Total for H1	650	400
July	120	100
August	110	90
September	70	40
October	80	60
November	120	80
December	130	90
Total H2	630	460
Total for a year	1,280	860

³⁷ The website of the Federal Tax Service of Russia:
http://www.nalog.ru/create_business/ip/in_progress/eshn/step4/.

1. Let us determine the tax base for a half year

The tax base for the reporting period (half a year) is 250 thousand rubles: 650 thousand rubles - 400 thousand rubles.

2. Let us determine the payment amount for a half year

Advance tax payment for H1 – 15 thousand rubles: 250 thousand rubles \times 6%.

3. Let us determine tax base a year

Tax base a year is 420 thousand rubles: 1,280 thousand rubles - 860 thousand rubles.

4. Let us determine the tax amount for a year

Tax amount for a year is 25.2 thousand rubles: 420 thousand rubles \times 6%.

5. Let us determine the tax amount payable at year-end

Taking into account the advance payment, a total of 10.2 thousand rubles is payable at year-end: 25.2 thousand rubles - 15 thousand rubles.

4.4. Unified tax on imputed income for certain types of activity (UTII).

The difference between UTII and the other taxation regimes is that no matter how much an individual entrepreneur has earned he/she is supposed to pay identically – 15% of the imputed income. This special taxation regime is applied by the decision of local authorities and only to certain types of activity.

Individual entrepreneurs who conduct any of the following types of activity are transferred to UTII on a voluntary basis:

- retailing;
- catering services;
- consumer services;
- veterinary services;
- auto repair, maintenance, and washing services;
- other types of activity prescribed in the Tax Code.

An individual entrepreneur may not be transferred to UTII in three cases:

1. Average number of employees exceeds 100.
2. Activities are conducted under a partnership agreement.
3. The terms and conditions prescribed in the Tax Code are not fulfilled.

In addition to UTII, the taxpayer may apply other tax regimes (the general taxation system or STS), the patent tax system.

In this situation, an individual entrepreneur must keep separate accounts by activity falling within UTII and by activity falling within the other tax systems.

In addition, separate accounting is obligatory for individual entrepreneurs who conduct several types of activity that are subject to UTII.

The UTII amount does not depend on the actual earned income. It is calculated as an imputed income

multiplied by the rate of 15%. The quarter of a year is considered to be the tax period.

Imputed income = basic profitability for certain type of activity \times K1 \times K2 \times physical indicator for certain type of activity.

Basic profitability is a conventional monthly profitability established by the Tax Code for every type of activity.

K1 is a deflator coefficient that reflects the influence of inflation, i.e. changes in consumer prices for goods (work and services), for several years and is established by the Ministry of Economic Development of the Russian Federation.

K2 is a coefficient that reflects the specific features of conducted entrepreneurial activities, including the range of goods (work and services), seasonal influences, working hours, the level of income, particular characteristics of the location where the entrepreneurial activities are carried out. This coefficient is established by the decisions of municipal authorities and by the laws of the federal cities of Moscow and Saint Petersburg for a year. K2 may range from 0.005 to 1 inclusively.

Physical indicator is a quantitative indicator that characterizes the taxpayer's activities and varies with the type of activity (the number of employees when providing consumer services; the total area of a parking lot, etc.). It is established by the Tax Code depending on types of activity.

Let us assume that an individual entrepreneur provides hairdressing services. Let us calculate UTII³⁸.

Table 4

Period	Number of employees, including IEs
January	3
February	4
March	4

1. Let us determine the basic profitability

For consumer services, it is 7,500 rubles.

2. Let us determine the K1 coefficient

For 2012, it is 1.569.

3. Let us determine the adjusting coefficient K2

Let us assume that for the given type of activity it is established at 0.7.

4. Let us determine the physical indicator

In this case, the physical indicator is the number of employees: 11 (3 + 4 + 4).

5. Let us determine the tax amount

³⁸ The website of the Federal Tax Service of Russia:

http://www.nalog.ru/create_business/ip/in_progress/envd/step2/

The imputed income is 90,610 rubles: $7,500 \text{ rubles} \times 1.569 \times 0.7 \times 11 \text{ employees}$.

UTII for Q1 is 13,592 rubles: $90,610 \text{ rubles} \times 15\%$.

6. Let us decrease the amount of tax on contributions and allowances

Individual entrepreneurs who have transferred to UTII and make payments to their employees are entitled to decrease (yet by at most 50%) the amount of computed UTII by the amounts of contributions and allowances paid in the given tax period for only hired employees. An IE who operates on his/her own may decrease the amount of UTII by the total amount of fixed insurance contributions paid for himself/herself to the Pension Fund of the Russian Federation and the Federal Compulsory Medical Insurance Fund.

Comparing UTII and the patent tax system, we can see that usually the tax amount payable under the patent tax system is higher than that of UTII. However, the obvious advantage of the patent tax system is the convenience of performance of the taxpayer obligations owing to the simplicity of the taxpaying procedure, without having to file tax returns. Under UTII, an individual entrepreneur will most probably need the services of an accountant, with relevant salary decreasing the benefit of applying UTII.

5. CONCLUSIONS

Based on all the discussed specific features of the special tax regimes for individual entrepreneurs, let us compare them in the Table 5 below.

Table 5. Comparative characteristics of all special tax regimes applicable to individual entrepreneurs

Taxation elements and the main features of regimes	UAT	STS	Patent tax system	UTII
1. Transfer	Voluntary			
2. Taxable item	Income minus expenses	1) Income; 2) Income minus expenses	Potential annual earnable income of the individual entrepreneur	Potential annual earnable income of the individual entrepreneur – “imputed income”
3. Tax period	Calendar year	Calendar year	Patent period (1–12 months)	Quarter
4. Tax rate	6%	1) for the “income” as a taxable item – 6% 2) for the “income decreased by expenses” as a taxable item – 5–15% as established by constituent entities of the Russian Federation depending on taxpayer category	6%	15%

So, Russian individual entrepreneurs are entitled to voluntarily apply on most favorable terms one or another special taxation regime in accordance with the effective restrictions prescribed in Russian laws.

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**PATIENTS' HEALTH – A PRIORITY FOR THE GENERAL PRACTITIONER
IN BULGARIA**

Tsvetelina M. Petrova-Gotova, Tihomira Zl. Zlatanova, Ralitsa Zl. Zlatanova-Velikova,
Krasimira Markova

Medical University – Sofia, Faculty of Public Health, 1527 Sofia, Bulgaria, “Bialo more” 8 str.,

E-mail: tsveti_p@abv.bg, drzlatanova@abv.bg, raliczlatanova@abv.bg

Abstract

Primary outpatient healthcare holds a key place and is one of the main elements in the continuing process of healthcare.

GP is this one who renders a primary, comprehensive and continuous care to their patients, regardless of disease, age and sex.

The good work of GP is expressed through the health of its patients.

The purpose of this article is to show how the health of patients is a priority for GPs and to analyze data from a survey of patients' opinion regarding the information that GP provides them when patients are directed to consult another specialist as well as the GP's desire thereafter to examine the results of tests and analysis as well the treatment assignment.

It follows from the results obtained that in Bulgaria GPs in general are to a large extent interested in the health and treatment of their patients.

Key words: *patients' health, Primary outpatient healthcare, treatment, General Practitioner.*

Healthcare in Bulgaria suffers from many problems – for which other than directly we can judge from patients and doctors constant complaints.

Primary outpatient healthcare has a key place and is one of the main elements in the continuing process of healthcare.

The General Practitioner (GP) is the one who renders a primary, comprehensive and continuous care to their patients, independently of disease, age and sex.

The good work of GP is expressed in the health of its patients.

The purpose of this article is to show how the health of patients is a priority for GPs and to analyze data from a survey of patients' opinion regarding the information that is given by their GP, directing them to consult another specialist and his desire to examine the results of surveys and treatment assignment.

For the collection of primary data a pilot research was carried out. The survey covered 502 anonymous patients across the country for the period from March to August 2012. The patients were selected inadvertently. The quantitative analyzes were performed with a statistical package of applicable programs – SPSS, whilst the way of interpretation is consistent with the theoretical material adapted to the program package.

The men were 28.9% of the respondents in the survey and the women were 71.1%. The patients in the 18 to 65 age group were 85.7%, ie fall into the category of working people. 69.5% of the survey respondents were working. The largest part of the respondents have higher and secondary education - respectively 41.4% and 29.5%. Six percent have completed their primary education and only 0.6% of the respondents have a scientific degree. The part of respondents living in the capital is 36.3%, 46.2% live in urban areas and 17.5% - live in villages.

The obtained results show that when patient is directed to consult other specialists, in most of the cases, the GP gives to the patient his contact details (address, phone) - 55.1% of all respondents. Other 10.4% of the respondents say that the General practitioner calls in advance the specialist to whom patient is directed (Table 1).

Table 1. Relative share of patients who receive specialist contact details by their GP

	Брой	%
I am told to cope with it myself	151	30.3
GP gives me specialist contact details	275	55.1
GP calls in advance the specialist	52	10.4
I have never needed it till now	2	0.4
I ask which specialist should I contact	1	0.2
I choose a specialist myself, but if necessary GP helps me	1	0.2
Other	17	3.4
Total	499	100

Regarding laboratory, X-ray and other tests the largest relative share again - 48.2% belongs to those patients who have received contact details of laboratory or radiology services from their GP, where they shall make the necessary tests. However, a large proportion of patients are told to go to their preferred clinic - 45.8%.

The fact that GPs' are concerned about his patients health is evident from the responses of 73.3% of the respondents who say that after the relevant specialist consultation the GP tells them he wants to see results and prescribed treatment at their earliest convenience. The answers depending on the place of residence do not significantly differ - the highest percentage belongs to those who have been told that GP would like to see the results - 70.5% of the respondents live in rural areas, 76.7% in urban areas and 70.4% in the capital (Figure 1).

Figure 1. Relative share of respondents to whom GP says he wants to see the assigned treatment after respective consultation with a specialist

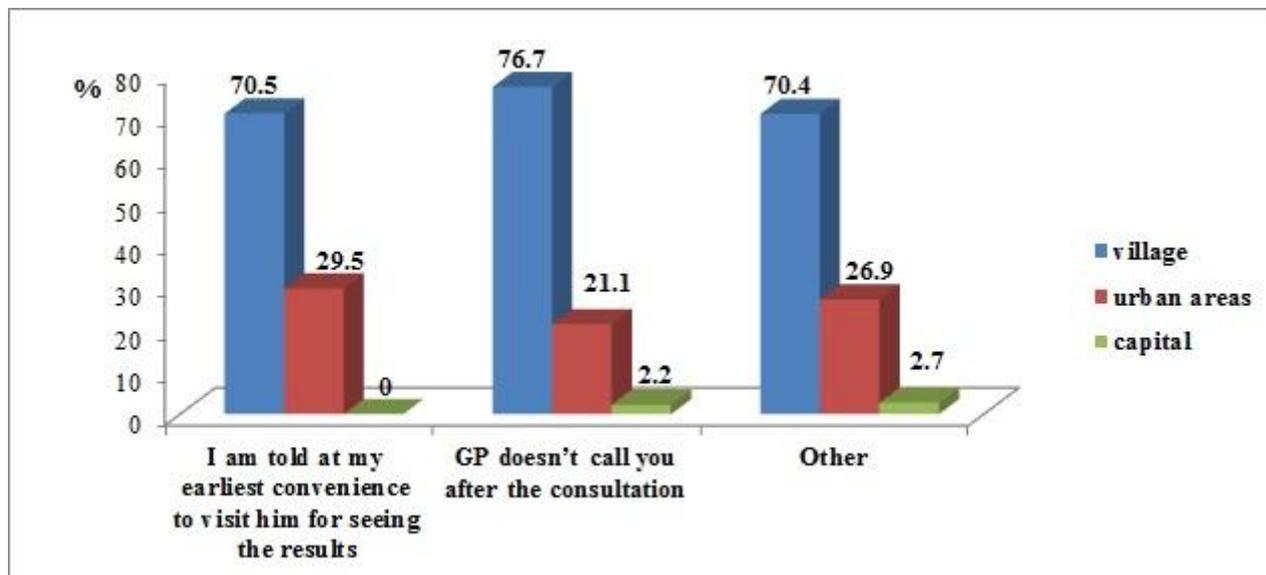


Table 2. Patient satisfaction of health care services received, depending on the proportion of those who receive contact details from their GP when directs them for consultation with another specialist

When you are directed to consult another specialist your GP gives medical referral and:	Are you satisfied with the medical help from your GP?			
	yes		no	
	Number	%	Number	%
I am told to cope with it myself	106	25.3	44	56.5
He gives me specialist contact details (address, telephone)	243	57.9	32	41.1
He calls in advance the specialist	51	12.1	1	1.2
I ask which specialist should I contact	1	0.2	0	0.0
I choose myself, if necessary doctor helps me	1	0.2	0	0.0
I have never needed it till now	2	0.5	0	0.0
Other	16	3.8	1	1.2
Total	420	100	78	100

Object of our study was patients' satisfaction of the medical care services received from their General Practitioner. Results analysis reveals patient positive attitude - 84.4% were satisfied with the received medical care services and only 15.6 percent gave a negative opinion.

Medical care quality problem in outpatient health care is a topical issue due to the fact that patients' needs are continuously increasing. Patients are better informed; demanding and looking for more information in reference treatment assigned and care quality.

A percentage of 57.9 of the respondents who were satisfied with the provided medical services say they receive specialist contact details where they are directed for consultation by their GP and 12.1 percent say that the GP calls the specialist in advance. It should be noted that 41.1% of patients receiving GP help by directing them to another specialist and giving specialist contact details (address and phone number), are not satisfied with the health care services received (Table 2).

From the table below (Table 3) we can see that despite the GPs willingness to become familiar with the consultation results and treatment assigned 37.2% of respondents were not satisfied with the medical services received.

Table 3. Patient satisfaction of health care services received, depending on the shown by GP personal care

After the consultation with a specialist, your GP:	Are you satisfied with the medical help from your GP?			
	yes		no	
	Number	%	Number	%
He told me at my earliest convenience to go with him to see the results from the consultation and administrated treatment	338	79.9	29	37.2
He does not call you after the consultation	78	18.4	46	59.0
Other	7	1.7	3	3.8
Total	423	100	78	100

CONCLUSION

It can be concluded that the GPs in Bulgaria generally are deeply involved in their patient health and treatment assigned. In a large extent they are entrusted with the responsibility to get patients to comply with doctor's instructions, to take their medicines and make necessary changes in their way of life.

Patients should have the opportunity to choose where to go (to any specialist in any medical institution for primary, special or hospital care) with the documents (the medical referral) given by their GP, as well as the laboratory or X-ray services where they can do the relevant medical examinations. If necessary, they should receive the relevant help but not required to choose a concrete medical establishment (place (clinic) to go).

Patients' health care services evaluation is positive, but however, it is recommended to improve the respect towards medical specialists as well as amelioration of conditions and ambulatory visits organization. Number of studies show that the relationship between health care costs and health care quality is quite uncertain, although it is necessary to allocate a larger percentage of primary outpatient health care from the general fund budget - between 12-15 percent (as requested by the National Association of GPs in Bulgaria) and as achieved in most countries. Now only 6 to 6.5% of health funds are spent for Primary outpatient health care. The increase of these funds will enable an improvement of GPs remuneration, their working conditions and career opportunities, as these are some of the main factors why doctors leave the country.

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<http://www.nsoplb.org/>

**SELECTED COST INDICATORS OF PRE-HOSPITAL EMERGENCY CARE
IN THE CZECH REPUBLIC**

Tomáš Halajčuk¹⁾, Miroslav Procházka¹⁾, Karel Antoš¹⁾, Vlastimil Nakládal²⁾, Jan Vaněk¹⁾

¹⁾Faculty of Military Health Sciences, University of Defence, Třebešská 1575,
50001 Hradec Králové, Czech republic

²⁾Emergency Medical Service of the Hradec Králové Region, Hradecká 1690/2A,
50012 Hradec Králové, Czech republic; E:mail: halajcuk@pmfhk.cz

Abstract

Due to a continuous increase of the number of patients, pre-hospital emergency care in the Czech Republic (CR) is struggling with the permanent cost growth. At the same time, there is a permanent necessity to measure provided care effectiveness from the professional and economic point of view. For resource planning process to be effective, it is crucial to analyze expenditures and find measurable parameters, which would be easily usable as a basis for cost benchmarking of pre-hospital emergency care providers. The article analyzes costs of Medical Emergency Service (EMS) in the Czech Republic. Attention is paid especially to indicators of costs ratio, costs per patient, costs per employee and total costs of EMS in the Czech Republic in the period from 2009 to 2011. These parameters are simple to observe and use.

Key words: *Pre-hospital emergency care, Emergency Medical Service, cost indicators, Czech Republic, health expenditures*

INTRODUCTION

The level of health care provided in the Czech Republic is relatively high according to available resources, both in terms of the professional medical quality level (OECD, 2011) and the economical efficiency of resources use, see (Aleksander Aristovnik, 2010), (OECD, 2011). The Czech health care system can be classified as a centralized system based on the principles of Public Health Insurance, the so-called Bismarck Model of Health Care System. Pre-hospital emergency care is a type of health care that is provided in the Czech Republic by Emergency Medical Service, Helicopter Emergency Medical Service and First Aid service (provided only in selected hospitals). All these components of pre-hospital emergency care are designed to provide emergency care where there are serious consequences to health, risk to life or risk of delay. During last few years, due to economical stagnation, the volume of financial resources has been not growing adequate to expenses growth. The pressure on all providers in terms of financial resources use effectiveness grew together with the increase in the operating costs of all types of medical care. All monetary values are represented in CZK, the exchange rate to 1 EUR was: 26.8 CZK in 2009, 25.6 CZK in 2010 and 24.5 CZK in 2011 (Czech National Bank, 2013).

Czech Health Care System Costs

Global assessment of the costs of pre-hospital emergency care in the Czech Republic can be derived from a comprehensive cost description of the whole Health Care System. The costs structure is relatively well mapped because of the current medical model. There are three basic sources of financing: Public

Health Insurance, Direct Public Spending and Public Spending Budgets. The health insurance expenditures on health care reached 218 billion CZK in 2011.(ÚZIS ČR, 2012a)

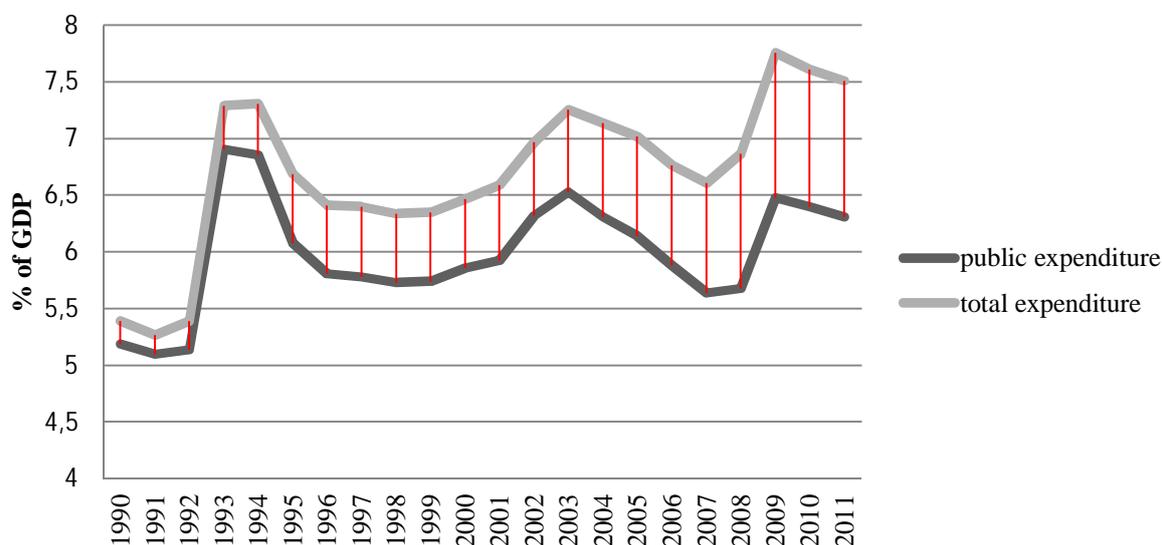


Figure 3 Health care expenditures to GDP ratio

Source of data: OECD, UZIS CR

Figure 3 shows the evolution of health expenditures in the Czech Republic between 1990 and 2011. This survey actually shows national the costs of providing health care with relatively good explanatory value. Since 1990, from which it is possible to monitor the quantity, a slight variation can be observed in the graph. It is possible to point out a sharp increase in spending between 1992 and 1993. This increase was due to a change in the model of health care system from Semasek³⁹ to Bismarck⁴⁰ and it reflects the period when new regulatory mechanisms still did not work. Significant information, however, is the growing difference between the total and public expenditure on health care. The separation of the two curves, which develop similarly in terms of trends, increases gradually but continuously. The difference is compensated by private or direct expenditures of the population on health care. The Czech Republic suffers a constant rise in expenditures, particularly for drugs and medical devices. The Czech health care system nowadays belongs to the group of OECD countries with the lowest share of private expenditures on health care. The current Ministry of Health policy contains a gradual increase of private expenditure with the opposite planned for public budgets, which will be slowly reduced. The economic costs of the health care system calculated by the Ministry of Health in 2011 represented 7.51 % of Gross Domestic Product (GDP), which amounted to about 290 billion CZK. One part of the mentioned costs, about 5

³⁹ Semasek Model of Health Care System is based on government budgets, in use in the Czech Republic until 1992.

⁴⁰ Bismarck Model of Health Care System is based on compulsory Public Health Insurance, establish in the Czech Republic in 1992.

billion CZK, includes the costs of the EMS system. Expressed in relative terms, EMS expenses were 1.7% of health spending and approx. 0.13% of GDP (ÚZIS ČR, 2012a).

Public Health Insurance Costs

In terms of health insurance expenditures on health care represent the largest part of the hospital with almost the half share, followed by pharmaceuticals with almost one fifth, outpatient specialists with less than 17%, general practitioners with less than 6% and curative dental care with 4.6%. Emergency Medical Service has to do with only 0.8% (see Figure 4), which is insignificant in the context of these types of care and is even lower than spending on spa and health resorts (1.4%). Expressed in absolute numbers, the EMS costs 172 CZK per insured person for a total of 1.75 billion CZK.

So, EMS does not belong to the main sources of economic consumption within health care in CR, but, on the other hand, it belongs to the most sensitive to deep changes in organization and funding.

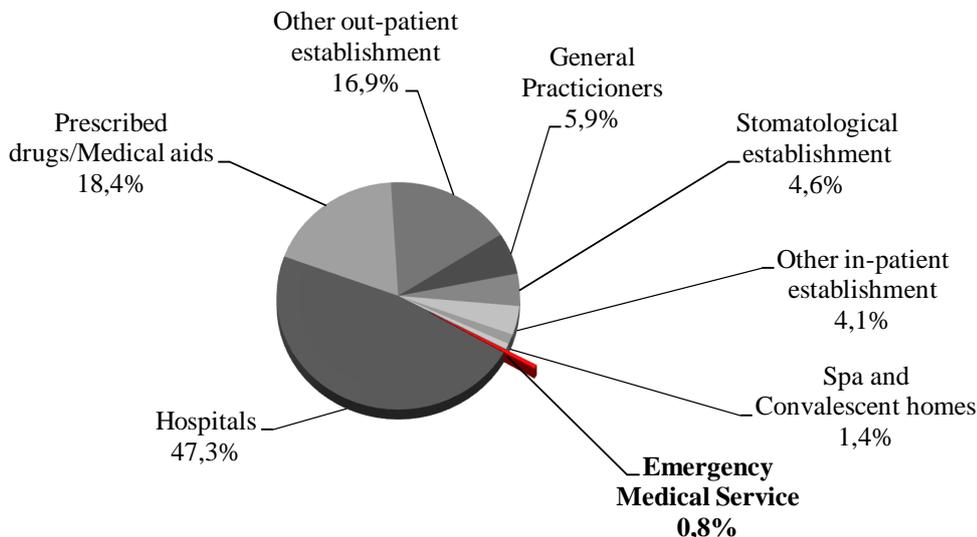


Figure 4 Health insurance expenditures by provided health care type

Source of data: UZIS CR, 2012a

Emergency Medical Service

The provider of Emergency Medical Service organization is founded by regional authority. The legislative framework of Emergency Medical Services clearly defines the legal status of health care providers.

There are significant differences between individual regions, which are fortunately relatively easy to identify and quantify. The determinants of existence and operation of EMS include county area, population, and last but not least, the basic economic indicators such as the proportion of the gross domestic product of the Czech Republic, the purchasing power of the population and the total revenue

and expenditure. There are currently 14 Emergency Medical Services in the Czech Republic, a number fully corresponding to the number of regional governments.

Important information about EMS activity is given by the structure of EMS missions. Patients are divided according to their health status into 7 main groups by National Advisory Committee for Aeronautics⁴¹ (NACA), which are designed in accordance with selected medical symptoms. Categories are as follows: NACA 0-3 represent light, medium or severe malfunction or injury not directly affecting patient's life; NACA 4-5 represents severity of health status with potential danger to life; NACA 6 means resuscitation due to basic life function failure and NACA 7 represents patient's death.

Official statistics of all treated patients and their structure by NACA shows, that in 2011 the ratios were as follows: 92.2 % NACA 0-3, 4.3 % NACA 4-5, 0.7 % NACA 6 and 2.8 % NACA 7.

Another classification can be created with respect to the purpose of rides. These items are useful for HEMS missions. The first category are "rides to field", which means missions in response to an emergency (70,2 % in 2011) and the another are "rides from hospital to hospital", which means missions to transport treated patients between hospitals because of medical reasons (27 %) (ÚZIS ČR, 2012b).

The structure of patient severity according to NACA is mentioned in Table 5. Obviously, most of EMS missions are carried out in cases without a real threat to life. In many cases, the EMS in the Czech Republic is abused and in some areas partially, but involuntarily and unofficially, substitutes First Aid, or even GP. This discord in CR is relatively widely spread, but according to the Ministry of Health it is much worse ethical and legal problem, when an EMS operator assesses the situation as negative to mission and the EMS crew is not sent to the field, then when there is no objective reason to send the crew and the crew is sent regardless.

Region	NACA 0-3	NACA 4-5	NACA 6	NACA 7
Prague	96,296	2,544	601	2,551
Central Bohemia	85,803	3,346	522	3,249
South Bohemian Region	47,253	2,959	222	1,650
Pilsen Region	35,853	1,979	465	778
Karlovy Vary Region	19,162	1,757	146	606
Usti Region	56,561	3,449	331	1,235
Liberec Region	51,743	4,052	467	1,541
Hradec Kralove Region	31,995	1,973	350	1,189
Pardubice Region	29,614	1,276	189	1,243
Vysocina Region	29,157	1,642	291	1,400

⁴¹ National Advisory Committee for Aeronautics was the predecessor of National Aeronautics and Space Administration (NASA)

South Moravian Region	6, 895	2,264	567	1,102
Olomouc Region	39,536	1,259	388	2,009
Zlin Region	35,678	1,825	172	985
Moravian-Silesian Region	86,480	3,136	636	1,727
CR total	707,026	33,461	5,347	21,265

Table 5 Number of patients according to health status severity in 2011

Source:ÚZIS ČR, 2012b

The EMS in CR is also an important employer, because in the whole CR it employs approximately 6,000 people (Emergency Medical Services Association, Czech republic, 2008). Another important parameter to take into account in the activity analysis is the total number of patients, which determines the system capacity. This number is slightly growing from approximately 730,000 in 2006 to 800,000 in 2011, see Table 6.

Year	Total number of patients	Change in comparison with 2008 (in %)	Change between years (in %)
2008	729,762		
2009	774,69	6.16	6.16
2010	795,564	9.2	2.69
2011	799,132	9.51	0.45

Table 6 Total number of Emergency Medical Services patients during 2008 and 2011

Source of data: EMS CR association

The difference in total number of patients between 2008 and 2011 makes 9.51%. From Table 6 **Total number of Emergency Medical Services patients during 2008 and 2011** it is possible to see slow stabilization of the amount to a number just about the 800,000 line. This is a very important piece of information because of system capacity planning, e.g. number of EMS crews, vehicles, material, etc.

Total Costs of EMS

The main economic indicator of EMS is represented by its total costs. This is the sum of all resources consumed by the activity within one year and can be defined as the sum of the fixed and variable costs of the organization. A fixed cost consist of EMS expenditures to ensure service's own activity regardless of the extent of the reported activities and is primarily composed of salaries, maintenance costs, the cost

of building maintenance, administration, energy, etc. Variable costs consist of expenses directly related to professional activities of EMS (the number of missions, type of intervention etc.) (Tomáš Halajčuk and Miroslav Procházka, 2013).

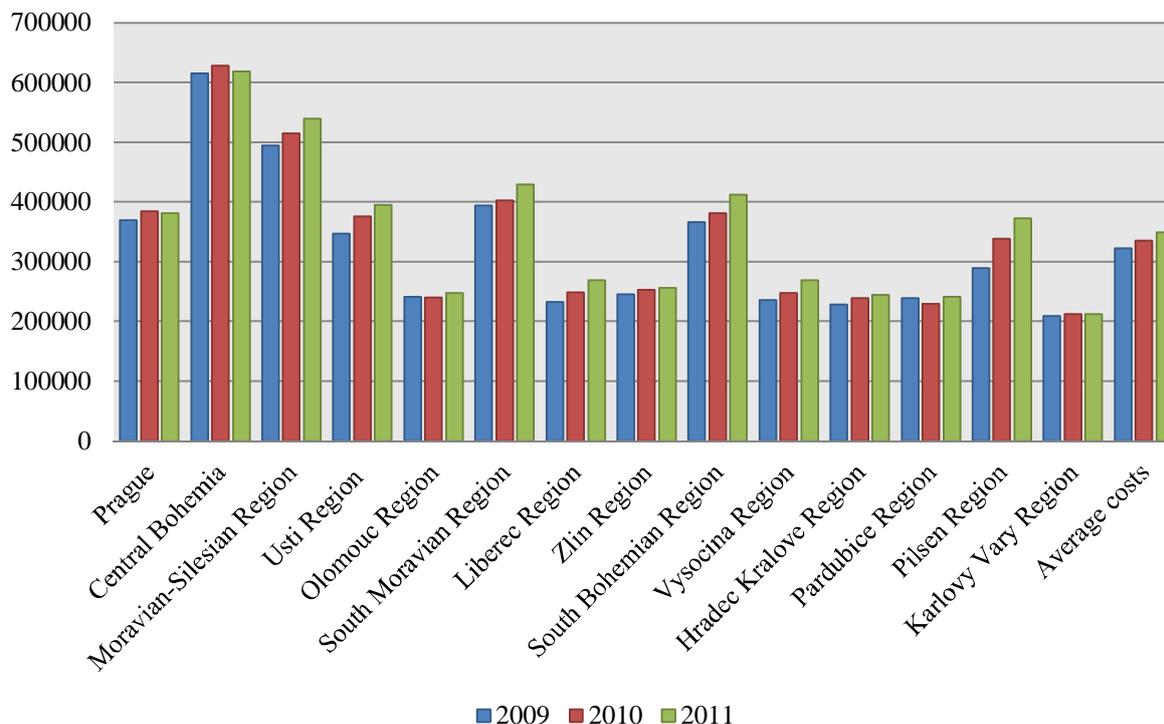


Figure 5 Total costs of Emergency Medical Services during 2009 and 2011 (in thousands CZK)

Source of data: EMS CR association

The sum of all EMS expenditures is visualized in Figure 5. Total amount of EMS costs has been calculated to 4.5 billion CZK in 2009, 4.7 billion CZK in 2010 and 4.9 billion CZK in 2011. During this three-year period, the total costs of EMS have increased by 400 million CZK, which represents an overall increase of about 8.4%. Annual changes are then represented by 4.2% increase between 2009 and 2010 and 4% between 2010 and 2011. The average of EMS total costs reached 322 million CZK in 2009, 336 million CZK in 2010 and 349 million CZK in 2011. From the visualized figures it is possible to read continuous, steady but not dramatic increase in costs.

For possible comparison it is possible to use numbers of the whole health system in CR, which declined between 2009 and 2011 by about 1%, represented by 3 billion CZK. In conjunction with this piece of information belongs the EMS into the few areas, where was none stagnation or reduction on the expenditure side. One of the reasons for this is the real and continuous increase of the number of treated patient.

Among regions it is possible to observe significant differences both in terms of overall costs and annual changes. EMS highest total expenditure for 2011 amounted to 618 million CZK in the EMS of Central

Bohemia Region. On the other end of the scale we find the 213 million CZK by Karlovy Vary Region EMS. The largest recorded annual relative change (+17%) was reached between 2009 and 2010 by the EMS of the Pilsen Region. The annual changes can also be found to be negative in several cases, the biggest was -4.2% for EMS Pardubice region between 2009 and 2010.

Structure of EMS costs

Each regional EMS has individual cost structure, which depends on the specific context in which the service operates. For an overview it is preferable to analyze the cost structure of EMS nationwide. Figure 6 shows the structure of the average cost of EMS in the Czech Republic. Red shades highlight the part of the costs that is generated by employees, namely their salaries and related health and social insurance. The blue color highlights further significant costs of EMS duty supplies. This cost group contains the consumption of materials, which accounts for 7.3% and includes fuel, medicines and other medical supply, depreciation and amortization 6.2%, services 6.0%, transport and repair of medical equipment 1.9% and 1.5% of energy.

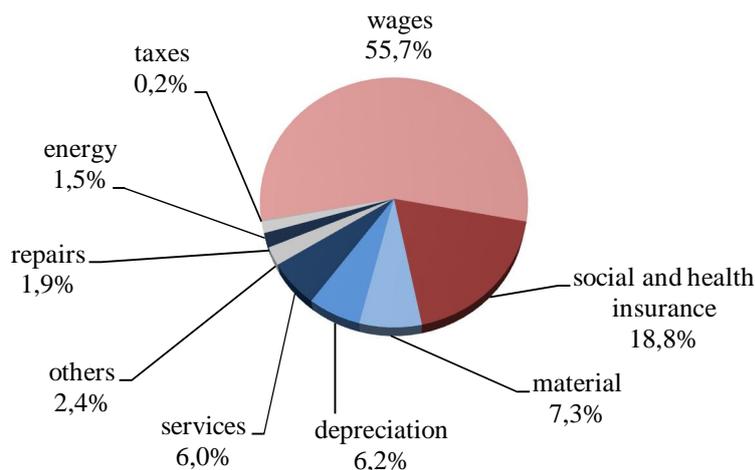


Figure 6 Structure of Emergency Medical Services expenditures 2011

Source of data: EMS CR association

Health services are generally characterized by high added value, which consists mainly of the labor contribution; therefore high proportion of the personnel costs is not unusual. The health sector copies the public sector and differs only in the details.

Fixed costs, i.e. wages, social and health insurance, depreciation and energy form 86.8 % of the total costs. Variable costs thus represent 13.2 %. These numbers explain the reason why it is not so easy to cut EMS expenditures by reducing the number of missions.

Costs per patient

By the evaluation of EMS total costs is necessary to count with regional differences and also with the professional medical output. Easy to calculate is for instance total EMS costs per patient ratio. This indicator is partially independent of differences between regions and it provides insights into the "unit price".

The fact that the differences in the average costs per patient represent up to 60% is quite strong, but must be re-examined in the context of real-world and regional specificities.

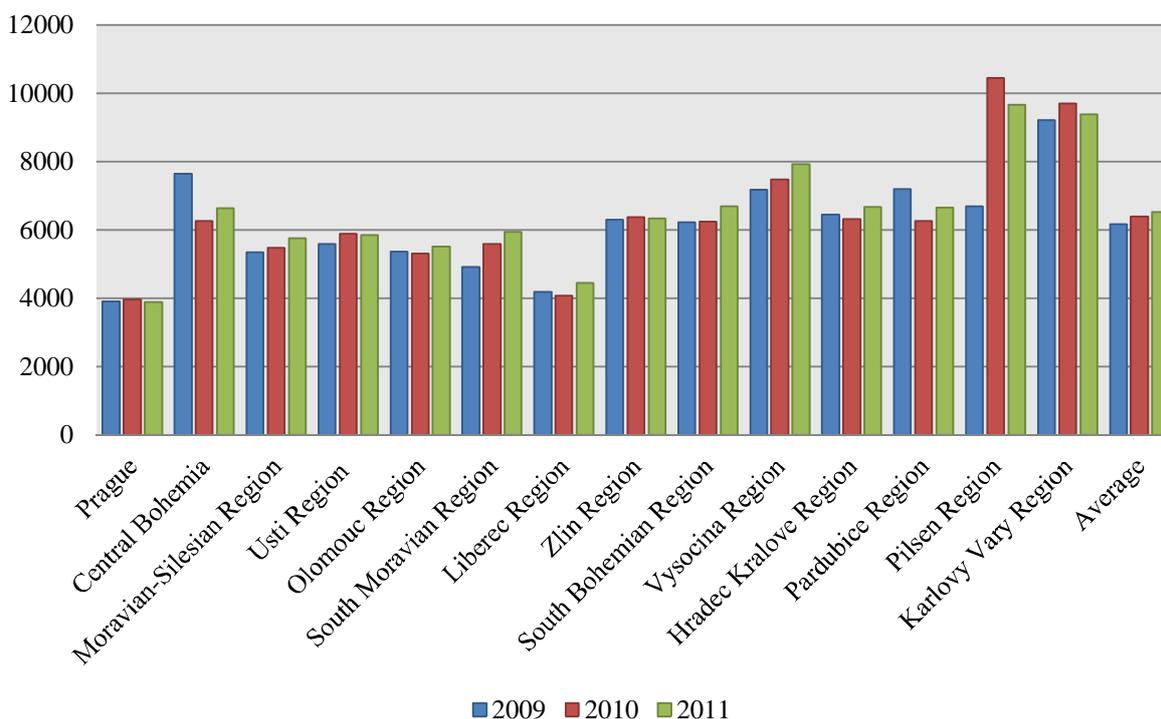


Figure 7 Total costs of Emergency Medical Services calculated per one patient (in CZK)

Source of data: EMS CR association

Figure 7 **Total costs of Emergency Medical Services calculated per one patient (in CZK)** shows how different the total costs of EMS per treated patient are. Expressed in absolute values, the highest value, namely 10,456 CZK is found in the EMS of the Pilsen region in 2010 and 9,681 CZK in 2011, and in the EMS of the Karlovy Vary Region (9,716 CZK in 2010). Both these EMS exceed the average cost almost by a factor of two (average costs per patient were as follows: 6,170 CZK 2009, CZK 6,395 in 2010 and 6,537 CZK in 2011). On the other hand, the EMS with the lowest cost per patient is the Prague EMS with less than 4,000 CZK and also the EMS of the Liberec Region (4,460 CZK in 2011).

Costs per employee

The labor efficiency of an EMS can be partly represented as the ratio between the total costs and the number of employees. Figure 8 shows the ratio and a slow increase in the numbers of most of the providers and especially in the average numbers. Average costs were calculated to be 74,700 CZK in 2009, 78,600 CZK in 2010 and 82,300 CZK in 2011. The maximal costs were reached by the EMS of the Liberec Region in 2011 with aprox. 95,500 CZK, the minimum, also by the EMS of the Liberec Region, reached 57,600 CZK in 2009 (the difference is 40 % during 3 years).

The differences between the regional EMS are caused by variability of conditions, e.g. the differences in crew numbers, vehicle numbers, etc.

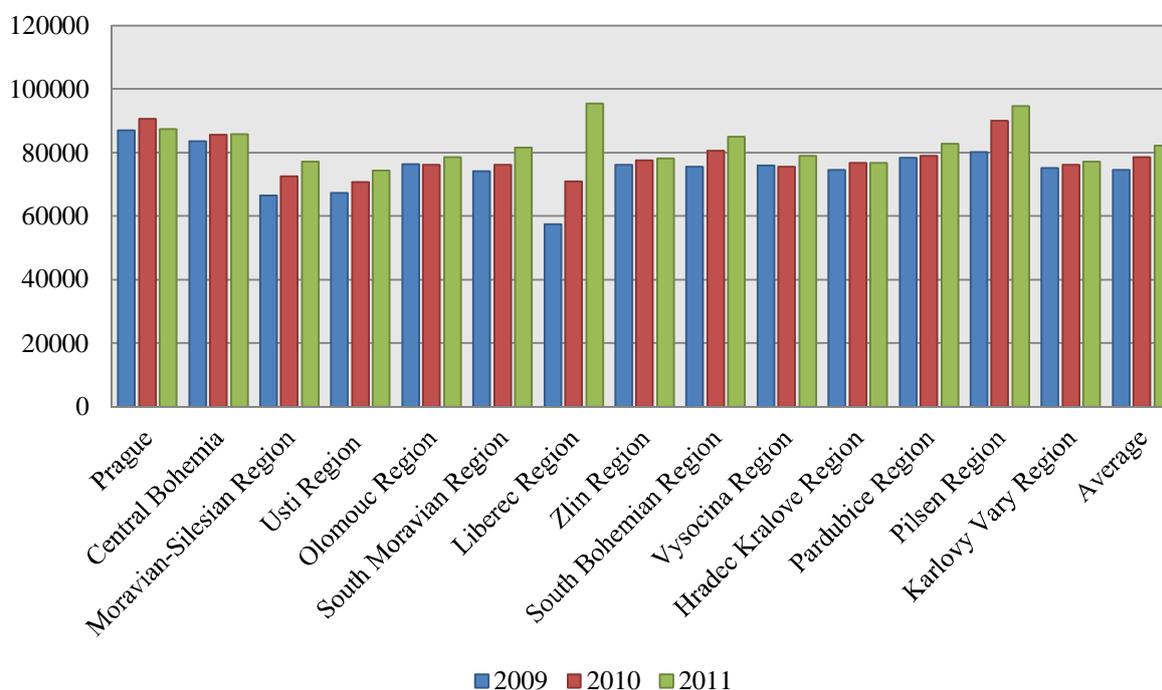


Figure 8 Total costs of Emergency Medical Services calculated per employee (in CZK)

Source of data: EMS CR association

SUMMARY

Monitored elements of EMS costs provided a general view on the current economic system of EMS in the Czech Republic. From the results it is possible to point out, that due to the increasing number of patients the costs of these entities are also increasing. In terms of cost structure a special pressure is placed on the costs associated with employee salaries, including related health and social insurance. The associated rates, such as the calculated costs per patient, differ significantly from provider to provider. This variability is in accordance with our findings and calculations that take into account regional specifics, such as the size or population density, and other factors, such as the number of rides and their

priority. Despite all the findings, total costs of EMS, with its 0.8 % share on Public Health Insurance does not belong to most money consuming types of health care. However, even this number is not an argument for the EMS providers' negotiations regarding the amount of reimbursements and contributions of the founder. It is probable, that the EMS costs will growth in the future, because of many reasons, for instance ageing of the population, prices growth, etc. In the event that an EMS provider costs continues to grow faster than revenues (whether by insurance companies or by the founder), the provider is obligated to prepare detailed specifications of effectiveness of the provided care. Only a well-specified cost analysis of EMS will influence the future cost items in order to optimize the expenditure side.

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MODERN UKRAINIAN INDUSTRY DEVELOPMENT TRENDS

Kateryna O. Tiulkina

Department of Economics of enterprise, Odessa State Academy of Civil Engineering and Architecture,
Odessa, Ukraine

Kostenok O. Yaroslava

Department of Macroeconomics and public administration, Kyiv National Economic University
named after Vadym Hetman, Kyiv, Ukraine



Abstract

There is an export-orientated adaptive development industry model in Ukraine nowadays. It is inefficient in modern conditions, as the economy grows too attached to global conjuncture and there are no ways to oppose negative external influences. Trends deployment of financial and debt crisis in Europe have a negative impact on the world market and caused a decrease in demand for Ukraine's main export products. Structural and technological modernization industrial complex and transition to higher technological system should become one of the prior directions the economic policy in Ukraine.

Key words: *industry, factors of economic growth, fixed investment, technological ways, catch-up modernization strategy.*

1. INTRODUCTION

Industry is an important element that forms the structure of the national economy plays a significant role in all economic activities of raw materials is the driving force in the formation of scientific and technical progress and ensuring expanded reproduction in general. Functioning of the economy is largely dependent on the performance of industry. Economic trends 2001-2011 years show that the share of industry in key indicators of economic development is high. So in 2011 the share of industry in output – 47,2%, in gross value added – 30,8%, 38,6% - the number of employees and 90% of exports. For comparison, the share of industrial production in developed countries ranges from 17,8% (Denmark) to 41,4% (Japan). The share of industry in creating value added is 20% (U.S.) to 38,1% (China) (Peltek, 2010).

Analysis of Industry of Ukraine at this stage can determine problems that affect its development. These issues should be attributed internal problems of the industry, the problem of interaction with other sectors of the economy and with world markets.

2. DESCRIPTION OF INDUSTRY

The industrial complex of Ukraine has an extensive territorial, organizational, socio-economic, technological structures. Growth rate, level of development and industrial structure are indicators of quantitative and qualitative characteristics estimation of the national economy and living standards functioning. Post-crisis development of the industry has a positive trend (Table 1) (Statistical Yearbook

of Ukraine for 2011, 2012, p. 106). Profitability increased by 2,6 times compared to 2009, so as the volume of sales. However, the negative trend is reducing the average number of employees in the industry.

In 2011 industrial production in Ukraine continued to increase after the crisis, but the growth rate slowed to 24,8% compared to 32% in 2010 (Figure 1). 2011 positive trend provided mainly export-oriented industries.

Table 1. Basic indicators of development Ukrainian industry

	2004	2005	2006	2007	2008	2009	2010	2011
Volume of industrial output, mln. UAH	400757,1	468562,6	551729	717076,7	917035,5	806550,6	1065108,2	1329266,3
Operating profitability of industrial enterprises, %	4,7	5,5	5,8	5,8	4,9	1,8	3,6	4,8
The share of unprofitable enterprises, %	38	37	35	33	39	40	41	38
The average number of employees in industry, ths.	3941,2	3913,3	3851,9	3690	3527,1	3185,1	3064,1	3014,5

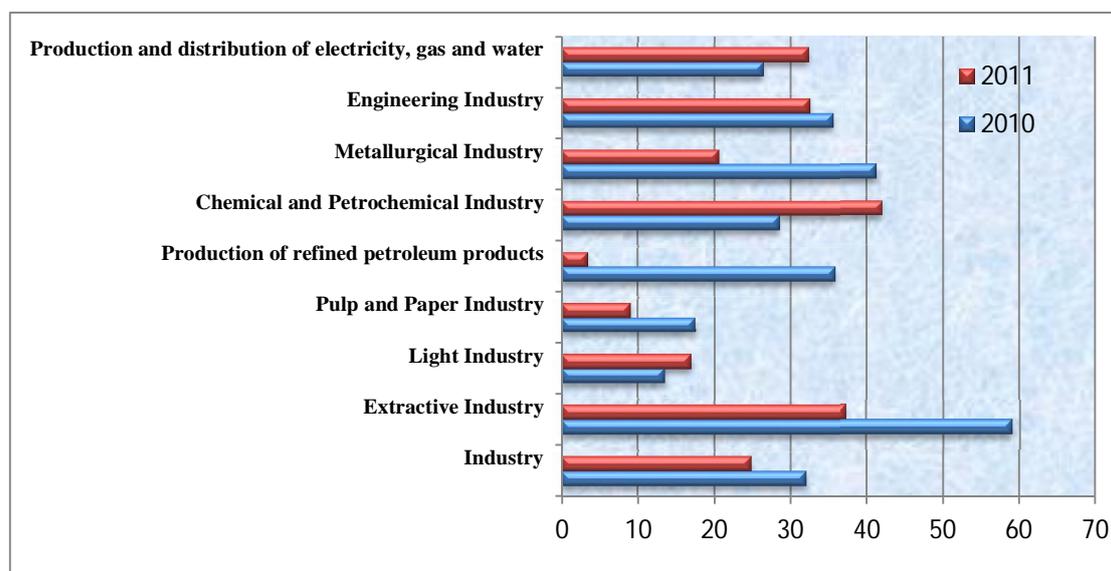


Figure 1. The share of industries in total

The highest growth was recorded in engineering (32,5%), due to the increase of vehicles and equipment (32,4%), including automobile manufacturing (31,5%) and railway rolling stock (38,0%) and in the chemical and petrochemical industry (42,1%), metallurgy (20,6%). However, compared to 2010 the growth slowed, primarily due to the modest growth in external demand. In particular, the construction and engineering industry in Europe (the main consumers of steel products) as a result of rise in borrowing on expectations the emergence of the financial crisis in the European Union gradually rolled business activity. Stimulating factor in the industry growth in Ukraine was the internal market, the development of which was determined by high investment demand.

In industries, which in 2010 showed the lowest growth rates recorded a negative trend in 2011: the food industry fell by 0,7%, pulp and paper production - up to 9% compared to 17,5% in 2010. Significant decline in 2011 occurred in the coke production and refined petroleum products due to reduced production of refined petroleum products by 32,7%.

High-tech industry sector slowed production growth in 2011. Production growth of electrical, electronic and optical equipment was 15,0% compared to an increase of 24,2% in 2010, medical equipment and measuring equipment – 5,1% (vs. 25,8%). Decreased electric motors, generators and transformers growth at 23,1%, compared with growth of 21,0% in 2010 In the pharmaceutical industry there was an increase of 2,5% (compared to growth of 34,8% in 2010).

Industrial production growth was ensured mainly by manual check of available raw materials and inputs based on outdated technology.

The main factors of economic growth in 2011 include:

I. Favorable external conditions stimulated the production growth and Ukrainian industrial products export. The growth in world steel prices (index of global steel made in December 2010 184,5 points in December 2011 – 195,0 points) created favorable conditions for Ukrainian producers of steel products for food resources (global price index for food resources FAO in 2010 totaled 185 points, and in 2011 - 228 points) - increased demand for fertilizer, helping to increase the chemical and petrochemical industry production.

Economic growth at the expense of export-oriented industries in the low diversification of products and markets pose a threat to the post-crisis economic recovery in Ukraine. In particular, there is significant risk of financial and debt problems of Eurozone countries, which could narrow the demand from the EU for Ukrainian exports.

II. Activation of investment processes in the economy, leading to improved financial performance of the industry (number of firms who received earnings in the total number of industrial enterprises in January-November 2010 amounted to 55,0% in January-November 2011 – 58,6%). Investment recovery has allowed to increase the efficiency of public and private investment resources, contributed to the production development and the gradual release of industrial crisis.

The most capable of investing structures are vertical and horizontal corporations. Corporatization of state enterprises in Ukraine was carried out as a stage of privatization. Some territorial-production and production-technological complexes, cooperation between enterprises, etc. were destroyed, narrowed the possibilities accumulating investments because of errors in the privatization.

Shredding structures in the process of privatization has led to what is provided by the law among organizational form on 01.01.11, the limited liability companies and private companies together accounted for 74,4%, joint stock companies – 5,3%. However, only large companies provide the greatest amount of capital investment, the concentration of scientific, technical and production potential,

allowing them to take more drastic and risky measures to upgrade production, expanding the range of industrial products and improve its consumer qualities.

Real corporatization may contribute to the concentration of capital in different sizes and implementing large-scale investment projects, the establishment of cooperative industrial relations in the sector and inter-territorial cooperation. One way to achieve these objectives should be joining businesses in clusters.

The above challenges post-crisis industry development mainly due to the significant uncertainty of industrial policy priorities, lack of important recovery projects of industrial development and implementation mechanisms that will play disparity sectorial structure of the pre-crisis period, underutilization of capacity of specific industries, reducing the foreign relations effectiveness and affects competitiveness and investment attractiveness of the industry in general.

Industrial policy as a part of the overall government policy should form a strategy for the industrial complex of Ukraine and its individual components, setting some type of economic system. The strategic framework of industrial policy in the State Programme of Industrial Development 2003-2011 biennium (Programme) aimed at creating a competitive industrial complex capable of globalization and increasing the national economy openness to solve the main tasks of socio-economic development and strengthening of Ukraine as high state. However, the objectives of the Programme are not met in full, and the potential of its key provisions was exhausted. A state program of industrial development is needed in the medium term, where the directions of state support would be determined in the general government balance, sectorial, enterprise and regional interests and resources.

Uncertainty about the priorities of industrial policy evidenced by the lack of appropriate legal and regulatory framework: the key is not designed for industrial development law "On Industry of Ukraine", which would define the term "industrial undertaking" and the criteria for classification of enterprises in industrial and priorities of industrial development, regulate a clear distinction authority to develop and implement national industrial policy, contributing to strengthening its effectiveness.

Today it is obvious that to secure positive trend in the industry and accelerate its structural transformation requires a set of organizational and economic measures that have consistently implemented in the areas of industrial policy as an investment, innovation, forming an effective structure of the economy, reform of ownership relations.

Investment processes in industry are characterized by the following trends:

1. Over long periods investment industry's not observed rate, established the state program of industrial development in the 2003 - 2011 biennium (predicted annual growth rate of investment in the industry at 12-13%). High rates of investment managed to retain only during the 2003-2007 (except for 2005, when the investment industry grew by 4,1%). There was a significant reduction measures in 2008-2010, due to the negative impact on activity of investors global economic crisis. In 2011, the growth of investment in fixed assets (IFA) in the industry over the same period in 2010 was 29,9%, indicating that overcoming crisis trends in investing industrial production (Figure 2). However, the previous years' low base, even as growth IFA is insufficient for technological modernization and restructuring in the industry (Sukhorukov at al., 2005).

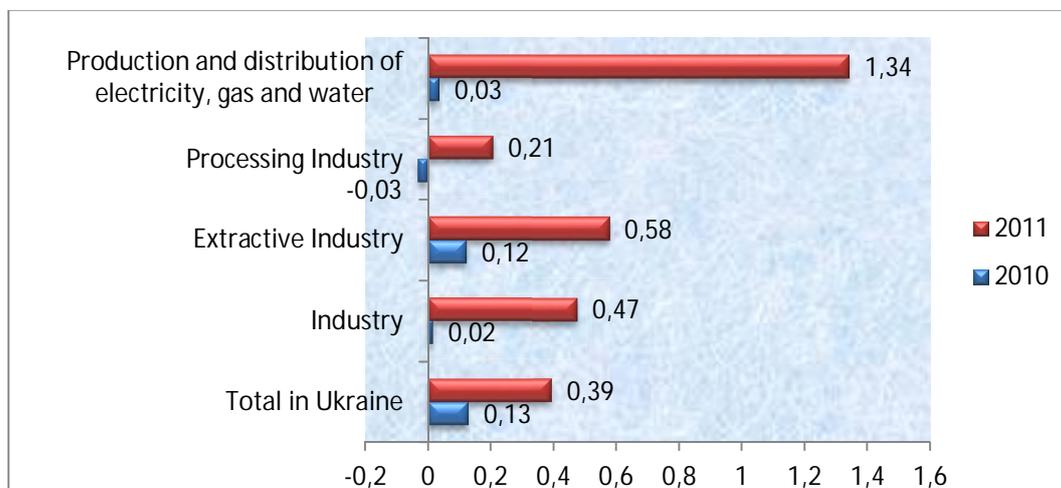


Figure 2. Growth rate of investment in fixed capital industry

Lack of growth in the industry due to the IFA, including inconsistency industrial, investment, tax and fiscal policy uncertainty sources of investment measures provided foreign government programs and more. These problems adversely affect the investment climate in the state, as indicates deterioration of Ukraine's position in the World Bank "Doing Business - 2012", in which Ukraine was ranked 152 out of 183 countries, down 7 positions compared to the rating of the previous year (145th out of 183 countries).

2. There are no reliable guarantees for the protection of foreign investment and the rights of investment activity subjects. The law does not regulate the issue of remedies foreign investors. The Law of Ukraine "On investment activity" from 18.09.1991, № 1560-XII are not defined terms, sources of compensation and reimbursement of losses to foreign investors, government agencies that are responsible for the compensation of damages, and procedures for termination of investment activity.

The low level of foreign investment is the industry's, share for 2005-2011 FDI inflows into the industry in total FDI inflows decreased from 48,8% to 31,4%. Low level of intellectual property rights protection has led to the fact that FDI has not become a source of technology transfer in Ukraine.

Policy of encouraging foreign investors in Ukraine should take into account trends in the global capital markets. There were changes in the regional distribution of world FDI flows in 2010 that characterized the growing role of developing countries, and transitive economies in attracting FDI into the background of reducing the share of developed countries. In 2011 the volume of FDI inflows to developed countries declined by 6,9% compared to 2009, FDI flows to developing countries increased by 9,7%, investment in the CIS countries increased by 5%. In addition, during 2011 there was reported a change in methods of investment FDI. The main way to implement FDI was reinvestment of revenues, decreased the proportion of equity investments. This proves that the recovery and stabilization of FDI in the country it is necessary to stable and favorable business environment, strengthening the positive dynamics of post-crisis recovery and the transition to economic growth (Global Investment Trend Monitor, 2011).

To attract FDI governments of many countries have taken measures to liberalize foreign investors and the investment climate. Not making concrete steps to improve the investment attractiveness of the industry, Ukraine may be on the side of the investment process

3. There are no developed mechanisms to encourage the investment flow in priority projects, which leads to their distribution sector imbalances and causes imbalances in the development of certain industrial activities. Investing industry works to maximize profits in the shortest time, which prevents long-term development and inhibits the restructuring industry.

In 2006-2010 the share of FDI in the steel sector in total FDI in the industry accounted for an average of 45,8%, in 2011 - 40.5%. The high share of FDI has also been in the food industry that in 2006-2010 the average was 17,6% (Zhalilo et al, 2012). Thus, the majority of FDI in industry is concentrated in sectors that do not have some kind of high-tech and knowledge-intensive industries, indicating a failure of FDI to Ukraine as a catalyst in the development of high-tech industry and foreign investors aiming for a quick profit. The effectiveness of the investment policy depends on adherence to certain principles (Figure 3).

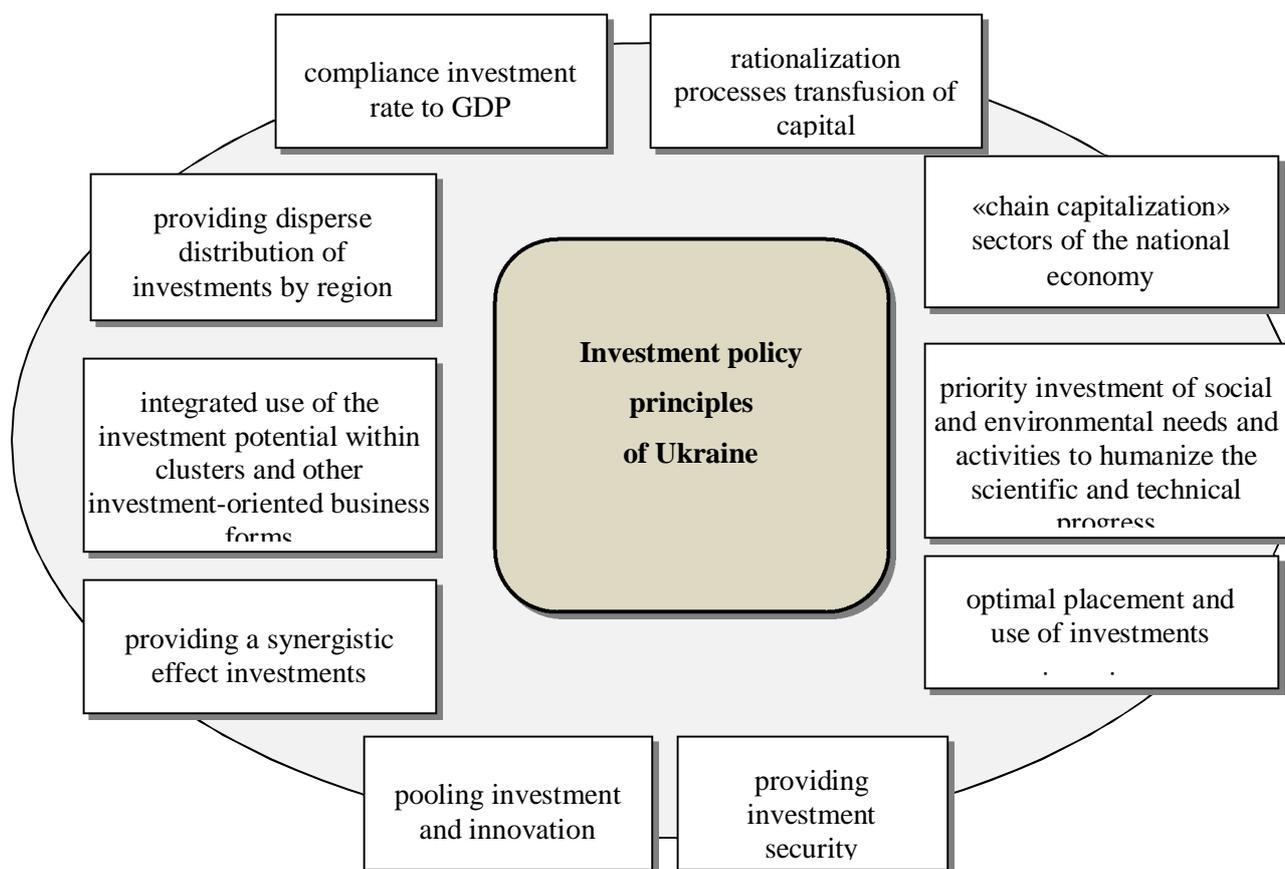


Figure 3. Investment policy principles of Ukraine

III. Growth in consumer demand caused by the household income increase (in 2011 income increased by 19,2% against 2010) and rapidly restore households lending (per 2011 maturities provided to households increased by 34,2%).

IV. Restoration of construction, amounting to January-December 2011 increased by 11,1%, mainly due to significant construction of Euro-2012. However, a large number of buildings are in conservation: at the beginning of 2011 has been suspended or closed down 1066 the construction of industrial buildings, warehouses and industrial buildings complex (413 with remote Payback period). The problems of construction is uncertain situations with orders on construction works, construction slowing create backlogs in the future, the lack of Ukrainian construction companies mobile base that would allow them to carry out large-scale orders outside the country and maneuver during the crisis.

3. RISKS AND DEVELOPMENT THREATS OF INDUSTRY

Despite the positive trend in the growth rate of industry, there are certain dangers.

The risks and threats that are caused by internal factors include:

1. Slow improvement of reproductive proportions in the industry that affects the industrial production growth opportunity and its efficiency is not conducive to improving the proportions of the creation of gross value added (GVA) by sector of industry. Thus, changes in gross value added by sector of industry that occurred during the 2003-2011 biennium, show faster growth of mining share in creating GVA, with 14,9% in 2003 rose up in 2010 to 23,9% and in 2011 accounted for 26,3%, while the share of manufacturing industry decreased from 68,2% in 2003 to 62,7% in 2010 and 2011 was 59,3%. The share of electricity, gas and water also underwent reduction of 16,9% in 2003 to 13,4% in 2010, and in 2011 was 14,4%.

2. The Economy of Ukraine fixing depends on external conditions together with low adaptation to new challenges and social needs, which causes deepening trade imbalances, increases sensitivity to price fluctuations and crises in world markets, deepen economic structural deformation, consolidating Ukraine for a supplier of raw materials and semi endanger macroeconomic stability of the country as a whole.

Almost half exports from Ukraine consists of low-tech and raw materials in the structure of merchandise exports in January - November 2011, the share of ferrous metals accounted for 27,2%, mineral products – 15,1%, chemical products – 7,8%.

3. Low proportion of high-tech industries with production of deep processing and end-use. The high-tech industries share, which contains chemical and petrochemical industry and engineering, in total sales for the 2004-2011 biennium remains low: in 2004 it was at 4,1%, in 2010 – 3,4%, in 2011 – 3,2%.

On figure 4 we see that the structure of manufactured industrial products prevailing share 3rd technological way. That is industry with low added value, which consumes much of electricity. It can be noted that the industry prevails Ukraine 3rd technological way in conjunction with the 4th and 5th elements. According to research Kleiman Y.A. (Kleiman, 2008) while playing several technological structure of the economy there are some disproportions, such as reduced efficiency of industrial production slowdown and worsening economic growth. Please note that the 3rd technological paradigm is being stagnant, 4th - in the phase of maturity, and the 5th - in the growth phase. This situation is associated with low innovative activity of industrial enterprises competitive in underdeveloped, lack of working capital to fixed assets.

4. Inadequate use of opportunities domestically produced high-tech products to meet local market needs. Ukraine meets the demand for high-tech products mainly through imports, the share of this segment in the structure of total imports to Ukraine in 2003-2011 he averaged 4,9%. In 2003-2008 importing high-

tech products increased from 981,6 million U.S. dollars to 3,656 billion U.S. dollars, average annual growth rate was 29%. Imports of high-tech goods in Ukraine in 2011 was 3427 million U.S. dollars and was greater than that of 2010 by 19,3%.

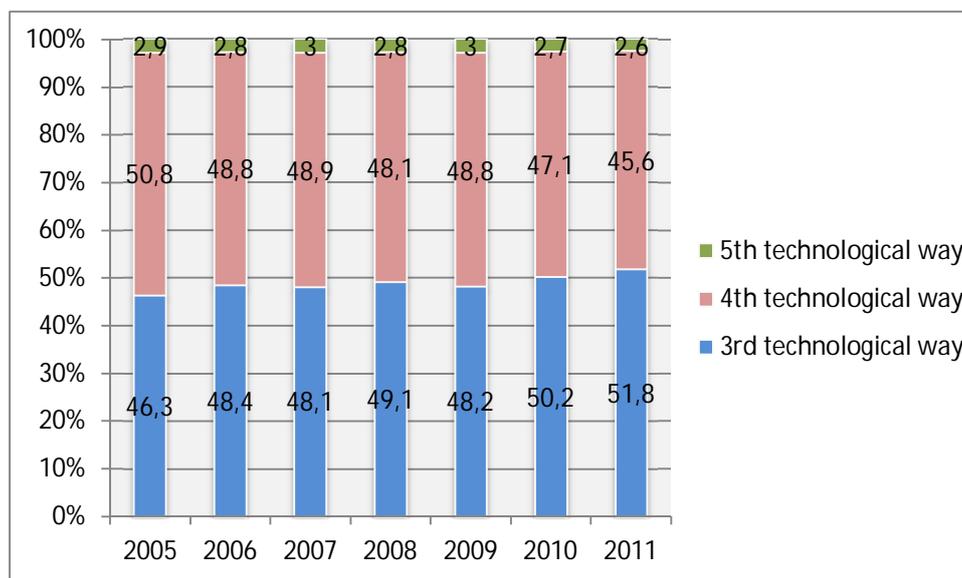


Figure 4. The structure of industrial production by technological ways in 2005-2011 years

Post-crisis economic recovery in Ukraine is largely associated with the development of the internal market reorientation of export-oriented enterprises to meet domestic needs, the development of industries that are not involved in international trade. Potential import contains transport, agricultural engineering, aviation industry, as evidenced by the growth in 2011 versus the same period in 2010 exports of aircraft by 2,4 times, railway locomotives - by 65,1%, vehicles, other than railway - by 19,9%, electrical machinery - by 26,7%, optical devices - by 11,9%.

5. Lack of diverse organizational forms of production cannot establish interdepartmental cooperation as the basis of a closed cycle of industry, intra-links for the full realization of productive capacity of industries, markets prevents expansion of industrial output, reducing the capacity of regional and sectorial development industry.

Threats and risks to the industry development in Ukraine caused by external factors include the following:

1. World oil prices. The oil price rise due to political instability in the Middle East and the associated potential problems with its supply is considered as a basic condition for the global economy this year. The April forecasts of the global assessment of the IMF (WEO), for which the average annual price of oil has stabilized at the level of 108 dollars per barrel, is 20% higher than estimates made by the end of last year. Similarly to higher forecasts Bloomberg and JP Morgan. Under these conditions, we should expect higher prices for oil this year at 135%.

The increase in world oil prices while maintaining the trend of recent years (2008-2011) to an increase in oil imports creates the conditions for a number of negative macroeconomic effects for Ukraine.

Among them - the inflation acceleration, deteriorating balance of payments, reducing the profitability of individual sectors, the decrease in company's equity that they could send for investment purposes. Increase in international prices of oil will cause the increase the domestic market and a proportional increase in prices of petroleum products. In the absence of effective regulation of prices of petroleum products in certain areas, particularly in the transport, agriculture, food industry and construction, which are the most dependent on fuel prices will increase the cost of production. The share of oil products is 28% in structure costs of transport enterprises, 8% - in agriculture, 5% - trade (Statistical Yearbook of Ukraine for 2011, 2012). Increasing the cost of the value added in these activities will decrease, which may lead to a reduction of wages, revenue or curtailment of investment activity in these enterprises.

In order to maintain profitability, companies with a significant share of oil and petroleum products will be forced to raise selling prices. As a result of linkages that may lead to the following consequences:

- the existing technological structure of production in order to maintain the level of profitability of agricultural enterprises are forced to raise prices by 1% rise in price of petroleum products at 5%;
- the food industry share of petroleum products is about 1% of agricultural production - 13% of services trade - 27%, transport - 3%. Fuel prices rise will increase the agricultural products price by 2,7 percentage points, the price of transport services by 6.1 percentage points, and increased trading margin by 1.8 percentage points which, in turn, through the inter-relationships affect the prices of food products;
- a significant proportion of the cost structure and production of construction enterprises petroleum products (about 11% and 7%, respectively), as well as transport services, determines the sensitivity of construction costs to the prices of petroleum products. Price increases in construction will increase the price index of investment in fixed assets, which in turn adversely affects the implementation of investment plans for domestic enterprises;
- acceleration of inflation due to rising agricultural production (by 2,7 pp) and food (by 1,9 pp), whose share in the consumer price index (CPI) is about 53%, and other components of the CPI, the price of which is directly or through cross-connections depends on crude oil prices.

Cumulative contribution to rising oil prices by 35% in Ukraine's GDP growth in 2011, which is formed by raising consumer prices, producer prices, prices of construction works and reduced profitability in transport, agriculture, construction, etc., will be about -1,4 pp. According to IMF estimates of the loss of such a rise in oil prices in 2011 are estimated as lower GDP growth by 0,8 percentage points – 1,8 percentage points

2. World prices for steel products. Japan after the earthquake will require significant investment and affect the dynamics of demand in global commodity markets, particularly in metallurgy. At the same time the global market in the short term, expected some decrease in supply of steel products. Primarily, this is due to the destruction of some production facilities at steel mills in Japan, which is the second largest steel producer in the world, and with possible interruptions in energy supply due to the destruction of facilities from the production and distribution of electricity.

Although there are some estimates on slowing the rise in prices for steel products through accelerated growth in domestic consumption relative to the rate of investment in fixed assets in China, according to a survey of experts, the increase in steel prices in 2011, the average estimated at 32,2%, including an estimated MEPS - 27% (Special Steel Association, 2012).

Trends in producer prices in the extraction of non-energy minerals and coke, which emerged at the beginning of this year (April to December last year - by 31% and 18%, respectively) also indicate a possible further increase in producer prices in industry (Statistical Yearbook of Ukraine for 2011, 2012).

Under these conditions and trends should examine a scenario in which steel prices during 2011 increased by 27%, which corresponds to the estimated MEPS.

This increase in prices, creates the conditions for a number of positive macroeconomic effects for Ukraine. Among them - improving the balance of payments and the formation of potential for growth and value added industry. This, in turn, creates the conditions for increased tax revenues, wages and profitability of the industry, the accumulation of funds for investment purposes.

However, we should expect some negative effects that arise as a result of linkages. Rising international prices for metallurgical industry will result in an increase of the internal market. As a result, in some areas, particularly in engineering and construction, which are the largest consumers of steel will increase the cost of production.

Under such conditions or businesses will be forced to raise selling prices, or added value will decrease, which may lead to a reduction of wages, revenue or curtailment of investment activity in these enterprises. Price increases in the mechanical engineering and construction will increase the price index of investment in fixed capital. This will slow down the implementation of investment plans on domestic enterprises.

Consequently, industry trends suggest starting the transition to the stage of growth and recovery of industrial capacity. However, a complex problem is the lack of competitiveness of the industry, recognized as one of the major threats to national security.

4. PROSPECTS OF INDUSTRY DEVELOPMENT

The development of both the economy and individual economic activities should be subject to the general plan for achieving the goal. Catch-up modernization model, which has been successfully proven in a number of developing countries should be used for traditional industries. This diversification and orientation of the internal market and address the internal problems will avoid some shortcomings of this model, in particular as regards their export monospecialized and underdeveloped domestic consumption. Catch-up modernization strategy is the most appropriate option for the development of Ukraine's economy is now, it is easily predictable results, will serve as the guideline has received achievements of other more developed countries (Polterovich, 2008).

The basis of catch-up modernization strategy should put a balanced approach flexible protectionism and import substitution. Both components should be closely linked. Protectionist policies should be applied to sectors and activities of industry, expansion of import-oriented production for the domestic consumer market. This will, on the one hand, protect the domestic market from uncontrolled (during dumping and illegal) imports, showing significant competitive pressure on domestic subjects, thereby narrowing their resource base for long-term investment, and on the other - will significantly expand capacity market for domestic production by reducing its import component.

Among the policy measures of protectionism that should be applied to these sectors should be noted:

- tariff protection within the limits prescribed under the WTO (Agreement on protective measures, 2000, pp. 4-24);
- customs protection by improving customs procedures, identification and evaluation of products, eliminating legal loopholes and illegal channels of smuggling;

- technical protection by raising the requirements specification of imported goods for their conformity with international standards of quality and safety of raising domestic sanitary standards to limit the capacity of the materials making up the imported goods, substances harmful to human health and the environment; full or partial compensation of the state "price of entry" into the market actors, including the organization of import-substituting production organization related industries for locking technological cycles, acquiring foreign licenses and technology, the cost of training and skills development in their own R & D entities marketing support of the development of centers of industrial design, technology transfer, etc.;

- promoting import-substituting production facilities tax and credit policies;

- implementation of state orders for certain socially important medical supplies that hitherto imported or produced in insufficient quantities (Kindzersky, 2010).

5. CONCLUSION

In conclusion, we note that the most pressing problems of Ukrainian industry characteristics are:

1. Structural and technological backwardness, leading to loss of production, high material and energy consumption;
2. Progressive technological simplification, consequently focus on manufacturing products made from foreign parts;
3. Unclosed technological cycle of production, low depth of processing intermediates and a small chain of new value added within the country;
4. Resource and export oriented production, which leads to the dependence of the economy from fluctuations in world markets;
5. Organizational shortcomings and the low level of capitalization of production;
6. High potential for the domestic market penetration of foreign multinationals with the subordination of national interests of foreign countries;
7. High depreciation of fixed productive capital and innovation and investment unattractive and insulation sector compared to other sectors of the national economy.

The presence of this population needs determines the need for transition to investment and innovation model of economic development of the country and the consideration of the investment policy in the industry. An important direction is to encourage investment, improvement of legislation on investment, and development of public investment, the development of the investment market, the development of public-private partnerships and improving organizational forms of management in public enterprises.

Implementation of these areas will increase the flow of investment products that promote modernization of industrial and technological base of enterprises, improve the profitability of production processes and ensuring the growth of industrial production.

State investment policy in the industry will solve the following problem: GDP growth, increasing economic competitiveness, social and cultural development, regional development and environmental protection.

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**THE ROLE AND PRACTICAL IMPORTANCE OF INTERNATIONAL
ACCOUNTANCY STANDARDS**

Tímea Halmosi

Szent István University Gödöllő, School of Economics and Social Sciences

Department of Accounting and Finance

Abstract

The convergence between the two sets of international accountancy rules, IFRS and US GAAP, have been in progress since 2002. Even though experts generally agree on the advantages of a global accountancy system, their views about its implementation differ significantly.

The demand for convergence can become even greater due to the regulations set forth in Basel III.

What kind of problems can arise in practice and what solutions can be recommended for them?

1. INTRODUCTION

Movements of capital typical of present-day world economy, cross-border corporate transactions and international economic relations all make the harmonisation and unification of the accountancy regulations of individual countries necessary.

Besides, also due to the financial crisis of 2007-2008, the issue of the regulation of financial and economic areas, as well as specifically the issue of accountancy regulation have again become the focus of attention. IMF has published several studies about the financial crisis. According to Noel Sacasa, financial research fellow of the Monetary and Capital Market Department of IMF, the reforms addressing weaknesses in the regulation have to embrace five important areas. Due to system risks and risk-taking that strengthens cyclicality, both capital adequacy and macro-economic policy must be made anti-cyclical. Accountancy systems crossing over markets have to be re-evaluated. In the area of securitisation, efforts have to be made towards harmonisation, more effective liquidity management and the improvement and re-evaluation of the present risk-management and analytic methods (Csáky, 2009).

2. THE EMERGENCE OF INTERNATIONAL ACCOUNTANCY RULES

Three great systems have influenced the emergence of international rules which are in effect now: accountancy rules set by the European Union, the regulation system of the United States of America (US GAAP) and international accountancy standards (IAS, IFRS).

The mentioned systems differ mainly in the nature of the regulation. The accountancy system of the EU and international accountancy standards are characterized by system theory, are comprehensive and theoretical ("continental"), whereas US GAAP is more focused on problem solving and has a technical basis (Kapásiné-Pankucsi 2003). The regulation of reporting and the depth of the regulation are also realised in different ways. In continental Europe, the regulation is based on a macro foundation, the rules are made by authorities and their compliance is also controlled by authorities. In Britain and the US,

regulations are based on micro foundations and have been created by professional organisations on a practical basis (Notes in: Czinkota M. R. et. al., 2003).

The main purpose of the EU is to develop a unified reporting system as well as to collect data with the purpose of analysis in order to identify community measures. EU regulations are essentially based on decrees and directives, which also appear in the field of accountancy. With regards to companies' financial statements, there are two directives in effect: directive #4 on business entities' annual statements (78/660/EGK decree) and directive #7 on consolidated accounts (83/349/EGK).

In the US GAAP system, regulation is created by authorized professional organisations, which is treated as a prescription, and court decisions also play a great role.

The original purpose of international accountancy standards was to collect all available good practices for stakeholders to choose from, but now, companies that want to prepare their statements according to IAS, have to fulfil serious requirements. The regulation is of technical nature and compliance is voluntary (Kapásiné-Pankucsi 2003).

The making of IAS's started in 1973, but a complete system was only created in the 1990's. It was during this period that the method of preparing statements according to the US GAAP emerged and became accepted nearly worldwide (Fekete 2005). This accountancy system must be used by companies selling on the American Stock Exchange, as statements prepared according to IAS are not acceptable there.

Nowadays, besides US GAAP, which plays a significant role, international accountancy standards are gradually gaining ground. In the European Union, in accordance with regulation 1606/2002/EK, companies listed on the stock market are obliged to prepare their consolidated annual accounts in accordance with international accountancy standards accepted for application in the Union. Besides this, Deloitte & Touche's survey of 2003 lists 90 countries which apply IFRS or have made a move towards convergence. (Deloitte & Touche International Financial Reporting Standard 2003. in Fajardo C. L., 2007). This number has been growing every year ever since.

As opposed to this, the preparation of individual statements is not so unified within the European Union. Member states are divided about the application of IFRS's. Nearly a third of them (29 %) make it mandatory; the same number (Hungary among them) do not accept it if companies only make their individual statement according to IFRS's. The remaining member states (42 %) have set the application of IFRS's as a possibility which, in some cases, means double reporting: the preparation of individual statements according to national criteria is also required besides individual statements according to IFRS's (Pankucsi, 2006).

3. THE HARMONISATION PROCESS

A harmonisation process started in 1995, in which the EU supported the introduction of IAS's and in 2002, a decree was passed which made the use of IAS's and IFRS's mandatory in the consolidated report (Fekete 2005). Besides this, the adjustment of the US accountancy system to international standards is also noticeable. Now, consolidated reports based on international accountancy standards are accepted by all the stock markets in the world. The convergence of the two international sets of accountancy rules, IFRS and US GAAP, creates similar rules, not totally corresponding standards. The phases of the convergence are the following (Madarasiné-Szimorny, 2012):

3.1 Phase one: from 2002 to 2006

The beginning of the convergence between US GAAP and IFRS was marked by the Norwalk Agreement in October 2002. In their Memorandum of Understanding (MoU), FASB and IASB formally committed themselves to the convergence of the two systems. The organisations' primary tasks were the implementation of short term mutual projects and the cooperation of their interpretative bodies in order to decrease the differences.

3.2 Phase two: from 2006 to 2008

As the next step, the organisations reinforced the responsibilities undertaken in the Norwalk Agreement in a new MoU in February 2006. The most important content elements of the MoU were the following:

- The convergence of accountancy standards can be achieved by developing high level mutual standards.
- Instead of eliminating the differences between the standards, the organisations shall create new, mutual standards which improve the quality of financial information.
- To serve the interests of investors, the organisations shall replace outdated standards with better and more reliable standards during the convergence.

Experts generally agreed on the advantages of a global accountancy system, but their views on implementation differed greatly. Many of them considered US GAAP more suitable to be the global set of standards.

3.3 Phase three: from 2009 to date

According to the viewpoint of SEC, a unified, high level and comprehensive collection of accountancy standards would serve the interests of American investors, therefore the organisation agrees on its implementation. SEC has publicly admitted that IFRS is more suitable to be the global set of standards, therefore they will continue to support the convergence between US GAAP and IFRS. The converged standards are planned to be created between 2012 and 2014, so the earliest date when the use of IFRS's in preparing the financial statements of American stock market companies can become mandatory is 1 January 2015.

4. REGULATION OF THE MONEY AND CAPITAL MARKET

In order to enhance the stability of the international financial system, The Basel Committee on Banking Supervision published the first Basel Capital Accord (Basel I) in 1988, which recommendation contained easily applicable specifications. It also had flaws, namely the following: capital requirements did not correspond with the risk involved in the operation of credit institutions; it was not risk-sensitive enough, nor did it take institutional characteristics into account. Therefore, in 2004, the second Basel Accord (Basel II) was created which, after recognizing the flaws of the previous one, was based on three pillars: capital adequacy, the complex supervision of capital adequacy and market disciplining force (Gulyás-Veres 2008). As the major player in the financial crisis was the banking sector, after it happened, it became necessary to further tighten the regulations in order to ensure the safe operation of banks. Accordingly, solvency capital, capital adequacy and effective risk management became the focus of the new regulation. The changes in the Basel regulations (Basel III) are being introduced gradually by 1 January 2019.

5. PAST, PRESENT, FUTURE?

Financial leaders, analysts and auditors agree that the introduction of IFRS's has happened seamlessly and they also see the future positively (Számvitel, Adó, Könyvvizsgálat 2006/6).

According to Kazainé, one of the main barriers to accountancy harmonisation stems from the economic, legal, social and cultural environment of the receiving country, and its further barriers are in connection with IFRS's themselves and the process of harmonisation.

On the other hand, it is clear from Deloitte's latest survey that, according to the banks, the chance for convergence between the standards of IASB and FASB is ever decreasing, despite the fact that most banks had supported the convergence process, according to previous surveys. However, analysts claim that the demand for convergence may increase further, provided that, according to the Basel III rules, in the case of applying different accountancy standards the required rate of solvency capital would also change.

The questions of international accountancy rules and taxation raise several further issues and partly shed light to the reasons for the difficulty of convergence, but the discussion of these issues is not possible due to size limitations of this article.

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TO IMERETI AS AN ISSUE OF REGIONAL BRANDING

Niko Chikhladze, Tea Valishvili, Kakhaber Gabelashvili

Kutaisi University, 13 Tsereteli St., Kutaisi, Georgia 4600

Abstract

The purpose of the article is to discuss the problem of regional branding in Georgia as well as to develop the appropriate recommendations. There is given a SWOT analysis of Imereti region and emphasized the main advantages of Imereti region in this respect. The above given analysis reveals that at the present stage there are real opportunities and resources for formation of Imereti as a brand. We believe that for formation of the region as a brand it is necessary to conduct proper analytical work and successive activities that will bring good results for the region tomorrow.

Key words: *branding, regional branding, Imereti region.*

1. INTRODUCTION

The recent years of experience reveal that the fundamental of a real success in construction of a new state system of Georgia is a regional policy balancing the interests of regions, maintained by constitution and legislative acts. It is a unity of purposeful actions, which are concentrated and coordinated at regional level and based on the development priorities. Georgia's region is defined as "a functional-planning territorial entity, which is a union of administrative-territorial entities coinciding with the operative territory of the State-Trustee Governor of Georgia" (Georgia Regional Development Commission 2010). This is an absolutely admissible approach since in compliance with constitution in force, the administrative-territorial organization of Georgia is envisaged just after restoration of territorial integrity.

The regionalization is rightly considered in Georgia as one of the basic areas of institutionalization of reforms. Despite successes in this field in recent years, there are still many problems to be resolved for securing the managerial and financing decentralization. Undoubtedly, we have to consider as a step forward even the fact that country already has the Regional Development Strategy for 2010-2017. Thus and so, under the real conditions, a particular attention must be given to the step-by-step implementation of this strategy.

Under present-day conditions, taking into consideration the positive aspects of the integration processes (WTO, European Council etc.), Georgian economy became "an open economy", but under conditions of less-developed national real sector it turned out considerably depending on the import. Unfortunately, the local production is not supported and stimulated properly. Consequently, we face the prevalence of import and worsening of country's taxation balance: in 2009, Georgia had relations with more than 150 countries and foreign trade turnover was estimated at \$5499,7 mln that exceeds the measure of 2005 by \$2146,7 mln or increased by 64%. Despite such increase it may be said that Georgia is just one-sidedly integrated into the world economy. According to 2009 data, the country's negative balance of foreign trade reached \$3232,5 mln, but exceeding of export over import, i.e. the export percentage accounts, for just 25,9% of the import and 20,6% of the foreign trade turnover. The situation by 2005 10-month period results has not been considerably changed: although the export volume has been insignificantly

increased, the percentage of it in the foreign trade turnover is still low (23,5%).⁴² Thus and so, in order to regulate the import and export it is necessary to: search for new markets, partners and investors; introduce the innovations; make the investment environment favorable; stimulate the export-oriented enterprise and import substitute production, wherein along with appropriate measures taking by governmental organs, undoubtedly a large role must be played by Georgia's regions. It is obvious that to date the Georgia's regions need as much as the air one breathes, assistance in international cooperation, raise recognizability and identification of competitiveness of the resources existing in the region, attraction of foreign partners. It is impossible to solve the stated and similar problems without regional branding.

2. PROBLEM OF REGIONAL BRANDING

It is noticeable that an issue of regional branding is rather new one in Georgia. The regional development strategy adopted in recent period already envisages an issue of branding of Georgia's regions. Regional branding is reasonable with the view to creation of image of region and it implies implementation of those programs, which should be oriented to increasing the investment attractiveness of territory. In addition, it implies gaining the consumer confidence for goods and services of regional origin and emphasizing the point of origin - the so-called national or regional image must guarantee the quality of product and emphasize its unique properties.

The region's marketing implies the joint initiative of local interested parties to present the region in the target markets (investors, tourists, potential residents, experts etc.). It is considered as an instrument of economic development. The reputation of the region must become its considerable intangible assets. In addition, the marketing strategies of municipalities, cities and population aggregates must be in compliance with regional marketing strategy. For the territorial branding there are applied the same principles like for the commodity and service branding, though the approach is much more comprehensive. This is conditioned by fact that the territorial brand directly impacts on the commodity branding development, which is in a direct relation with this particular territory.

At this time we will direct the vector of our research to an issue of regional branding, particularly for one of the Georgia's regions – Imereti.

3. QUESTIONS OF FORMATION OF IMERETI REGIONAL BRANDING

“Differentiate or die” – noted by Jack Trout, a well-known authority on marketing communication field. The brand, which is not able to stand out in the total mass, is always under the risk of disappearance in this mass. All those brands, which won't possess special properties and nature, are considered as faceless brands and consequently their prospects are not too clear. There is not much known about such region, there is no story told of it and consequently such region has little chance and opportunity for development. In this regard, the Imereti is in a good initial state – the region has specific character and it even begets emotions. It must have more positive image and take care not only of attention attraction.

⁴² Analysis is performed by us relying on National Statistics Office of Georgia (www.geostat.ge)

In spite of its small territory Georgia has lot of territorial varieties, as between different regions (differentiation of economic development, variety of national culture and traditions, ecological and demographic peculiarities etc.), so inside the region as well for each separate territorial entity.

Table 1. Some characteristics of Imereti region

Total area	- 6518,8 km ²
Population size	- 700,1 thousand people
Number of administrative units	- 12
including city	- 1
municipality	- 11
Administrative center	- Kutaisi
Distance between administrative center and capital city	- 220 km
Distance of administrative center:	
to nearest international airport	- 20 km
to nearest seaport (Poti)	- 102 km

Imereti region is a clear confirmation of this. This region of West Georgia, which is rich with unique conditions and resources, as an administrative-territorial unit traces its origin to remote past and has rich historical traditions (Gavtadze & Chikhladze 2009; Chubinidze 2008; Chikhladze 2008; Chikhladze 2003; Charkhalashvili & Gulua 2010). However, only in 1995 it has been established as contemporary administrative-territorial unit.

Situated at the crossroads of Europe and Central Asia, Georgia is a bridge connecting different important economic regions with a total of 827.0 million people, including the European Union (495.0 million), CIS (243.0 million), Turkey (73.0 million) and the Caucasus region (16 million). It is a shortest transit main connecting link between Western Europe and Central Asia for transportation of oil, gas and dry cargo.

Georgia's oil and gas pipelines, Black Sea ports, highly developed railway system and airports play an important role in the development of East-West interconnection. The mentioned advantage is considerably realizing in Imereti, which is situated in a region of sea damp subtropical climate.

One of the significant nationwide functions of Georgia is a transit function, due to which the geopolitical location of Imereti region and Kutaisi acquired a new meaning. At the present stage, the region reveals itself as a connecting transport corridor on the one hand between European and Asian countries and on the other hand – between Western and eastern regions of Georgia (see Pic. 1).

Pic. 1. Imereti region as a part of transport corridor



An important event in the Imereti region was reconstruction of Kopitnari airport for international flights. Advantageous geographical situation of the airport and natural-climate conditions make it attractive as to foreigners, so to neighbouring regions as well. Not only airport, but the developed railway system as well link the Imereti region to Black Sea ports, Tbilisi, other countries and regions. In this regard, a special significance is given to functioning of Samtredia rail center. The highway system of Imereti region links the territorial entities to Georgia's regions and other countries. Geopolitical location of the Imereti acquired a new meaning within TRACECA project of European Union, which is aimed to connect the Caucasus and Central Asia regions with Europe and assist to economic development of these countries.

The Imereti's territorial entities are rich with some natural resources, on the basis of which it is possible to develop local production through the attraction of foreign investments.

The region is distinguished by variety of mineral resources existing on the Georgia's territory. At present, there are counted over 100 deposits of mineral and raw material resources, including the following:

- Chiatara Manganum - the balanced and unbalanced reserves come to 215 mln tons by each type of ores (oxide, carbonate, rusty, combined, sandstones). Presumably, there are still reserves of unprocessed manganese in Kvirila surroundings, territories of Zestafoni municipality, Chkhari-Ajemeti, Kutaisi and Terjola;
- Coal of Tkibuli and Gelati;
- Barite, diatomaceous building materials, clay reserves;
- Betonite clays, marble, marmorized limestone, basalt deposits;
- Energy potential. The water resources create profitable conditions for formation of energy supply sources, without which it is impossible to develop an industrial sector (at present, there are functioning 5 powerful hydro power plants in the region).

Existence in densely-populated territories testifies to one more advantage. Profitable conditions are created for manufacturers of foods and light industry and consumer goods oriented to the local market, and for development of processing industries and services sector as well. Imereti region is distinguished

by a well-developed banking system, the definite center of which is the city of Kutaisi. Altogether there are functioning in the region 7 big banks with several tens of branch offices in district centers.

Over the decades, the experienced and highly skilled personnel have been formed in the city of Kutaisi. With a glance of present-day international conditions and trends it is possible to consider the existence and cheapness of labor resources in traditionally characteristic of Imereti sectors (textile industry, footwear production, production of foodstuffs, mechanical engineering, transport, tourism, hotel industry etc.) as a substantial advantage.

It is noticeable that successful realization of regional priorities depends on involvement of universities and professional schools potential as generally, so in scarce special subjects (extracting and processing of stone, food and light industry engineering and technology, electrical engineering, urban geography, strategic management in business etc.) with a view to both training-retraining of personnel and developing the particular business-projects.

The factor analysis of functioning of the Imereti region's territorial economic system is reasonable to provide at the following two levels:

1. The macroeconomic level: general economic position of the country, government promotion of business, strengthening country's international position, increasing the role and political-economic value of the city of Kutaisi (obtaining the recognition of second capital of country) etc.;
2. The regional level: geo-economic location, economic traditions, resource potential, membership in an Assembly of European Regions etc.

The unity of the stated factors will condition the potential of the Imereti region and the positive tendencies in the development of business activities. Among them it is necessary to emphasize the following ones: *for Georgia*: attractive investment environment, strategic geographical situation, sustainable macroeconomic environment, liberal trade policy and tax legislation, simplified customs and licensing procedures, low-level corruption; *for Imereti*: profitable geo-economic location; variety of natural resources; skilled and cheap manpower; broad experience of industrial production; wide opportunities for development of tourism; dynamically developing banking industry. Over the past few years, the positive changes have been observed in economic situation of Imereti that is generally expressed in increase in output of industrial production, make quantity and investments. In our opinion, it was a result of improving the investment climate, a rise in investment attractiveness and consequently, a decrease of investment risk in the region.⁴³

4. SWOT ANALYSIS OF IMERETI REGION

In order to make the acceptable brand strong, positive and effective it must be grounded in a suitable foundation. Such foundation is represented by highly professional SWOT analysis and its conclusions. In the issue of such analysis, which balances the region's strengths and weaknesses, brand's development opportunities and expectable threats, there is created the marketing strategy, wherein will be described the brand positioning, expected benefits and communication arguments (rational and

⁴³ Calculations related to improvement of investment environment in Imereti are detailed in following works: **Gvartadze, G & Chikhladze, N 2009**, *Development Conditions and Opportunities of Imereti region*, Kutaisi.; **Gvartadze, G & Bakuradze, A 2003**, *Substance and Design Procedure for Regional Investment Risks*, Proceedings of I Republican Scientific Conference of Young Scientists' Association, Kutaisi.

emotional). Therein, we have presented the generalized version of SWOT analysis, which is desirable to be guided by regional marketing strategy. The bases for SWOT analysis matrix compiling were as our research works, so considerations and commentary of regional brainpower⁴⁴ (see Table 2).

Why is it so important? Because there is still no existing branded region in Georgia. The one, which will be first, will not only make a path for others, but it will be in line for leadership as well.

The branded region is a region, which not only attracts investors and tourists, but copes with complex social processes as well (unemployment, education, security, culture and leisure time, labor emigration, lifestyle-related emigration). The branded region aims at the following: building the high-level infrastructure, creation of attractive conditions in all spheres of life, and good image and possibilities for its promotion. Without all above mentioned, the regional brand will be under permanent crisis conditions and the region will take faceless and nameless place on a map of the world, and it will remain the place, which is leaving by population and it is not worth while to visit (Chikhladze & Gvartadze 2010).

Table 2. SWOT analysis of Imereti region

Strengths	Weaknesses
Geo-political and geo-economic location of region; well-developed transport linkages (roads, railway, air transport) and organized infrastructure; relatively advantageous location of region's tourist zones with a view to transport linkages; existence of firm and rational justification for promotion of region as a tourist center; natural-climate conditions favoring commercial farming; existence of numerous and various historical sites and cultural heritage; stable criminogenic situation; rich and diverse natural resources; growing dynamics of investments; cheap and affordable labor force; existence of special development zone; existence of parliamentary and governmental organs – Kutaisi is a second capital of country; existence of industrial potential and rich scientific-educational traditions; competitive positions in industry and metallurgy; strong non-governmental sector acting in the region; opportunities for obtaining of cheap energy sources (solar, wind, water power); dynamically developing banking industry.	Drain of highly trained labor resources; high level of the politicization of the mass media; improper use of existing resources in business activities; unemployment high rate; the large share of vulnerable groups in the population; low purchasing capacity of population; shortage of high-level hotels; popularity of exit tourism among population; low awareness of region's population in region tourism potential; neglect of some interesting and attractive territories; shortage of tourist road-routes (cycle, riding, ski); shortage of business consulting organizations; low involvement degree of population in solution processes of problems important for region; high polarization degree of population incomes; absence of wholesale organized system; insufficient mobility of labor resources; absence of participating planning; absence of development strategy of Imereti region.
Opportunities	Threats
Increase of region's investment attractiveness that concerns tourism sector as well; high potential of rural economy and agro-industrial sectors; strengthening the functioning of small and medium enterprises; professional advancement of regional self-governmental authorities in knowledge and skills;	Low capacity utilization; military danger from Russia; natural disasters and great number of landslide zones; low employment rate among youths; low demands for scientific and marketing research; migratory processes; aspiration for illegal jobs; low level of fiscal decentralization; out-of-date technical

⁴⁴ There is performed by us the SWOT analysis of separate sectors of Imereti regional economy as well

<p>increase of interest of investors in region; increase of involvement of international financial institutions in solving the regional problems; increase of tourism prestige in Georgia; opportunities for development or transit tourism in connection with membership in European Union;</p> <p>opportunities for development of specialized tourism market; opportunities for development of business service sector on the basis of higher school; existence of suitable base for creation of industrial parks and zones; profitable conditions for tourism development; increase of number of professional retraining centers;</p> <p>development of education, health-care protection and cultural sectors; international opportunities for membership of Imereti in Assembly of European Regions;</p> <p>rehabilitation and development of cultural heritage; opportunities for close business ties with friendly cities and regions (Columbia DC, Newport, Poznan, Ashkelon, Gyanja, Lvov, Donetsk, Zaporozhie, Kharkov etc.) in economic, education tourism spheres.</p>	<p>infrastructure; roads and transport infrastructure; inefficient system communication and information in tourism sector; absence of regional development strategy; low level of economic and legal education of population; foreign competition to local tourism product.</p>
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It is very important to apply the tourism development opportunities in regional branding. Tourism is one of the most high-potential sectors of economic development. Tourism development will favor the socioeconomic development of regions and improving the living standards of population.

Imereti is a far-reaching region with a view to tourism development. The region is rich with mineral waters, historical and cultural sites.⁴⁵ At present, there are existing 53 health-resort and recreation centers in the Imereti region (Sairme, Tskhaltubo, Nunisi, Simoneti, Sulori, Satsire, Chiatura Khreiti, Samtredia, Zvare, Amagleba and others). It is necessary to mark out among them the following ones:

- The resort Tskhaltubo – diversified balneology health resort, famous for the thermal-radionic mineral waters, healing about 60 various diseases.
- Special emphasis must be put on Sataplia National Reserve located at Tskhaltubo territory (345 hectares), wherein are as karst cave, so the unique finding in the world – dinosaur footprints;
- Prometheus (Kumistavi) Cave at the territory of Tskhaltubo municipality;
- Sairme resort – located at the height of 915-930 m above sea level, surrounded by pine grove that creates a unique microclimate. The resort is famous for mineral springs situated on the Tsablari riverside.

It is possible to create in Imereti new openings for medical tourism. Since 2006 there is functioning in Kutaisi the current state multifield clinic – the West Georgia National Medical Center. It is a one of the leading medical institutions in Europe.

⁴⁵ See details (**Charkhalashvili & Gulua 2010**)

Imereti holds a leading position in the recreational system of Georgia. That includes unique natural and water-mineral resources in kind of mineral waters. Among waters it is possible to distinguish various mineral springs in Tskhaltubo, Sairme-Baghdati municipality, Nunisi in Kharagauli, Sulori in Vani, and Sachkhere. There are existed in the region thermal waters reserves in quantity, the use of which can yield major fuel economy.

There are deployed in Imereti the discovery and adventure tourisms. This is conditioned by massifs and woodlands, embracing an area of 250 thousand hectares. There are the following special interest tourisms: mountain hiking, mountain equestrian, speleo-tourism, rafting on Rioni River.

Religious tourism is a new and interesting field for Imereti as a region with rich historical past. The territory of Imereti as well as all Georgia, is represented by antique historical and cultural monuments of early and late Christianity. Each of them represents inexhaustible supply for tourist groups and specialists. Only in Imereti region there are over 250 such monuments.

The opportunities for development of particularly extreme tourism in Imereti are of interest as well, for all three fields of which (extreme, entertainment and curative speleological tourism) there are existing sufficient resources in the region.

One of the priority directions of tourism product in Imereti is represented by resorts and health-improving zones.

The region's beautiful landscape and curative mineral waters make balneology health resorts very attractive to guests. The Imereti's health resorts and recreation zones, which have been built on in Soviet times, were intended for cheap, low comfort and service infrastructure. Consequently, as of today, absolute majority of them do not meet requirements of contemporary market. In spite of this, the unique curative mineral waters, climate and beautiful nature give us opportunity to develop new programs and suggestions, taking into consideration up-to-date requirements, for rebuilding of them.

Imereti abound in caves and other natural monuments. The trust territories of the Imereti caves are the part of whole system of Georgia's trust territories and include the following categories: Sataplia State Reserve; Tetri (White) Cave Natural Monument; Kumistavi Cave Natural Monument; Khomuli Cave Natural Monument; Tsutskhvati Cave Natural Monument; Navenakhevi Cave Natural Monument;; Nagarevi Cave Natural Monument; Iazoni Cave Natural Monument; Sakazhia Cave Natural Monument; Tskatsitela Canyon Natural Monument; Okatsi Canyon Natural Monument; Okatsi Waterfall Natural Monument. Besides large lakes, there are lot of natural lakes in different places of Imereti region at the heights of 1000 and 1500 meters above sea level. Each of them gives us a great opportunity to create new infrastructure on-site.

5. MEASURES TO BE IMPLEMENTED FOR BRANDING IMERETI REGION

First of all, it is necessary to develop the Marketing Strategy of Imereti's Tourism Sector, which must be in compliance with development strategy priorities. The Marketing Strategy must be aimed at defining the best mode and arguments for this information transfer to consumer.

The strategy must contain the "advertising message" on addressee's expectations and needs, and analysis of brand positioning in the market as well.

Thus and so, on the basis of development strategy the Marketing Strategy defines what, how and who we have to inform. It is necessary to note that along these lines there are created some bases in Kutaisi. That is confirmed by fact that 2011 municipal budget envisages programs such as: Tourism

Development (48 thousand Lari); Strategy Development Program of Kutaisi (50 thousand Lari); Foreign Investments and Business Promotion and International Economic Relations development ((50 thousand Lari). In addition, since 2011 in Kutaisi there will be launched the tourism information center, which will be available to any traveler. There is planning to implement the Kutaisi City Pass Program that will include Kutaisi into the list of those cities, which take care of providing the travelers with necessary information and safety of them. These programs envisage certain direction of branding of city of Kutaisi and they can contribute to branding of region as well, but they do not have comprehensive, orderly and purposeful character.

Regional brand, as opposed to commercial brand, must attract interest not only of local population, but it must be naturally supported by local mass media and public opinion.

Taking advantage of this fact will be expressed in PR results. Frequently, the image of brand increasingly depends on this communication component than on expensive advertising company effectiveness. Although, for provoking and using such “interest” there is required professional PR again.

In order to achieve the efficiency in business activities it is necessary to provide the customers involving in the market with information about product quality and unique properties. With the view to placing the comprehensive information about region it is necessary to update the web-page of the region. Also, it is necessary to form the diversified verbal and visual identification of slogan and logotype of the product. It is necessary to detailed inventory not only existing facilities (buildings), but all the natural and other resources required for the development of separate branches of tourism and to create the appropriate data base (data bank) on the basis of this information. Use of informational background about resources existed in the region will favor to develop and implement the long-term strategy for development of tourism sector. Perception of Imereti brand should be considered in accordance with “remoteness” of consumers in following way: region dweller, neighboring region dweller, country citizen, neighboring country citizen, distant country dweller and other continent dweller.

The farther we go, the less is known about region, recognizability of brand goes down and related emotions are changing. Consequently, it is necessary to undertake activities such as: creation and application of visual identification system of region and its components (coat of arms, flag, logo, welcoming phrases, and advertising items); region’s Internet-service and thematic Internet-service, own editions (brochures, newspapers, catalogues, booklets, publications, posters); advertising and information audio-visual and interactive technologies (for example, CD, DVD, wherein are recorded presentations and advertising films); cooperation with mass media (presentations, demonstrations of advertising films, sponsoring (funding) the articles and publications); study tours and study press; participation in fairs and exhibitions; organization of presentations; advertising activities and events.

6. CONCLUSIONS

The brand “Imereti”, as well as all the other brands must understand why and with whom it is intended to compete, i.e. the brand has to determine its direct and indirect business rivals. At the micro- level, the business rivals of the Imereti region are the rest 8 regions of Georgia, which should be able to rival with it for investments, subsidies, tourists, students and immigrants.

The above given analysis reveals that at the present stage there are existed the real opportunity and resources for formation of Imereti as a brand. We believe that for formation of region as a brand it is necessary to conduct proper analytical works and successive activities that will bring good results for region tomorrow.

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THE IMPACT OF UNGUIDED ROCKET FIRINGS ON THE ISRAELI CAPITAL MARKET

Tchai Tavor

Department of Economics and Management, Yezreel Valley College.

Yezreel Valley, 19300 Israel

Abstract

In recent years, terrorist organizations have made considerable advancements in their operations and in the technology they employ by using unguided rockets. Such developments are amplified in Israel and pose threats to the population centers in the area. In this study, I shall examine how the firing of unguided rockets towards Israel impacts the capital market and whether such impact is permanent or transitory, where for the purposes of the study I shall examine the firing events based on categorical characteristics represented by the Terror Index. The results show a negative correlation between the severity of the event, the range of the trajectories, the number of casualties and wounded, and index returns. Similarly, it was observed that only in the events accompanied by low rocket firing rates, were the capital markets permanently affected.

Key words: *Terror Index, Rockets, Terrorist Event, Market Efficiency, Permanent*

1. INTRODUCTION

In recent years, terrorist organizations have considerably advanced their operations and their technology by using unguided rockets. The economic backbone that these organizations damage are the open economic channels that allow the unrestricted flow of people, capital, and goods and services between countries around the world (Abadie and Gardeazabal, 2007).

The typical terrorist event causes limited damage that manifests itself in the organization's ability to relay the terror information to its various audiences, the principal one being in the victim country. Public opinion in the victim country, through expression of personal anxiety, places pressure on decision-makers, who in turn modify their policies to better reflect the terrorist organization's goals and interests. The success of such a strategy depends on the ability of the organization to facilitate disproportionate anxiety that is several times larger than the actual threat.

Terrorist organizations place considerable efforts and resources in an attempt to cause anxiety and inflict moral-psychological effects in their target audience. To this end, organizations conduct thorough examinations of the media reports of their target country in an attempt to locate its social weaknesses, to amplify its anxieties, to identify social fissures and internal struggles and to harness those to reach their ends. The public disagreements are used by the terrorist organizations to inspire the questioning of the justice, the values and the regime. The effectiveness of such warfare increases the longer the act continues and turns into a battle of attrition of many casualties and frequent terror events, even while the number of casualties in each event is limited. Frey, Luechinger and Stutzer (2007) empirically measured the damage caused by terrorist activities using the number of such events as an indicator. In their study, they offer a new approach based on overall satisfaction from life or data pertaining to subjective welfare that are gathered independently from data on terrorist activities, and so are not biased to pressing effects. They showed that terrorist activities lead to significant reductions in the general

satisfaction from life, and considerable compensation in wages is then needed to offset the damage caused by the terror.

Terror has become a widespread weapon around the world, with terrorist organizations conducting destructive operations at different levels, targeting different populations such as soldiers, women and children, both for national purposes as well as for criminal ones. Nowadays, terror plays a part of our lives, affecting the economy most generally, and the capital markets specifically. A study done by Johnston and Nedelescu (2006) examined what the most efficient policies are to regulate financial markets during a terrorist attack, focusing on the terrorist activities in New-York (2001) and Madrid (2004). The results show that the diversification, the liquidity and the robustness of the financial markets are the most efficient means to absorb the resulting shocks, but in addition, a flexible response from the governing authorities is of paramount importance.

A comprehensive study examining this phenomenon was published by Brounen and Derwall (2010) and examined the changes taking place to eight important financial markets as a result of 31 terrorist activities during the years 1991-2005. Their results reveal an average drop in returns of 0.34% across the board during the day of the event, and a steeper drop of 0.92% in the market where the terrorist activity had taken place. It was also found that the time it takes for the markets to return to their original values spans between two and three days. A similar result was obtained by Nikkinen and Vahamaa (2010) when examining the impact of terrorist activities on the British capital market, revealing that investors expect a steep drop of the FTSE index in the short term after a terrorist attack.

Kollias et al. (2011) found an even stronger effect than did Brounen and Derwall (2010) when examining the impact of the New-York and Madrid attacks on the financial markets. They show that during the Madrid attacks, the three central stock exchanges in Spain dropped an average of 2.1% on the day of the attack. This process continued unabated for the ten days following the attack, with an average drop of 4.35%. It took 15-17 days for the prices to return to their original ones, with the most damaged sectors being electricity providers and insurance; the banking sector was the sector least affected. While the British market saw a drop of 1.6% during the day of the event and the following day, the market returned to its original values within a day. The explanation for this difference lies in the fact that the London terrorists died in the attack, so the public did not feel as threatened afterwards.

A new study in the subject was conducted by Chesney, Reshetar and Karaman (2011), empirically examining the effect of terror on stock values, commodity values and bonds using 25 terrorist attacks during an 11 year period. The results indicate that two thirds of the terrorist activities have considerable negative effects on the markets, with the most sensitive sectors being airlines and insurance and the least sensitive being the banking sector. It was also found that gold and other commodities respond negatively to the attacks, and are not hedged well to such attacks. The results also indicate that the attacks cause significant reactions in the markets, ones that are mitigated only several days after. Another study that examined the effects of terrorist attacks on the different industrial sectors in the Israeli capital market was conducted by Berrebi and Klor (2005). The analysis was performed by examining the change in the market value of Israeli firms of different sectors traded in American stock exchanges. The results show that different sectors respond differently to the terrorist attacks. Security companies tend to react positively to the attacks, while all other sectors see considerable drops.

A similar result was obtained by Chen and Siems (2004) when examining how 14 significant terrorist attacks around the world affected the capital market. They revealed that capital markets nowadays are more resistant and heal sooner from terrorist attacks than ever before. The reasons are the flexible market structure, the robustness of the banking and financial systems, and the high liquidity in the market that enhances the robustness and reduces post terror-events anxiety. Similarly, Fernandez (2008) had

examined the effects of the political instability in the Middle East, following the invasion of Iraq, on the volatility of the global financial markets between the years 2000-2006. She found that the volatility in global stock prices has gone through short-term, transitory changes during the examination period, while no significant change in volatility was observed between the war period and the control period. Another consequence observed in the report was that the political instability of the Middle East affected the volatility of the major financial markets (US, Britain and Japan) during the beginning of the war in Iraq. Following the period, however, most indices experienced drops in volatility.

One of the countries constantly under threat of various terrorist activities, and for the most part is able to prevent them, is Israel, a country in the midst of one of the most complex security situations. Its survival depends on its ability to prepare for varying threats, to deter its enemies, and to deflect their attacks in times of need. During the past decade, owing to the confrontation with the Palestinians beginning in September 2000, the terror threat on the State of Israel has risen, and has been characterized by destructive suicide bombings meant to induce the psychological effects necessary in a terrorist strategy. Following a tough period of adjustment, Israel's security forces have learned to curb such bombings.

A comprehensive study discussing the effects of terrorist activities based on various characteristics on the Israeli capital market was conducted by Tavor (2011). Five principal examinations were conducted in the study: the general effect of the event, the effect of the event based on its location relative to the green line, the effect of the event based on its location within the green line, a comparison of terrorist activities with casualties to those without casualties, and a comparison of terrorist activities resulting in an IDF response to those not resulting in an IDF response. His results reveal the following: 1. A terrorist activity creates a general negative attitude in the capital market both before the event as well as after it, 2. The market reacts moderately to terrorist events outside of the green line, but drops sharply as a result of attacks within the green line, 3. The market reacts sharply to terrorist attacks in Jerusalem and in the center of the country, as opposed to those in the north or the south, 4. An event with casualties affects the capital market during the day of the event and during the following six days, while following events with no casualties, the capital market adjusts rapidly and retains its stability during the period following the event, 5. The market responds positively following a terrorist attack in the event that a response follows the attacks, but negatively when no response follows.

Peleg et al. (2011) examined 152 terrorist attacks in Israel, with a total of 345 civilian casualties during the Second Intifada. In the study, they examined the sensitivity of the capital market to numerous and prolonged terrorist attacks (a certain "normalization of terror"), between the years 2000-2006. The study hypothesized that during the Second Intifada, the resiliency of the Israeli economy had risen and its sensitivity declined. Their results indicate that the TA100 index is affected by the intensity and severity of the event, but in a very restricted time period. One explanation is due to the suddenness of the terrorist activity, resulting in only a short-term effect, without creating a longer-term effect. Due to this character of the terror acts, they argue, a "normalization" of error results, where terrorist activities become a routine of the daily life in Israel, and so do not create a sense of "excitement" in the capital markets for more than several days following the event.

As a result of the ensuing difficulties to execute terrorist activities stemming from the successful prevention systems of the security forces and the setting up of the separation wall and the buffer zone, terrorist organizations have turned their attention in recent years to redirect their militarizing efforts

towards the channel of unguided rocket firing⁴⁶. This strategy guides the terrorist organizations in Lebanon and in the Gaza Strip and motivates them to invest the majority of their efforts and resources into the development and optimization of weapons that targeting high-density population centers.

The use of unguided rockets by terrorist organizations against Israel had begun in the 70's. The Palestinian terrorist organizations in Lebanon used cannon shooting and heavy artillery towards the Israeli Defense Forces and towards Israel. In the 90's, Hezbollah began launching short-range rockets towards northern Israel, continuing until reaching a peak in the days of the Second Lebanon War of the summer of 2006. It is important to note that the destructive level of unguided rockets is relatively lower than other means of terrorist activities. Nevertheless, the damage caused by rocket shootings on civilian populations is not only measured by the statistics of casualties and wounded, but by an intense, economic damaging across the board that includes the costs of the changes in the economic lifestyle of the residents affected in the different areas, as well as wider costs. The latter may include the enlargement of the security budget, the redirecting of funds for protective and offensive measures, the financing and repairing the damages caused by rockets, the general market uncertainty and the fearing of a wider confrontation with the terrorist organization (Eldor and Melnick, 2004).

Several additional studies examined the effects of terrorist events on the Israeli capital markets. Eldor et al. (2005) examined, using a sample of 460 terrorist attacks and 58 targeted killings during the period 2000-2003, to what extent the effects of terrorist activities and an anti-terror policy on the capital market is permanent in those sectors experiencing prolonged and unabated terrorist activities. The main conclusions of the study are that stock rates drop as a result of terrorist activities, the stock rates are almost unaffected by the targeted killings that follow these terrorist activities, and the rise of terrorist activities causes investors to redirect their operations from the stock markets to more solid investment opportunities such as short-term government bonds. Another study in the field was conducted by Zussman and Zussman (2005) examining the ways in which targeted killings affect the containment of terrorist activities, by analyzing the response of the Israeli stock market to assassinations of Palestinian terrorists during the Al-Aksa Intifada. Based on a sample of over one hundred successful targeted killings during the Intifada, they revealed that the response of the capital market to the operations depends on two factors: the notability of the target and its status – whether political or military. The capital market does not respond to assassinations of minor targets, but responds very powerfully to assassinations of leading figures. Similarly, attempted assassinations of political figures do not contribute to minimizing terror, while damaging military targets does contribute to terror minimization. Eldor and Melnick (2004) examined the effects of 639 terrorist activities during the years 1990-2003 on both the stock and bond markets. The study examined the effects of several parameters (the location of the bombing, the target of the bombing, the type of terrorist activity, number of casualties and number of wounded). Several findings were revealed in the paper: 1. Since the beginning of the Al-Aksa Intifada in September 2000, the effect on the stock market was negative and permanent, 2. Suicide bombings have a permanent negative effect on the market, 3. Attacks on transportation have a transitory negative effect on the market, 4. Attacks taking place within the green line have a transitory effect on the market, 5. Bombings with wounded have permanent effects on the market.

In this study I shall analyze how the firing of unguided missiles towards Israel affects the capital market, for which purpose I shall examine the terrorist attacks based on categorical properties. Unlike many other studies that examine a variety of different terrorist attacks, in this study I shall only concentrate on

⁴⁶ Unguided rocket firing is a generic term denoting any firing that with no direct aiming (rockets or mortars), and its advantages is in the large range between firing location and destination.

one type of attack - the firing of rockets, and thereby examine the effects of a continuum of attacks that all share almost identical properties during an extended time period.

The study is based on a particular sample of 623 terrorist attacks using rocket firing between the years 2002-2010. For the purposes of the analysis, I shall use the Terror Index, composed by Eldor et al. (2005), and shall expand on it⁴⁷. The index takes into consideration a variety of factors such as: the number of rockets fired during the event, the range of the trajectory, the number of wounded, number of casualties and the duration of the event. The importance of examining the effect of terrorist activities on the Israeli capital market results from the fact that such events are the norm in Israel, whereas they are rare and unusual incidents in other markets. In this research, I shall examine the following issues: (1) To what extent the effect of continual terrorist attacks is permanent? Is the response of the market immediate or does it begin with an initial overreaction that is followed by investor-corrections? (2) Has investor response to terrorist attacks changed over time? The study is organized as follows: Chapter 2 presents the data and methodology of the study, Chapter 3 presents the results of the empiric examination, divided into several analyses and Chapter 4 presents the conclusions of the study.

2. DATA AND METHODOLOGY

2.1 Data

The data for this study describe rocket firing events that took place between 2002 and 2010 and were collected from ynet.co.il. The data were reported in the media in real-time and have possibly affected the capital market, unlike those events discovered only in retrospect. The study was based on 623 rocket firing events on the State of Israel that had taken place during the above time period, as shown in Table 1 below. Firing events taking place during Operation Cast Lead⁴⁸ were not included in the sample as during the operation, a barrage of rockets were fired from the Gaza Strip that bear no relevance to the examination of the permanence of such events.

Each event is characterized by the data published about it during the duration of the event. These include: the publication time, the number of rockets fired, the location of the event, the range of the trajectory, the number of wounded and casualties⁴⁹, and so forth. Similarly, whether or not the event was followed by a military operation between Israel and the Hamas was also noted. Traded volumes and stock returns

⁴⁷ The index composed by Eldor et al. is based on binary categorical variables that limit the value of an event's effects. I suggest the use of categorical variables that may take up many values, thereby better characterizing the event.

⁴⁸ Operation Cast Lead – an IDF operation in the Gaza Strip lasting between December 27, 2008 until January 17, 2009. The aim of the operation was to damage the infrastructure of Hamas and to bring about an end to rocket firings on Israeli territory. The military operation ended in a unilateral ceasefire by Israel.

⁴⁹ A wounded person dying of injuries several days after the event is considered a wounded, as the examination is done during the day of the event and the two days following it, and not the period after that.

from the TA100⁵⁰ and the S&P500⁵¹ indices were collected as well, as these represent the leading indices in the country.

	Number of firing events	Number of rockets	Casualties	Wounded (excluding anxiety disorders)
Total firing events in the sample	623	2197	11	268
Period before Operation Cast Lead – 7/2007 – 12/2008	536	2062	10	267
Period following Operation Cast Lead – 1/2009 – 12/2010	87	135	1	1

Table 1 – A description of the rocket firing events by different characteristics

2.2 Methodology

In order to find whether the effect of rocket launches were transitory or permanent, I shall define that if there had not been a single, excessive response to the stock prices but rather, a continual negative effect during the duration of the event, then the effect shall be termed ‘permanent’. For these purposes, I shall examine the closing prices of the TA100 during the day of the event, $Y(t)$, the day prior to it, $Y(t-1)$, and both days following it $Y(t+1)$ and $Y(t+2)$. In case the event had taken place in the morning of the trading day or during it, this trading day will be considered the day of the event. In case the event had taken place at the end of the trading day or during a day in which trading does not take place, then the first trading day following it is considered the day of the event.

I shall divide the study into two principal time periods, prior to, and following Operation Cast Lead, as noted above. Such a classification was conducted since after the operation, rocket firings had dropped substantially, and this point represents a change in the nature of the rocket firing.

In this study, I shall examine the effect of rocket firings based on several characteristics and their effect on prices in the capital markets, and they include: the number of rockets fired, the range of the trajectory, the number of casualties or wounded, and whether the event was followed by an ongoing military operation (lasting at least a week). Based on these characteristics, and on the basis of the model developed by Eldor et al. (2005), I shall calculate the severity of the event, TI.

$$(1) TI = D_1 + D_2 + D_3 + D_4 + D_5$$

Where,

D_1 – A categorical variable, taking the value 1 when five or fewer rockets were fired, the value 2 when the number fired was between six and ten and the value 3 when more than ten rockets were fired.

⁵⁰ TA100 index – the index containing the 100 stocks of the highest value in the market, and is considered by many researchers as the Israeli market index.

⁵¹ S&P500 index – the index containing the 500 corporations (mostly American) of the highest value in the market, and is considered the indicator of the American economy, and as it is the highest traded index in the world, it reflects the American economy honestly.

D2 – A dummy variable taking the value 0 when the range fired was less than 10 km, and the value 1 when the range was greater than 10 km.

D3 – A dummy variable taking the value 0 when there were no wounded, and 1 where there were.

D4 – A dummy variable taking the value 0 when there were no casualties, and 1 where there were.

D5 – A dummy variable taking the value 0 when the event was not followed by an ongoing military operation, and the value 1 when the event was followed by it.

In the second analysis, I shall examine whether the effect of each event was transitory or permanent. For the purposes of the analysis, I shall use the TI index, representing the “pessimism level”, receiving a value between 0 and 7, for the four days surrounding the terror event. This examination is based on the regression model of Eldor and Melnick (2004), albeit used differently. Whereas their model considers the TI index surrounding the day of the event, I shall take into account both the returns surrounding the day of the event, as well as the TI of the day of the event. The econometric model in this analysis is represented by the following equation:

$$(2) Y_t = \alpha + \beta_1 \cdot SP + \gamma_1 \cdot TI_t + \gamma_2 \cdot Y_{t-1} + \gamma_3 \cdot Y_{t+1} + \gamma_4 \cdot Y_{t+2} + \varepsilon_t$$

Where Y_{t-1} represents returns from TA100 on the day prior to the event, Y_{t+1} represents returns of the TA100 index a day following the event, Y_{t+2} represents the returns of the TA100 two days following the event, and SP represents the returns of the S&P500. The use of such a variable is meant to express the effects of global changes (especially that of the US) on the Israeli financial markets. In the event the regression returns that $\gamma_3 + \gamma_4 \neq 0$ significantly, I shall induce that the effect of the event is permanent.

The permanence of the event shall also be analyzed in an additional, more direct, observation of the cumulative yield (CY) starting at the day of the event until two days following it.

$$(3) CY = Y_t + Y_{t+1} + Y_{t+2}$$

In the event I shall significantly find that the cumulative yields are non-zero, I shall conclude that the effect of the rocket firings is permanent; that is, the event had a continual negative influence and not one that is transitory and followed by a market correcting rise in returns.

Since the mid 90's, a tight relationship had existed between the Israeli stock market and the American one (Eldor and Melnick, 2004), as can be seen in Figure 1. Therefore, in addition to returns from the TA100 (Y_t), the difference between the TA100 and the S&P500 will also be measured ($Y_t - SP$), thereby yielding a purer effect of the terror event.

3. RESULTS AND DISCUSSION

In this study I expect that the firing of rockets towards Israel will negatively affect firms' expected profitability, and hence their risk premium due to the rise in uncertainty, causing stock prices to drop. The central hypothesis, therefore, is that a negative correlation exists between rocket firing events and the capital market, and such a correlation will become more steeply negative the higher the severity of the terrorist event is. Similarly, it is possible to assume that the majority of the impact will be permanent, and not transitory, consistent with the results of Eldor et al. (2005).

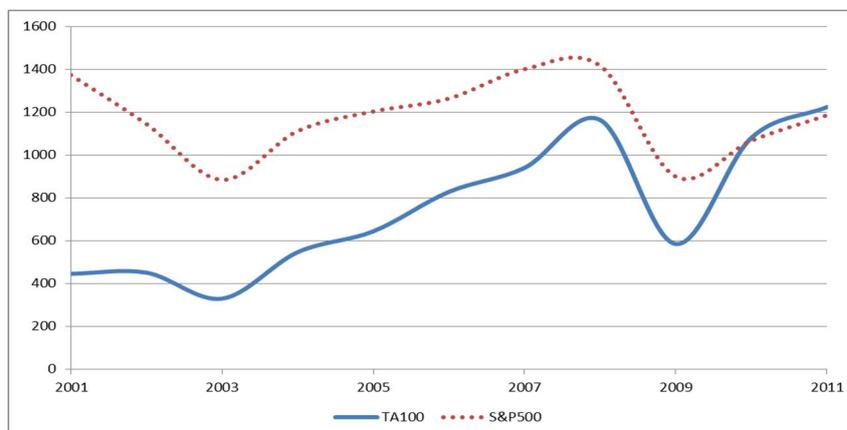


Figure 1: Observing the TA100 and the S&P500 along a decade

3.1 Descriptive statistics

In this section I shall present a general overview of the data on the rocket firings and their effect on the capital market that were collected for the study, as can be seen in Table 2 (below). The effect was measured on the TA100, as well as on the TA100 after its correction by the S&P500 (representing the American market). The table contains three panels describing performances of the capital market during the four days surrounding the day of the rocket firing towards Israel: Panel A contains all of the events in the sample, Panel B contains those events taking place prior to Operation Cast Lead, and Panel C contains events taking place following the operation.

Yield (%)	Panel A: All the sample period			Panel B: Before "Cast Lead" operation			Panel C: After "Cast Lead" operation		
	Mean	Median	Standard deviation	Mean	Median	Standard deviation	Mean	Median	Standard deviation
Y_{t-1}	0.018 (0.731)	0.08 (0.224)	1.354	0.023 (0.686)	0.09 (0.269)	1.329	0.009 (0.935)	0.07 (0.667)	1.502
Y_t	-0.103 (0.065)	0.01 (0.222)	1.39	-0.147 (0.014)	-0.035 (0.061)	1.385	0.172 (0.253)	0.07 (0.222)	1.399
$Y_t - SP$	-0.146 (0.009)	-0.09 (0.053)	1.401	-0.158 (0.007)	-0.11 (0.001)	1.376	-0.071 (0.682)	0.09 (0.663)	1.622
Y_{t+1}	-0.039 (0.419)	0.06 (0.856)	1.224	-0.02 (0.702)	0.08 (0.509)	1.228	-0.159 (0.221)	-0.120 (0.237)	1.204
Y_{t+2}	-0.002 (0.97)	0.08 (0.321)	1.329	-0.004 (0.934)	0.085 (0.312)	1.27	-0.013 (0.939)	0.07 (0.86)	1.66

Table 2 – Capital market performances during the four days surrounding the rocket firing towards Israel

The table contains three panels, describing performances of the capital market during the four days surrounding the day of the rocket firing towards Israel: Panel A contains all of the events in the sample, Panel B contains those events taking place prior to Operation Cast Lead, and Panel C contains events taking place following the operation. Each panel shows the average, the median, and the standard deviation for the four days of examination. In parentheses is reported the p-value for examining the assumption that the average is significantly non-zero (t-test), or that the median is not different from zero (Wilcoxon test). Returns of the TA100 were taken during the day of the event (Y_t), the day prior to it (Y_{t-1}), and during the two days following it [Y_{t+1} ; Y_{t+2}], as were those corrected by the S&P500 American index on the day of the event (Y_t-SP).

Observation of the entire sample (Panel A) shows that only during the day of the event is there a significant drop of 0.103% (p-value=0.065) in the TA100 index, and an even more significant drop of 0.146% (p-value=0.009) in the theoretical returns when correcting the TA100 index with the S&P500 – strengthening the assumption that the American market affects the Israeli one, and that during a negative event, an Israeli index corrected by an American one results in steeper drops. A similar result is evinced by Panel B, describing the period prior to Operation Cast Lead, when during the day of the event a significant drop of 0.147% (p-value=0.014) in the TA100 is seen, as is a drop of 0.158% (p-value=0.007) in the theoretical returns of the TA100 corrected by the S&P500.

Unlike in the first two panels, the period following Operation Cast Lead does not show significant drops during the four days surrounding the event. A possible explanation is the immunity of the Israeli public that had grown in strength over the years, and that this public has become confident of both the responsive powers of the IDF and the robustness of the Israeli capital market. Observing the returns during the two days following the event shows no upward correction of the capital market, a feature that provides an initial indication of the rocket firing's permanent effect.

	N	$Y_t(\%)$	$Y_t - SP(\%)$
<i>Number of rockets in barrage</i>			
1-5	529	-0.039	-0.118
6-10	65	-0.311	-0.191
above 10	29	-0.794	-0.550
p-value		0.004	0.003
<i>range of trajectory</i>			
up to 10 km	567	-0.065	-0.138
over 10 km	56	-0.48	-0.222
p-value		0.02	0.009
<i>wounded</i>			
absent wounded	533	-0.060	-0.145
with wounded	90	-0.354	-0.151
p-value		0.015	0.308

<i>casualties</i>			
absent casualties	609	-0.019	-0.141
with casualties	11	-0.15	-0.343
p-value		0.59	0.365
<i>resulted in an ongoing operation</i>			
did not result	564	-0.052	-0.123
resulted	59	-0.585	-0.362
p-value		0.001	0.049
<i>TI index</i>			
Low TI	548	-0.042	-0.107
Hight TI	75	-0.535	-0.432
p-value		0.02	0.032

Table 3 – The effect of the terrorist activity on the capital market based on different characteristics

In this table I present the performances of the Israeli capital market, as well as that of the Israeli capital market corrected by the S&P500 on the event day based on six characteristics: the number of rockets fired, the range of their trajectory, number wounded, number of casualties, whether it resulted in an ongoing operation and the TI index. For each characteristic, market performances were examined based on several categories.

Table 3 presents an analysis of the rocket firing's effects on the TA100 and the S&P500 corrected TA100 for six categorized event characteristics. The first characteristic, the number of fired rockets, is divided into three: a low number (between 1 and 5), a medium number (between 6 and 10) and a high number (above 10 rockets). Looking at the sample distribution based on this characteristic yields that 85% of the cases had weak firing and only 5% had heavy firing. The results show that the more severe an event is, the steeper the TA100 drop shall be. During a weak firing, the market drops by 0.039% compared to a steeper drop of 0.794% (p-value=0.004) during heavy firing. Based on the second characteristic, the range of the trajectory, it can be seen that a majority of the rockets fired had short ranges (below 10km). The analysis of the effect of the characteristic on the capital market shows that the larger the range is, the greater the population exposed to the threat, and the more steeply the market drops.

For the next two characteristics, wounded and casualties, we shall notice that the trend does not change, that is, the greater the number of wounded or casualties, the more steeply the market drops in reaction. The fifth characteristic, that of ongoing military operations, shows that most events were of short durations, and that the longer the duration of an event is, the more steeply the market will drop. The last characteristic represents most generally the severity of the event and is represented by the TI index. It shows that most of the events were not severe, and that the greater the severity of the event, the more steeply the TA100 drops, as can be seen in Table 3, with a steep drop of -0.535% (when TI > 2) as opposed to a moderate drop of -0.042% (when TI < 2).

	Number of rockets in barrage		
	1-5	6-10	above 10
range of trajectory			
up to 10 km	%90	%93.8	%93.1
over 10 km	10%	6.2%	6.9%
wounded			
absent wounded	%87.7	%81.5	%62.1
with wounded	12.3%	18.5%	37.9%
casualties			
absent casualties	%98.2	%96.9	%93.1
with casualties	1.8%	3.1%	6.9%
resulted in ongoing operations			
did not result	%89.5	%84.6	%72.4
resulted	10.5%	15.4%	27.6%
<i>TI index</i>			
Low TI	%93.1	%0	%0
Hight TI	6.9%	100%	100%

Table 4: A distribution of the event characteristics based on the number of fired rockets

Table 4 presents the distribution of the different event characteristics based on the number of rockets fired. An observation of these characteristics shows that the greater the number of rockets fired, the higher the percentage of wounded and casualties. A similar result is obtained in the effect of the number of fired rockets on the duration of the event. Considering the TI characteristic, it is seen that the number of rockets fired has a central and important effect on the severity of the event. While events with a low number of fired rockets are represented by low TI values, those with six or more rockets fired are represented by a high TI value.

3.2 Examination of the permanence of the event

The goal of terrorist organizations is to generate events that will affect civilian lifestyle even during the period following the event; such effects are therefore termed permanent. Success in these operations is measured over time and may motivate the determination of the terrorist organizations. In this section I shall directly examine, for the cases of rocket firings, whether the effect lasts only during the day of the event (transitory event) or whether it continues for the days thereafter (permanent event).

Table 5 presents the analysis of the permanence of the events by distributing the data into years and considering other event characteristics, and by calculating the significance of the cumulative yield starting on the day of the event until two days following it. The distribution into years was divided into three groups: group 1 contains firing events taking place between 2002-2005 (before Operation Cast Lead), with an average of 35 annual firings, group 2 contains 396 events taking place between 2006-2008 (before Operation Cast Lead), with an average of 132 annual firings, and group 3 contains 87 firing events between 2009-2010 (following Operation Cast Lead), with an average of 43.5 annual firings.

	N	CY _{0,2}	p-value
2002-2005	140	-0.571	0.043
2006-2008	396	-0.032	0.119
2009-2010	87	0.000	0.000
more than 5 rockets	94	-0.697	0.01
over 10 km	56	-0.472	0.091*
event with wounded or casualties	90	-0.862	0.039
event resulting in confrontation	213	-1.028	0.019

Table 5: Permanence examination by year of event and by event characteristics

The results of the analysis show that during the first period there is a permanent negative effect while the rate of rocket firings was still low. During the second period, no permanent negative effect is observed, even though the rate of rocket firings was an average of one every two and a half days. The explanation for the difference was that during the first period, the civilians who were not accustomed to the firings were significantly affected, while during the second period, Israeli civilians entered a phase of nonchalance, on one hand, and mental immunity, on the other, so that the firing attacks had a weaker effect. Such results strengthen the study conducted by Brounen and Derwall (2010) who had received that the market was affected even during the two days following the terror attack.

When I examined whether a permanent effect depended on other parameters that describe severity in each one of the event categories, it can be seen that each severe parameter results in a permanently negative effect that depends on which severe parameters it is. The strongest effect is caused by events resulting in ongoing military operations, wounded or casualties. The reason for this effect is that these events have a direct impact on the public, resulting in uncertainty and the selling of stocks on the market. The parameter with the least effect is range of trajectory. It is important to recognize that during this period the hazardous zone had increased in area but was still relatively small. Terrorist organizations have only recently been able to expand their possibilities to include longer ranges (over 70km), a factor which would have drawn a population of a million civilians into the hazardous zone and would likely have affected the results of the study.

The time of the event is an important element in the effect of the firing on the capital market – it is customary to assume that terrorist organizations prefer to fire rockets in the morning hours, when children are in school, or closer to the evening hours, when news programs on television tend to be

broadcasted. I shall then wish to examine whether a relationship exists between the time of the event and the extent of its permanence. Figure 2 represents the cumulative yield during the four days surrounding the event, where the events are divided into 3 groups depending on the time of the event: group 1 – the firing events that took place during the morning trading hours (44.2%), group 2 – the firing events that took place during the afternoon trading hours (15.3%), and group 3 – the firing events that took place after the trading day had ended (40.5%).

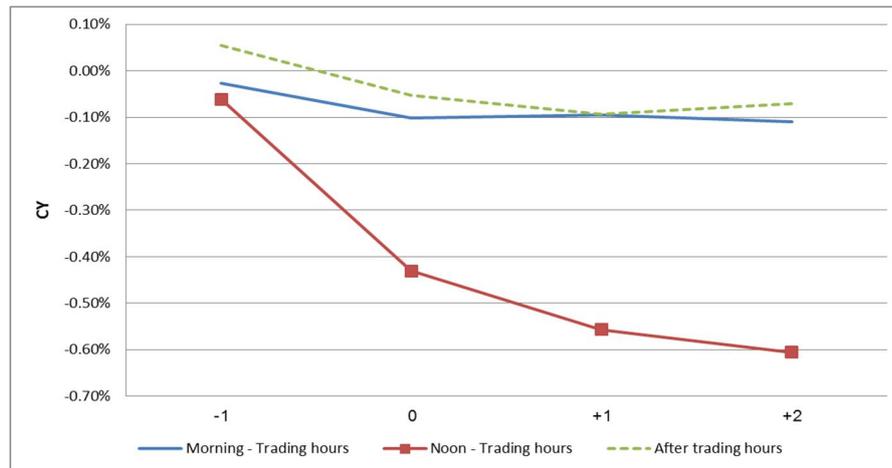


Figure 2: Performance of the TA100 index depending on the time of the event

Figure 2 shows that when the firing events take place during the morning hours or after the trading had ended, the market responds with gentler drops both during the day of the event and in the period following it, indicating a weaker permanent effect. Events that take place in the afternoon trading hours witness a steeper drop, of -0.37%, lasting the two days following the event as well, indicating a stronger permanent effect in this case. A possible explanation is that events that take place in the morning experience drops in return at the time of the event (see Eldor et al., 2005), and the market begins to correct itself throughout the day, resulting in increasing prices. A similar process begins with the events taking place in the afternoon trading hours, but as opposed to the morning events, investors have shorter time to correct the drops seen in the trading day, and so the day results in a steeper drop. The ensuing drop in the following day indicates further corrections to the shares rate that result from the event's revealed information that investors obtain from the various media channels, which they use to update their expectations accordingly.

3.3 Construction of a regression model for examining the effect of rocket firings on the capital market

Rocket firing events cause a drop in the value of the financial assets held by the public and as a result, drop the profitability of firms, further increasing the level of uncertainty in the market. In this section, I shall examine, using an econometric model, whether a relationship exists between the severity of the event, and the stock returns from that day, as well as the assumption that the effect of rocket firings on the capital market is permanent (see Table 6). In line with this regression, I shall assume that if $\gamma_3 + \gamma_4 \neq 0$ significantly, then the effects of the rocket firings is permanent.

Regression coefficients	All the sample period	Before "Cast Lead" operation	After "Cast Lead" operation
α	0.00388 (0.0147)	0.00341 (0.0383)	0.00605 (0.5454)
β	0.51139 (0.000)	0.53539 (0.000)	0.40155 (0.0001)
γ_1	-0.00199 (0.0015)	-0.00188 (0.0032)	-0.00247 (0.6022)
γ_2	0.10942 (0.0386)	0.0814 (0.1745)	0.24944 (0.0218)
γ_3	0.05682 (0.0256)	0.06299 (0.0252)	-0.01347 (0.0893)
γ_4	0.07237 (0.1901)	0.102 (0.1149)	0.01305 (0.8855)
$\gamma_3 + \gamma_4$	0.0151 (0.0234)	0.0423 (0.0023)	0.032 (0.0372)
R2	0.427	0.536	0.214

Table 6: Construction of a regression model for examining the effect of rocket firings on the capital market.

In this table I shall examine whether a relationship exists between the severity of the event, and the stock returns from that day, as well as the assumption that the effect of the rocket firings is permanent, and not transitory, based on the following regression: $Y_t = \alpha + \beta_1 \cdot SP + \gamma_1 \cdot TI_t + \gamma_2 \cdot Y_{t-1} + \gamma_3 \cdot Y_{t+1} + \gamma_4 \cdot Y_{t+2} + \varepsilon_t$. Where Y_{t-1} represents the TA100 returns on the day prior to that of the event, Y_{t+1} represents the TA100 returns on the day following the event, Y_{t+2} represents the TA100 returns two days following the event, and SP represents the S&P500 returns. The role of this last parameter in the equation is to represent the global effects (especially those of the US) on the Israeli financial markets. In case that in the regression we shall obtain that $\gamma_3 + \gamma_4 \neq 0$ significantly, I shall assume that the effect of the terrorist event is permanent.

The results of the regression show that there is a positive correlation between the TA100 and the S&P500, as well as between the returns of the day prior to the event and the returns of the day during the event. It can also be seen that the more severe an event is, the more it induces investor uncertainty, thereby dropping prices. In the permanence analysis, it could not be safely assumed that $\gamma_3 + \gamma_4 = 0$, so it is possible to assume that the effect of the rocket firing is, indeed, permanent. This result is consistent with the examination conducted in the earlier chapter, as well as that conducted by Eldor et al. (2005).

4. CONCLUSIONS

The intensification of terrorist threats in recent decades and the rise in the number of terrorist activities in various destinations around the world have brought about a counter-response by members of the international community. The war on terror includes many and varied tools: prevention and enforcements by the military and police; development of judicial apparatuses nationally and internationally and the presentation of a political front against the phenomenon and all of its manifestations.

This process amplifies in Israel, as well, as the technological developments of unguided rockets threaten population centers. Terrorist organizations see these firings as an asymmetric, simple, accessible, and cheap response to Israel's military supremacy. Such a response, in their view, while not without its problems and disadvantages, allows them to interrupt the civilian life of those in the hazardous zone, to undermine the social fabric of its citizens, to bypass the buffer zone implemented by Israel, and to instill a certain theatre of horror that will hamper the prevention efforts of the Israeli security forces.

In this study I examined whether rocket firings affects the capital market and whether this effect is permanent or transitory, for which purposes I analyzed the firing incidents based on categorical characteristics.

Unlike many other studies that examine a variety of different terrorist attacks, in this study I concentrated on one type of attack - the firing of rockets, and thereby examined the effects of a continuum of attacks that all share almost identical properties during an extended time period. The study is based on a unique sample of rocket firing in the first decade of the 2000's. For the purposes of the analysis, I have used the Terror Index, taking into consideration a variety of factors such as the number of rockets fired during the event, the range of the trajectory, the number of wounded, number of casualties and the duration of the event.

Considering the effect of the firing events by their characteristics on the capital market yielded that most of the events consisted of soft firing and short ranges. Similarly, a negative correlation was found between the severity of an event, the range of the firing, the number of wounded and casualties, and the returns of the TA100.

An interesting result was obtained when considering whether the effect of the event had been transitory or permanent. Those events accompanied by low number of rockets had a permanent effect on the capital market, followed by price drops even in the period following the event. Events accompanied by a high number of rockets did not result in a permanent effect. The explanation for this is that during the first period, civilians who are not accustomed to rocket firings were significantly affected, while during the second period, Israeli civilians had entered a phase of nonchalance on one hand and mental immunity on the other, such that the firing events had weaker effects.

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**DEMOGRAPHIC PROBLEMS THROUGH ECONOMETRIC MODELS
AND INTERFERENCE WITH THE RELATED LEGAL ISSUES**

Irina Oriol, Economics, UNIVERSITY "EFTIMIE MURGU" REȘIȚA, Romania

Gheorghe Pinteala, Law, UNIVERSITY "EFTIMIE MURGU" REȘIȚA, Romania

Abstract

The exacerbation of humanity's global common problems strengthens the necessity to increase awareness for concerted action to solve them in the public interest.

Globalisation issues are very diverse. But there are some common characteristics that are correlated by deep connections and a relationship that includes political, economic, scientific and technical aspects. They reflect the growing economic influences, complexity and internationalisation of all social processes that can be solved only by joint efforts of all countries and peoples. Today individual-society relationships are expressed by: decline, mortality, infant mortality, morbidity, disease, poverty and others. Future means birth, health, high living standards, education, economic growth, and scientific progress.

The present paper aims at analysing the increasingly important influences on demographic processes in Romania and Europe such as birth, death, fertility, morbidity and other factors by applying econometric modelling elements. This work is part of a series of researches in the field of demography and legislation.

Key words: *globalisation, demography, social processes, fertility, morbidity, econometric models*

DEMOGRAPHIC ISSUES AND THEIR INTERFERENCE WITH LEGISLATIVE ASPECTS

From the legal viewpoint, the demographic policy of the Romanian state may be analysed from multiple perspectives, taking into account an accented population's drop after 1989. If we take into consideration the "theory of the optimum", i.e. of the demographic minimum and maximum, we find that it refers to the relation between population and territory (density, intensity of social relations, diversity of social, economic and cultural activities), and the relation between population and resources (subsistence means, survival, development).

The situation in the field of demographic policies in Romania after 1989 can be characterised by non-intervention. It is debatable, indeed, if we deal with the effective promotion of the non-intervention principles or simply with the marginalisation and avoidance of the theme.

The abrogation of the crime of abortion immediately after 1989 resulted in the uncontrolled increase of abortions, sometimes performed outside the legal frame and even in totally inappropriate locations, and by completely unqualified personnel, with serious, even deadly consequences for the mothers who resorted to such interventions.

Thus, the legislator was forced to proceed to the reintroduction of abortion on the list of crimes, if it is performed in other conditions and by other personnel than those stipulated in the law. Obviously, this should not be regarded as a coercive policy meant to support a pro-birth policy.

The lower fertility rate and the reduction of the number of Romania's population occurred after a forced growth supported by administrative means before 1989.

On the other hand, due to these very evolutions, an unfavourable pyramid of ages was constituted, by the strong narrowing of the base, i.e. small ages. In the next decade we shall have an upside-down population pyramid. Consequently, in order to prevent the excessive diminishing of the small-age generation, we must conceive and accept a pro-birth demographic policy.

A first step was taken by the promotion of a law meant to ensure the legal frame regarding the protection and promotion of children's rights, i.e. Law no. 272 of 21.06.2004. For the legal consolidation of children's position in society, the law established the legal sense of the notion of child (person under the age of 18 who has not acquired the full capacity of exercise, in the conditions of the law), family (parents and their children), extended family (child, his parents and relatives up to the 4th grade inclusively), substitutive family (persons, other than those belonging to the extended family, who ensure the child's bringing up and care, in the conditions of the law).

What defines the law and is considered of great legislative importance for the growth of birth-rate is the notion of individualised protection plan, notion which defines the document in which one realises the planning of services, service providing and child's special protection measures, based on the psycho-social evaluation of the child and his family, in view of integrating the child who was separated from his family into a stable and permanent family environment, in the shortest delay possible.

Furthermore, the law constitutes the legal frame for defining and establishing children's rights – civil rights and liberties, family environment and alternative care, child's wellbeing and health, education, leisure and cultural activities.

The legislator also referred to the special protection of the child who is temporarily or permanently deprived of his parents' protection, approaching in this respect the legal issues of placement, emergency placement, specialised supervision, protection of refugees children and protection of children in case of armed conflict, protection of the child who committed a penal deed and is not penally liable, protection of children against exploitation, including economic exploitation (children' protection against drug use, against abuse or neglect, against kidnapping or any form of trafficking, against other forms of exploitation).

In order to implement the realisation of the stipulations of the aforementioned law, it was also necessary to establish the institutions and services with attributions in child protection enforcement, both on the central and on the local level, the private organisms, as well as the financing for the child protection system.

Obviously, Law 272/ 21.06.2004 stated that public authorities, authorised private organisms, natural and legal persons responsible for child protection are obliged to observe, to promote and to guarantee the children's rights established by Constitution and law, in accordance with the provisions of the UN Convention regarding children's rights, ratified through Law no. 18/1990, republished, and of the other international documents in the matter, in which Romania is a signatory.

The realisation of an adequate legislative frame is the result of the necessity to reconsider the priority granted up to now to the social dimension of the post-communist transition and in a more general plane, social policies in our country. The multitude of the present problems, with the accumulation of deficits in certain areas, imposes a legislative increase of the resource allotment, including by public social expenditure. Thus, Romania is confronted with a series of demographic changes with long-term implications.

GENERAL CONCEPTS RELATED TO THE EXISTING DEMO-ECONOMIC RESOURCES

“A country’s population and economy are two main interdependent components of human society. Population, both as producer and consumer of goods and services, is the basis and purpose of production. A country’s economy – one of the basic components of national life, determines the nature of civilisation. In its turn, national economy is one of the major forces that have built the nation.”⁵²

After the demographic post-reform we remark serious reasons of worry: rapid decline of the country’s population, aggravation of population’s demographic structure, extremely low birth rate and in a descendant trend, way under the threshold necessary for reproduction, very low indeed, we may add. This situation creates the risk that the quality of labour force exhibits unwanted structural modifications, influencing many domains of activity. The reduction of the number of young population, especially, triggers, throughout Europe and in the country, a series of serious problems, difficult to solve, especially in the socio-economic sphere. The recorded demographic problems will be a serious obstacle for the strategic development path.

Modern economy is characterised by a high level of complexity, proved by the variety of its subsystems, by a high level of mobility, manifested by the rapid structural changes, the apparition of new domains of activity and professions, under the influence of progress in the field of science and technology, as well as by the intensification of connections between different sectors of activity, branches and sub-branches of national economy.

The policy of the most intense population refers to the low birth rate in developing countries. Nevertheless, its implementation is difficult, and in the absence of financial resources is often limited to declarative situations. These policies were sometimes unaccepted by the citizens with large family traditions, with high social status of maternity and especially paternity. The governments of Muslim countries generally reject the state’s intervention in family planning. The simple reproduction of population, or “growth zero” - one of the goals of the demographic policy in the developing regions, is theoretically possible if each family will have an average of 2.3 children (because there are people who do not get married, childless families, early deaths in accidents). However, such a situation does not automatically mean the immediate stabilisation of the population, it is an issue with medium and long-term effects. Plus, if as a result of the demographic policy, a sudden drop of birth rate is recorded, this will lead to structural changes by age groups and genders of the population.

⁵² Ya.V. Gusev, Russia’s demographic situation is a threat to the country’s economic security, Управление экономическими системами: электронный научный журнал, Editions ООО «Д-Медиа», Kislovodsk, ISSN 1999-4516, <http://www.uecs.ru/ojurnale>

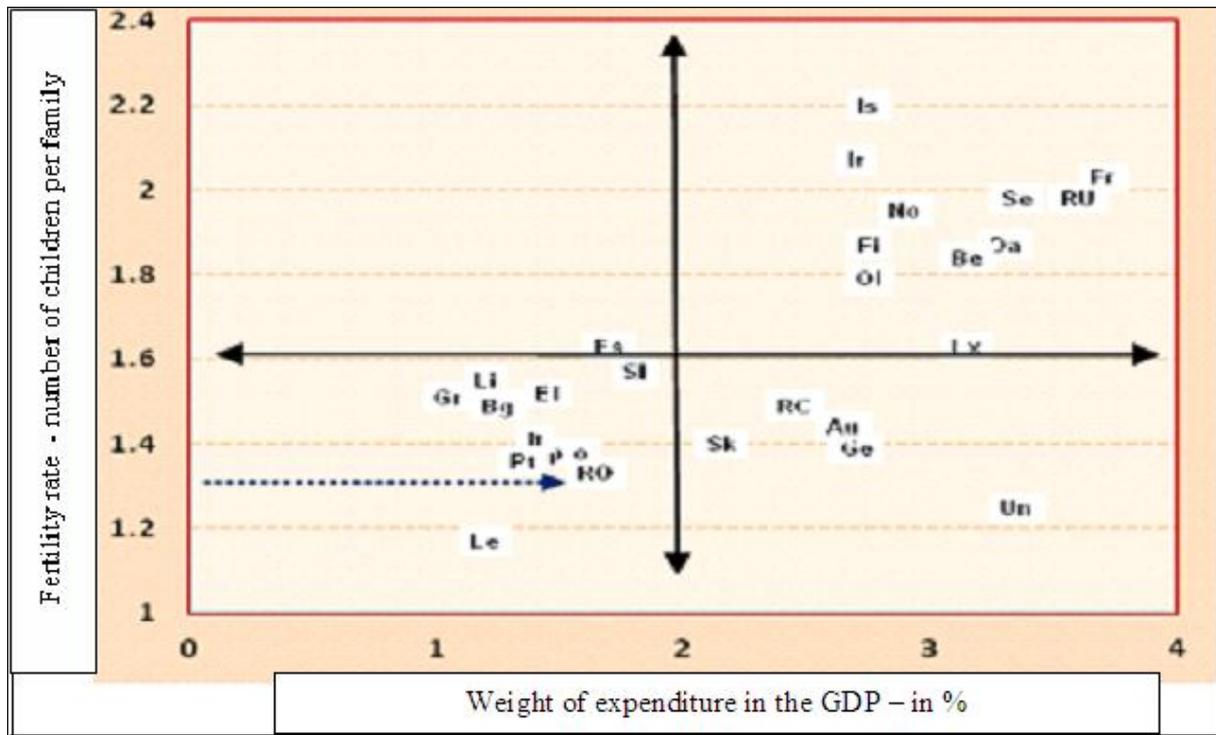


Figure 1. Correlation between the percentage of family benefit expenditure in the GDP and the level of fertility rate in European countries⁵³

Today, in 47 countries of the Third World measures are taken to encourage a decrease in reproduction. They suppose that a rational population policy is an essential condition for the general economic growth and consequently they should pay a special attention to the population's regulation. The policy of limiting population growth is most frequently realised by means of family planning. India was the first developing country to include, in 1951, the objective of reducing birth rate in the five-year national development plan. In order to solve this problem the two-child family was introduced. In China, family planning was regarded as a fundamental fertility policy and was elaborated by the State's Planning Committee. The particularity of China's demographic policy is the relatively important role of quarantine measures, which included administrative and economic sanctions against families with many children. As regards human reproduction, today's China is closer to the industrialised countries than to the developing countries. In general, the family planning programme, the experience of each country as well as the efficient use of labour force and human resources may play a relevant part in the preservation of the living standards in developing countries and in the reduction of destabilising causes of economic situations when we compare industrialised countries with developing countries. The correlation between the weight in the GDP of the family-oriented expenditure directly influences the fertility rate in Europe's countries (figure 1). In many European countries situated at the bottom of the list when it comes to

⁵³ Organizația pentru Cooperare Economică și Dezvoltare / Organisation for Economic Co-operation and Development - OECD, Public spending on family benefits, Family database, OECD-Social Policy Division, 2011 (www.oecd.org/e/s/social/family/database).

economic performance, the family composition decreased by the reduction of the number of children. It is a fact with serious consequences in the long run – the social burden will be difficult to carry by the active, fit for work population.

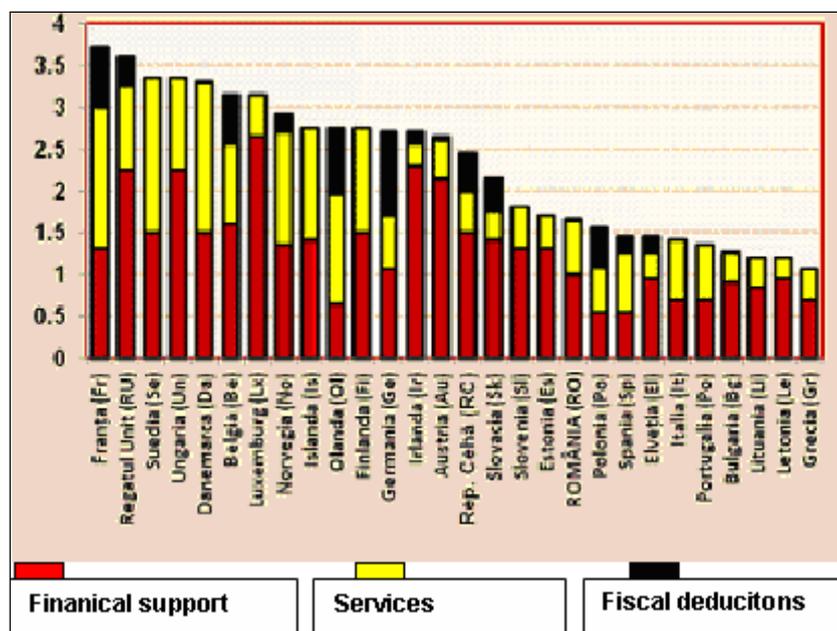


Figure 2. Weight of the family-oriented public expenditure in the GDP in European countries, in 2007 (%)⁵⁴

The state's financial support is substantial in developed countries such as Luxembourg (2.52%), Ireland (2.25%) or Austria (2.15%). The state comes to the support of families with further measures of economic aid such as fiscal deduction and the bearing of expenditure for some social services (education, health). Romania ranks 19th on that list (figure 2). However, the state's financial support and the expenditure for certain social services are rather low, which will not lead in the near future to the improvement of the existing demographic situation.

In the context of a certain uncertainty in the economic and social plane, an essential role must be played by the provisional activities, by the possibility to sketch some alternatives of economic development, able to offer solutions for the stability and macroeconomic balance, to orient economic agents towards profitable domains and activities, compatible with the needs of national economy. Grace to prediction studies, different paths and modalities can be suggested, meant to generate an acceptable future, through the future evolution orientation of different macroeconomic system's components and through the anticipation of the implications of certain forwarded solutions.

⁵⁴ Idem. www.oecd.org/e/s/social/family/database

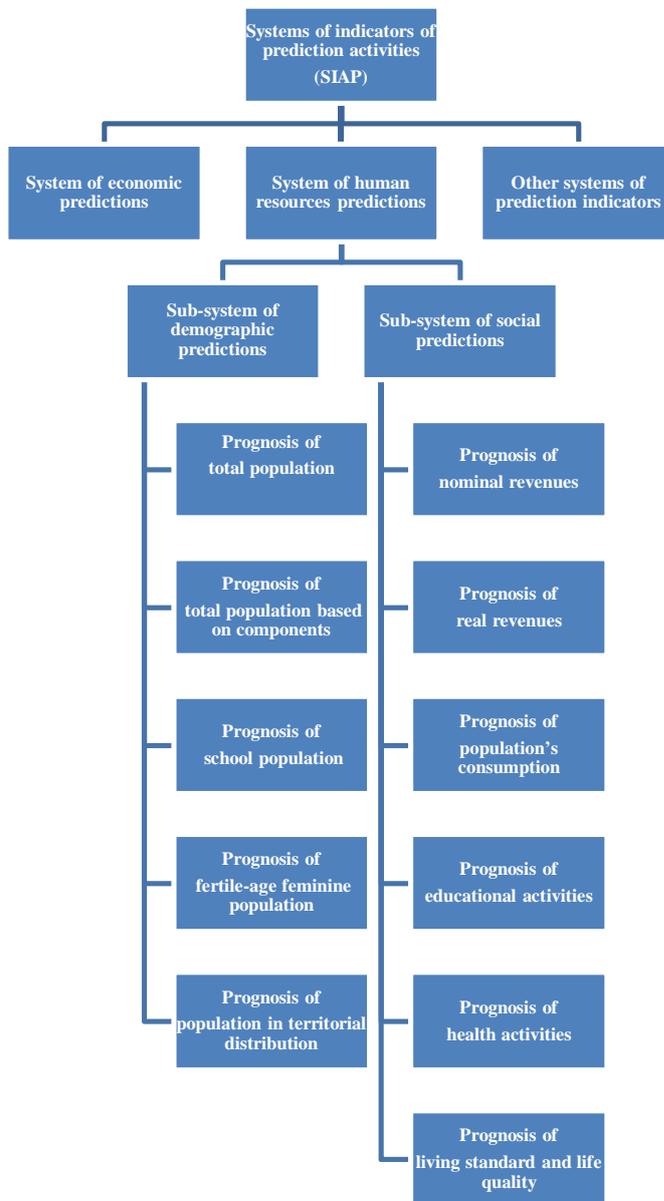


Figure 3. The system of indicators of the prediction activities (elaborated by the authors)

Observing the dynamism of economic and social processes, we may state that we are witnessing an absolute need for prediction, anticipation of wanted or unwanted future events occurring at present, and for the evaluation of prospective consequences of different action variants. Depending on the intensity of the influential factors and taking into account the circumstances, predictions may range anyway between certainty and uncertainty.

The elaboration of the system of indicators used in provisional activities (SIAP) raises a series of problems related to their content, calculus methodologies, analysis and utilisation (figure 3). SIAP

indicators are synthetic indicators at the basis on the characterisation of the country's dimension, structure, proportions and rhythm of social-economic development. All indicators included in SIAP in relation with the social-economic conjecture may be grouped into indicators of outrunning, concordance and tergiversation.

The elaboration and analysis of demographic predictions constitute the basis of the calculus of predictions for all domains of social-economic activity. The system of human resources prediction indicators (SIPRU) contains two complex groups of indicators: the subsystem of demographic prognoses (SPD) and the subsystem of social prognoses (SPS).

ECONOMETRIC MODELLING OF DEMO-ECONOMIC PHENOMENA

The active research-innovation relations in the economic system depend on objective and subjective factors, both internal and external. Grace to their objective nature, environmental factors, caused by the long-term trends, and are not related to the arbitrary decision of a specific individual subject – those whose action is a direct result of conscious decisions. For the same reasons - objective and subjective / co-ordinated – they are interlaced and form a system of incentives for an innovating research strategy. The structural crisis, a crisis of overproduction and unemployment, triggers the need and creates the conditions to reach a high efficiency rate, which is possible only by radical innovations.

For the analysis of the correlation between macroeconomic and demography indicators we used econometric and statistic methods. For this purpose we elaborated several econometric models based on the official statistic information⁵⁵. In order to have a higher degree of relevance of results, dynamic indices were calculated (figure 4).

The macroeconomic factors included in the research are: GDP, consumption prices index (PIC), investments (INV), employed population (PO), total population (Pt), births (N), deaths (D). The connection between the factors is stochastic, and the mathematical representation is⁵⁶:

$$y_i = f(x_1, x_2, \dots, x_k) + \varepsilon_i \quad (1)$$

The regression function at the basis of the linear multifunctional model has the following form:

$$y_i = \alpha + \beta_1 \cdot x_{1i} + \beta_2 \cdot x_{2i} + \dots + \beta_k \cdot x_{ki} + \varepsilon \quad (2)$$

where: y_i represents the values of the resultative variable;

$x_{1i}, x_{2i}, \dots, x_{ki}$ are the values of the factorial variables taken into consideration;

$\alpha, \beta_1, \dots, \beta_k$ are the parameters of the model, corresponding to the factorial variables

$x_{1i}, x_{2i}, \dots, x_{ki}$;

ε_i is the random or residual variable.

A rather important problem consists in determining the degree to which the resultative variable reacts to the modifications of the factors included in the econometric model influencing it to a higher or

⁵⁵ Irina Oriol, Constantin Popp – Econometria / Econometry, ISBN:978-973-1906-96-6, Ed. Eftimie Murgu , Reșița, 2011, p. 35

⁵⁶ Idem, p. 160

a lower extent. It represents the determination of the sensitivity of the effect phenomenon (resultative variable) against the variation of the cause phenomenon (factorial variable), known under the name of elasticity:

$$E_i = \alpha_i \cdot \frac{\overline{x_i}}{y_i} \quad (3)$$

The variation degree of the factors included in the research represents the identification of the growth reserves of the value of the resultative factor⁵⁷:

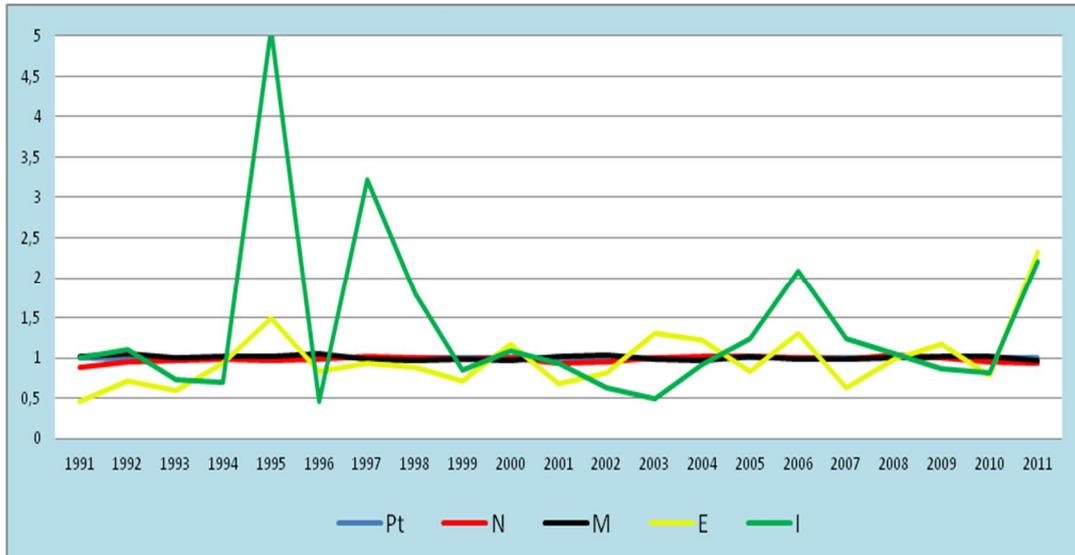
$$\beta_i = \alpha_i \cdot \frac{\sigma_{xi}}{\sigma_y} \quad (4)$$

where: σ_{xi} - and σ_y - variances of the independent and residual factors.

The solutions resulted for the econometric analysis and simulations were possible on the basis of the EViews 7.0 software⁵⁸.

Evolution of Romania's population and evolutive trends

The demographic component of the human factor (labour force) is essential, as it determines the stability of a country's population and its economy. In European countries and in Romania there was a critical demographic situation. The high death rate and the low birth-rate were the main causes of demographic crisis, in which the natural population loss is not compensated by migration.



⁵⁷ Irina Oriol – Metode statistice / Statistic methods, ISBN:978-973-1906-96-6, Ed. Eftimie Murgu, Reșița, 2011, p. 187

⁵⁸ Elizabeta Jaba, Ana Grama –Analiza statistica cu SPSS sub Windows / Statistic analysis with SPSS under Windows, ISBN: 973-681-609-5, Polirom, București / Bucharest, 2004

Figure e. Dynamics of total population, natural and migratory movements in Romania, in the period 1991-2011

The problems related to the human factor are not only the drop of total population, including that due to migration, but also the quality and structure of population, as mentioned above.

”The demographic situation in our country and in European countries, according to studies conducted by many internal and external researchers, describe it as catastrophic, and it is a serious impediment in the development of national economy”.⁵⁹

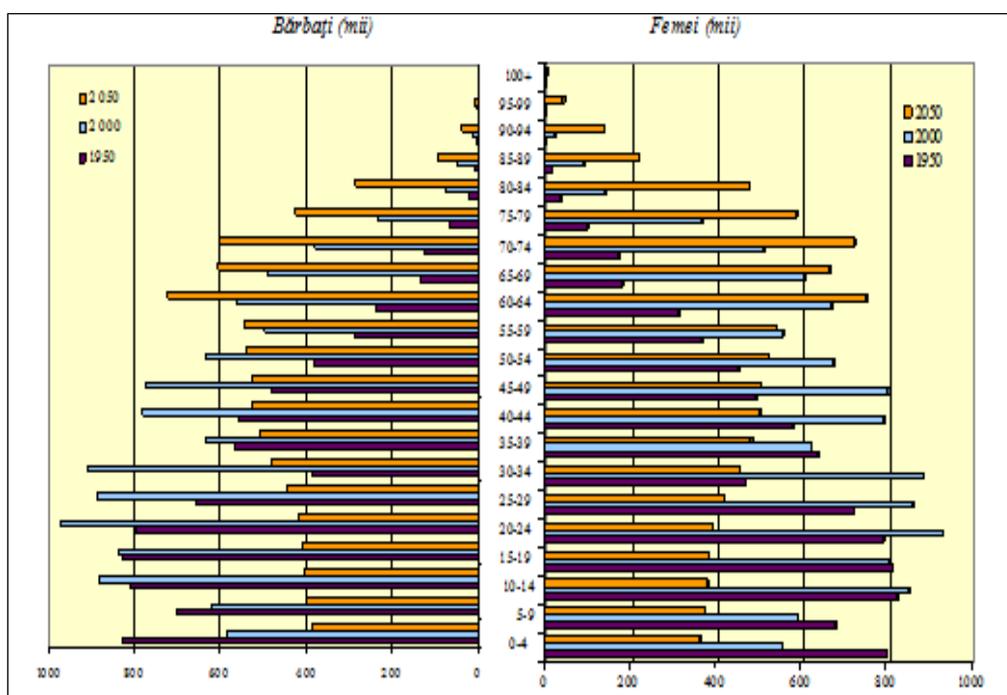


Figure 5. The ageing process among Romania's population⁶⁰

The population's ageing will result in thorny social and economic problems. The population's social burden will be felt in the very next period (figure 5). The basis of the age and gender pyramid is

⁵⁹ Ya.V. Gusev, Russia's demographic situation is a threat to the country's economic security, Управление экономическими системами: электронный научный журнал, Editions ООО «Д-Медиа», Kislovodsk, ISSN 1999-4516, <http://www.uecs.ru/ojurnale>

⁶⁰ Divizia Populație a Departamentului de Politici Economice și Sociale a Secretariatului Națiunilor Unite, Perspective privind populația lumii: versiunea 2008 / Division for the Population of the Department for Economic and Social Polices of the United Nations Secretariat, Prospects regarding world's population: version 2008, <http://esa.un.org/unpp>,

decreasing, and in the years 2050, according to prognoses, it will halve. The demographic policies must take priority in the national and European plane.

DEMO-ECONOMIC CORRELATIONS, INFLUENCES AND TRENDS IN ROMANIA

The present study is focused on the relation and influence of macroeconomic indicators upon the evolution of the total number of population, the influence of the demographic factors.

According to the data included in the study, the most relevant interdependence between the indices analysed is the interdependency between the $I_{p_{tot}}$ index and the following indices: I_N (dynamics of birth rate), I_M (dynamics of death rate), I_{INV} (dynamics of investments), I_{PO} (population's employment rate), I_{PIB} (dynamics of the GDP in comparable prices) .

The econometric analysis of the model in its entirety highlighted the fact that the relation between dependent and independent factors is rather strong:

Table 1.

Dependent Variable: $I_{p_{tot}}$				
Method: Least Squares				
Date: 03/19/13 Sample: 1998 2011 Included observations: 14				
$I_{p_{tot}} = C(1) + C(2) * I_N + C(3) * I_M + C(4) * I_{PIB} + C(5) * I_{INV} + C(6) * I_{PO}$				
	Coefficient	Std. Error	t-Statistic	Prob.
C(1)	0.918574	0.089288	10.28778	0.0000
C(2)	-0.024196	0.038230	-0.632915	0.5445
C(3)	0.001748	0.065914	0.026512	0.9795
C(4)	-0.010106	0.004061	-2.488738	0.0376
C(5)	0.001591	0.005595	0.284286	0.7834
C(6)	0.112173	0.029771	3.767885	0.0055
R-squared	0.783143	Mean dependent var		0.996349
Adjusted R-squared	0.647607	S.D. dependent var		0.006863
S.E. of regression	0.004074	Akaike info criterion		-7.870916
Sum squared resid	0.000133	Schwarz criterion		-7.597034
Log likelihood	61.09641	Hannan-Quinn criter.		-7.896269
F-statistic	5.778119	Durbin-Watson stat		3.300915
Prob(F-statistic)	0.015005			

The correlation coefficient is $R = 0,885$ and the determination coefficient is $R\text{-squared} = 0.783$ (table 1). The Durbin-Watson test for verifying the self-correlation of random variable shows that the model obtained after the data processing is correct (coefficients are higher than 3.3). The calculated values of the Fisher-Snedecor test (F) of the econometric models indicate the higher relevance of the model – $F = 5.778$ (probability $\alpha = 0,015$) (table value being 4.82 with the probability of results guaranteeing $\alpha = 0,05$).

The resulted econometric model has the form:

$$I_{p_{tot}} = 0.91857 - 0.024196 * I_N + 0.00175 * I_M - 0.01011 * I_{PIB} + 0.00159 * I_{INV} + 0.11217 * I_{PO} \quad (5)$$

(0.5445) (0.9795) (0.0376) (0.7834) (0.0055)

As expected, two factors directly influenced the population's evolution, and they exhibited a drop during a determined period: birth rate and economic development (GDP). The model (5) shows that once new jobs are created, unemployment will decrease, and the population's life quality and living standard will increase, which will influence one of the demographic factors in decline.

The variation ranges of the partial correlation coefficients were calculated for three variants of probabilities of results guaranteeing - 1%, 5%, 10% (table 2). The correlation coefficient of the GDP factor (I_{GDP}) fell within the range $-0,019469$ and $-0,000742$ ($\alpha = 0,005$). As for the I_{PO} factor, it ranges between 0.0568 and 0.167533 ($\alpha = 0,005$).

Table 2.

Coefficient Confidence Intervals							
Date: 03/19/13 Time: 09:23 Sample: 1998 2011 Included observations: 14							
Variable	Coefficient	90% CI		95% CI		99% CI	
		Low	High	Low	High	Low	High
C(1)	0.918574	0.752539	1.084609	0.712676	1.124472	0.618979	1.218169
C(2)	-0.024196	-0.095287	0.046894	-0.112355	0.063962	-0.152473	0.104080
C(3)	0.001748	-0.120822	0.124317	-0.150250	0.153745	-0.219419	0.222914
C(4)	-0.010106	-0.017657	-0.002555	-0.019469	-0.000742	-0.023731	0.003519
C(5)	0.001591	-0.008814	0.011995	-0.011312	0.014493	-0.017184	0.020365
C(6)	0.112173	0.056813	0.167533	0.043521	0.180824	0.012280	0.212065

For the analysis of the partial coefficients of the model we calculated the elasticity coefficients and the degree of variation of the factors included in the model (table 3).

Consequently, at an 1% increase of the GDP factors' dynamics and of the number of live born babies, the number of population will drop by 1.45% and 2.17% respectively, on condition the other factors remain unchanged. The positive growth is influenced by the factors "investments in national economy" and the factor of decrease of mortality and especially infantile mortality (as the birth rate itself is dropping).

Table 3

Partial elasticity coefficients and Table factors' variation degree

	Partial elasticity coefficients $E_i = a_i \frac{\bar{x}_i}{y}$	Variation degree of the factors included in the model $\beta_i = a_i \frac{\sigma_{xi}}{\sigma_y}$
The resulted econometric model	$E_{IN} = -0.0217$ $E_{IM} = 0.00174$ $E_{IPIB} = -0.01452$ $E_{INV} = 0.00159$ $E_{IPO} = 0.11294$	$\beta_{IN} = -0,114599$ $\beta_{IM} = 0.0059434$ $\beta_{IPIB} = -0,53905$ $\beta_{INV} = 0.059153$ $\beta_{IPO} = 0.905638$

The greatest reserves for the growth of the country's population number are found in the increase of population employment rate, the increase of investment volume, as we can see by analysing the coefficients of the variation degree of the factors included in the model (β).

CONCLUSIONS

It is crucial to prevent certain economic-social effects. Economy management is made based mainly on econometric calculations regarding the influence of population and labour resources on economic expectations. The present study is part of a series of studies aiming at determining and evaluating the factors related to social-economic life, living standards and population's life quality. The results obtained in our study suggest the following actions:

- review of the system of indicators and information regarding population, in view of collecting correct and complete data necessary for the realisation of calculations of enhanced prognoses, i.e. for instance to be able to use the methods of prognosis components, because, due to the fact that as the value of the population's natural growth was negative during a sequence of consecutive years, we recognise the necessity of knowing the factors of population's fertility by specific age groups, specific mortality by age groups and main death causes;
- as, in time, we witnessed an ascendant trend of the population's demographic ageing coefficient, it is necessary to elaborate a real demographic policy;
- orientation of demographic policy towards a pro-birth policy, i.e. encouraging families, perhaps by granting certain fiscal incentives, to have more children.

Nevertheless, the information based on the research related to this debate remain sketchy. Many aspects of the relation between national policies and demographic trends are not yet well understood and it is still difficult to separate the effects of specific policies and initiatives from the effects of the social, political and economic effects.

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**VALIDATION OF VARIABLES OF HUMAN RESOURCE MANAGEMENT
BY METHOD OF EXPERT ASSESSMENT**

Palmira Papsiene

Vilnius Gediminas Technical University. Sauletekio ave. 11, LT-10223 Vilnius, Lithuania

Abstract

This article analyzes practical application of expert methods. In striving for successful tackling of the tasks of human resource management in organization of public sector, there is a proposal to apply a method of expert assessment by determining significance of criteria. Process of human resource management is characterized by many different criteria. A basement for assessment is creation of the list of criteria influencing process of human resource management by invoking expert assessment. In order to confirm compatibility of experts' opinions there was applied Kendall's concordance coefficient.

Keywords: human resource management, expert assessment.

1. INTRODUCTION

Qualitative research was performed using a method of expert assessment. Application of expert assessment as a method of collection of qualitative data is based on assumption that it is meaningful to know experts' attitudes, assessments and opinions. There was used a partially formalized type of interview in order to get one type of information from every expert. In this case, the questions were put-up, but the answers were not foreseen. In methodology of qualitative studies there is an appeal mostly to methods of creation of samples of qualitative research proposed by M. Patton (1990) (Bitinas, Rupsiene, Zydziunaite, 2008). A sample of selection is composed of public sector organizations leaders, managers of departments and scholars. This method was selected because of the striving for logical generalization.

In designing sophisticated objects, forecasting perspective of development, there is a need to appeal to experience and knowledge of qualified specialists. One of the most prevalent heuristic methods is expert assessments – quantitative assessments of processes or phenomena that can not be measured directly (Boguslauskas, 1999).

Every expertise is composed of the following stages: 1) formulation of objective; 2) formation of expert group; 3) organization of interview; 4) processing and analysis of information. Expert assessment was performed in following sequence: description and analysis of criteria content, creation of questionnaire of experts' assessment, formation of experts group, determination and normalization of criteria significance, criteria ranking, determining of compatibility of opinions, determination of values of criteria.

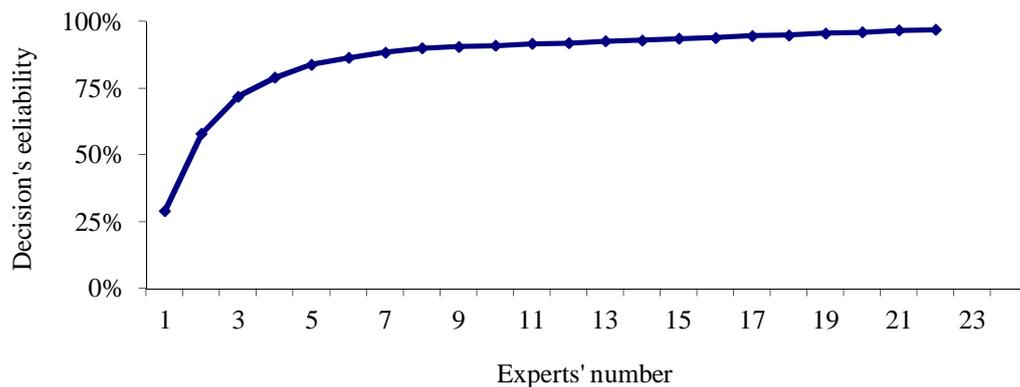
While performing scientific researches, it is important to find out what makes a totality of subjects under investigation. In the case under investigation, investigative totality is composed of experts. The main requirement to the expert is competence (Orlov, 2011; Skackauskiene, 2010; Chegodaev, 2010). Good expert is characterized by following characteristics: erudition (formulation of indefinite problems); intuition; universal knowledge (systemic analysis of the problem). There is settled a limit of expert's

experience – not less than 5 years of work in organization of public sector. Coefficient of experts' reliability is calculated according to the formula (Boguslauskas 1999):

$$K_p = \frac{N_T}{N}, \quad (1)$$

here N_T – number of correct answers; N – number of questions presented.

Having determined reliability coefficients of future experts the number of experts is being selected. When there are too little experts, subjectivity may appear, and when there are too much experts it is difficult to reach one opinion. The number of experts is being selected depending on desirable precision of assessment. With reference to the author (Rudzkiene, 2009), optimal number of experts has to be selected (see Pic. 1).



Pic.1. Dependence of standard deviation of experts' assessments on number of experts

Source: V. Rudzkiene (2009)

Experts are presented with a put-up questionnaire of criteria assessment. Experts are assessing importance of criteria in point of view of management of human resources. By giving every criterion a score from 1 to 10, the more important criterion gets higher assessment. V. Podvezko (2008) highlights that it is very important to determine compatibility of experts' opinions by applying multi-criteria assessment methods.

2. DETERMINATION OF CRITERIA SIGNIFICANCE

Experts are assessing every criterion by particular score in point of view of significance. Having performed experts questioning, a matrix was created where scores of criteria assessment were tabled. Further the results obtained were processed statistically. Significance of criteria was determined and normalization was performed in following sequence (Zavadskas, Kaklauskas, Banaitiene, 2001):

Average value of criterion assessment \bar{t}_j is determined according to the formulas:

$$\bar{t}_j = \frac{\sum_{k=1}^r \omega_k t_{jk}}{\sum_{k=1}^r \omega_k}, \text{ or } \bar{t}_j = \frac{\sum_{k=1}^r t_{jk}}{r}, \quad (2)$$

here ω_k - coefficient of standing of expert k ; t_{jk} - assessment of index j performed by expert; r - number of experts.

It is meaningful to calculate a significance of indices according to the formula:

$$q_j = \frac{\bar{t}_j}{\sum_{j=1}^n \bar{t}_j} \quad (3)$$

and to determine unity of experts' opinions, by applying Kendall's coefficient of concordance that is calculated as follows (if there are no ranks related):

$$W = \frac{12S}{m^2(n^3 - n)}, \quad (4)$$

here S - sum of squares of ranks' deviations, n - number of factor groups / number of samples with different features, m - number of experts in samples (must be equal in all samples).

$$S = \sum_{i=1}^n \left(S_i - \frac{m(n+1)}{2} \right)^2, \quad (5)$$

Reliability of expertise could be expressed by concordance coefficient of experts' opinion that describes a level of congruence of individual opinions:

$$W = \frac{12S}{r^2(n^3 - n) - r \sum_{k=1}^r T_k} \quad (6)$$

$$S = \sum_{j=1}^n \left[\sum_{k=1}^r t_{jk} - \frac{1}{n} \sum_{j=1}^n \sum_{k=1}^r t_{jk} \right]^2 \quad (7)$$

$$T_k = \sum_{l=1}^{H_l} (h_l^3 - h_l) \quad (8)$$

here T_k – k index of ranks related in ranking; H_l – number of equal rank groups in ranking k ; h_l – number of equal ranks in the group of related ranks l after assessment of expert k ; t_{jk} – rank attributed by expert k to criterion j ; k – number of experts; n – number of criteria assessed.

Significance of concordance coefficient is determined according to the formula:

$$\chi^2 = \frac{12S}{m(n+1) - \frac{1}{n-1} \sum_{k=1}^r T_k} \quad (9)$$

If value χ^2 calculated according to formula (9) is bigger than χ_{lent}^2 in the table, depending on the number of freedom levels and accepted level of significance, hypothesis of concerted rankings of experts is being accepted. If $\chi^2 < \chi_{lent}^2$, it is assumed that experts' opinions are not concerted.

Reliability of the research was determined using Kendall's coefficient of concordance that shows unity of experts' opinions (Boguslauskas 1999; Zavadskas, Kaklauskas, Banaitiene 2001). When $W = 1$, it could be stated that all experts assessed all variants equally, and when $W = 0$, it could be stated that experts have no one opinion.

The advantage of ranking method is its simplicity, clearness and low input of experts' work time for evaluation of indices.

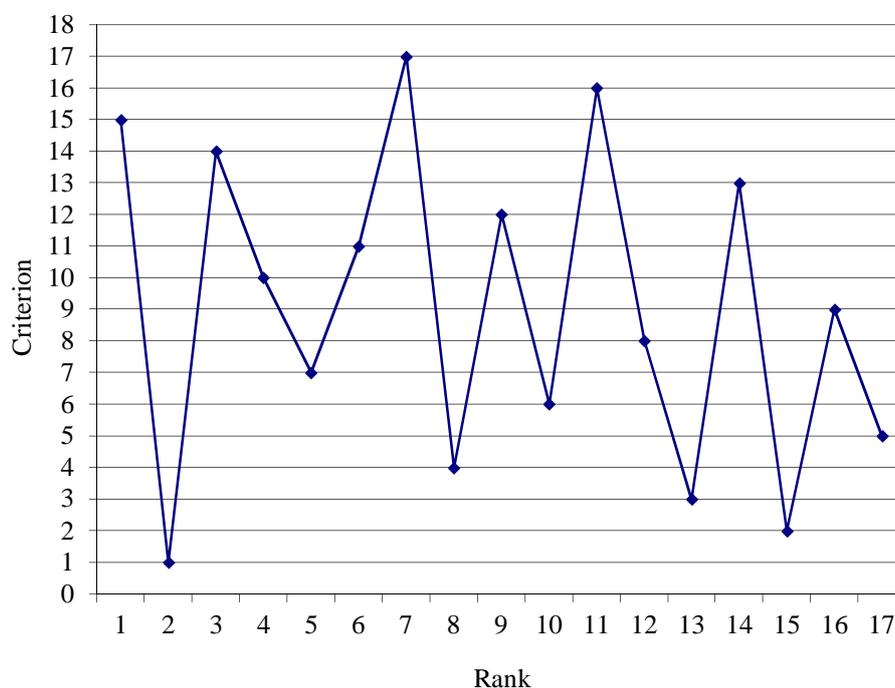
3. RESULTS OF EXPERT ASSESSMENT

Expert assessment was performed by agreeing every expert individually. There were ten experts competent on issues on human resource management in public sector questioned. Based on summarized data of experts interview, significance of every criterion and compatibility of experts' opinions were determined. The results obtained are presented in Table 1.

Table 1. Matrix of experts' assessments

No.	Assessment of expert										Sum of ranks	Significance or criteria
	1	2	3	4	5	6	7	8	9	10		
1	9,1	9,4	9,7	9,5	9	9,5	9,5	9,3	9,4	8,8	93,2	0,06263
2	7,8	8,2	8,7	9,6	8,2	8,2	8,3	7,9	8,2	8,1	83,2	0,05591
3	8,4	9,7	8,4	8,5	8,6	8,8	8,5	8,1	8,6	8	85,6	0,057523
4	8,6	9,1	9,4	9	9,1	8,6	8,6	8,9	8,3	8,9	88,5	0,059472
5	7,7	8,1	8,5	8	7,7	7,9	8,1	7,7	7,9	7,9	79,5	0,053424
6	9,2	8,4	9	8,6	8,3	9,2	8,9	8,2	8,5	8,3	86,6	0,058195
7	9,4	8,7	10	9,1	8,8	9,4	9,6	8,8	8	8,6	90,4	0,060749
8	8,5	8,6	9,5	9,2	8,7	9	8,4	7,8	8,1	8,2	86	0,057792
9	7,9	8,3	8,6	8,3	7,8	8	8,2	8	8,4	8,4	81,9	0,055037
10	9	9,3	9,6	9,3	8,9	9,1	9,2	8,3	8,7	9,3	90,7	0,06095
11	8,9	9,6	9,3	8,7	9,4	8,5	9	8,7	8,9	8,5	89,5	0,060144
12	8,2	9	9,2	8,4	8,4	8,4	8,8	8,5	9	9,2	87,1	0,058531
13	8	8,5	8,8	8,1	8,5	8,1	8,7	8,4	9,2	9,1	85,4	0,057389
14	9,3	8,9	8,9	8,8	9,2	8,9	9,3	9	9,1	9,4	90,8	0,061017
15	9,3	9,5	9,9	9,4	9,3	9,3	9,4	9,2	9,5	9,5	94,3	0,063369
16	8,1	9,2	9,1	8,2	8	8,3	9,1	8,6	8,8	8,7	86,1	0,057859
17	8,7	8,8	9,8	8,9	8,1	8,7	8,9	9,1	9,3	9	89,3	0,060009
Sum	146,1	151,3	156,4	149,6	146,6	147,9	150,5	144,5	147,9	147,9	1488,1	1

Distribution of ranks of criteria of human resource management is presented in Pic. 2.



Pic.2. Distribution of ranks of criteria of human resource management

It is seen from the presented diagram of ranks that 15-th criterion of assessment has the highest and the 5-th criterion the lowest rank in opinion of experts.

Table 2. Results of expert assessment

Criteria	Significance of criteria	Average of ranks	Sum of ranks	Average (M)
1	0,06263	14,7	147	9,32
2	0,05591	4,7	47	8,32
3	0,057523	7	70	8,56
4	0,059472	9,9	99	8,85
5	0,053424	1,1	11	7,95
6	0,058195	8,05	80,5	8,66
7	0,060749	11,9	119	9,04
8	0,057792	7,4	74	8,6
9	0,055037	3,5	35	8,19

Criteria	Significance of criteria	Average of ranks	Sum of ranks	Average (M)
10	0,06095	12,2	122	9,07
11	0,060144	11	110	8,95
12	0,058531	8,6	86	8,71
13	0,057389	6,9	69	8,54
14	0,061017	11,8	118	9,03
15	0,063369	15,8	158	9,43
16	0,057859	7,7	77	8,61
17	0,060009	10,75	107,5	8,93
<i>N (number of experts)</i>		10	Degree of freedom	16
Chi-square (χ^2)		93,331	p-level	0
Kendall's coefficient of concordance (W)		0,5833	Average of ranks	0,537

Random value is distributed in accordance to distribution of χ^2 with a degree of freedom $v = m-1$. In accordance to the selected level of significance α (in practice value of α usually is 0,05 or 0,01) from the table of distribution χ^2 with a degree of freedom $v = m-1$ we found a critical value χ_{lent}^2 . In order experts' assessments would be concerted, calculated value of χ^2 has to be higher than that of χ_{lent}^2 , which is equal 26,29 when taken from the table of distribution with a degree of freedom $v=17-1=16$ and significance level $\alpha=0,05$. As $93,33 > 26,29$, the opinions of experts are concerted (see Table 2).

CONCLUSIONS

Having performed expert assessment it was determined that the coefficient of concordance of experts' opinions, which describes a degree of congruence of individual opinions, is $W > 0$. In this case, its value is $W = 0,58$, which shows unity of opinions. Significance of the coefficient of concordance is determined by the condition $\chi^2 \geq \chi_{table}^2$, in this case $93,33 > 26,29$. It could be stated that criteria assessed, purpose of which is to characterize a process of management of human resources, are significant and informative, suitable for use in the system of assessment.

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CREDIT RISK DYNAMICS IN CZECH REPUBLIC

Petra Sumna

Vysoká škola finanční a správní, o.p.s., Estonská 500, 101 00, Prague 10, Czech Republic

Abstract

This article discusses the credit risk management in banks in the Czech Republic and its dynamics in the pre-crisis period, in the crisis and after crisis. In this period of time there are monitored basic indicators related to credit risk, value adjustments for the risk, the number of loans in default and links of individual variables.

This article discusses the credit risk, and ways in which it operates in conjunction with the business cycle, as well as the development of credit risk in credit dynamics in the course of the business cycle. Damping of the fluctuations in the credit dynamics in the course of the economic cycle is devoted to, for example, Frait, Komárková (2008). Models of bank financing of Czech corporations and credit risk is discussed in a study Grešl, Jakubik (2008). This article aims to combine these topics and focus on the development of credit risk and its changes over the business cycle. The main hypothesis of the work will be demonstrating the possible link with credit risk financing in various sectors during the phases of the business cycle. The main objective is the analysis of linkages making adjustments and business cycle, as well as analysis of the linearity of the volume of loans and the number of adjustments to individual types of loans.

Key words: *Credit risk, economic cycle, pro-cyclical, capital adequacy, adjustments.*

The topic of this paper is the defining context of credit risk and its control methods in the banks in the Czech Republic in the years 2006-2011. The basic motivation of this work is to follow in this period of time the key characteristics associated with credit risk, creation of adjusting entries, the number of loans in default and to analyze the relations between variables, the scope of the impact and elimination of losses arising from credit risk-driven inefficiently in the individual banks, more specifically, in Komerční banka, Česká spořitelna and ČSOB.

In addition, it will also be monitored the binding of value adjustments on the economic cycle. One of the tools for the analysis of degree of pro-cyclical in the behaviour of banks is the analysis of development accumulated depreciation in the course of the business cycle. Pro-cyclical in the formation of accumulated depreciation can be partially mitigated by gross profits development. In this project will be further examined the linearity of the relationship between the volume of granted loans and the number of adjustments to individual types of loans.

The State of the banking sector is indicative for the condition of the entire financial market and, by extension, of the entire economy. The negative development in the banking sector has an impact on the stability of the financial system and the unstable financial system threatens the growth of the economy. Given the current level of link economies there is downside risk of spreading to other countries. Risks in the banking sector are significant enough that it has become the subject of international regulation.

1 CREDIT RISK AND ITS DETERMINANTS

Credit risk belongs to the most significant bank risks. In my contribution are analyzed processes related to credit risk, its analysis, evaluation, and different aspects, which are affected by the economic cycle.

1.1 *Credit risk and economic cycle*

Banks and other financial institutions are trying to maximize their profits, which require precise appreciation of the risks associated with their portfolio of assets. In addition, from the perspective of financial stability, it is important and interesting to understand when is an implicit credit risk driven by specific factors that can be specific for identification of common risk companies or systematic factors which affect all companies at the same time, and therefore have a wider range of effects on financial stability, given that several banks may suffer substantial losses in their credit portfolio at the same time. In this context, there can play a very important role the macroeconomic development, in particular, in credit risk evolution over time. The empiric results of various literatures claims that between credit risk and macro-economic development exists certain important links. Pederzoli and Torricelli (2009) or Jiménez and Saurina (2005). In fact, periods of strong economic growth, which are sometimes accompanied by robust credit growth, are sometimes followed, with some delay, by the growth of standard rates in the total level, alternatively as a result of imbalances created during these periods.

The state of the economy in certain phase of economic cycle can be a very important determinant of implicit risk and, therefore, also of a financial decisions. It is widely known that in the course of the recession, consumers shall suspend the premium services, leaves the "luxury" and therefore, banks will start to worry about defaults on loans and the increase in credit risk. In spite of some companies neglect this dimension. Macroeconomic conditions affect not only the credit risk, but also on speculation rates in companies.

1.2 *Pro-cyclicality and the credit risk*

Pro-cyclicality of the financial system is its ability to amplify fluctuations of economic activity in the course of the economic cycle through the pro-cyclical nature of the provision of loans and other activities of financial institutions.⁶¹ The main prudential tools include differential capital requirements, classification of loans and tightening the rules for accumulated depreciation, the introduction of dynamic accumulated depreciation stricter assessment of the collateral or tougher criteria for the provision of certain classes of loans. From the tools of regulation and supervision are measures that involve more extensive requirements for disclosure, more regular and deeper supervision or regular stress testing.

Many publications find and explain the context between rapid credit growth and credit losses. The most common errors of banks in the field of money lending occur more in the boom times than in the period of medium - recession. This is the case on the ground that the period of expansion are both creditors and debtors too confident with their investment projects and their ability to pay or compensate the debts, charges and interest. Banks are too optimistic, thus they are optimistic in credit policy as such. By contrast, in times of recession the credit policy is much more conservative. Explanations are called "disaster myopia," which comes as a result of when in risk management in the period of expansion is not taken into account the probability of the negative developments of future events Guttentag, Herring

⁶¹ FRAIT, J., KOMÁRKOVÁ, Z.: Nástroje pro tlumení výkyvů v úvěrové dynamice v průběhu hospodářského cyklu, 2008, str. 70 dostupné z:

http://www.cnb.cz/miranda2/export/sites/www.cnb.cz/cs/financni_stabilita/zpravy_fs/fs_2008-2009/FS_2008-2009_clanek_1.pdf

(1984). In addition so-called "group behavior," which explains us why are bank managers ready to finance by the negative net present value of the project in the period of expansion – this is the case on the grounds that credit faults are judged more leniently if they are normal respectively common to the entire industry Rajan (1994). Managers behave like other managers in the industry, so they unnecessarily don't risk their status, and thus are able to finance projects whose net present value appears to be positive in the period of expansion, and of these, then subsequently in periods of recession become loans in default. Last but not least is the explanation so-called "institutional memory hypothesis" Berger, Udell (2003), which explains the highly cyclical profiles of loans and credit losses. This is because the hiring of still younger workforce that is less experienced. Those more experienced, who remember the period of recession and their lessons, those are less or no longer this period remember so well and report the distorted information. All these factors lead to fluctuations in the credit policy.

There exist a clear cut of the direct relationship between the credit cycles and credit risk, which is explained by the fact that the rapid growth in the credit portfolio is positively associated with percentage growth in outstanding loans in the future. More or less those loans that are lent during the boom years have a higher probability of failure of default than those that are lent during the period of slow credit growth.⁶² In the period of expansion are the requirements for warranties more free.

1.3 *Macroeconomic determinants of credit risk*

Risk management in Czech banks is based on an integrated approach that takes into account the legal and regulatory standards imposed by the Czech National Bank and other regulatory institutions. Most of the banks in their procedures reflect the development in all areas i.e. credit risk, market risk, liquidity risk, as well as regulatory risk, legal risk, operational risk, and environmental risk. However, there are various macroeconomic determinants of credit risk, which, in conjunction with the economic cycle can significantly influence the future development of each particular subject.

The interest for credit risk management significantly deepened the financial crisis, in particular the interest of regulators for the question of pro-cyclicality behavior of credit dynamics. In the quantification of credit risk the Bank is based on quantitative and qualitative criteria, the effect of which is to determine the ratings. The Bank uses several types of credit ratings depending on the type of counterparty and transaction type. Continuous strengthening of credit risk management framework includes all of its folders, including regulations, instruments, procedures and knowledge of workers. Special emphasis is placed in the time of economic crisis to the framework of credit activities in retail banking, organization and processes in the prevention of credit frauds. The following chapters will therefore be given to each of the determinants of credit risk.

1.3.1 *Inflation expectations*

One of the first determinants, respectively, channels acting in connection with economic cycle on the credit risk is the inflation expectations. Commercial banks assess the risk associated with providing loans to various applicants based on their credibility and provides for higher risk of higher interest rates. If the risk exceeds an acceptable level, banks will no longer be willing to give a loan for any high interest rate. In this situation occurs to allocate credit. There is a ceiling of interest rates above the level of no loans are provided (Stiglitz, Weiss, 1981; Wray, 1992; Wolfson, 1996). Under these conditions (especially if invoked a restrictive monetary policy in an effort to curb inflation) starts the demand of loans to be less and less elastic, and its elasticity can drop to zero.

⁶² JIMÉNEZ, G., SAURINA, J.: *Credit cycles, credit risk and prudential regulation*, Banco de España, 2005, str. 5

Excessive focus on fight with inflation associated with the effort to increase short-term interest rates can complicate the access of small and medium-sized enterprises to loans, become more expensive mortgages and consumer loans to households. As a result would then be slowing down of economic growth, which in turn can have a pronounced negative impact on less developed member countries, or regions of the EU.

1.3.2 Cyclical output

Another determinant of credit risk in connection with company profitability is cyclical output. There are several reasons why the credit risk associated with the bank profitability can be pro-cyclical. First and foremost, lending mostly decrease during cyclical downturns, and that such a period are commonly associated with a decrease in risk. Commissions also held by banks will be higher due to the deterioration in the quality of loans and capital could also have pro-cyclical behavior as the value of the asset has a tendency to follow the phases of the cycle. In the second place, the demand for transactions in credit and stock markets would have been significantly reinforced during the economic boom and interest margin could grow stronger. Therefore, yields could grow faster than the cost of the head to increase of profits, by contrast, are likely to remain in force during the economic slowdown.

The present study attempts to get a step ahead as well as two methods of estimating the cyclic output. One uses a variation of the real GDP of the segmented trend, while others use the deviations from the trend of the GDP calculated by applying the Hodrick-Prescottova filter (1980). In the periods during which the GDP exceeds its trend, the output gap is positive and if profitability is pro-cyclical, we expect to grow. Similarly, if GDP is below the trend we expect that profits will fall.

1.3.3 Probability of default

Another determinant of credit risk in connection with the economic cycle is the probability of default. Credit event of default is defined as a violation of the debtor's payment morale. In the regulatory terminology (the CNB Decree No. 123/2007) is typically used the concept of debtor's failure that occurs at the moment when it is likely that he doesn't pay off their obligations duly and on time, without the creditor goes to the satisfaction of the claims of the collateral or at least one payment (whose amount is considered to be a significant for creditor) is past due for more than 90 days.⁶³ Possible cases of default are delay, change, rejection (can occur on government debt of developing countries), the omission of payments (one of the most important credit events), debt restructuring (if changes the original terms of payment – the nominal value of debt, interest rates, debt priority - it is used for the prevention of real failure), bankruptcy, rating reduction (implicitly increase of probability of failure, rating of the reference obligation may fall below a predefined value), merger (after the merger of subjects may have the resulting entity a lower rating than the original reference entity), cross default (if there is default of different commitment of the company than the one that is the subject of the contract) or entry to a specific legal regime (e.g., bankruptcy, receivership). Link default and economic cycle consist of the fact that the probability of default is in a period of recession higher and lower at the time of expansion.

1.3.4 Adjusting entries and reserves

One of the very important determinants of credit risk in connection with the economic cycle are adjusting entries and reserves. Banks classify all their assets from financial activities into five categories in accordance with the measures of the Czech National Bank, no. 123/2007 Coll. on the basis of quantitative criteria (payment morale and financial statements) and qualitative criteria (detailed

⁶³ Česká Národní Banka; *Zpráva o finanční stabilitě 2008/2009*; Slovníček pojmů, str.108

knowledge of the client, the client's behavior and history). Since the year 2008 banks have applied the principle of sharing in the classification of applicant and guarantor for claim in default in accordance with the rules of Basel II. All relevant classified exposures are assessed individually at least on a quarterly basis three levels of committees for adjustments, or whenever the need arises to recovery specialists. Adjustments are created on the basis of the present value of the expected future cash flows to the bank and, after considering all available information, including estimates of the value of the collateral and the expected length of collection of receivables process. Adjustments for other receivables are created on the basis of variant statistical models. For example, in Komerční banka, a.s., that is the subject of this research, it is on the basis of statistical models of EL (Expected Loss) and the ELBE (Expected Loss Best Estimation) taking into account the specifics of the claims (the client segment, type of product, risk classification). In these models are values of EL and ELBE parameterized based on observations of past losses, new risk factors and with regard to the phase of economic cycle.

2 CREDIT RISK DYNAMICS IN BANKS IN CZECH REPUBLIC

This chapter includes comparisons of risk management in each of the banking entities KB, ČS, ČSOB, their way of risk management, creation of adjustments and pro-cyclicality in the period 2006-2011. For each of the Banks subjects is analyzed the volume of loans and the adequacy of the value adjustments and further regression analysis for the verification of hypotheses of pro-cyclical behavior of bank subjects.

2.1 *Komerční banka, a.s.*

2.1.1 *Credit risk management*

Risk management at Komerční banka, a.s. (hereinafter referred to as "the Bank") is based on an integrated approach that takes into account the advanced risk management standards that are used within the group, Societe Generale, along with legal and regulatory standards imposed by the Czech National Bank and other regulatory institutions. Komerční banka in their procedures reflects development in all areas i.e. credit risk, market risk, liquidity risk, as well as regulatory risk, legal risk, operational risk, and risk of environmental concentration.⁶⁴ Komerční banka uses for evaluation of credit risk scoring models, evaluation, LGD and EAD models, for mass retail bank uses statistical techniques and for corporate clients expert approach. Risk management control area is in accordance with requirements of Basel II. There exists a credit risk Control Department, which carries out periodic checks on the processes of providing and monitoring loans. Control activities are focused not only on the loan portfolio, but also to the management of the impact of the economic recession.

The table below shows the development of loan volume, creation of adjustments and the development of gross profits before the crisis in its course until the end of 2011.

⁶⁴ Výroční zpráva. In *Výroční zpráva 2009, Komerční banka, a.s.* [online]. Praha: ENTRE, s.r.o., 2010 [cit. 2011-03-25]. Dostupné z WWW: <http://www.kb.cz/file/u/about-bank/investor-relations/annual-reports/annual-report-2009/>, str.42

Table 1 – The evolution of the volume of loans, adjustments and profits of Komerční banka, a.s. in 2000-2011.

Year	Adjustments	Granted loans	Gross profits in mill. Czk
2 000	13 719	287 623	14 933
2 001	15 574	285 083	3 386
2 002	11 582	163 806	11 362
2 003	8 168	160 149	12 896
2 004	7 405	156 764	13 323
2 005	7 316	185 225	11 790
2 006	9 095	252 505	11 427
2 007	10 393	304 521	14 328
2 008	13 142	364 040	16 257
2 009	14 871	372 303	13 549
2 010	15 877	384 593	16 075
2 011	17 211	434 486	11 456
TOTAL	144 353	3 351 098	150 782

the value of the number of adjustments is negative

Source: Own; the data are transposed from annual reports of Komerční banka, a.s. from the years 2000-2011.

2.1.2 Adjusting entries and reserves

Adjustments are created on the basis of the present value of expected future cash flows to the Bank and, after considering all available information, including estimates of the value of the collateral and the expected length of the collection of receivables process.

On the basis of Basel II requirements are adjustments to other claims based on statistical models of EL (Expected Loss) and the ELBE (Expected Loss Best Estimation) taking into account the specifics of the claims (the client segment, type of product, risk classification). One of the tools for the analysis of degree of pro-cyclicality in the behaviour of banks is the analysis of development accumulated depreciation in the course of the business cycle. Pro-cyclicality in the formation of accumulated depreciation can be partially mitigated by the development of gross profits. Economic downturn is mostly followed by growth of the volume of accumulated depreciation. If the banks behave in pro-cyclical way, the economic downturn would have been followed by an increase in the volume of accumulated depreciation.

The table below examines the relationship between the volume of granted loans and the number of adjustments. For the estimation of pro-cyclicality in the formation of accumulated depreciation has been used the data from the annual reports of Komerční banka, a.s. from the years 2000-2011.

Table 2 - The relationship between the volume of granted loans and the number of adjustments of Komerční banka, a.s.

Year	xi	yi	xiyi	xi ²	Yi	(yi - Yi) ²
2 000	13 719	287 623	3 945 899 937	188 210 961	318 640	962 040 021
2 001	15 574	285 083	4 439 882 642	242 549 476	362 102	5 931 991 057
2 002	11 582	163 806	1 897 201 092	134 142 724	268 570	10 975 466 362
2 003	8 168	160 149	1 308 097 032	66 716 224	188 580	808 312 663
2 004	7 405	156 764	1 160 837 420	54 834 025	170 703	194 288 752
2 005	7 316	185 225	1 355 106 100	53 523 856	168 617	275 809 721
2 006	9 095	252 505	2 296 532 975	82 719 025	210 299	1 781 308 451
2 007	10 393	304 521	3 164 886 753	108 014 449	240 712	4 071 640 805
2 008	13 142	364 040	4 784 213 680	172 712 164	305 121	3 471 488 626
2 009	14 871	372 303	5 536 517 913	221 146 641	345 631	711 388 649
2 010	15 877	384 593	6 106 183 061	252 079 129	369 202	236 891 808
2 011	17 211	434 486	7 477 938 546	296 218 521	400 457	1 157 950 382
TOTAL	144 353	3 351 098	43 473 297 151	1 872 867 195	3 348 634	30 578 577 296

Source: Own; the data are transposed from annual reports of Komerční banka, a.s. from the years 2000-2011.

Table no. 2 shows that along with the growing number of loans the Bank creates a higher number of adjustments. If the Bank has a higher number of loans, it is also more likely to increase the risk of non-repayment, hence the increase in credit risk and therefore creates greater number of adjustments.

2.1.3 Capital adequacy

Komerční banka, a.s. manages equity capital in order to maintain a strong capital base necessary to the development of their business activities and to meet regulatory capital requirements in the current period and in the future. Bank in the capital planning process takes into account both internal and external factors, which are reflected in the corresponding individual intentions expressed in the form of limit values for Tier 1 and total capital adequacy ratios.

Within the framework of the second pillar of Basel II, which requires the establishment of a system for internal assessment of capital adequacy in relation to the risk profile (so called system of internally fixed capital), the Bank established and formalised this system and describe the related strategy of capital adequacy. The Bank analyzes the effects of stress conditions on all risks within a given time views.

2.2 Česká spořitelna

2.2.1 Credit risk management

The risk management processes in the Česká spořitelna are managed according to established risk management strategy, approved by the Board of Directors of the Bank, which contains the principles of

risk management, including the processes of risk identification, monitoring and measuring system of limits and limitations.

In the management of credit risk, used Česká spořitelna a unified methodology that includes the rules for prudent credit process including many rules. In credit risk management of the Bank is based on information from its own portfolio, uses information from external sources, for example information from Credit Bureau, from central registry of loans or the Bank uses ratings of renowned rating agencies. An extensive data base, which is available for the purpose of credit risk management, serve as a basis for credit risk modeling and as a support for recovery of debts, valuation of claims and the calculation of losses.⁶⁵

As a key instrument in risk management is in Česká spořitelna considered to be an internal rating, which is used to measure the risk of the counterparty and reflects the probability of debtor's failure in the next 12 months, and is in accordance with the requirements of the regulator, validated by an independent subject. In the context of risk management the Bank divides its client non-entrepreneurs "without default," and uses 8-speed rating range and 13-speed rating system for other clients. For all clients "in default" Bank uses grade "R", which are further divided according to the reason for the failure.⁶⁶ For the determination of risk parameters, such as probability of default, loss on loans in default and credit conversion factors are used by the Česká spořitelna's own internal models which correspond with the requirements of Basel II. For monitoring of the amount of credit risk, risk assessment and portfolio management in default is currently used monitoring of risk parameters.

The table below shows the development of loan volume, creation of adjustments and the development of gross profits before the crisis in its course until the end of 2011.

2.2.2 Adjustments for credit losses

The value adjustments methodology in Česká spořitelna is in accordance with international accounting standards (IFRS), with a monthly reassessment. Adjustments are calculated depending on if there is found out the depreciation. If that is the case, then adjustments are calculated on an individual basis, if this is not so, so are calculated the portfolio adjustments, whose amount is specified by using models based on historical experience of the Bank. In the case of all non detailed claims and retail receivables with an exhibition of more than 5 million CZK is used the method of discounted expected cash flows. In the case of other retail receivables is the rate of depreciation determined statistically, based on historical experience with the course of the recovery of a similar type of claims.

The table no.4 examines the relationship between the volume of granted loans and the number of adjustments. For the estimation of pro-cyclicality in the formation of accumulated depreciation has been used the data from the annual reports of Česká Spořitelna, a.s. from the years 2000-2011

⁶⁵ Výroční zpráva. In *Výroční zpráva 2009, Česká spořitelna, a.s.* [online]. Praha : Omega Design, s. r. o., 2010 [cit. 2013-03-20]. Dostupné z WWW: http://www.csas.cz/banka/content/inet/internet/cs/VZ_2009.pdf, s.39

⁶⁶ Výroční zpráva. In *Výroční zpráva 2009, Česká spořitelna, a.s.* [online]. Praha : Omega Design, s. r. o., 2010 [cit. 2013-03-20]. Dostupné z WWW: http://www.csas.cz/banka/content/inet/internet/cs/VZ_2009.pdf, s.40

Table 3 - The evolution of the volume of loans, adjustments and profits of Česká Spořitelna, a.s. in 2000-2011.

Year	Adjustments	Granted loans	Gross profits in mill. Czk
2 000	3 217	134 900	5 604
2 001	2 731	186 655	6 963
2 002	18 812	150 314	9 423
2 003	9 025	178 159	10 195
2 004	7 166	239 289	11 334
2 005	6 672	283 420	12 439
2 006	6 339	329 105	15 155
2 007	6 810	418 415	18 375
2 008	8 929	461 433	23 171
2 009	14 713	469 192	26 390
2 010	19 225	460 077	26 744
2 011	17 976	483 552	25 649
TOTAL	121 615	3 794 511	191 442

the value of the number of adjustments is negative

Source: Own; the data are transposed from annual reports of Česká Spořitelna, a.s. from the years 2000-2011.

Table 4 - The relationship between the volume of granted loans and the number of adjustments of Česká Spořitelna, a.s.

Year	xi	yi	xiyi	xi ²	Yi	(yi - Yi) ²
2000	3 217	134 900	433 973 300	10 349 089	330 122	38 111 808 888
2001	2 731	186 655	509 754 805	7 458 361	329 204	20 320 194 593
2002	18 812	150 314	2 827 706 968	353 891 344	359 597	43 799 378 275
2003	9 025	178 159	1 607 884 975	81 450 625	341 100	26 549 632 611
2004	7 166	239 289	1 714 744 974	51 351 556	337 586	9 662 313 971
2005	6 672	283 420	1 890 978 240	44 515 584	336 652	2 833 689 474
2006	6 339	329 105	2 086 196 595	40 182 921	336 023	47 859 277
2007	6 810	418 415	2 849 406 150	46 376 100	336 913	6 642 538 513
2008	8 929	461 433	4 120 135 257	79 727 041	340 918	14 523 831 481
2009	14 713	469 192	6 903 221 896	216 472 369	351 850	13 769 168 432
2010	19 225	460 077	8 844 980 325	369 600 625	360 378	9 939 974 348
2011	17 976	483 552	8 692 330 752	323 136 576	358 017	15 759 043 757
TOTAL	121 615	3 794 511	42 481 314 237	1 624 512 191	4 118 360	201 959 433 621

Source: Own; the data are transposed from annual reports of Česká Spořitelna, a.s. from the years 2000-2011.

Table number 4 shows that as well as Komerční banka so Česká Spořitelna with growing number of granted loans make up a higher number of accumulated depreciation to pose the probability of an increase in credit risk.

2.2.3 Capital adequacy

The calculation of the capital requirement for credit risk is since the year 2007 based on the internal rating and its own estimates of the parameters. The calculation of risk-weighted assets is carried out on a monthly basis. Standard calculation is regularly updated by stress testing, in whose context are modeled the impacts of sudden changes in the market environment in particular macroeconomic effects.

Česká spořitelna provides capital on an individual and consolidated basis. Individual capital adequacy of Česká spořitelna in 2009 exceeded the level of 8.00% required by the Czech National Bank.⁶⁷

2.3 ČSOB

2.3.1 Credit risk management

The process of risk management in ČSOB is based on a single principle, using a method that reflects both expected losses incurred under normal circumstances and unexpected losses, which are based on statistical models. These models use the probabilities derived from historical experience, tailored to the current economic environment.

Risk management monitoring is carried out on the basis of the determination of the limits that reflect the business strategy and the level of accepted risk. ČSOB has credit risk management Committee (CRC), which has overall responsibility for the development of credit risk strategies and implementing of principles, frameworks, policies and limits for credit risk. The Committee is responsible for the key issues relating to the management of credit risks, adopts fundamental decisions regarding to credit risks management and monitors their performance.⁶⁸

The table below shows the development of loan volume, creation of adjustments and the development of gross profits before the crisis in its course until the end of 2011.

2.3.2 Adjustments

Adjustments are controlled by the management of the Bank, in particular, their adequacy. There are monitored market values, the adequacy of adjustments for losses from diminution in value. The amount of collateral reporting to individual claims does not exceed their book value. Revenues from realized collateral are used to reduce or to pay outstanding claims. The Bank also takes advantage of the collective adjustments and in particular for credits and loans, where there is no objective proof attesting to the individual's impairment and thus reflect the write-down included in a group of assets. The amount of collective adjustments and, above all, credits and loans, where so far does not exist objective proof attesting to the individual diminution in value and thus reflect the depreciation included in a group of

⁶⁷ Výroční zpráva. In *Výroční zpráva 2009, Česká spořitelna, a.s.* [online]. Praha : Omega Design, s. r. o., 2010 [cit. 2011-03-25]. Dostupné z WWW: http://www.csas.cz/banka/content/inet/internet/cs/VZ_2009.pdf, str.43

⁶⁸ Výroční zpráva. In *Výroční zpráva 2009, Československá obchodní banka, a.s.* [online]. Praha: 2010 [cit. 2013-03-18]. Dostupné z WWW: http://www.csob.cz/WebCsob/Csob/O-CSOB/Vztahy-k-investorum/Vyrocnipololetni-zpravy/Vyrocnizpravy/VZ_CSOb_2009.pdf, str.45

assets. The amount of collective adjustments is assessed on the basis of statistical estimates, at the end of each financial year. Any losses from diminution in value are estimated based on historical losses in the portfolio, current economic conditions, the approximate amount of delay between the time when there may be a loss of, and the time when the loss is to be assessed in the formation of adjustments on loss from the reduction of values, and expected receipts and revenues after diminution in value.

The table no.6 examines linearity of the relationship between the volume of granted loans and the number of adjustments. For the estimation has been used the data from the annual reports of Československá obchodní banka, a.s. from the years 2000-2011.

Table 5 - The evolution of the volume of loans, adjustments and profits of Československá obchodní banka, a.s. in 2000-2011.

Year	Adjustments	Granted loans	Gross profits in mill. Czk
2 000	18 809	348 820	6 465
2 001	14 623	417 743	8 913
2 002	10 177	418 143	9 286
2 003	10 744	441 596	7 445
2 004	6 697	426 058	9 723
2 005	7 031	472 631	13 399
2 006	7 005	340 279	12 442
2 007	7 299	411 129	12 638
2 008	6 380	411 644	374
2 009	10 720	395 774	19 876
2 010	12 466	399 741	15 338
2 011	12 565	449 291	12 970
TOTAL	124 516	4 932 849	128 869

the value of the number of adjustments is negative

Source: Own; the data are transposed from annual reports of ČSOB, a.s. from the years 2000-2011.

Table 6 - The relationship between the volume of granted loans and the number of adjustments of Československá obchodní banka, a.s.

Year	x_i	y_i	$x_i y_i$	x_i^2	Y_i	$(y_i - Y_i)^2$
2 000	18 809	348 820	6 560 955 380	353 778 481	-448 400	635 558 994 958
2 001	14 623	417 743	6 108 655 889	213 832 129	52 874	133 129 416 351
2 002	10 177	418 143	4 255 441 311	103 571 329	585 282	27 935 599 089
2 003	10 744	441 596	4 744 507 424	115 433 536	517 384	5 743 852 775

2 004	6 697	426 058	2 853 310 426	44 849 809	1 002 012	331 723 539 994
2 005	7 031	472 631	3 323 068 561	49 434 961	962 016	239 497 639 074
2 006	7 005	340 279	2 383 654 395	49 070 025	965 129	390 438 097 362
2 007	7 299	411 129	3 000 830 571	53 275 401	929 923	269 147 172 932
2 008	6 380	411 644	2 626 288 720	40 704 400	1 039 973	394 797 596 139
2 009	10 720	395 774	4 242 697 280	114 918 400	520 258	15 496 318 539
2 010	12 466	399 741	4 983 171 306	155 401 156	311 175	7 843 987 724
2 011	12 565	449 291	5 645 341 415	157 879 225	299 319	22 491 462 810
TOTAL	124 516	4 932 849	50 727 922 678	1 452 148 852	6 736 948	2 473 803 677 748

Source: Own; the data are transposed from annual reports of ČSOB, a.s. from the years 2000-2011.

Table number 6 shows that, as Komerční banka and Česká Spořitelna as well as in Československá obchodní banka, a growing number of loans make up a higher number of accumulated depreciation to pose the probability of an increase in credit risk.

2.3.3 Capital adequacy

The capital adequacy of ČSOB as part of KBC Group (KBC Group) is monitored using the Basel II. rules and indicators. The Bank applied the single group access to internal capital system (SVSK). Group access to SVSK has been approved by both top management of KBC, and by the authorities of ČSOB. In the access are taken into account requirements of parent and local regulatory institutions.

3 ANALYSIS OF PRO-CYCLICAL BEHAVIOR OF BANK SUBJECTS

One of the tools for the analysis of degree of pro-cyclicality in the behaviour of banks is the analysis of development accumulated depreciation in the course of the economic cycle. Pro-cyclicality in the formation of accumulated depreciation can be partially mitigated by the development of gross profits. Economic downturn is mostly followed by growth of the volume of accumulated depreciation. If the banks behave pro-cyclically, the economic downturn would have been followed by an increase in the volume of accumulated depreciation.

For research of the pro-cyclicality, which is defined as the deepening of the fluctuations of the economic cycle activities of the financial sector,⁶⁹ especially banking lending has been spoken hypothesis No 1.

Hypothesis no. 1:

H0: The financial sector does not increase the volume of bank loans in a time of economic boom and at the same time does not reduce the volume of granted loans in times of economic contraction.

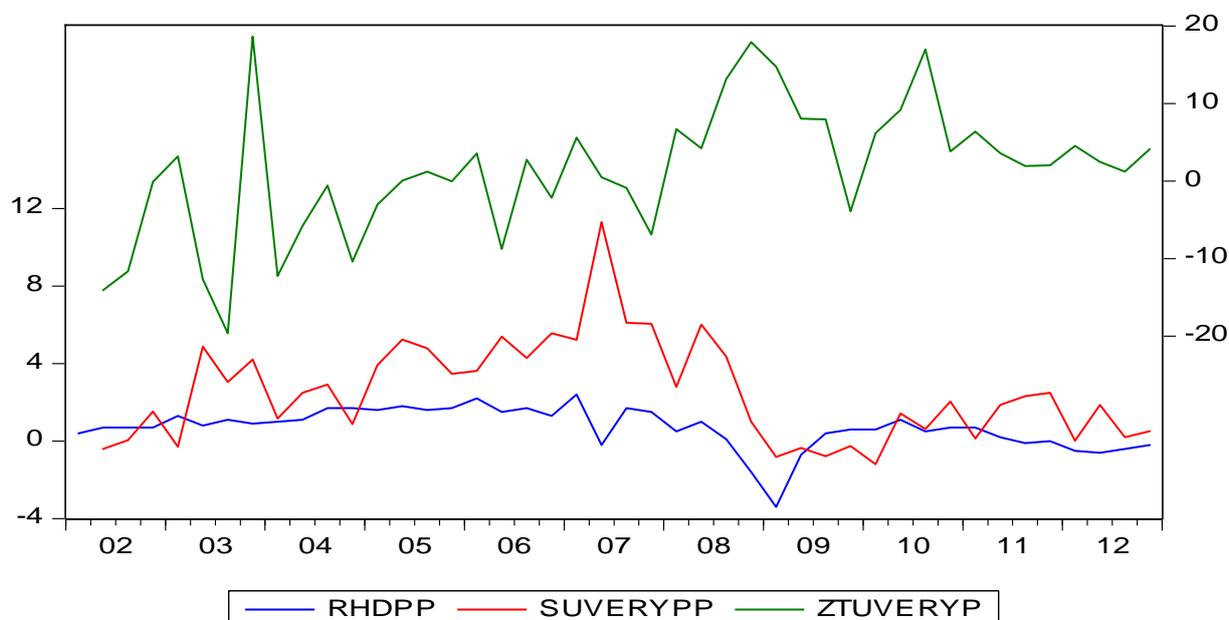
⁶⁹ GERŠL, A., JAKUBÍK, P.: „Procykličnost finančního systému a simulace feedback efektu.“ Dostupné z:

http://www.cnb.cz/miranda2/export/sites/www.cnb.cz/cs/financni_stabilita/zpravy_fs/FS_2009-2010/FS_2009-2010_clanek_III.pdf

Ha: The financial sector increases the volume of bank loans in a time of economic boom and at the same time reduces the volume of granted loans in times of economic contraction.

In order to verify the truth of the hypothesis will be carried out empirical research using econometric software. The variable quantity represents the volume of standard loans provided by the financial sector and as an independent variable with real GDP in the Czech Republic, the interbank rate PRIBOR (set out at the end of the month) and the volume of loss-making loans. From the chart No. 1 can be traced, that the volume of granted loans by financial sector in the Czech Republic (red curve) roughly follows the evolution of real GDP in the CZECH REPUBLIC (blue curve). The volume of granted loans and the trend of real GDP have shown a growing trend since the beginning of the reference period, while in 2007 grew both quantities the fastest and then the trend reverses. Trends in the volume of loss-making loans has reached the highest level in 2003 and then in 2008 and 2010.

Chart no. 1 - Quarterly volume of provided and loss-making loans along with the development of real GDP



Note: Quarterly trends in the volume of loans of the financial sector in the Czech Republic midst-quarterly in% (SUVERYPP) is shown on the left axis of the red curve along with the CZECH REPUBLIC'S real GDP quarterly percentage changes and the right axis is the development of the volume of loss-making loans midst-quarterly in%.

Source: Czech National Bank; available from:

http://www.cnb.cz/cnb/STAT.ARADY_PKG.STROM_SESTAVY?p_strid=CAABBA&p_sestuid=&p_lang=CS

All time series have been revised to exhibit stationarity, while only in one case it was necessary to modify the PRIBOR time series for the first gap. In Annex A, is for example showed the test for examination of the stacionarity for a time series of the total volume of standard loans provided by financial institutions in the Czech Republic. For the verification of the validity of the hypothesis No. 1 was designed OLS regression model, where as explained variable performs the total volume of standard

loans in the Czech Republic and the explanatory variables include real GDP, PRIBOR and the volume of loss-making loans. From the model in Annex B results that artificial variable of real GDP (where number 1 is in the time series indicated in the midst-quarterly growth of real GDP by 1.3% and more) have a positive effect on the volume of standard loans provided by financial institutions. Specifically, it was measured that in midst-quarterly growth of real GDP by at least 1.3% occurs to growth of the volume of standard loans in the Czech Republic. Furthermore, it was measured that at the volume of standard loans does not affect the interbank rate PRIBOR neither the volume of loss-making loans, which leads to negative coefficient, which indicates that in the period of economic boom apparently decline the volume of loss-making loans.

In Annex C, is given the next model of OLS regression, where as explained variable is again the total volume of standard loans in the Czech Republic and the explanatory variables include real GDP, PRIBOR and the volume of loss-making loans. In this case, artificial variable of real GDP (where number 1 is in the time series indicated in the midst-quarterly decline of real GDP) negatively affect the volume of standard loans provided by the financial institutions.

3.1 Results

From the output of the model results that in midst-quarterly decrease of real GDP there is a decline in the volume of standard loans in the Czech Republic. Furthermore, it was measured that on the volume of standard loans does not affect the interbank rate PRIBOR neither the volume of loss-making loans, where was once again measured negative coefficient.

From the outputs of the models from the annexes B and C result that the total volume of standard loans in the Czech Republic provided by financial institutions tends to rise in times of economic boom (when is midst-quarterly growth of real GDP minimally by 1.3%), while decreases in the period of economic contraction (when is midst-quarterly decrease of real GDP), thus the null hypothesis No. 1 is rejected and the alternative is hereby approved. The financial sector in the Czech Republic, according to above mentioned findings presented to behave pro-cyclical.

We can therefore say that along with growing number of provided loans the Bank creates a higher number of accumulated depreciation. If the Bank has a higher number of provided loans, it is also higher probability of increase of non-repayment risk hence the increase of credit risk, and therefore the Bank creates a higher accumulated depreciation.

I am aware of the fact that in order to be able to make relevant conclusions, it would be necessary to carry out a much larger analysis with a larger number of variables. In that case, then the results should show the extent to which these factors affect the behavior of the banks. Furthermore, it is necessary to take into account the fact that the results may not have significant informative character mainly due to the fact that the data used for research are not so long, in order to take stock of a sufficiently long period, which would include the whole economic cycle.

CONCLUSION

This contribution deals with the issue of credit risk management in banks in the Czech Republic and their determinants. In each individual chapters are at first analyzed the basic risk management attributes, determinants and indicators associated with credit risk, value adjustments to that type of risk, the number of loans in default and reciprocal links of individual variables. In addition, the allowance is focused on the development of credit risk and its changes over the economic cycle. Study suggests possible link of credit risk with financing in various sectors during the phases of the economic cycle.

The aim of the project and its main focus was the description of the specific procedures of credit risk management in Komerční banka, a.s. Česká spořitelna, a.s. and Československá obchodní banka, a.s. In addition, there are listed not only their approaches to the risk measurement, its provisioning and minimizing, but also a description from the perspective of capital adequacy and method of making adjustments. Subsequently, the project shows the development of making adjustments against the number of granted loans and against the development of gross profit in each bank subjects. Another objective was to make analysis, on whose basis will be found out if banks behave pro-cyclical.

Applied regression analysis indicated that the analyzed subjects make adjustments in pro-cyclical manner. In the case that would be made a larger type of regression analysis, which would include more variables and all the banking entities in the Czech Republic and has proved to be the case, as well as for other banking entities, we could assume that dynamic accumulated depreciation might contribute to the economy in the form of creating buffer, from which it would be possible to draw on in times of economic downturn. In practical terms, the dynamic accumulated depreciation would be problematic from series of reasons, and it would have to be preceded by ensuring its compliance with other elements of the international framework of financial institutions regulation.

Annex

Annex A - Test investigation of stacionarity for a time series of the total volume of standard loans to financial institutions in the Czech Republic

Annex A

Null Hypothesis: SUVERYPP has a unit root

Exogenous: Constant

Lag Length: 0 (Automatic - based on SIC, maxlag=9)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-3.092764	0.0348
Test critical values:		
1% level	-3.596616	
5% level	-2.933158	
10% level	-2.604867	

*MacKinnon (1996) one-sided p-values.

Note: the time serie of the total volume of standard loans in the Czech Republic (SUVERYPP) was tested by a widespread examination of the ADF stacionarity test, while from the result is evident, that the null hypothesis is rejected and SUVERYPP so does not have a unit root.

Source: Czech National Bank

Annex B - OLS regression Model, where as the dependent is a time series midst-quarterly change of total volume of standard loans in the Czech Republic

Dependent Variable: SUVERYPP

Method: Least Squares

Date: 03/16/13 Time: 09:50

Sample (adjusted): 2002Q2 2012Q4

Included observations: 43 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
RHDPP0	1.813058	0.851860	2.128352	0.0397
ZTUVERYP	-0.023358	0.045573	-0.512543	0.6112
D(PRIBOR)	0.487124	0.857332	0.568186	0.5732
C	2.080510	0.481479	4.321083	0.0001
R-squared	0.140673	Mean dependent var		2.551126
Adjusted R-squared	0.074571	S.D. dependent var		2.587080
S.E. of regression	2.488750	Akaike info criterion		4.749846
Sum squared resid	241.5612	Schwarz criterion		4.913679
Log likelihood	-98.12170	Hannan-Quinn criter.		4.810263
F-statistic	2.128123	Durbin-Watson stat		1.258114
Prob(F-statistic)	0.112260			

Note: OLS regression model, where as the dependent variable entered a time series of midst-quarterly change of total volume of standard loans in the Czech Republic (SUVERYPP) in %, while the independent variable in the form of dummy variables of real GDP in the Czech Republic (RHDPP0, where the number 1 is in time series shown in growth of real GDP by 1.3% and more) is statistically significant with a positive sign, while the remaining independent variables in the form of midst-quarterly change of total volume of the loss-making loans in % and the first gap of time series PRIBOR are not statistically significant. According to the DW model test reports autocorrelation of residues which could help the inclusion of other statistically significant variables to the model.

Source: Czech National Bank

Annex C - OLS regression Model, where as the dependent is a time series midst-quarterly change of total volume of standard loans in the Czech Republic

Dependent Variable: SUVERYPP

Method: Least Squares

Date: 03/16/13 Time: 20:35

Sample (adjusted): 2002Q2 2012Q4

Included observations: 43 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
RHDPP1	-2.274365	1.026416	-2.215833	0.0326
ZTUVERYP	-0.005545	0.047108	-0.117710	0.9069
D(PRIBOR)	0.649504	0.842692	0.770750	0.4455
C	3.043072	0.422593	7.200958	0.0000
R-squared	0.148111	Mean dependent var		2.551126
Adjusted R-squared	0.082581	S.D. dependent var		2.587080
S.E. of regression	2.477957	Akaike info criterion		4.741154
Sum squared resid	239.4706	Schwarz criterion		4.904987
Log likelihood	-97.93481	Hannan-Quinn criter.		4.801570
F-statistic	2.260197	Durbin-Watson stat		0.985567
Prob(F-statistic)	0.096619			

Note: OLS regression model, where as the dependent variable entered a time series of midst-quarterly change of total volume of standard loans in the Czech Republic (SUVERYPP) in %, while the independent variable in the form of dummy variables of real GDP in the Czech Republic (RHDPP1, where the number 1 is in time series shown in real GDP decline) is statistically significant with a negative sign, whereas the remaining independent variables in the form of midst-quarterly change of total volume of the loss-making loans in % and the first gap of time series PRIBOR are not statistically significant. According to the DW model test reports auto-correlation of residues which could help the inclusion of other statistically significant variables to the model.

Source: Czech National Bank

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THE WORLD EXPOS AS A PLATFORM FOR ECONOMIC DEVELOPMENT

Linda Kelle

Latvia University of Agriculture, Faculty of Economics

18 Svetes Street, Jelgava, Latvia

Abstract

The aim of this research is to explore and to analyze The World Expos (expositions) as a platform for event's host city economic development. The World Expo (Exposition) is one of the world's oldest international events and is the largest gathering of people on the whole planet – Expos are unique events of international cooperation dedicated to the communication of innovation and promotion of a global dialogue on themes that engage the entire world community. The research concludes that The World Expos are powerful mega-events with multiple effects on economic development of the host city.

Key words: *The World Expo, mega-events, economic development*

1. INTRODUCTION

World Expos are the largest and broadest of mega-events. They are powerful instruments of urban regeneration bringing significant benefits to the host city or country in many areas, for example, infrastructure development, economic, social, cultural, political and others. Expos allow people to explore the world outside of their everyday experience - different cultures, new scientific advancements, and new inventions. A World Expo is always centered on a broad, universal theme, which exhibitors must keep in mind when constructing their pavilions at an Expo. In the past several Expos, there has been a strong focus on environmental sustainability.

World Expos take place every five years and last for six months. The most recent World Expo was held in Shanghai in 2010. A 528-square kilometer Expo site welcomed a record 73 million visitors, which is around 400,000 per day. This was an event that gathered people from more than 200 countries side by side, promoting their culture, values and knowledge by showcasing the theme “Better City, Better Life”, creating chances for exchange, cooperation, development and understanding.

This paper aims to explore and to analyze The World Expos (expositions) as a platform for event's host city economic development. The main goal of any World Expo is to attract visitors, and the tourism impacts of a World Expos are significant. Also local businesses see an increase in demand for goods and services, increase in employment at these businesses, as they require more workers to provide these goods and services. All this lead also to more state and local tax revenues. (World Expo 2020 Silicon Valley USA Economic impacts 2011). Important factors such as culture, diplomacy, entertainment, science, technology, architecture, materials, art, modernisation, efficiency, cultural and scientific development etc. can be strongly associated with the World Expos.

This paper is based on existing literature, different researches, scientific publications and other materials. The research is mainly based on the monographic descriptive method and methods of analysis and synthesis. The research paper provides a list of important factors that makes The World Expos a significant economical, social and political catalysts.

2. MEGA-EVENTS AND WORLD EXPOS – THEORETICAL ASPECTS

The Convention relating to International Exhibitions says: „An exhibition is a display which, whatever its title, has as its principal purpose the education of the public: it may exhibit the means at man's disposal for meeting the needs of civilization, or demonstrate the progress achieved in one or more branches of human endeavour, or show prospects for the future. An exhibition is international when more than one State takes part in it.".

Since the first Expo, the Great Exhibition of 1851, hosted at London's Crystal Palace, innovations have included telephones, elevators and geodesic domes. As for the benefits an Expo can deliver both to its host nation and those that choose to exhibit, these range from tangibles such as economic gains to less quantifiable, but no less significant, advances in areas such as cultural relations and soft diplomacy. (Hughes, 2012)

World Expos are the largest and broadest of mega-events. They are powerful instruments of urban regeneration bringing significant benefits to the city in many areas: infrastructure development, economic, social, cultural, political, etc. Two key characteristics make them place-making events of a unique kind: they exist and communicate through the medium of buildings, objects and displays; they are theme-based and therefore bring new content and new meanings to a place through visions, solutions and practices that are brought together to create an educational experience for millions of visitors (The BIE and World Expos).

Dornscheidt, Groth and Reinhard shows the Roche classification of events based on the target coverage and market and media interest criterias (Table 1).

Type of event	Target coverage/market	Media interest	Examples
Mega-event	Global	Global	- World expositions - Olympic games - World championships
Special event	Selected regions in the world/national	International	- Formula 1 races - Wimbledon, US Open - Tour de France - Oscar awards
Hallmark event	Supra-regional/national	National	- National garden shows - Regional wine festivals - National gymnastics tournaments
Community event	Local to regional	Local/regional	- Regional garden show - Regional wine festivals - City carnivals/festivals

Table 1. Classification of events (Dornscheidt, Groth and Reinhard 2005)

Mega-events generate global interest by focusing the attention of a global target. TV channels around the world report on this kind of event. **Special events** aim to cover national or international market and attract national and international media attention. **Hallmark events** have a national or supra-regional focus. This category includes sports events, festival weeks and major cultural events. **Community events** take place in a local-regional context and are primarily of interest to a local audience and media (Dornscheidt, Groth and Reinhard, 2005).

Horne & Manzenreiter (2006) defines two key characteristics that mega-events should hold: first, that the host nation, region or city should experience significant alterations to the regular cycle of events that take place in that place; and second, that such events should attract media representatives and viewers from numerous nations across the world.

Bramwell (1997) points out that mega-events are considered to be large and internationally-known events such as the Olympics and World Fairs and that term mega-event describes large events of world importance and high profile which have a major impact on the image of the host city. As well he states that mega-events are also usually viewed as a highly significant tourist asset for a host area, which means that events directly attract participants and visitors resulting in a raised profile of the area.

Expos today have become a unique platform for international dialogue, for public diplomacy and for international cooperation. It is a unique large-scale international event, which rules are approved by governments of the organization member states. The uniqueness of Expos is based on three pillars: their universal scope; their international scale; their lasting cultural and urban legacy. As a result, Expos provide true transformational experience for visitors, enabling a renewed dialogue with citizens and contribute to strengthening cooperation amongst countries. (Why an Expo) Through the Expo, both – the organizing country and the participating countries have a platform for:

- bringing their policies and initiatives in specific thematic areas to the attention of the citizens by translating them into practices, innovations, policies, solutions as well as visions for the future in a multilateral perspective;
- establishing a transparent framework for accountability in all thematic areas in which Expos place a particular focus on quality of life and on sharing best practices for the local and international benefit;
- to express the need for a balance between local and global solutions, in particular in areas where each dimension of the Expo theme depends on different environments, different contexts and different cultures. (Why an Expo)

At the beginning, the Expo host country didn't receive any assistance at a governmental level. The size and content of each exhibition was not standardized, meaning an international coordinator was needed to step in. Loscertales (2012) points out that two important conferences gathering experts from different industries and public representatives were organized in Paris in 1907 and 1908. It defined the key interests of Expos as business opportunities, technological progress, and international public relations. Political powers could see the benefit and were quick to become involved, so that each event could be more regulated and sustainable.

This is why the creation of **the Bureau International des Expositions (BIE)** was launched by governments - in 1912 by Germany, setting up a diplomatic conference on that topic. The Berlin Conference of 1912 saw 16 committed countries participate and defined the frequency, the geographical rotation and the terminological foundations of the Expo. Unfortunately the outbreak of the First World War hampered the progress of the events, until 1927, when the International Chamber of Commerce

revived the idea and France seized the opportunity to continue its progress. Thus, in 1928, an international conference gathering 40 countries was held in Paris and provided the very first example of Expo regulation, the 1928 Convention, the legal instrument that regulates the organization today (Loscertales 2012).

The Bureau International des Expositions (BIE) is the international governing body responsible for overseeing and regulating the calendar, the bidding, the selection and the organization of World and International Expos. The BIE fulfills three critical tasks to ensure:

1. the correct application of the Convention and of all relevant regulations relating to Expos;
2. the transfer of knowledge and best practices between an Expo and another;
3. the development of the Expo framework and principles to ensure that these events remain relevant with the changing times (The BIE and World Expos).

The BIE recognizes three types of Expos, which differ in terms of size, forms of participation and thematic aspect:

- **World Expos** (or “International Registered Exhibitions”): They take place every 5 years and have a duration of 6 months. Participants build their own pavilions and the size of the site is unlimited;
- **International Expos** (or “International Recognized Exhibitions”): They are held between two World Expos and their duration is three months. The organizers build all the pavilions and rent them to participants, and the size of the site is 25 hectares maximum;
- **Horticultural Expos**: They follow the rules of International Expos. The theme is purely horticultural and participation takes the form of a garden presentation.

These Expos have in common the types of participants, which include nations, international organizations, corporations, civil society organizations, etc., as well as the core values of education, innovation and cooperation stated in art.1 of the BIE Convention. As such each Expo allows to create a platform for an international dialogue between citizens, states and institutions around a topical theme of universal interest; provides a laboratory for future experimentation for new ideas, concepts and innovations; help strengthen international relations on many dimensions: economic, cultural, political, scientific, educational, etc. (The BIE and World Expos).

Since 1994, Expos have also been declared by the BIE General Assembly as key instruments for education for sustainable development. To host an Expo, a region, via its national government, must secure the approval of the BIE.

3. THE WORLD EXPOSITIONS OVER THE TIMES

The very first world exhibition was the „Great Exhibition of the Works of Industry of All Continents”, held in London in 1851. It was organized, in the words of Prince Albert, ‘to give us a true test and a living picture of the point of development at which the whole of mankind has arrived’. The exhibition building, the Crystal Palace, was a gigantic 503 meters in length crystalline web of mass-produced iron and glass, a vast display cabinet containing over 100,000 exhibits, ranging from industrial machinery to raw materials, from fabrics to furniture. More than six million people visited the exhibition in six months and 25 countries took part (Murphy and Ciric 2010). The profits from the first Great Exhibition in

London 1851 were used to found the city's famous Natural History Museum, Science Museum and Victoria and Albert Museum (Hughes 2012).

Analysts have identified three distinct epochs of the World Expos:

- the era of industrialisation (1851-1938), when inventions including the telephone were first shown;
- the era of cultural exchange (1939-1987), the most famous of which was in Montreal in 1967;
- the era of nation-branding (1988-present) when Spain, for example, used Seville in 1992 to demonstrate its commitment to modernity and democracy post-Franco.

More recently, countries incorporate elements of all three eras, with Expos used to showcase new inventions, to facilitate cultural exchange based on a theme, and to drive city, region and nation-branding. An early-day example of the latter is the Eiffel Tower. Built in 1889, it has become both a global cultural icon of France and one of the most recognizable structures in the world. Named after its designer, engineer Gustave Eiffel, the tower was built as the entrance arch to the 1889 World's Fair. Another notable example is the Space Needle in Seattle, built for the 1962 World's Fair. Today, an Expo's cultural value and the resultant economic benefits provide evidence of the events' significance (Loscertales 2012).

From their origins as international gatherings of states showcasing industrial power and technological innovation, World Expos have since evolved to become platforms for the international community to debate, probe, share best practices, and explore new solutions for the challenges that our planet faces. Loscertales (2012) highlights that as global forums that are educational, entertaining, and accessible to the general public, Expos serve as a powerful instrument of public and cultural diplomacy, more specifically, an Expo can establish the host city's leadership on the event's central theme. Expos enable the engagement of citizens to find solutions to the problems of the day.

After the 1933 World Expo Chicago has set up its theme, the following expos also began to have their special themes. The theme is now the core of an Expo. It unites different participants – scholars, experts, professionals, and ordinary citizens; it unites different business sectors and national borders. This is why selecting a powerful theme is a key to the success of an Expo. Table 2 shows the history of the World and International Expos.

Time	Host	Country	Theme
1851	London	Britain	---
1853	New York	America	---
1855	Paris	France	---
1862	London	Britain	---
1867	Paris	France	---
1873	Vienna	Austria	---
1876	Philadelphia	America	---
1878	Paris	France	---

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1889	Paris	France	---
1893	Chicago	America	---
1900	Paris	France	---
1904	St. Louis	America	---
1915	San Francisco	America	---
1915	Panama	Panama	---
1926	Philadelphia	America	---
1930	Liege	Belgium	---
1933-1934	Chicago	America	A Century Progress
1935	Brussel	Belgium	Peace Through Competition
1937	Paris	France	Arts and Technics in Modern Life
1939-1940	New York	America	Building the World of Tommorrow
1958	Brussels	Belgium	Evaluation of the World for a More Human World
1962	Seattle	America	Man in the Space Age
1964-1965	New York	America	Peace Through Understanding
1967	Montreal	Canada	Man and His World Land
1970	Osaka	Japan	Progress and Harmony for Harmony for Mankind
1975	Okinawa	Japan	The Sea We Would Like to See
1982	Knoxville	America	Energy Turns the World
1984	New Orleans	America	The Worlds of Rivers-Fresh Water as a Source of Life
1985	Tsukuba	Japan	Living and Environment Household Science and Technology for Human Beings
1986	Vancouver	Canada	World in Motion-Would in Touch
1988	Brisbane	Australia	Leisure in the Age of Technology
1990	Osaka	Japan	Human Beings and Nature
1992	Sevilla	Spain	Age of Discovery
1992	Genova	Italy	Christopher Columbus-the Ship and the Sea
1993	Taehung	Korea	A New Path Forward
1998	Lisbon	Portugal	Oceans-A Heritage for the Future
2000	Hannover	Germany	Humankind, Nature, Technology and Development

2005	Aichi	Japan	Nature's Wisdom
2010	Shanghai	China	Better City, Better Life

Table 2. The history of the World Expo's and themes (World Expo History).

For the upcoming Expos –World Expo 2015 in Milan, Italy, and the International Expo 2017 in Astana, Kazakhstan and World Expo 2020 that are under competition for host countries – their themes touch up on almost every essential aspect of human society.

Milan 2015's theme "Feeding the Planet, Energy for Life" will talk about the importance of agriculture to our survival, such as the over-use of resources, unequal access to food, and imbalances between consumption patterns. The theme of the International Expo 2017 in Astana, Kazakhstan, will be "Future Energy". With rich energy resources, the country feels more equipped to lead the research for renewable and sustainable development (Loscertales 2012).

The World Expo 2020 is still under competition – the candidate countries (and cities) were presented in November 2011 in Paris and in November 2013 the BIE will announce the country which will host the World Expo 2020. For the World Expo 2020, Loscertales (2012) tells that Sao Paulo of Brazil has chosen the theme "Power of Diversity, Harmony for Growth" to allow participating countries to present their innovative social and economic policies, environmental programs and forthcoming technologies, in areas such as transportation, energy, information technologies and urban thinking. Yekaterinburg of Russia have chosen to present "The Global Mind" to survey world opinion with the goal of communicating the values, hopes, dreams and aspirations of people from every culture and nation across the world in a single discussion. Ayutthaya of Thailand want to propose the theme "Balanced Life, Sustainable Living", with an emphasis on harmony between people, culture, technology and the natural environment. Izmir of Turkey concentrates on the world's healthcare problems by proposing the theme "New Routes to a Better World, Health for all". It will look primarily at health issues, while focusing in a rather positive manner on quality of life issues. And finally, Dubai propose "Connecting Minds, Creating the Future" to show humanity's success in encountering challenges and using our imagination and creativity for social progress.

4. IMPORTANCE OF THE WORLD EXPOS

Hosting a large mega-event potentially offers both – direct and indirect economic benefits. Direct benefits may include capital and infrastructure construction, improved transportation, telecommunication and other significant infrastructure elements.

In the 21st century alone, the interest in World Expos has continued, as reflected by the consistently high numbers of visitors attending the event in the six months of its duration: Hanover 2000 (19 million), Aichi 2005 (22 million), Shanghai 2010 (73 million). Even the smaller scale Expos such as Yeosu 2012 has welcomed over 8 million visitors during a three-month period (Why an Expo).

Numerous authors, including Roche (1994, 2000), Sola (1998), Matheson & Baade (2004), Coates & Humphreys (1999) and Dolles & Soderman (2008) have produced analyses of the purported influences that mega-events could, should and have had on host nations (Chen 2008).

Matheson and Baade (2004) suggest that mega-events offer hosts the chance to put the country (or city) on the map, providing significant international exposure and discuss the possibility that events can also be seen as political events that serve to showcase the economic, political, and cultural power or as a signal that a country has arrived as a major figure on the international scene.

Matheson (2006) points out that studies of how mega-events affect economies can be defined into two types, *ex ante* (pre-event) and *ex post* (post-event). These studies tend to differ in objectives, methodology and outcomes and proponents of each invariably write off the results of the other type as misguided or inaccurate and future researches in this field are needed.

Hughes (2012) tells about the infrastructural development of host nations and cities. Expo 1967, for example, led to the construction of infrastructures that were essential to host city Montreal's growth, such as the Décarie autoroute and the Louis-Hippolyte Lafontaine bridge and tunnel. That Expo even inspired the name of baseball team the Montreal Expos. In addition, thanks to the annual Man and His World exhibition, the Expo site has become the beautiful Jean-Drapeau Park, a posthumous tribute to the individual most associated with this great achievement. Significantly, Expo 1967 contributed enormously to the sense of pride of Montrealers and Canadians in general.

However, not all Expos have been regarded as memorable successes. A total of 40 million visitors were expected at Expo 2000 in Hanover, but final numbers fell significantly short, leading to a financial deficit of about US\$600m. That said, factoring in direct and indirect macro-economic effects, economists at international strategy consulting firm Roland Berger concluded that the benefits for Germany of staging the fair actually amounted to 5.47 billion euros (US\$7.3bn). Since then, the southeastern area around Expo Plaza has been transformed into Hanover's new centre of information technology, design, media and arts – a development that generates a continuing economic legacy for the city (Hughes 2012).

Elsewhere, the benefits for some of the participating nations were compelling. According to a report by the internationally regarded marketing guru Tjaco Walvis, while the Dutch pavilion at Expo 2000 cost 35 million euros (US\$47m) it potentially generated some 350 million euros (US\$470m) for the Dutch economy, with 92 per cent of visitors saying they were now more likely to either visit the Netherlands or look to do business there (Hughes 2012).

The theme of the Shanghai Expo 2010, on both banks of the Huangpu River, was “Better City – Better Life”. It involved the largest number of countries - 192 countries and 50 international organizations- and was the most expensive in the history of World Expos. By its end, more than 73 million people had visited, beating the previous record of 64 million in Osaka in 1970, with as many as 1.03 million on just one day – 16 October, 2010. About 5.8 per cent of the visitors – 4.25 million – were foreigners. Six new subway lines were opened between 2008 and 2010. Four thousand new taxis were bought. It was a monumental opportunity to capitalise on tourism, and overall revenue in this sector rose 13 per cent year-on-year during Spring Festival to 2.1bn yuan (US\$332.7m). It cost 11.96bn yuan (US\$1.89bn) in operating costs to run the event, the most ever for a World Expo, but it made a profit of more than 1bn yuan (US\$158m). Total revenue was 13bn yuan (US\$2.06bn), with 7.36bn yuan (US\$1.2bn) coming from admission fees and almost 4bn yuan (US\$633m) from sponsorship, according to the China Daily newspaper. The city spent a further 19.74bn yuan (US\$3.12bn) preparing and building the 5.28 sq km site, exceeding the budget of 18bn yuan (US\$2.8bn) (Hughes 2012).

Influential people at the closing ceremony included Sri Lanka's and Nepal's presidents, the prime ministers of Hungary, Finland, the Bahamas and Lesotho and Ban Ki-moon, Secretary-General of the United Nations. In a speech, Ban said: “Thanks to this Expo, millions of people learned about the

possibilities for making our cities healthier and safer, cities that better integrate nature and technology, cities that offer their citizens cleaner air and water, and better lives all round.” (Hughes 2012).

Shanghai smashed all records by the visitor numbers with 73 million in 2010, but the figures for Chicago’s World’s Fair in 1893 are arguably more impressive. It attracted 27 million people, a quarter of the population of the United States, at a time when people couldn’t travel with ease.

Important fact is also that even Vancouver didn’t make money at the time, it is generally accepted that the Expo 1986 was a major catalyst in changing the perception of the Canadian city from a provincial conurbation to a place with genuine global aspirations. It is now regularly ranked as one of the best cities to live in on earth (Hughes 2012).

As Bramwell (1997) indicates, research studies of mega-events as components of tourist destinations highlight the need for effective strategic planning. Hall (1989) underlines that planning is an essential ingredient not only for the short term success of the event itself but also in realizing the longer term benefits that can accrue to a community in the holding of such events. Getz (1989) suggests that evidence of the failure of planning or a lack of planning in the hosting are seen in the costly „white elephants” that are often left, once an event has concluded.

As Matheson (2006) acknowledges “mega-events bring intangible psychological value” such as the promoting a certain image for the host city. Expo gives higher global recognition that can induce greater foreign tourism. Matheson & Baade (2004) states that mega-events can have different effects on developed and developing nations; however, there is little substantive evidence in place to support this. In fact, there are often wild variations in estimates of the overall effect of mega-events.

Bramwell (1997) points out some important factors that cities considering investing in a mega-event or other large event should keep in mind, for example, setting a clear formal plan and doing sufficient research as well identifying a strategic vision; doing research and monitoring before and after a mega-event; integrating a mega-event with broad development planning.

5. CONCLUSIONS

1. From the first World Expo held in London in 1851, it has been held successively for many years.
2. Mega-events are seen to have major tourism impacts for host city and country.
3. The most expensive aspects of World Expos are the building venues and infrastructural improvements, for example, telecommunication and transportation sectors, so it could be expected that host city has a positive impacts on employment, with construction and retail sectors benefitting the most as venues are built and incoming tourists served.
4. World Expos have the potential to produce a number of economic outcomes, dependent on numerous factors. Some mega-events can provide large economic benefits such as increased GDP, employment, retail opportunities and tourists; however, without proper planning, an event can fail.
5. Mega-events and World Expos have the potential to produce the intangible benefits, identifying the change in worldwide image and recognition that can be sparked through the exposure provided by the global media. Image promotion involves improved social structure and boosts worldwide recognition.

6. Overall, it appears that if handled correctly and planned suitably, mega-events and World Expos can provide huge benefits for their host nations.

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**TRENDS IN SEARCH ENGINE RANKING OF SELECTED SLOVAK UNIVERSITIES
AND SEO PERFORMANCE IMPLICITLY**

Andrej Miklošik

Department of Marketing, Faculty of Commerce, University of Economics in Bratislava

Dolnozemska cesta 5, 85235 Bratislava, Slovakia

Abstract

In the article we analyze the results of research of search engine results pages positions of Slovak university faculties on selected key words. Especially we focus on comparing the results from two periods – 2012 and 2007. We analyze the data from different perspectives to determine the overall development trends. This will implicitly give us the image of the situation regarding search engine optimization activities of the universities. The aim of the article is, based on the trend analysis, generalize the findings and point at the possible recommendations for the future implementation of e-marketing tools in this area.

Key words: e-marketing, search engine marketing, university marketing

1. INTRODUCTION

Behavior of the Internet population changed slightly in the recent decade. People are using full text search engines to find the information, services and products they are looking for. In the past few years, two new major trends can be observed:

- Using social media to find information regarding the final buying decision and
- Multiscreen as the new trend when analyzing the processes to find the information and make the order.

People tend to spend more time on the Internet social media. They are searching for the tips from their friends which influences their decision making. According to recent HubSpot study, 71% of consumers are more likely to purchase if they get positive references from social media (Ewing, 2012). However social media are not a competitor of the search engines, they are complementary. When a user finds an information or source on social media, usually he uses search engines to find more information on the topic or to research competitive products or solutions.

The second major trend is multiscreen. People use more screens to perceive information: television, computer at work, computer at home, laptop, tablet, smart phone. This is a sample scenario of how user gets to the final buying decision:

1. He sees an advertisement in TV.
2. He runs search on smart phone tablet to research more information on the topic.
3. Next day at work he opens browser and compares the products on a bigger screen.
4. He buys the product at work or at home when he comes to his pc, notebook or tablet.

This process can have more steps and they can be repeated. In this chain of actions, when user finds quick information on smaller screens and finalizes the decision using a bigger screen, search is the link between these devices. On each device user typically runs search to find the website he was looking at on the device a while ago. According to Meunier, 38% of daily media interactions occur on a smartphone. Thus search and mobile search is very important to link the various devices and screen together to find the relevant information (Meunier, 2012). The visualization of this trend is shown at the figure 1.

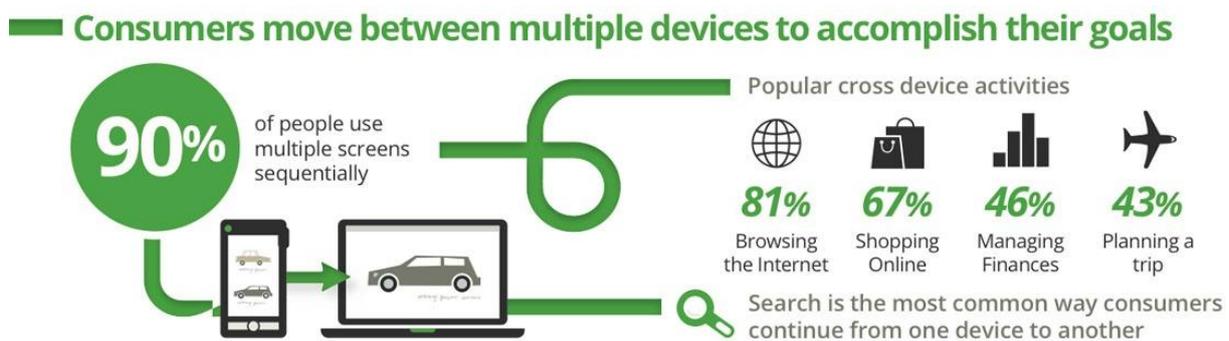


Figure 1. Multiscreen trend in marketing

Source: (Google.com, 2012)

These two trends in user behaviour even highlight the importance of using full text search to find information. All organizations should pay attention to the search engines page results (SERP) positioning to reach the audience. The aim of this article is to analyze the trends in the search engine rankings on Slovak university faculties and to prepare recommendations on improving the search engine optimization (SEO) implicitly.

2. TRENDS IN SEARCH ENGINE RANKING

In 2007 and 2012 we realized research on the SERP positioning of selected Slovak university faculties. We analyzed the positions of 21 faculties, the complete list can be found in Appendix 1 of this article. We analyzed the position of each faculty website on 8 keywords related to economy studies. We used different methods to gather the results, including both manual and automated. We used the tool Seotools.sk to get automated results for SERP positions (Seotools, 2012). We applied the methodology as described in a case study Benchmarking of a website, part I - SERP (Miklošík and Hvizdová, 2012). We list the complete results of the empiric study in the Appendix 2.

We list the final results in the table 1. PI is the performance index which was calculated as following:

$$\text{reached SERP positions} / \text{best possible SERP positions} \times 100$$

As can be seen from the results, none of the solutions reached the value of the performance index of more than 33%, which would be one third of the potential achievable score. If we look at the results diapason, that is very wide and score websites of some faculties equal to or approaching zero.

Interpretation of these results tell us that websites have in this respect (the measurement of achieved positions in the search results, which is consequential primary criterion for evaluating SEO performance), very poor performance. This means that if their potential customers, thus prospective students seek information via a search engine Google.sk, in most cases they do not find the faculty page and do not go to the web page of the particular faculty. Faculties thus lose many potential visitors who would come to the site of the faculty via search results. Search is currently the strongest source of customers on the Internet and it is necessary to seriously start working with it. If we compare the measured and evaluated results in this study with the perception of the situation in this area, which we found through a survey questionnaire, we find disproportion as well as correlation. We addressed several question to the faculty representatives aimed at determining the current state in the field of marketing and Internet marketing at the faculties. In the question number 8 we investigated the senior staff satisfaction with the website of the faculty. Up to 53% of respondents said they are satisfied with the website. However, if we look at the findings of the performance objectively, certainly it is not possible to be satisfied at all. In case that the responsible person interview possessed the relevant information, he could not feel satisfied. As regards the implementation of measures and the use of instruments in the field of SEO, the answers to question number 15 show that only 94.7% of faculty do not use these tools, with almost a third of respondents do not know what SEO is. We list the complete results of performance index measured in the table 1.

ID	PI	Rank
1	8,6	17
2	14,7	10
3	11,0	12
4	15,4	9
5	19,1	7
6	24,0	4
7	24,3	3
8	24,5	2
9	30,6	1
10	10,0	14
11	3,9	18
12	15,7	8
13	11,8	11
14	0,0	20
15	1,5	19
16	19,9	6
17	22,8	5
18	10,3	13
19	8,8	16
20	0,0	20
21	9,6	15

Table 1. Performance results (PI) and rank of the faculty websites

It is clear that faculties, if they want to be successful in the long struggle for the student, will have to start paying attention to e-marketing tools and start working on the improvement in SERP positions. Significant improvements are possible for each of the analyzed websites, but are significantly acute for faculties, which achieved a performance index below 20%. There are 16 faculties with such poor results.

Given the findings of the study in 2012, we were interested to determine, if an even minimum positive trend could be observed comparing the results of 2012 and 2007. Given that research in this area started already in 2006, we could compare a large base of measured data from several periods. We realized, therefore, a comparison of the faculties' performance between 2012 and 2007.

In 2007, we measured the results (positions) in SERP within the first to third results pages. The maximum measured value was therefore No.30 position. Data from 2012 are thus transformed into the same scale to be able to perform the direct comparison. Complete results of mapping the positions of the two reference years are presented in Appendix 2.

The average position in 2012, according to this methodology was 27.71, where in 2007 the average positions of 27.77 was reached. Over a period of five years only minimal improvement in the average position of 0.06 can be observed.

We also examined the trends in the development in terms of change in the total number of positions, and in the top 10 results (SERP), in the top 20 and TOP 30 of the SERP. We visualize the results in the following figure. As can be seen from this analysis, in 2012 there were 2 more TOP 10 positions reached compared to 2007. Frequency of the TOP 20 and TOP 30 remained unchanged.

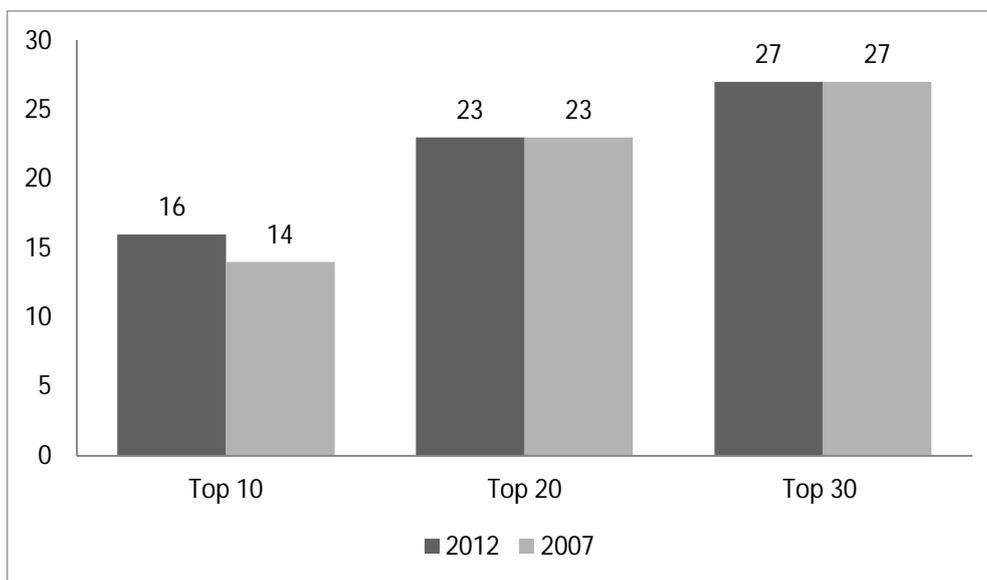


Figure 2. Development of overall number TOP10, TOP20 and TOP30 positions

Another view on data obtained and evaluated is the look at how many top 3 placements were achieved in compared years. The first three positions are crucial in SEO, because the website receives the majority of users from these positions. Only a small percentage of users reflect to the next. According to available statistics, only 1-2% of users searching for information use these results and click to go to the website.

We have compiled a graphic interpretation of the measured values and visualized the number of TOP 3 positions obtained. The results are displayed at the figure 3. In 2012 there were only two No.1 positions in Google SERP reached compared to 2007 with three NO. 1 positions. If looking at NO. 2 positions, worsening can be observed as well, where the faculties fell from three No. 2 positions to just one. From this perspective, it can be concluded that there has been a deterioration since the No.1 and No. 2 positions are much more valuable than the No.3 positions which were gained in 2012.

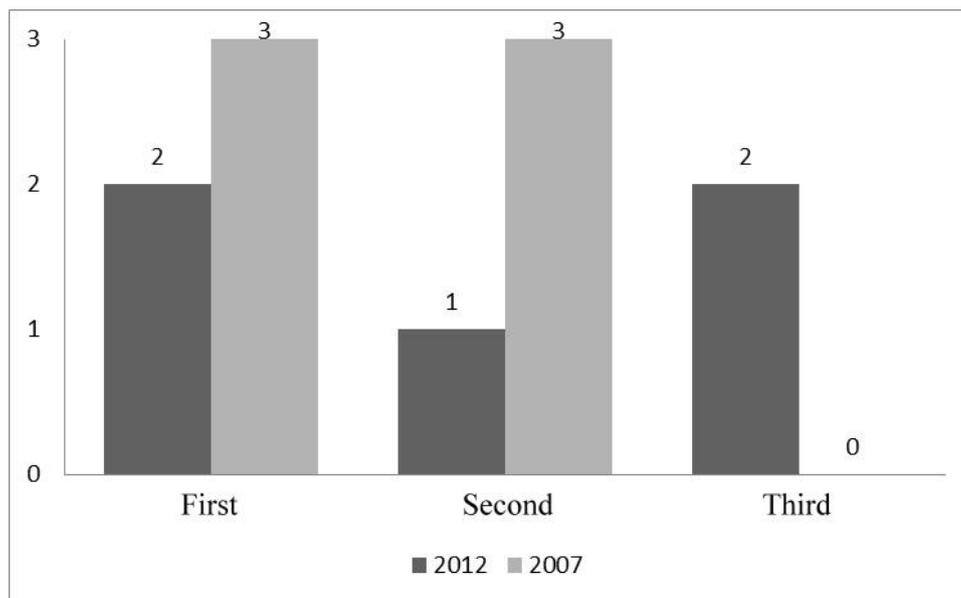


Figure 3. Number of TOP3 positions in SERP

Another view, which can help us to get an objective interpretation of the results measured is the frequency of positive and negative changes in the faculty average positioning in the SERP. At the figure 4 we visualize the sum of the positioning improvements and worsening in three categories: up to 10%, between 10 and 20% to 20%.

As can be seen from this perspective, a slightly positive development can be observed in these data, since as many as nine times there have been improvements average position (five versus deterioration) in the range of 0-10%. In the middle category the changes are balanced and in the third category, the most important changes, we can see one worsened position. This means in overall, that 12 faculties have improved their average positioning in Google SERP on keywords analyzed and 9 faculties have worsened their results.

3. CONCLUSIONS

Based on the results of research we have formulated our key conclusions and recommendations, which are almost universally applicable to all faculties and their application should result in a dramatic increase in the quality of web presentation of the faculty and implemented e-marketing activities.

1. Enforce systemic implementation of marketing activities at the faculty. An important part of this activity is the allocation of human resources capacities and increase of budgets, which are now minimal compared with the commercial sector.
2. Involve experts in e-marketing. Internal and / or external experts can provide valuable insight and advice to existing solutions. These are often of poor quality such and multiple improvements are possible in a relatively short time. Experts are also able to correct the distorted perceptions of existing activities by internal faculty workers.
3. Analyze and review results. The faculties are often not aware of the present situation, they are not aware of the trends and thus are not able to influence the situation, apply the best tools and measure the change.

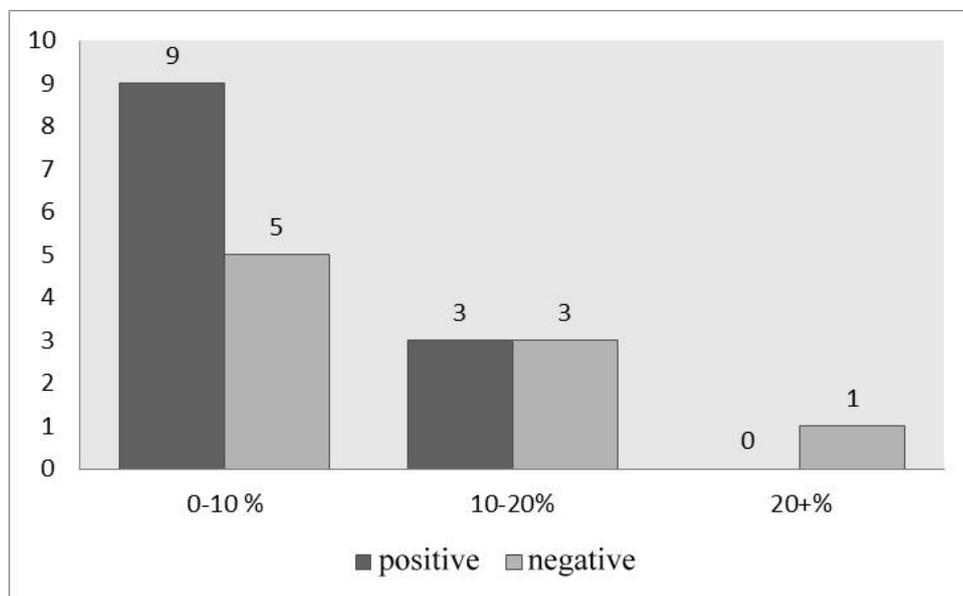


Figure 4. Frequencies of positive and negative changes in comparison of 2012 and 2007

Finally, we can state that the situation in the search engine results positions of the Slovak faculties has not changed dramatically since 2007. Although in commercial sector companies pay more and more attention to using sophisticated tools for optimizing the position in search results, the universities are several years behind. Alarming is the fact, that we analyzed university faculties offering economically oriented studies. These institutions, which should prepare students for management, marketing and other positions, are not able to apply the tools and techniques they want to teach their students.

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APPENDIX 1 COMPLETE LIST OF FACULTIES INCLUDED IN THE EMPIRICAL STUDY

Faculty ID	Faculty name	Acronym	Web site URL
1	Obchodná fakulta Ekonomickej univerzity v Bratislave (EU)	OF	obchodnafakulta.sk
2	Národohospodárska fakulta EU	NHF	nhf.euba.sk
3	Fakulta medzinárodných vzťahov EU	FMV	fmv.euba.sk
4	Fakulta hospodárskej informatiky EU	FHI	fhi.sk
5	Fakulta podnikového manažmentu EU	FPM	fpm.euba.sk
6	Podnikovohospodárska fakulta EU v Košiciach	EUKE	euke.sk
7	Ekonomická fakulta UMB	EFUMB	ef.umb.sk
8	Fakulta manažmentu UK v Bratislave	FMUK	fm.uniba.sk
9	Fakulta ekonomiky a manažmentu Slovenskej poľnohosp. univerzity	FEMUNIAG	fem.uniag.sk
10	Ekonomická fakulta, Univerzita J. Selyeho	SELYE	selyeuni.sk
11	Fakulta masmediálnej komunikácie UCM v Trnave	FMKUCM	fmk.ucm.sk
12	Ekonomická fakulta Technickej univerzity v Košiciach	EFTUKE	ekf.tuke.sk
13	Fakulta manažmentu Prešovskej univerzity	FMUNIPO	unipo.sk/fm
14	Fakulta sociálno ekonomických vzťahov Trenčianskej univ. A. Dubčeka	VSEVTNUNI	tnuni.sk
15	Fakulta verejnej správy Univerzity Pavla Jozefa Šafárika	FVSUPJS	fvsupjs.sk
16	Fakulta ekonómie a podnikania Bratislavskej vysokej školy práva	PANEURO	paneurouni.com
17	Vysoká škola ekonómie a manažmentu verejnej správy v Bratislave	VSEMVC	vsemvs.sk
18	Vysoká škola manažmentu v Trenčíne	VSM	vsm.sk
19	Vysoká škola medzinárodného podnikania ISM Slovakia v Prešove	ISMPO	ismpo.sk
20	Sales Manager Akadémie	SM	sales-manager.sk
21	Bankovní institút vysoká škola	BIVS	bivs.sk

APPENDIX 2 COMPLETE RESULTS ON SERP POSITIONS USING 8 KEYWORDS

2012	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
A	31	31	31	31	31	28	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31
B	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	6	4	9	15	31	12
C	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31
D	31	31	6	26	31	21	13	1	22	31	31	31	31	31	31	31	31	31	31	31	31
E	20	2	31	15	20	6	3	31	31	10	31	5	31	31	31	31	31	31	31	31	31
F	31	31	31	31	31	31	31	31	7	31	31	31	31	31	31	15	5	31	31	31	31
G	31	31	31	31	4	31	31	1	6	31	31	31	3	31	31	31	31	31	31	31	31
H	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31
AVG	29,6	27,4	27,9	28,4	26,3	26,3	25,3	23,5	23,8	28,4	31,0	27,8	27,5	31,0	31,0	25,9	24,4	28,3	29,0	31,0	28,6
2007	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
A	31	31	31	31	31	24	5	1	11	18	12	25	4	14	12	31	31	31	31	31	31
B	31	31	31	31	31	31	18	31	31	31	31	31	31	31	31	2	1	4	31	31	31
C	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31
D	31	31	31	31	31	31	8	9	31	31	15	31	31	31	31	31	31	31	31	31	31
E	31	31	31	31	31	4	1	31	31	2	31	6	31	31	31	31	31	31	31	31	31
F	31	17	31	31	31	31	31	31	31	31	31	31	31	31	31	31	20	31	31	31	31
G	31	31	31	31	31	31	27	9	23	31	31	31	2	31	31	31	31	31	31	31	31
H	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31
AVG	31,0	29,3	31,0	31,0	31,0	26,8	19,0	21,8	27,5	25,8	26,6	27,1	24,0	28,9	28,6	27,4	25,9	27,6	31,0	31,0	31,0

Legend:

A-H Keywords used for SERP positions comparison

**ECONOMIC ASPECTS OF TROLLEYBUS TRANSPORT IN EUROPE
EXPIRIENCES OF TROLLEY PROJECT, CENTRAL EUROPE PROGRAMME**

Ernest Czermanski

Faculty of Economics, University of Gdansk
ul. Armii Krajowej 119/121, 81-824 Sopot, Poland

Abstract

The aim of the paper is to present latest results of a Central Europe Programme project – TROLLEY on the field of public transport economics – in trolleybus transport mode. The project has a main goal – to improve the image of trolleybus system in Europe by preparing economical, marketing, social and environmental arguments voting for this electric mode of public transport.

This paper consists of five parts. After short overview of the Trolley project author presented simple assumptions of the research and general results of costs and exploitation results of the research. As next are presented five case studies of partner cities: Salzburg, Parma, Gdynia, Szeged and Eberswalde with more detailed analysis of their conditions of functioning and cost analysis results. This part is summarised by common conclusions and short comparison of analysis results. As complementary, on the end are given two indicators showing utilization factor of presented trolleybus systems.

Key words: *public transport, trolleybus transport, transport efficiency,*

1. INTRODUCTION

TROLLEY is an EU funded project consisting of nine partners located in Central Europe: Salzburg AG, public transport operator of Salzburg, City of Brno, Barnim Bus GmbH, bus operator of Eberswalde, TEP S.A., public transport operator of Parma, Leipziger Verkehrsbetriebe (LVB) GmbH, public transport operator of Leipzig, City of Gdynia, University of Gdansk, SZKT, public transport operator of Szeged and TrolleyMotion, an international action group to promote trolleybuses. TROLLEY covers almost one third of all Trolleybuses that are currently running, almost one third of all existing Trolleybus routes and every 5th Trolleybus city in central Europe. The main aim of the project is to optimize the use of energy, to increase the efficiency of public transport in general and to improve patronage and the overall image of Trolleybuses. TROLLEY delivers transferable strategies and innovative ways of promoting Trolleybus systems in Central Europe as environmentally friendly mode of transport and appropriate alternative to regular diesel bus or costly tram systems.

One of the main goal of the project was to elaborate the economical efficiency of trolleybus transport mode. In this meaning was prepared full direct research on partners public transport operators.

In this paper will be presented main results of this research and conclusions regarding exploitations costs, cost structure and utilization factors.

2. ASSUMPTIONS OF THE RESEARCH

This analysis covered the costs recorded in selected cities of Trolley project partner, i.e., Salzburg (Austria), Parma (Italy), Gdynia (Poland), Szeged (Hungary) and Eberswalde (Germany).

Due to the huge differences in accounting regulations and rules of cost calculation, the common features allowing for comparison of the analysis' results, could not be found everywhere. In addition, the economic and financial policy of particular urban transport companies and the profile of their activity are also of great value. In some areas, the local and national transport policy, developed in different ways and not using electric propulsion advantage, have some important influence. Finally, the reason for the differences is the different structure of the public transport system in the cities. All cities have a fleet of buses with diesel engines. The buses with gas propulsion are exploited only in Gdynia and Parma. The trams are being operated only in Leipzig, Brno and Szeged. The only town without a trolley so far is Leipzig, in return, it is the only city with hybrid buses.

Data for each public transport company in the partner cities collected during the project, has to be limited to the fixed and variable direct costs of their operation. The main objective of the analysis is to compare the operating costs of various transport modes in the urban transport system, rather than between different European cities. Furthermore, the second objective was to compare the urban public transport modes with different drive and power supply, and thus comparing the costs of purchase, maintenance and depreciation of rolling stock. Other costs, such as indirect overhead costs were assumed to be the same for all vehicles regardless of the type of drive. So there is no justification for the presentation of indirect costs (departmental and for the entire institution), and the cost of insurance and taxes.

In the analysis, the presented data are sometimes divergent. It results from two different methodological approaches to the analysis. In the first approach, consistent with the theory of trolleybus transport costs, the mean values of energy consumption, maintenance costs and the depreciation of a new vehicle are calculated at the prices of 2012. The second approach is based on the actual costs derived from the accounting systems of carriers for the year 2011, averaged for one vehicle kilometer (vhkm) on the basis of this year's resources, and by that time the cost. Without completing the calculation with the structure of the operators' actual cost, the comparative analysis does not indicate fully the existing differences between the trolleybus systems. Therefore, the actual cost are summarized for 1 vhkm and briefly characterized in the last part of the analysis. Thus, the outset in Table 1 presented a collective theoretical calculation of 1 vhkm for the selected partner cities according to the types of costs. Then the results were interpreted for each city separately, presenting also the basic structure of the operational performance and actual manufacturing costs of 1 vhkm.

Table 1. Calculation of the unit cost of public transport in the partner cities in Trolley project (trolleybus fleet). Data for the year 2011.

No.	Costs items	units	Salzburg	Parma	Gdynia	Szeged	Eberswalde
1	2	3	4	5	6	7	8
I.	DIRECT COSTS depending on vehicle milage		2,514	4,21	1,65	1,9466	3,24
1.	Energy consumption:	PLN/vhk	0,714	1,629	0,532	0,7146	1,44
1.1.	- price of 1 kWh (netto)	PLN	0,28	0,65	0,28	0,352	0,56

1.2.	- consumption norm per 1 km	kWh/1	2,55	2,5055	1,9	2,03	2,57
1.3.	- overhead on energy consumption	%	0	0	0,268	0	0
2.	Maintenance and repair	PLN/vhk	1,80	2,58	0,84	1,232	
2.1.	- cost taken form bookkeeping	PLN	105.882,35	317.646,90	49.555	41.366,86	1,80
II.	DIRECT COSTS depending on working time		93,235	87,75	57,37		90,36
3.	Depreciation:	PLN/h	39,305	35,37	32,05	81,24	38,59
3.1.	- new vehicle price	PLN	3.400.000,0	2.600.000,0	1.590.000,0	2.128.000	2.600.000
3.2.	- annual depreciation value	%	136.000	104.000	127.200	193.455	144.444
3.3.	- annual working time of 1 vh	h	3.460	2.940	3.969	2.381	3.743
4.	Driver skalary (total brutto):	PLN/h	53,93	52,38	25,32	20,16	51,77
4.1.	- monthly salary	PLN	7.121,16	8.800	4.253,72	2.550	8.694,44
4.2.	- salary correction resulting form seakness,	%	0	0		0	0
4.3.	- overheads rate	%	21,4	19,73	20,61	32,8	28,364

Source: own study based on collected accounting data

3. ANALYZIS OF RESULTS OF THE RESEARCH

3.1. SALZBURG

Salzburg AG is a multi-branch company dealing with not only the urban passenger transport, but also with regional passenger rail transport, inland waterway passenger transport, tourist hill-lift carriage (over 47 million passengers in 2011, by all means of transport), the carriage of goods (2,25 million tons transported in 2011), production of electricity, heat, supplying residents with water, the disposal of their household waste and the provision of telecommunications services.

As of 31.10.2012, the Salzburg AG company operated 102 trolley buses with a total of 13.593 passenger seats. Average age of fleet is 10 years, with the oldest unit of 23 years old. For the purposes of marketing and prestige, the operator has also three old-timers, which, however, are not usually operated in a public service.

The annual volume of operator's transport capacity is over 6,0 million vdkm, which gives the average size of 58.823.5 km for one vehicle per year. This capacity is produced totally by trolleybus fleet. With an average operating speed of 17 km/h, an annual operating time reached 3.460 hours of work. For the correctness of the analysis, the same conditions were also applied to the theoretical value of the cost of the bus transportation.

The average distance of a statistic passenger transportation in 2011 was 5,7 km – at an average cost of transportation services by 3,24 PLN per 1 passenger kilometer (paxkm), including energy costs, maintenance and repair of vehicles without labor costs, network maintenance and amortization.

Direct costs depended on the course are relatively low for one vkm (0,48 PLN) due to the low cost of electricity. In addition, we may speak of a large margin sensitivity to changes in the prices of energy – reaching up to 171%, i.e. the increase of electricity price by this rate, with constant prices of diesel, still provides less direct costs associated with the movement of the vehicle.

Taking into account the need to incur the cost of catenary maintenance and low electricity costs, the only really significant change in the direction of a possible reduction of trolleybus operating costs in Salzburg are cheaper purchases of new rolling stock.

On the other hand, when having in view the types of costs included in the total cost of transportation services measured in vkm, the most important cost-generating factors are the drivers' wages (Figure 1).

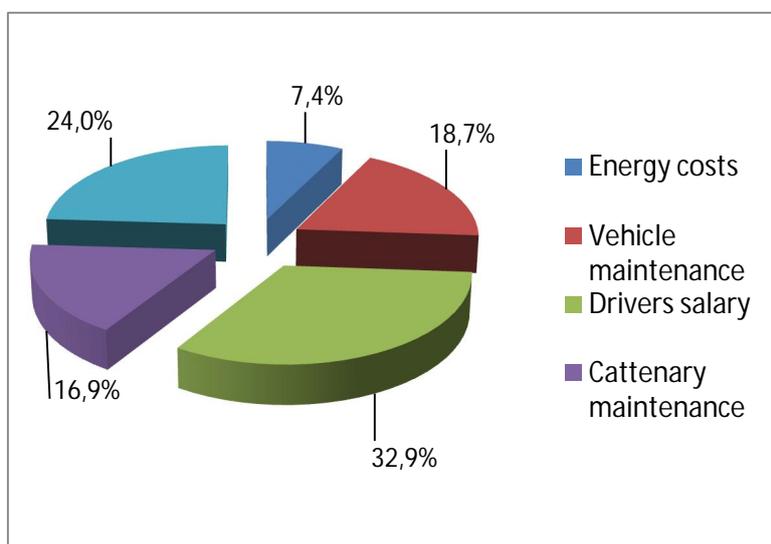


Figure 1. Structure of the direct cost of 1 vkm in trolleybus transport in Salzburg AG
Source: own study based on collected accounting data.

Taking into account all the direct costs of production of transport service, converted into one vkm, the highest costs of Salzburg AG are the drivers' wages and overheads. But this is not the dominant position. Another important cost item is the amortization of vehicles. Its high level is connected with high initial value of the vehicle as the company's asset. And in addition, it should be noted that the operator has a relatively new fleet of high quality parameters. This is also reflected in the high cost of vehicle maintenance, which is the third largest cost item. Slightly less important in the cost account is the cost of maintenance of catenary (including substations), while the cost of electricity consumption has lowest share.

The total direct cost of 1 vkm calculated in Salzburg AG amounts 9,64 PLN and it is the highest value among all the partner cities.

3.2. PARMA

TEP SA. is a transport company involved not only in urban passenger transport, but also in regional, school and tourism transportation.

As of 31.10.2012, the TEP SA possessed quite a large fleet of vehicles (414 units), mainly buses (urban, long-distance, school and leisure) - 384 units and 30 trolleybuses. The fleet is profiled in terms of both passenger groups (residents of the city, students, long-distance travelers, tourists) and directions of travel (urban transport network, in relation to / from school, in non-urban relations, any tourist destinations). 200 vehicles are operating within the municipal transport network, of which 62.5% are diesel buses, 23% natural gas buses and 14.5 % are trolleybuses. On this basis, we can say that trolleybuses communication in Parma is of little importance in terms of rolling stock. .

Based on the above presented fleet, the theoretical annual transport capacity of the TEP SA reaches 1,2 million vkm. The actual transport work was, however, only 598.000 vkm in 2011, mainly because of the numerous renovations of the road and because of the shutdown of the trolleybus traffic in July and August and on Sundays. Similar values of the annual mileage were also reached by public buses with oil or natural gas propulsion. Therefore, the value of annual capacity amounted to 5,2 million vkm for buses with internal combustion engine and 1,9 million vkm for buses with gas propulsion.

Average distance of one statistic passenger transportation in 2011 was 3.6 km, at an average cost of transportation services at the level of 2.77 PLN/paxkm (including energy costs, maintenance and repair of vehicles - without labor costs, network maintenance, catenary maintenance and depreciation). From the additional information provided by the operator, it is evident that the average number of passengers per every 1 km of journey made in 2011 amounted 12,41 and the total number of all passengers transported in 2011 by trolleybus fleet was 7.314.500. While taking into account these two numbers and the average trip length of one passenger (3,6 km), it results in the transport work provided by trolleybuses at the level of 26.332.200 paxkm. The total number of transported passengers by TEP Parma in 2011 amounted to 30.385.688, of which 24% traveled by trolleybuses. Considering the fact that this carrier has operated 200 vehicles in his public urban fleet, then 14.5% of the fleet (trolleybuses) produces almost twice as much work than other transport modes. The trolleybuses have a slightly higher average number of passenger seats and support the most frequented pedestrian routes.

The cost analysis presented in table 1 shows that the direct costs associated with the route of trolleybus 1 vkm amount of 9,37 PLN. And no dominant cost factor influencing this is visible. A similar importance is given to depreciation, vehicle maintenance and driver salaries. A more or less unified structure is recorded, without a single dominant category of cost, because only the costs of catenary maintenance is around 5%, while the others are in double digits in the vicinity of 20 - 30%

3.3. GDYNIA

The public transport in Gdynia is organized and managed by the Public Transport Board as a body representing the municipality of Gdynia. The urban public transport network is served by up to 8 road transport operator and one passenger carrier (the last one operating maritime ferry services within the Gulf of Gdańsk). Only one carrier, Przedsiębiorstwo Komunikacji Trolejbusowej (PKT), operates trolleybus fleet.

As of 31.10.2012, the PKT had a trolleybus fleet of 84 vehicles, mostly Solaris, model 12 (50 unites, the latest of which was purchased in 2012), and Mercedes-Benz (30 vehicles), mainly from the 90s, including the units converted from diesel to electric propulsion. The total passenger seats amounted

8,690. The average age of the fleet is 10 years, with the oldest vehicle being 20 years old. These figures do not include a two oldtimers, which are owned and operated by the PTS for special occasions.

The above presented fleet enabled for reaching 4.969.108 v_hkm of the annual trolleybuses transport capacity in 2011, which stands for 58.460 km of the average transport route of one vehicle per year.

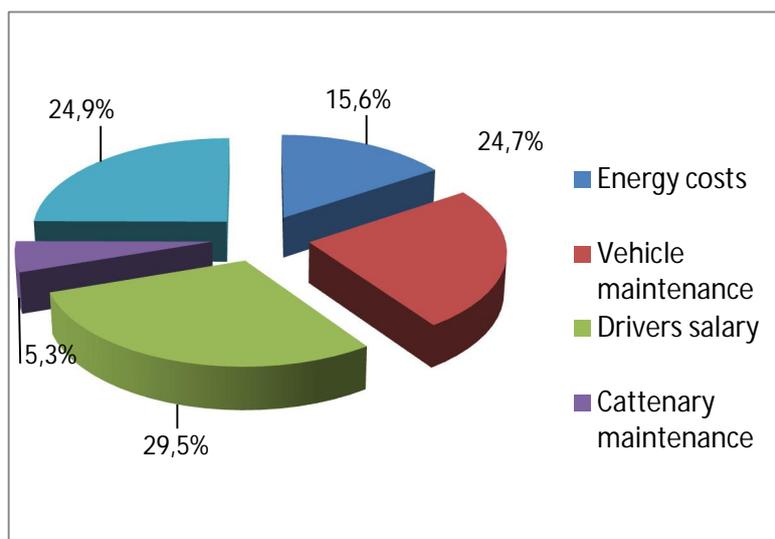


Figure 2. Structure of the direct cost of 1 v_hkm transport work produced by trolleybus fleet in TEP

Source: own study based on collected accounting data.

The average distance for which a statistic passenger was transported in 2011 was 5,29 km, at an average cost of transportation services at the level of 1,73 PLN/paxkm (including energy costs, maintenance and repair of vehicles – without labor costs, catenary maintenance, depreciation and amortization). The total number of passengers carried in 2011 amounted 25.145.874 and the performed transport work reached 133.098.566 paxkm.

With an average operating speed of 18 km/h (basing on data provided by the carrier), we can calculate that the average annual working time of the vehicle amount 3.969 hours, what stands for almost 11 hours a day, regardless of the day of the week.

PKT of Gdynia has a very low cost per one v_hkm, only at the level of 1,65 PLN of direct costs depending on traffic. They consist of both low cost of energy (although not the lowest as compared with other partners) and low maintenance of trolleybuses. This may result, for example from the ownership of comprehensive technical facilities and high durability of the stock.

When analyzing the direct costs related to working hours, i.e. amortization, catenary maintenance and wages of drivers), the results of Gdynia are not such good. Only the amortization attributable to one v_hkm is the smallest among all the partners. The other types of costs are on the average level. In the end, the overall direct cost of one v_hkm trolleybus transport in Gdynia is 6,40 PLN.

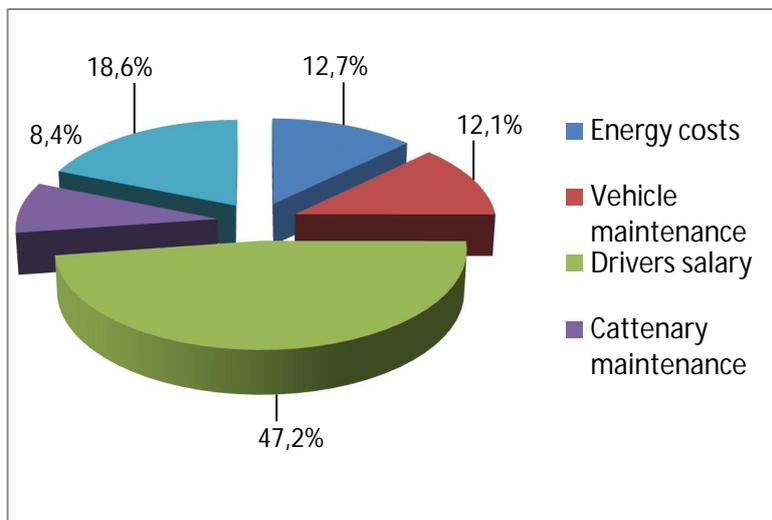


Figure 3. Structure of the direct cost of 1 vchkm transport work produced by trolleybus fleet in PKT

Source: own study based on collected accounting data.

3.4. SZEGED

The public transport in Szeged is based on two transport service providers: Szegedi Közlekedési Kft and Tisza Volan Share Holding Company, of which the first company has a market share of around 54%, while the other has a 46% share. SZKT operates both trolleybuses and trams. In turn, the bus (diesel and CNG) transport is provided by the second operator.

As of 31.10.2012, the SZKT operated a trolleybus fleet of 48 units (mostly Skoda). The total number of passenger seats in the trolleybuses is 3.859. The average age of the fleet is 16,9 years, the oldest vehicle is 28 years old.

The above presented fleet enabled for reaching 1.611.701 vchkm of the annual trolleybuses transport capacity in 2011, gives the average transport route of 33.577 km per one vehicle per year. The average distance for which a statistic passenger was transported in 2011 was 2,03 (and this is the lowest score among all the project partners). The total number of passengers transported in 2011 amounted 13,27 million and the performed transport work reached 26,95 million paxkm.

According to the data provided by the carrier, the trolleybuses in Szeged have a rather low average operating speed - only 14,1 km/h, therefore, we can determine the average operating time per vehicle at 2.381 hours a year.

Direct production costs of 1 vchkm in trolleybuses communication amount 1,95 PLN, mainly due to both the low cost of electricity combined with low consumption of this energy (obtained thanks to the flat terrain of the city), and the low cost of vehicle maintenance.

Taking into account other direct costs, including the cost of catenary maintenance and amortization of vehicles and drivers salary, the cost structure is rather exceptional, since more than 59% is assigned to depreciation. In the European Union countries, the most serious cost item are usually salaries, but in Szeged the dominated position is taken by the amortization. It results from several factors. First of all, data adopted for the calculation are derived and based on newly purchased articulated trolleybus – with

the purchase cost of 532.000 EUR, and with very short period of depreciation (only 11 years). The average period of amortization in other countries fluctuates between 15 and 20 years, which is almost twice as long as in Szeged. The second reason consists in the relatively low level of utilization of the trolleybuses, as an annual average transport route of one trolleybus, as previously reported, amounts about 33 thou. km. Other carriers operate their vehicles up to twice more, even up to 62 thou. km per year (e.g. in Eberswalde). It results therefore in a very high amortization rate attributable to one vkm. In addition, this situation is distorted by so high rate calculated for a new vehicle, when in fact the SZKT fleet is quite old. In turn, the vehicle maintenance costs are low and reveal a normal utilization level.

Therefore, the cost structure of 1 vkm in SZKT is based on amortization, while the low labor costs in Szeged group equate the personal costs to the level of vehicle maintenance costs.

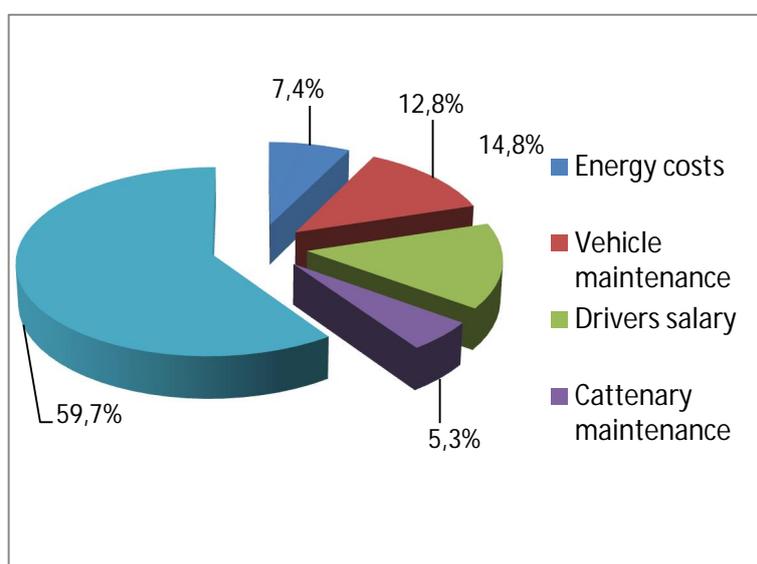


Figure 4. Structure of the direct cost of 1 vkm transport work produced by trolleybus fleet in SZKT

Source: own study based on collected accounting data.

3.5. EBERSWALDE

The public transport system in Eberswalde is based on the Barnimer Busgesellschaft mbH (BBG) company. Due to the spatial development in the region, this company operates not only in Eberswalde, but also incorporates in the communication system the nearby cities and towns: Finowfurt, Joachimsthal, Oderberg and Britz.

As of 31.10.2012, the BBG had a trolleybuses fleet of 12 units, all articulated Solaris, the Trollino 18 model. The whole fleet was completely renovated in the past three years - the oldest vehicle was produced and purchased in November 2010, at the latest in June 2012. The total number of passenger seats in the BBG trolleybuses fleet amounted 1.536.

The above fleet enabled for reaching an annual transport capacity of 754.858 vkm in trolleybuses transportation, giving up an average size of 62.905 km per one vehicle a year, with an average number

of 128 passenger seats in the vehicle. The average annual transport route is the highest in the group of trolleybuses operators.

The average distance for which a statistic passenger was transported in 2011 amounted 6,78 km, at an average cost of transport service of only 0,13 PLN/paxkm (including energy costs, maintenance and repair of vehicles - without labor costs, catenary maintenance and depreciation). The total number of passengers transported in 2011 reached 2.816.226, and the transport work amounted 19.087.574 paxkm.

As presented in the introduction, the BBG is an urban and regional carrier. In his fleet, the carrier has also over 100 buses with combustion engine, which annually performs 5.637.880 vhkm and 392.717.315 seat kilometers, with an average number of 70 passenger seats. The annual volume of transport work of the BBG bus fleet amounts 66.989.173 paxkm. The number of passengers carried in amounted 5.092.774 in 2011 - at an average distance of 13,82 km in regional transportation and 8,05 km in city traffic.

Comparison of the direct cost of bus and trolleybus transport in Eberswalde reveals the plus side of to the former one. When taking into account the same costs associated with the route (fuel / energy and vehicle maintenance), a one vhkm made by traditional bus costs 34% more than the one vhkm performer by a trolleybus. Its resulted from relatively low cost of energy for the trolleybus (despite rather high cost of electrical energy in Germany in comparison to other cities of the project partners). The difference is equal to 1,12 PLN. After calculating the total direct costs of 1 vhkm for buses in Eberswalde, we obtain 9,14 PLN, so the total cost of diesel bus transport is 0,88 PLN higher per one kilometer then trolleybus transport. With a comparable annual transportation work, it brings 4.961.334 PLN of theoretical savings in purely financial terms. It is the only such case revealed during the analysis made in the Trolley project and it suggests that, in certain technical, organizational, economic and financial circumstances the trolleybus transport is more efficient then the bus transport. In the following part of the paper, the author paid a special attention to these aspects.

As can be seen from the above data, the largest, but not dominant share is attributed to the personnel costs (34,39%). In addition, we have two other important types of cost: amortization of vehicles and their maintenance. The catenary maintenance has the lowest share of the costs structure, as the catenary firstly is very short and also in a very good condition so it does not require more investments. The 1,2% share of this cost in total cost structure is extremely low as compared with other analyzed cities. On the other hand the BBG has bared relatively high cost of purchasing electricity, as was previously mentioned. Generally, however, in the terms of value, a unit cost of 1 vhkm at the level of 8,36 PLN is high as compared with other project partners. The higher cost is recorded only in Salzburg.

4. CONCLUSIONS

The analysis of direct costs of public transport in the partner cities of the Trolley project which were carried out in this article indicate their characteristics features, but it does not allow for comparing them with each other, all the more it cannot be a basis for setting standards, functions or average values of the individual indicators and cost items for the European Union. Wherever possible, the efforts were made to identify only certain trends or phenomenon occurring on a wider scale. The results of these comparisons were presented in Table 2.

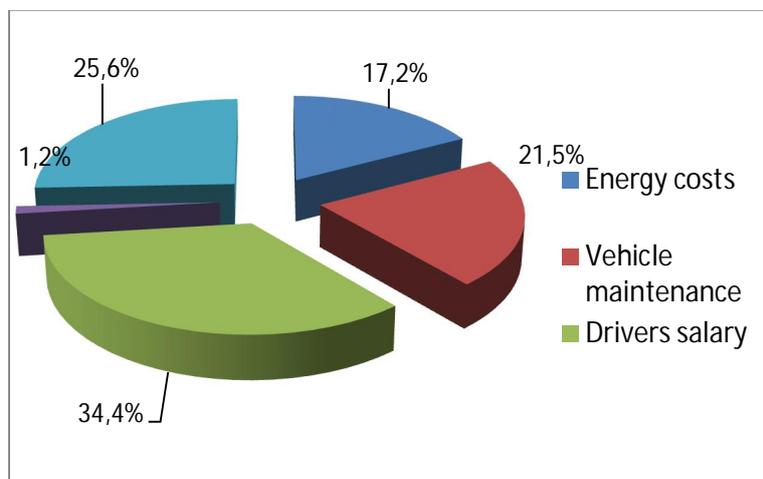


Figure 5. Structure of the direct cost of 1 vkm transport work produced by trolleybus fleet in BBG

Source: own study based on collected accounting data.

Table 2. Summary of basic indicators in trolleybus transport in the Trolley project's partner cities by the actual accounting cost as of the year 2011

Indicator	Measure unit	Indicator value for:				
		Salzburg	Parma	Gdynia	Szeged	Eberswalde
Number of citizens	persons	147.685	175.789	248.574	170.052	41.331
Trolleybus fleet	vehicles	102	29	85	48	12
Number of passenger seats	pcs.	13.593	2.837	7.960	3.859	1.536
Average capacity of 1 vehicle	pcs.	133,3	97,8	93,6	80,4	128
Length of catenary (double tracks)	km	104,0	19,6	96,0	44,0	16,0
Average annual distance made by 1 vehicle	km	58.823,5	41.379,3	58.460,0	33.577	62.905
Annual transport capacity	vkm	6.000.000	598.000	4.969.108	1.862.000	754.858
Annual transport capacity	seatkm (Mio.)	799,8	117,4	465,3	181,4	86,22
Annual passenger carried	pax	38,4 M.	7.292.565	25.145.874	13.270.000	2.816.226
Annual transportation work	Paxkm (Mio.)	218,88	26,25	133,0	26,95	19,09
Average distance for 1 passenger	km	5,7	3,6	5,29	2,031	6,78
Average direct cost of 1 paxkm	PLN	3,24	2,77	1,73	0,59	0,13
Average direct cost of 1 vkm	PLN	9,79		6,40	7,71	8,36
Obligatory depreciation period	years	25	25	12,5	11	18
Average time of exploitation of 1 vehicle	h	3.460	2.934	3.969	2.381	3.495

Source: Author's own study

Large discrepancies between the various partners – the public operators, according to various criteria, does not allowed for drawing a firm conclusions. Comparison of these systems must always be accompanied by additional analysis of site conditions, traffic organization model, the structure of the society's mobility and model of transport organization.

In Salzburg, there is one carrier which operates exclusively articulated trolleybuses. The cost of their purchasing and exploitation is very high. Hence the high depreciation. In addition, the mountainous area, density housing with fragments of historic buildings, are the reason of high costs of building and maintenance of catenary, which cannot be based on typical technological solutions. In addition, the social conditions of the inhabitants of Salzburg place high demands on the quality of public transport system. Finally, Austria is a country with a high GDP, and thus the relatively high income, which generates high personnel costs and in the structure of direct costs this item is the greatest one. But on the other hand, the carrier makes use of its multi-industry profile, including production of its own electricity (produced in 100% from hydropower of mountain streams). This creates a huge advantage both in terms of financial costs and low external costs arising from avoiding emissions when using such source of energy.

Parma, in the opposite, has a fairly plains, but narrow and often historic buildings. It has a different model of the passenger transport organization, as the trolleybuses are not the only vehicles operating within it, but also the diesel and CNG buses. Moreover, the school children are also carried by small school buses so this group does not represent a demand for trolleybus system. The catenary maintenance costs are on the middle level and did not show unusual characteristics. However, the rolling stock maintenance costs are slightly higher than the average amount. This occurs due to the maintenance of very diverse fleet of very different thicknesses age, from thirty-model Monnari the new articulated HanHool, AG300 T ATM model, which was purchased last year (but not yet included in the rolling stock, as it has not received certification and is not connected to the network). TEP SA has also very high cost of energy purchases - the highest in the analyzed group of cities.

Costs of maintenance of vehicles and catenary, however, are quite low in Gdynia, what results still from the general differences in the prices of energy in Central and Eastern Europe countries and Western Europe (including the case of Szeged). The PKT, thanks to its own technical facilities and a new depot, also has low cost (relatively) of vehicle maintenance. Many of them are new (Solaris), and the older ones (Mercedes) are among the most enduring vehicles and were intentionally purchased according to the criterion of the lowest failure rates. Therefore, the amortization costs are also quite low. The costs of catenary maintenance are on average level, while the personnel costs have the largest share in the costs structure. The PTS, although having a status of commercial law entity, still have a public function so the payment and personnel policy has to specifically addresses the requirements of labor law and the role of trade unions. In the final result, as compared to other partners, Gdynia has the lowest unit direct cost of 1 vkm, which is as much as 39% lower than the highest in the group - the TEP.

It would seem that similar relationships, and trends can be found in the Hungarian partner - SZKT in Szeged. However, the unusual system of calculating the amortization results in very high rate of 1 vkm per trolleybus in SZKT, even higher than the rate in Salzburg. The main item of this cost is amortization, which is calculated only for a period of 11 years. Moreover, the presented accounting data are relating to the new vehicle, which SZKT purchased in 2012 at a cost of 532.000 EUR. Other costs of maintenance and energy are on the similar level as in Gdynia. The only exception is the cost of wages, which are extremely low per 1 vkm and are has less than 15% share in the total direct cost.

In turn, the last partner - BBG from Eberswalde has a quite balanced cost structure. But we can pointed out the cost of energy which are relatively high when compared with other partners, but this fact occurs

due to the pricing conditions in Germany. A relatively low cost are in turn generated by catenary maintenance. On the one hand, it results from its relatively short distance - 16km and only three substations, and from quite simple construction and landform.

5. UTILIZATION's FACTOR

Based on the above cost and comparative analysis, it's possible to make an additional comparison between the cities using two additional indicators: rate of using 1 seat in the vehicle in the year (or a day), and the capacity utilization rate, measured as % of the entire carrier fleet's capacity presented in a given period.

The rate of 1 seat use in the year indicates the ratio of the number of transported passengers to the total number of seats in all vehicles operated by the carrier. The value of this ratio is greater than or equal to zero. When interpreting its value, we can conclude that when it assumes 0, the vehicle/fleet did not transport any passenger in the period considered, even if the vehicle/fleet made some transport work (seat-kilometers index > 0). In practice, this rate in the urban transport, with daily use of vehicles, will have a four-digit value, the higher, the better, i.e. confirming a high degree of using every seat in the vehicle.

This ratio for the analyzed cities is presented below:

Ratio	Measure unit	Value of ratio for:				
		Salzburg	Parma	Gdynia	Szeged	Eberswalde
Use of 1 seat per year	pax	2.825,0	2.570,5	3.159,0	3.438,7	1.833,5
Use of 1 seat per day	pax	7,74	7,04	8,65	9,42	5,02

The above results can be hardly interpreted, because so far they have not been widely measured, and therefore it was not possible to determine the function of this ratio. The present results can be regarded as a residual, allowing only for a comparison of the analyzed cities, rather than determining the average values of reference for all trolleybuses operators.

This indicator may be extended with its value calculated for one day, and it can be obtained by dividing the rate achieved for 1 year by the average number of 365 days.

The capacity utilization rate - is the ratio of the passenger-kilometers made to the seat-kilometers made. The value of this ratio should be in the range of <0, 1>. When the ratio is equal to zero, it means that the carrier did not transport any passengers in the analyzed, and the mileage and seat-kilometers made were empty. The opposite situation occurs when there is a full use of seat-kilometers – equal to passenger-kilometers, which will be reflected in the values of ratio = 1. In practice, however, both of these cases do not occur. It is also difficult to indicate the average values for the trolleybus systems in Europe, because, like in the previous situation, also this indicator has not previously been widely calculated.

This ratio for the analyzed cities is presented below:

Ratio	Measurement Units	Value for:				
		Salzburg	Parma	Gdynia	Szeged	Eberswalde
Transport capacity use	%	27,37	22,36	28,58	14,86	22,14

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**THE FORMATIVE STAGES OF THE SOCIAL AND CORPORATIVE
RESPONSIBILITY STRATEGIES**

Galina S. Merzlikina, Tatyana Y. Gribtsova

Volgograd State Technical University, Russia, 400005, Volgograd, Lenin Prospect, 28

Abstract

The article reveals the main stages of the company development strategy on the basis of corporate social responsibility and a balanced scorecard. Building a strategy is seen as a process of constant change, cumming to the external and internal environment in the long term. Using such an approach allows the company management to develop a flexible strategy for their organization, and to give a chance to its continued existence.

Key words: *strategy of social and corporative responsibility, stakeholders, social responsible program, corporative management.*

Presently, the corporative management, aimed at maintaining and encouraging competitive advantage with the help of social responsibility tools is the goal-setting task for the managers who works in the homegrown and overseas markets. The foreign corporations, especially multinational ones, have enough experience in developing successful strategies for socially responsible management. In Russia predominantly the largest corporations need to use such strategies in order to go to the next level and satisfy the international quality standard. However, the problem of finding an optimal balance between the interests of all concerned companies, that are able to affect the company performance index, touch not only large but also less large organizations of regional and municipal level that come face to face to the same problem. This article discusses the strategy of social and corporative responsibility (i.e. the SCR strategy) as a platform that combines all company activities. Systems for realizing such an approach are the corporations that are seeking the new markets and extra competitive advantages.

We have proposed a set of fundamental principles that are desirable to the formation of a SCR strategy:

- Principle of system, involving the creation of a set of related programs, aimed at covering all aspects of the enterprise activities. This principle describes the logical interaction of processes in the external and internal corporative environment, their interdependence, which should be reflected in the structure of a SCR strategy;
- The principle of interdependence – it is necessary to take into account that the impact of the individual elements extends to the whole company and the internal state. There is not a single isolated object; all have an influence on each other. It must always act as a system of obligations of various kinds: the ethical, economic, social and etc;
- The principle of flexibility – the corporation should focus on the challenges of the external environment in its socially responsible behavior;
- The principle of optimality – the SCR strategies should be focused on the inquiry processing of the stakeholder groups, satisfying their needs It leads to a mutual justification of the expectations of the maximum number of stakeholder groups for the enterprise;

- The principle of effectiveness – it's necessary to construct a mechanism of estimating the planned effectiveness in the network of the SCR activities.

- The principle of documentation – the most important condition for the following implementation of the SCR strategy is the fixing standards of the social responsibility in the approved documented base of SCR.

The social and corporative responsibility can be seen as a commitment of the corporate management in maintaining a balance in meeting the needs of all stakeholders involved in the implementation of the entrepreneurial activity of the organizations [1].

The most important task of the companies is to increase the value of the business companies, using the adoption and implementation of the social and corporative responsibility strategy. This, in turn, requires from the companies to develop a strategy based on the effective stakeholder engagement and the sustainable business. It helps to establish links that allow companies to address issues of corporate social responsibility in line with the expectations of the stakeholders. [4] This approach allows to develop the appropriate business performance indicators and ensure the effective information to the internal and external stakeholders about the SCR strategy and its implementation.

The companies that developed a SCR strategy are able to demonstrate more clearly their approach to maintenance of ethical principles and show the achieved results, including in the area of the corporate management and risk management, thus increasing the business value. Willingness to collaborate openly with the external and internal environment allows doing the business more resistant to bad changes in the business environment. [2]

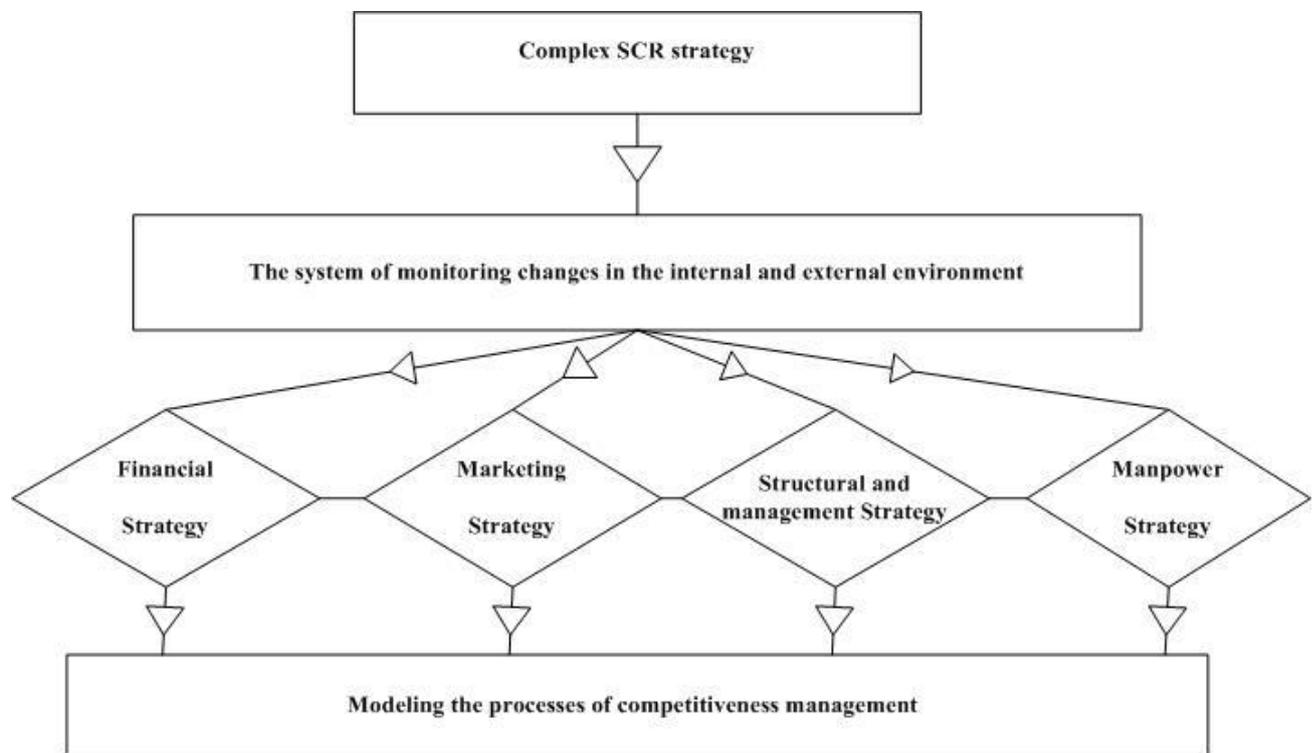
It should be noted that the SCR strategy is not considered by us as one of the possible business areas, but as the underlying strategy that determines the nature and specificity of the control system in all the vital areas of the enterprise. The SCR strategy may be a necessary platform for the development and implementation of the strategies in all major areas of the enterprise activity (see Pic. 1. The interaction model of the SCR strategy with the main areas of the enterprise activity).

Pic. 1. The interaction model of the SCR strategy with the main areas of the enterprise activity (proposed). The picture shows an illustrative list of the key strategies that are necessary for the development of a comprehensive SCR strategy. The list can be modified depending on the nature of the enterprise.

It allows establishing a set of interrelated activities aimed at achieving a united goal – to improve the competitiveness and development of the business entity. Compared with the corporations controlled by the principles of non-socially responsible standards, the organizations, that use the demands of interested groups as the main orientation, will be able to achieve the internal and external competitive advantage, and save them in the long run. The use of a CSR strategy in the corporative management helps to allow the creation of greater value for the shareholders, management and all employees of the corporation, which creates an additional basis for the financial stability of the organization.

We briefly describe the steps of forming a SCR strategy as a basic platform for the implementation of all vital areas of the organization:

The first step is to form a working group. The level of staff competence involved in the development and implementation of CSR strategy is very important. Sometimes the lack of qualified specialists can be a big obstacle for developing of a competent comprehensive SCR strategy.



The second important step is the examination of the functioning characteristics and making "portrait" of a business unit at the time of the research work. That is necessary to describe objectively the studied company and its environment activities. Developing the SCR strategy may involve the implementation of measures for two main vectors: Internal (the implementation of the social activity at the micro level within a corporation) and external (the implementation of the CSR strategies at the macro-level in interaction with the environment). The internal social programs, related to the development of staff, health and safe working conditions, with the solution of socially responsible restructuring, improving the efficiency of doing business. The external social programs are aimed at the development of the local community, maintaining good business practices, environmental activities, as well as the strengthening of the corporative reputation and image.

We suggest as **the third phase** of the SCR development strategy - building a model of balanced indexes. However, changing targets apparently should lead to the certain changes in the system. The financial component in some cases may be reserved (e.g. in the case if the hybrid organizations develop the system of strategic principles – i.e. SSP), but it will have to act not as a "top", but as an intermediary unit, providing a more meaningful implementation of (social) objectives.

The fourth stage of the SCR strategy construction is the formation of a strategic business card. This stage leads to improved strategic management in all areas of the enterprise, since the objectives and strategic actions set out in the CSR strategy qualitatively affect the formulation of the problems and the formulation of performance indicators in the framework of other policies - is the horizontal integration goals.

The fifth step is necessary to pay attention to the compliance with the existing organizational structure of the company developed the strategic map of the enterprise. The organizational structure must satisfy three requirements: to encourage employees with the responsibility to carry out their obligations and to promote the development of the basic business skills and perseverance in implementing the strategy, and also allow the modification of the strategies according to the expectations of stakeholders.

The sixth step of the SCR strategy formation in the company is the development and approval of the implementation plan, receiving the status of an official document. The plan should include a timetable for the execution of works, fixing the persons responsible for the execution of works, as well as measures of responsibility and motivation of the employees for the implementation of activities of the CSR strategy. [3]

The seventh stage of the process involves the formation of monitoring the achievements in the implementation of the planned activities, as well as the critical thinking about future activities, including the assessment of the performance indexes.

To conclude, the development of a comprehensive SCR strategy, based on SSP, involves the consistent implementation of a number of steps that lead to the modernization of the company management and is seen as a cyclical process of continuous change with the demands of the external and internal environment in the long term. Using such an approach allows the management of companies to develop a flexible strategy for their organization and to enable its long-term existence.

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**COMPANY VALUE CREATION AND ITS IMPACT ON SHAREHOLDER RETURN:
EVIDENCE FROM THE BALTIC STATES**

Valdonė Darškuvienė

Vytautas Magnus University

Abstract

The concept of company value creation, as one of the key goals of management, has been developed and discussed by practitioners and researchers for several decades. As limitations of traditional accounting-based company performance measures have increasingly caused dissatisfaction, the discussion on value creation measurement and the relationship between value creation and shareholder return has attracted significant attention in research literature. Investigation of relationship between value creation indicators and shareholder return has been widespread, but with diverse outcomes. Limited attention has been drawn to analysis of EVA and its evolution in small markets. The aim of the paper is to analyse value creation of Baltic listed companies and investigate whether value creation indicator outperforms accounting-based alternative measures of firm performance in relationship with stock return in the Nasdaq OMX Baltic Stock Exchange in the period of 2007 – 2010. The mixed results of empirical research show ability of EVA indicator to outperform accounting performance measures in explaining stock return.

Key words: *value creation, economic value added, shareholder return, stock return*

1. INTRODUCTION

The widely propagated and accepted shareholder value maximization goals of company management brought about discussion on value creation measurement and the relationship between value creation and shareholder return. Previous empirical studies have focused on management incentives to apply EVA as value creation indicator, its efficiency in performance measurement and planning, provide for higher shareholder returns. They were spurred by limitations of traditional accounting-based company performance measures, which have increasingly caused dissatisfaction. However, consensus on whether or not there is relationship of company value creation indicators with stock market return has not been reached up to now. Research in different global, regional and local markets has provided mixed results (Stewart 1991, De Villiers 1997, Biddle et al. 1997, Garvey & Milbourn 2000, Worthington & West 2004, Fernandez, P, Aguirreamalloa, J & Avendaño, LC 2011 and others) – from extreme optimism in suggestions to wider application of the EVA metrics, to complete its rejection. Studies suggest that differences in research findings might be derived from diversity and inconsistency in measurement of shareholder value creation, inability to capture future company value growth, life-cycle effects, management efficiency by stock return.

Broad stream of research is based on principal-agent theory and information content hypothesis. Investigations of relationship of application of value creation versus accounting-based indicators with market return in different countries produce contradictory findings. Investigations of long-term implications in well developed markets provided for positive results, while in cases of less-developed markets with shorter-term periods the results were more contradictory. However, arguments related to

country differences, effects of country corporate governance practices, specifics of small open economies are barely taken into account.

Shareholder value maximization has become predominant goal of corporations in Lithuania as well as in the whole Baltic region along with strengthening of corporate governance regulations and policy, voluntary and mandatory, both at the national and international levels. This have formed framework for compulsory and voluntary information disclosure by companies and had major influence on company management and market participants' behavior during the recent market downturn. To achieve such a goal, it is important for companies to set and apply performance measures that are aligned towards the corporate goal of shareholder value enhancement. Application of such indicators might be a success if market recognizes and rewards for company value creating decisions undertaken by management.

The aim of the paper is to analyse value creation of Baltic listed companies and investigate whether value creation indicator outperforms accounting-based alternative measures of firm performance in relationship with stock return in the Nasdaq OMX Baltic Stock Exchange in the period of 2007 – 2010.

The research is performed on listed companies of Baltic countries in the Nasdaq OMX Baltic Stock Exchange in the period of 2007 – 2010, aiming to capture effects of market downturn and revival. Country and industry differences in value creation within a small open economy setting are investigated. High growth rates through company investments and borrowing strategies, leading to financial policy of high indebtedness, spurred by foreign ownership, have become a general company management trend before the recent economic and financial crisis. This setting gives an opportunity to investigate the concept of value creation empirically.

2. BACKGROUND

The concept of company value creation, as one of the key goals of management, has been developed and discussed by researchers for several decades. In order to overcome limitations of traditional accounting-based company performance measures, value creation metrics have been introduced, spurred by increasing importance of financial markets. These metrics were based on the concept of residual income, defined as operating profit with capital charge subtracted. Thus all investors, who provide capital, not only shareholders, but also creditors, and their expectations of fair return on their investments were taken into account.

This concept was extended by a comprehensive performance measurement tool, developed by Stewart (1991) - economic value added or EVA. EVA measures company's ability to generate profits in excess of the cost of the capital employed to generate those profits. It is calculated as the difference between after-tax operating profits and the cost of capital invested by debt holders and equity holders in the following way:

$$EVA = NOPAT - (\text{Cost of Capital} * \text{Capital})$$

where:

$$NOPAT = \text{Net operating profit after taxes} = \text{Operating profit} \times (1 - \text{Tax rate})$$

$$\text{Capital} = \text{Equity} + \text{Debt}$$

$$\text{Cost of Capital} = \text{Weighted average of the after-tax cost of debt and cost of equity}$$

Positive EVA shows the excess of profit over the return required by company's external stakeholders, thus conclusion about company value creation is proposed. EVA is negative, when the generated profit

is less than the return required by company's external stakeholders, and intuitive conclusion about company value destruction is made.

Since the introduction of EVA, numerous researchers have discussed its advantages and drawbacks (De Medeiros, 2005, Maditinos, Sevic & Theriou 2006, Ismail 2006, Sharma & Kumar 2010; Lin & Zhilin 2008; ArabSalehi & Mahmoodi 2011, Shil 2009, and others). A number of adjustments were offered to overcome accounting treatment effects on NOPAT and capital. Among numerous discussed adjustments (Stewart 1991, Anderson, AM, Bey, RP, Weaver, SC, 2004, Venanzi 2010) the most common ones include research and development, goodwill, deferred taxes, provisions for bad debt, amortization, and operating leases, generally based on US GAAP conventions.

In addition, a number of EVA-related measures were developed, including the following:

1) Refined economic value added (REVA) (Bacidore et al. 1997):

$$REVA = NOPAT_t - WACC \times MV_{t-1}$$

where MV_{t-1} is the sum of the end-of-period market value of equity and market value of debt net of current liabilities (MV_{t-1}).

2) Adjusted economic value added (AEVA) (De Villiers 1997).

$$AEVA = NOPAT - a^* \times (\text{Current Value Capital}),$$

where a^* is the required accounting return.

Adjusted economic value added was introduced for making financial decisions under inflation, based on restating assets in current values, determining the proportional mix of current, depreciable and non-depreciable, assets and required accounting return.

3) Real economic value added (realEVA) (Warr 2005):

$$RealEVA_t = NOPAT_t / (1+p) + pD_{t-1} - DA_t - (WACC_{real}) * (\text{replacement capital}_{t-1}),$$

where p is the rate of inflation, pD is gain from debt depreciation, DA is historic expense depreciation adjustment, and replacement capital is the firm capital base after adjusting for replacement costs.

4) Tailored EVA (Shil 2009), defined as specific to company due to its organizational structure, business mix, strategy and accounting policies.

5) EVA Momentum (Stewart 2009):

$$EVA \text{ Momentum} = (EVA_t - EVA_{t-1}) / Sales_{t-1}$$

EVA Momentum is assumed to consolidate income efficiency, pricing power, business mix, asset management, profitable growth, and strategic retrenchment into one decisive score, and is proposed to be a successor to the DuPont ROI indicator.

6) Wealth Added Index (WAITM) (Stern Stewart 2002)

$$WAI^{TM} = \Delta \text{Market Capitalization} - \text{Required Return} + \text{Dividends} - \text{Shares Issued}$$

The index aims to show excess wealth generated above expectations based on the perceived risk of the shares, reflecting returns for all equity investors, no matter when they bought their shares.

7) Relative Wealth Added (RWATM) (Stern Stewart, 2002)

$$RWA^{TM} = \text{Market Capitalization}_0 \times (\text{Adjusted TSR} - \text{Peer-group Average Adjusted TSR})$$

where TSR - total return of a stock to an investor (capital gain plus dividends)

It compares the shareholder value created by the company with the average of its peers. This can either be expressed as in absolute or monetary terms (RWATM) or as a percentage of the initial Enterprise Value (%RWATM). The TSR and Market Capitalization are adjusted to include, as a weighted average, the performance of shares issued during the period, and other capital changes. The peer group TSR also includes an adjustment for leverage to make it comparable to the measured company.

These measures can be applied not only to listed companies, allowing for increasing competitiveness in capital markets by encouraging low cost of capital, but also to private ones as well as divisions of firms. They are distinct from other value metrics, such as market based measures, including market value added (MVA), excess return and future growth value that can be applied to stock exchange listed and traded companies, cash flow measures, including cashflows from operations (CFO) cash flow return on investment (CFROI), shareholder value added (SVA), cash value added (CVA), created shareholder value (CSV).

During the last decades numerous studies were conducted to find empirical support to practical application of EVA as a measure of economic value in terms of its consistency, sensitivity and validity. The study performed in US market by Stern et al. (1991) popularized the notion of superiority of EVA as performance indicator, arguing that it enhances comparability and corrects distortions of managerial incentives introduced by GAAP accounting. Proponents of EVA have claimed that this metrics better explains stock returns and firm values than traditional accounting-based indicators, and that it motivates managers to create shareholder wealth. Riahi-Belkaoui (1993), Riahi-Belkaoui & Picur (1994), Worthington & West (2004) have found supportive evidence in the US market. Garvey and Milbourn (2000) looked for correlation between EVA adoption and stock performance among 6,789 firm years from 1986–1997. They tested estimates of the incremental value added by EVA and found the estimates were significant and positive. Chen and Dodd (1999) found the existing relationship between EVA and return, however with weak correlation.

In their seminal research Biddle et al. (1997) presented empirical relationship between EVA and stock return for a large set of firms (6174) for well-developed markets during the period of 1984 to 1993. Using theoretical concepts of *relative* information content and *incremental* information content, they concluded that earnings have a stronger correlation to stock returns, than EVA to returns. Biddle et al. noted, that “strength of the relation between stock returns and contemporaneous performance is a function of length of time or “window”, over which returns and performance are measured”. Research of 2225 companies in UK market by Ismail (2006) provided evidence of stronger relationship of stock return and NOPAT than EVA. The study of Günther, Landrock & Muehler (2000) on German stock market could not conclude that value based performance measurement (EVA, CVA, DFC) outperforms traditional accounting performance metrics (such as return on sales (ROS), return on investment (ROI) and return on equity (ROE)).

With the expansion of businesses globally and the push towards shareholder value creation in emerging and developing countries, empirical research on EVA application against traditional financial indicators, and their relationship to stock return followed in such countries as China, India, Japan, Greece, Portugal, Iran and others (Peixoto 2002, Maditinos, Sevic & Theriou 2006, Lin & Zhilin 2008, Shil 2009, Shubita 2010, Sharma & Kumar 2010, Poll, Booyse & Pienaar 2011, Parvaei, 2013). A number of studies conducted in emerging and transition countries found significant correlation of EVA with stock performance (e.g. Peixoto 2002), thus proving that EVA might be recognized as a measure of quality of strategic company decisions and may serve as a signal of strategic change. However, the others have found no clear evidence that EVA is the best internal measure of corporate success in adding value to

shareholder investments (e.g. Maditinos, Sevic & Theriou 2006, Maditinos et al. 2009). However, so far there was no empirical research on ability of EVA indicator to outperform accounting performance measures in explaining stock return in Baltic states.

3. DATA SAMPLE

For the empirical analysis a sample of listed companies from the NASDAQ OMX Baltic Stock Exchange was developed. The sample was composed of 57 listed companies from Lithuania, Latvia and Estonia, of which 22 Lithuanian listed companies, 27 Latvian listed companies and 8 Estonian listed companies. They represent 9 different sectors of economy, excluding financial sector. To account for the status and dynamics during the late economic and financial crisis the period of 2007-2010 was selected. The data on firm performance from 2007 to 2010 are based on published audited annual financial reports. The set of company performance indicators were collected from the annually published NASDAQ OMX Baltic Stock Exchange Guide.

The data of company share prices was derived from NASDAQ OMX Baltic website. Data includes observations from January 2007 to December 2010. Main variables for calculation of stock return were actual stock price and NASDAQ OMX Baltic index, which were used to compose the relevant returns for investigation.

4. METHODOLOGY

In order to capture value creation by listed companies and its change in the three Baltic countries under market downturn conditions EVA measure was used. Since no official database exists on EVA indicator for the Baltic companies listed in Nasdaq OMX Baltic market, EVA calculations had to be performed. Following Stewart proposition (Stewart, 1991) EVA model was selected. EVA model with unadjusted NOPAT and invested capital was used, since adjustments have been proposed mainly in US GAAP accounting setting. The variation of EVA model used is as follows:

$$EVA =$$

where NOPAT - net operating profit after tax; IC – invested capital; WACC- weighted average cost of capital are the inputs of the model.

NOPAT is defined as income available to shareholders (operating profit) plus after tax interest expenses without additional adjustments. Capital invested is derived at the beginning of the year, and includes equity and total interest-bearing liabilities (short-term as well as long-term). This information was derived from audited balance sheets and income statements. NOPAT divided by invested capital provides with a well know indicator of return on invested capital (ROIC). Such a variation of EVA model allows to examine the spread between return on invested capital (ROIC) and weighted average cost of capital (WACC), as advocated by (Koller et al., 2010).

For calculation of company's annual WACC the amount of each source of capital was calculated separately and weights are assigned on market value basis. After tax cost of debt is employed in the model, using information separately for each company on annual total interest paid, total interest-bearing liabilities and normative tax applied in Lithuania, Latvia and Estonia during the period under research.

Companies' annual required rate of return was calculated using Capital Asset Pricing Model (CAPM), which requires risk free rate of return, coefficient β and risk premium as inputs. Methodology proposed

by A. Damodaran (2010) and P. Vernimmen (2011) was followed. Annual risk free rate of return was derived as averages of long-term (10 yr maturity) government bond yields during the period under research. Government bonds with triple A ratings of five European countries (Austria, Germany, France, Luxembourg and Netherlands) were included in calculations.

Coefficient β in the model represents company stock volatility against market volatility, based on $Cov(R_s, R_m)$ as covariation between stock return and market index return, and $Var(R_m)$ as stock return variation. Coefficient β was calculated separately for each listed company and year for the period of 2007-2010. Calculations were made applying closing stock prices for daily returns of listed companies' stock and daily Nasdaq OMX Baltic submarket indices (Nasdaq OMXV for Lithuania, Nasdaq OMXT for Estonia and Nasdaq OMXR for Latvia) for daily index returns over corresponding 12 month periods.

Baltic countries' risk premium used in CAPM model was defined adding Lithuanian, Latvian and Estonian market risk premium to European capital market risk premium from A. Damodaran and P. Vernimmen databases, separately for each year under research.

To determine levels of relationship of value creation (measured by EVA) of listed companies in Baltic countries under the limited period of investigation and limited sample size with stock return for the sample companies a correlation method was employed.

Stock return was calculated following the model used in similar studies as the basis:

where P_1 - company stock price at t_1 and P_0 - company stock price at t_0

To account for information content in the stock return, average of company stock daily returns after the audited financial reports announcement date are calculated for each company for four consecutive periods, 68 400 calculations in total. Stock return was adjusted for dividends and for change in number of shares.

In order to investigate if EVA indicator outperforms traditional accounting-based financial performance measures, traditional indicators of profitability – return on assets (ROA) and return on equity (ROE) - were selected and applied in the research. These indicators measure the earning power of companies and have been widely employed in studies on stock market reaction to shareholder value creation and accounting return (Peixoto 2002, Worthington & West 2004). All company performance measures were evaluated separately by each listed company, and based on annual data. Since the time frame is four years, all variables were calculated over this period for the sample companies.

In order to explore relationship between value creation (measured by EVA) and stock return, and to contrast it with relationship between accounting based company indicators and stock return, the basic research method used in this study was correlation analysis. This is a commonly used method to find out the relevance and magnitude of effect of a certain company performance indicator (in this case EVA, ROA and ROE) on the stock return by comparing correlations. The estimations were made cross-sectionally by years to capture evolution during the economic downturn. In order to examine explanatory power of the research model coefficients of significance were examined.

5. RESULTS

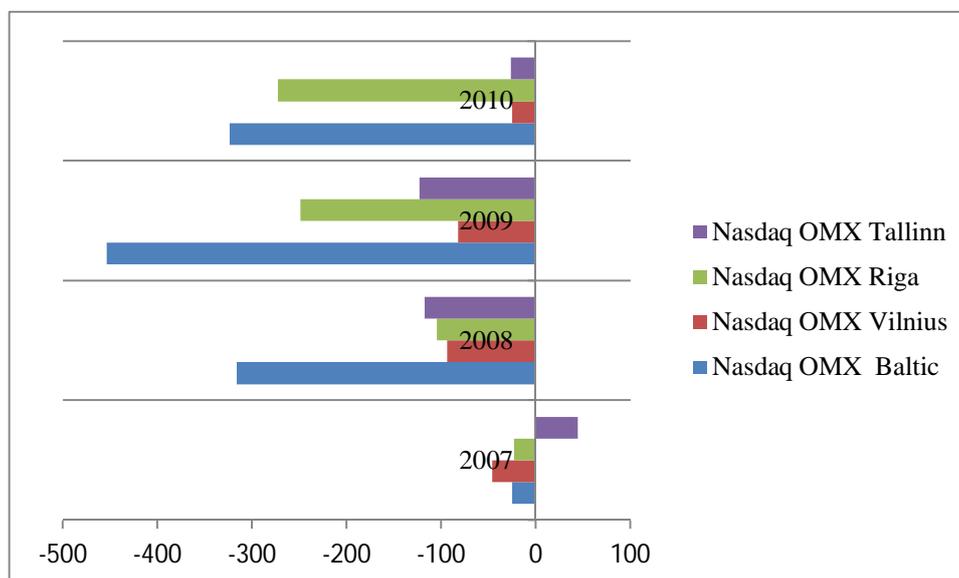
Results of the present study provide information on development of annual EVA during the short term period 2007-2010 in the three Baltic countries. Descriptive statistics for EVA indicator of listed companies in Nasdaq OMX Baltic market and its three submarkets (Vilnius (Lithuania), Riga (Latvia) and Tallinn (Estonia)) is provided in Table 1 below.

Table 1. Descriptive statistics of EVA in Nasdaq OMX Baltic market and submarkets in 2007-2010, mn Eur.

	2007	2008	2009	2010
Nasdaq OMX Baltic				
Average	-0,44	-5,55	-7,96	-5,68
Maximum	15,29	17,1	23,11	21,06
Minimum	-47,75	-92,13	-130,96	-196,13
St. deviation	8,55	15,86	21,42	27,75
Nasdaq OMX Vilnius				
Average	-2,11	-4,26	-3,73	-1,12
Maximum	11,85	17,10	16,66	17,99
Minimum	-47,748	-47,808	-42,167	-27,95
St. deviation	11,15	11,15	10,46	7,98
Nasdaq OMX Riga				
Average	-0,84	-3,88	-9,23	-10,10
Maximum	5,45	7,19	5,96	5,40
Minimum	-13,03	-40,62	-130,96	-196,13
St. deviation	3,71	10,10	26,83	38,62
Nasdaq OMX Tallinn				
Average	5,51	-14,71	-15,34	-3,29
Maximum	15,29	15,67	23,11	21,06
Minimum	-16,424	-92,126	-55,665	-33,874
St. deviation	10,54	33,88	23,28	16,83

Descriptive statistics for EVA indicate that the market has been characterised by negative EVA through all the analysed period. It shows also deep negative impact of the market downturn in the 2007-2009, with increasingly negative average and minimum EVA for the whole Baltic market as well as for its submarkets. On the other hand, the best performing companies managed to maintain positive and increasing maximum EVA. When comparing the three Baltic countries, highest average EVA was noted in Estonia, thus including best performing companies, while worst performing companies were in Latvia with lowest negative EVA. The year 2010 marks a strong reversal towards recovery in the whole Baltic region.

The accumulated EVA of the listed companies in the Baltic region was negative throughout the market downturn period. Figure 1 data indicates managerial efforts to reverse the negative EVA in Estonian and Lithuanian companies, and the opposite trend in Latvian market.

Fig.1. Total EVA in Nasdaq OMX Baltic market and submarkets in 2007-2010, mn Eur.

When comparing the three Baltic stock markets by the share of companies with positive EVA, Estonian stock market is clearly standing out with the largest share of companies with positive EVA (87%) at the beginning of the period, and a strong revival after economic and financial crisis in 2010, when the share of companies with positive EVA reached 62,5% (see Table 2). By 2010 the share of companies with positive EVA in Lithuanian and Latvian markets exceeded the one at the beginning of crisis in 2007, which might be viewed as an indicator of significant restructuring activities and company management success.

Table 2. Share of companies with positive EVA in Nasdaq OMX Baltic market and submarkets

	2007	2008	2009	2010
Nasdaq OMX Baltic	45,6%	24,6%	22,8%	45,6%
Nasdaq OMX Vilnius	36,0%	13,6%	22,7%	40,9%
Nasdaq OMX Riga	40,7%	33,3%	25,9%	44,4%
Nasdaq OMX Tallinn	87,5%	25,0%	12,5%	62,5%

Estimates of EVA indicators for listed companies in Nasdaq OMX Baltic stock exchange and their aggregates allowed to rank industries in the Baltic region by percentage of companies, creating value through period 2007-2010. The change in the rank of specific industry indicated how severely it has been hit by the recent economic and financial crisis and the efficiency of management in overcoming the negative crisis impact.

Table 3. Ranking of industries in Baltic countries by percentage of companies with value creation activities*

	2007	2008	2009	2010
Telecommunications	1	1	1	1-2
Technology	8-9	7-9	8-9	1-2
Consumer services	2	2	2	4
Health care	3-4	3	5-6	3
Basic materials	3-4	7-9	5-6	6
Utilities	5	5	4	7
Consumer goods	6	6	3	5
Industrials	7	4	7	9
Oil and gas	8-9	7-9	8-9	9

*Based on data from Nasdaq OMX Baltic listed companies

Information provided in the table shows, that ranking was lead by telecommunications sector, which was creating value throughout the analysed period. In spite of economic and financial crisis, only two sectors managed to sustain their value creating positions in Baltic countries, namely telecommunications and consumer services. Among other ones, technology sector was distinguished, as it had been most efficient in reversing the negative impact of the crisis and converting from value destruction in 2007-2009 to value creation in 2010.

The analysed period was characterized by significant changes in company capital structure through reduction of financial debt, as well as low investments. The ranking of industries provided the insight that larger percentage of companies with value creating activities was more characteristic to service industries (ranked from 1 to 4) with lower levels of investments and financial debt. Thus the results do not contradict opinion of those researchers, who have pointed out to the diversity in the size of EVA in the short run, i.e. high tech companies with larger long-term investments often have negative EVA in the short run, while companies with lower long-term investments experience positive EVA more often. Furthermore, it may be stated that such companies (and sectors) have survived the impact of the crisis with less negative outcomes.

In order to examine the role of EVA in determining stock return separately for the three Baltic countries (Nasdaq OMX Baltic submarkets), relationship between the annual EVA indicators, defined as annual EVA divided by the number of shares outstanding, and stock returns was determined. Table 4 shows ambiguous results, different for the three countries.

Results derived from yearly cross-sectional sample revealed that strong positive correlation between the two measures is recognized in several cases - for 2010 in Estonia and 2007-2008 in Latvia, while strong negative correlation observed in 2007 in Lithuania. Other coefficienticients, as not statistically significant, suggest, that EVA might not be related to stock return for separate years. Negative relationship, though statistically not significant, was observed in cases of severe market conditions, under depressed stock market. Small sample size for the three Baltic countries have influenced significance of the results as well.

Table 4. Correlation between EVA and stock return by submarkets of Nasdaq OMX Baltic Stock Exchange

	2007	2008	2009	2010
Nasdaq OMX Vilnius				
N	22	22	22	22
Pearson Coefficient	-0,547***	-0,122	0,391*	0,350
p - value	0,008	0,589	0,072	0,111
Nasdaq OMX Riga				
N	27	27	27	27
Pearson Coefficient	0,518**	0,598***	-0,118	-0,115
p - value	0,05	0,01	0,549	0,431
Nasdaq OMX Tallinn				
N	8	8	8	8
Pearson Coefficient	0,043	-0,618	-0,316	0,757**
p - value	0,92	0,103	0,447	0,030

*

significance at 10% level, ** significance at 5% level, *** significance at 1% level

In order to conclude about explanatory power of EVA versus accounting based measures in stock return, relationship between accounting return indicators (ROA and ROE) and stock return was examined in three Baltic countries (by Nasdaq OMX Baltic submarkets). Table 5 shows the results of investigation of relationship between ROA, ROE and stock return for Nasdaq OMX Baltic submarkets. The results of correlation between company ROA, ROE and stock return in Nasdaq OMX Vilnius (sample size – 22 companies) show statistically significant results for the end of the analysed period for the indicators.

Results of individual year cross-sectional sample for Latvian listed companies are not encouraging. The results of correlation between company ROA, ROE and stock return in Nasdaq OMX Riga (sample size – 27 companies) are weaker – only return on equity (ROE) has significant positive correlation with stock return in the years 2009-2010. There is no significant positive correlation for other indicators. In case Estonian listed companies the results of investigation of relationship between ROA, ROE and stock return show strong positive relationship was found only for return on assets for the end of the period, i.e. year 2010.

Results of the present study reveal that for all investigated individual year cross-sectional samples part of coefficients are not statistically significant. Relationship between neither return on assets nor return on equity and stock return in general does not show higher explanatory power of accounting based profitability indicators. Moreover, for EVA and profitability indicators statistically significant results were received for different years. For EVA indicator stronger relationship with stock return was observed, than for accounting profitability indicators, in case of significance of results.

Table 5. Correlation between company ROA, ROE and stock return in Nasdaq OMX Baltic submarkets

	2007	2008	2009	2010
Nasdaq OMX Vilnius				
ROA				
Pearson Coefficient	-0,340	0,430**	0,390*	0,463**
p - value	0,122	0,046	0,073	0,030
ROE				
Pearson Coefficient	-0,304	0,435**	0,328	0,504**
p - value	0,169	0,046	0,136	0,017
Nasdaq OMX Riga				
ROA				
Pearson Coefficient	0,263	0,140	-0,408**	-0,206
p - value	0,176	0,478	0,031	0,293
ROE				
Pearson Coefficient	0,045	-0,017	0,585***	0,465**
p - value	0,821	0,934	0,001	0,013
Nasdaq OMX Tallinn				
ROA				
Pearson Coefficient	-0,780**	-0,446	-0,135	0,813**
p - value	0,022	0,268	0,448	0,014
ROE				
Pearson Coefficient	-0,544	-0,452	-0,440	0,590
p - value	0,164	0,261	0,276	0,124

* significance at 10% level, ** significance at 5% level, *** significance at 1% level

This is consistent with majority of research for smaller stock markets with lower liquidity. In a number of cases relationship between EVA and stock return was found, however, not through all the research period (Shubita 2010, Dodd & Chen 1999, De Villiers & Auret 1998, Günther, Landrock & Muche 2000), which was explained by investors irrational behavior, market co-movement, insider trading and other external factors. Another explanation of the results (Dodd & Chen 1999, Shubita 2010, Ismail 2006) may be based on hypothesis that for countries, where EVA indicator is not widely used as management performance measure, relationship between EVA and stock return is weaker.

Biddle et al. (1999) state, "it is possible for a metric to be quite useful for internal purposes even though it conveys little if any news to market participants regarding the firm's future prospects. (...) EVA and residual income could prove effective in motivating shareholder wealth creation without being informative to investors." Thus, even if the results of the research provide with contradictory findings, EVA measurement and application should not be neglected. There are several additional potential

explanations why EVA does not outperform profitability indicators in their relationship with stock return. We did not take into account for the set of accounting adjustments as proposed by Stern et al. (1991). The cost of capital estimates might be upward biased, leading to increased weighted average cost of capital (WACC) and negative spread (ROIC-WACC). We have examined the period with negative EVA, profitability and negative stock return under adverse market conditions. For listed companies in Baltic countries with concentrated ownership, strong influence of stakeholders, widespread policy of borrowing, and strong corporate governance company performance measures, based on value creation, might be more relevant than accounting-based ones.

6. CONCLUSIONS

Analysis of empirical research on value creation indicators (most often, EVA) and their predictive power suggests, that for well-developed markets majority of the researchers did not find positive relationship with market return. However, in cases of usage diverse of research methodologies mixed results were obtained for less-developed markets.

The analysis of EVA indicator of listed companies in Nasdaq OMX Baltic market and its three submarkets (Vilnius (Lithuania), Riga (Latvia) and Tallinn (Estonia)) during the period of 2007-2010 indicate that the market has been characterised by negative EVA. It shows deep negative impact of the market downturn in the 2007-2009, with increasingly negative average and minimum EVA for the whole Baltic market as well as for its submarkets. On the other hand, the best performing companies managed to maintain positive and increasing maximum EVA. Our results indicate diverse value creation/destruction evolution in the three Baltic countries under market downturn, which may explain different ways and specific solutions applied by listed companies in overcoming the economic and financial crisis.

Research results suggest significant differences in value creation patterns by industries in the three countries of the Baltic region over the research period, with telecommunication sector taking the lead, followed by consumer services and healthcare.

Results on research relationship between EVA versus accounting return indicators (ROA and ROE) and stock return in three Baltic countries (by Nasdaq OMX Baltic submarkets) provided mixed results in terms of explanatory power in explaining stock returns. For EVA and profitability indicators statistically significant correlation results were received for different years. Stronger relationship of EVA indicator with stock return was observed, than for accounting profitability indicators, in case of significance of results. Limited period of investigation and limited sample size for the research of small markets did not allow the use of more rigorous methodologies.

Our results suggest, that for small markets such as the Baltic stock exchanges, however with strong corporate governance and its extreme orientation towards shareholder value creation, importance of EVA indicator should not be neglected. Under market downturn conditions, which have an extremely negative impact on share market value, EVA indicator might become a better measure of value creation for market participants, in contrast to accounting profitability indicators.

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**DIRECTIONS TO IMPROVE THE INVESTMENT ATTRACTIVENESS
OF UKRAINE IN TERMS OF GLOBALIZATION**

Anastasia Duka, Iuliia Tkachenko

Department of Management of innovative and investment activity within

Taras Shevchenko Kyiv National University; apd@online.ua; julietat@ukr.net

Abstract

In the last years the humanity assists to the fundamental changes in economy no matter the level from which is regarded. These changes are so fast and intensive that many times the humanity is confronting also with adaptation difficulties and also with the collapses of some value systems which have proved themselves incompatible with new realities to the world level. So, we've become the witnesses of a world in which the commercial bounds and the capital fluxes between countries have grown so much that the globalization of the world economy is a reality. The globalization is a term used to describe a multi-causative process which has as result the fact that the events which takes place in some part of the globe have more and more wide repercussive on the societies and on the problems from other parts of the globe. It influences all aspects of the life, including economic development. Therefore, it's very important to investigate the influence of this factor in any economic research.

Key words: EU, globalization, ratings, Post-Soviet countries, Ukraine

1 INTRODUCTION

The main vectors of Ukraine's domestic and foreign economic policy over the last decade and a half have been the so-called European and the Russian vectors. The former presupposes orientation toward Europe and a goal of eventual membership in the European Union. The latter implies orientation toward closer economic ties with Russia. After the Orange Revolution, the new Ukrainian leadership affirmed the EU membership as its first priority. However, since 2004, Ukraine has not moved any closer to the EU, but managed to isolate itself from Russia. A significant break-up of the economic ties with Russia has been a big drawback in Ukraine's economic policy and contributed to the declining rates of growth. It mainly occurred because the new Ukrainian leadership has opted to treat the two "vectors" as alternates and made decisions that were definitely driving Ukraine away from Russia. So, the aim of the article is to identify the dependency between the countries' attractiveness to foreign investors and their position in international ratings and, if there the hypothesis is right, characterize the best vector for the further Ukrainian economic policy.

The previous researches connected to this topic were not so global and concentrated mainly on: the position of Ukraine in international ratings [2], dependency of the countries' attractiveness to foreign investors from the position in one international rating [1].

The main methods to be used in the article are: quantitative (statistical, regression analysis) and analytical.

2 MAIN CONTENT

In the modern world all foreign economic relations should be based on market-driven decisions. Among other things, this means prevalence of money transactions over barter. It is well-known that barter transactions have been widespread in the early stages of transition from centrally planned economies to the market system. Barter still exists in relations between countries of the former Soviet Union. Economic theory tells us that relations based on barter are inefficient, because they lock-in efficient and inefficient enterprises, and in many cases efficient enterprises subsidize inefficient ones.

Many questions arise in this regard. How come that the country which is so much dependent on Russian and the entire post-Soviet market could not recognize it? It is a reality of time that many Ukrainian products are only competitive in post-Soviet space but not competitive in the world markets. Therefore, strategically it was necessary to find products that are associated with the Ukraine's comparative advantage first, then find ways to sell these products through world markets, keep selling other products in the post-Soviet space.

In the research there were chosen 2 well-known ratings, which are published every year, starting from 2006: the Index of Economic Freedom - X Variable 1[5] and the Corruption Perceptions Index - X Variable 2[6]. They reflect the main principles of the changes in human values, the progress of the reforms, the effectiveness of the state economic policy and a lot of other factors. Thus, they may help us with the main goal of the research – to indicate the best vector of the further economic reforms in Ukraine: whether it is the scenario of the European Union, pro-Russian countries or its own way. Moreover, it should be noted that data on these ratings are available for all countries. We couldn't use other ratings because of restrictions regarding the period of the research or they were not provided for all countries from our sample. These kind of restrictions were noticed regarding the Global Competitiveness Index[4] and the Doing Business Rating [3] and some other ratings.

For the estimation of the model we use data compiled from several sources. In addition to the indexes described above, we use data on foreign direct investment and population. All of the variables were taken from the World Bank data base [7]. As noted, data on seven countries over the years 2006-2012 are included in the data set.

As for the Index of Economic Freedom, The index scores nations on 10 broad factors of economic freedom using statistics from organizations like the World Bank, the International Monetary Fund and the Economist Intelligence Unit: Business Freedom; Trade Freedom; Monetary Freedom; Government Size/Spending; Fiscal Freedom; Property Rights; Investment Freedom; Financial Freedom; Freedom from Corruption; and Labor Freedom[5]. The 10 factors are averaged equally into a total score. Each one of the 10 freedoms is graded using a scale from 0 to 100, where 100 represents the maximum freedom. A score of 100 signifies an economic environment or set of policies that is most conducive to economic freedom.

The 2012 Corruption Perceptions Index draws on 13 different surveys and assessments from 12 different institutions[6]. The institutions are the African Development Bank, the Bertelsmann Foundation, the Economist Intelligence Unit, Freedom House, Global Insight, International Institute for Management Development, Political and Economic Risk Consultancy, Political Risk Services, the World Economic Forum, the World Bank and the World Justice Project.[6]

Countries must be assessed by at least three sources to appear in the Index. The 13 surveys/assessments are either business people opinion surveys or performance assessments from a group of analysts. Early Corruption Perceptions Indexes used public opinion surveys.

Thus, the above-mentioned ratings have scientific importance, are used in macroeconomic overviews by economists all around the world and, according to our hypothesis, can influence the foreign direct investment.

The sample includes data on countries' variables on which the observations covers a relatively short period of time – seven years. This is not ideal time coverage to capture fixed effects of these variables. The reason is that the data may have been subject to short-term fluctuations. It would certainly have been preferable for us to use longer time series but, unfortunately, we were seriously constrained by data availability and resources.

We chose 7 countries to compare with Ukraine. The choice was made according their geographical position, territory, population and current political and economic position in the world. There were 3 blocks of countries formed (table 1).

Table 1. Blocks of the countries

Block 1	Block 2	Block 3
Lithuania	Belarus	Poland
Latvia	Uzbekistan	Romania
	Kazakhstan	

In this research we concentrated our attention to the problematic of the economic development of the post-Soviet states, also commonly known as the Former Soviet Union and position of Ukraine regarding the future directions within geo-political and geo-economic development. There are the 15 independent states that emerged from the Union of Soviet Socialist Republics in its dissolution in December 1991. The three Baltic states restored their independency on the basis of state continuity; while the remaining 12 republics are deemed to have seceded from the Soviet Union and are thus referred to as the Newly Independent States (NIS). The NIS subsequently formed the CIS and most joined CSTO, while the Baltic states eschewed that path and instead joined both the European Union and NATO.

After the collection of data on the foreign direct investment and population we calculate the amount of foreign direct investment per person (Y) (table 2).

As we can see from the Table 2, the period of the financial crisis didn't influence the non-EU countries according the dynamic of the foreign direct investment. It means that there are a lot of other factors to be more influential, than the ratings.

Also it should be indicated that the situation with the foreign direct investment for Ukraine is a bit different. The main "source" of the foreign direct investment is return of the offshore money (in particular, from Cyprus), which was withdrawn from the country to avoid taxation. This factor is visible in regression analysis.

In order to create a background for an analytical analysis, we use regression analysis for every country, including Ukraine. The results are provided below in table 3.

Table 2. Foreign direct investment (per 1 pop, US\$)

		2006	2007	2008	2009	2010	2011	2012	2012 /2006	2009 /2006
Block 1	Lithuania	542,12	572,93	585,15	19,76	243,4	477,86	282,02	0,52	0,04
	Latvia	726,85	1020,17	556,46	41,69	169,72	712,28	480,53	0,66	0,06
Block 2	Belarus	37,17	189,02	229,64	197,43	146,79	422,46	152,45	4,10	5,31
	Uzbekistan	6,57	26,24	26,04	30,32	57	50	37,01	5,63	4,61
	Kazakhstan	415,47	716,6	1006,44	822,88	707,64	839,62	825,31	1,99	1,98
Block 3	Poland	513,96	618,07	385,28	338,96	363,4	490,76	87,09	0,17	0,66
	Romania	526,55	460,44	646,52	225,51	137,14	117,98	117,73	0,22	0,43
	Ukraine	119,77	212,67	235,91	104,57	141,59	157,68	172,1	1,44	0,87

Table 3. Results of the regression analysis

	Block 1		Block 2			Block 3		Ukraine
	Lithuania	Latvia	Uzbekistan	Belarus	Kazakhstan	Poland	Romania	
Regression Statistics								
Multiple R	0.932395	0.398038	0.946006	0.12699	0.311327	0.701723	0.838606	0.328003
R Square	0.86936	0.158434	0.894927	0.016126	0.096925	0.492415	0.70326	0.107586
Adjusted R Square	0.804041	-0.26235	0.842391	-0.47581	-0.35461	0.238622	0.55489	-0.33862
Standard Error	94.36091	379.2512	6.643345	142.0297	211.7456	147.7228	147.4532	55.15081
Observations	7	7	7	7	7	7	7	7
ANOVA								
Significance F	0.017067	0.708233	0.01104	0.968007	0.815545	0.257643	0.088055	0.796403
F	13.30929	0.376522	17.03444	0.032781	0.214655	1.940226	4.739909	0.241112
Coefficients								
Intercept	-14605	-5914.96	271.369	689.9651	-1279.39	1169.916	5637.887	58.29579
X Variable 1	244.0328	81.82799	-2.04765	-12.0699	40.95178	0.079537	-93.371	-2.52384

X Variable 2	-478.121	213.1767	-79.2395	32.11435	-183.169	-159.122	138.9195	91.69683
<i>t Stat</i>								
Intercept	-3.55863	-0.614	5.058352	0.349439	-0.27498	0.436349	3.189733	0.170086
X Variable 1	4.257806	0.513427	-1.86868	-0.25594	0.509854	0.001409	-2.62486	-0.27502
X Variable 2	-3.11968	0.367067	-4.84335	0.163011	-0.58598	-0.85959	0.639076	0.660315
<i>P-value</i>								
Intercept	0.023615	0.572419	0.007189	0.744381	0.796952	0.685102	0.033225	0.873199
X Variable 1	0.013076	0.63471	0.135038	0.810617	0.636997	0.998943	0.0585	0.796921
X Variable 2	0.035537	0.732164	0.00838	0.878414	0.58936	0.438481	0.557535	0.545139
<i>Standard Error</i>								
Intercept	4104.093	9633.522	53.64772	1974.493	4652.706	2681.148	1767.511	342.7432
X Variable 1	57.31421	159.376	1.095775	47.15824	80.32056	56.44456	35.57178	9.176883
X Variable 2	153.2593	580.7576	16.36045	197.0066	312.5865	185.1135	217.3757	138.8683

Lithuania: The multiple regression form of the model is:

$$y = -14605 + 244.0328x_1 + -478.121x_2$$

The results of the analysis show that the R Square is high – 86.9%. The Significance of F = 0.017, there is only a 2% chance that the Regression output was merely a chance occurrence. So, there is dependency between the foreign direct investment and a position in the rating of Lithuania.

Latvia: The multiple regression form of the model is:

$$y = -5914.96 + 81.82799x_1 + 213.1767x_2$$

As for Latvia, the R Square is just 16% and the Significance of F is 0.71, which is very high. So, we can't make any objective conclusions about a relationship between foreign direct investment and place in a rating for Latvia.

Uzbekistan: The multiple regression form of the model is:

$$y = 271.369 + -2.04765x_1 + -79.2395x_2$$

The results of Uzbekistan in this research show that this country has the highest correlation between the changes in the ratings and the foreign direct investment, which is adjusted by the R Square of 89%. Also the P value (except X Variable 1) is less than 0.05. It means that the influence of X Variable 1 is not so significant.

Belarus: The multiple regression form of the model is:

$$y = 689.9651 + -12.0699x_1 + 32.11435x_2$$

The results of the regression analysis for Belarus show that there is almost no connection between the foreign direct investments to the country and its position in ratings. The R Square of 2% and the Significance F of 97% indicate it very clearly.

Kazakhstan: The multiple regression form of the model is:

$$y = -1279.39 + 40.95178x_1 + -183.169x_2$$

The high value of the Significance F and the R Square of 10% show us that there is no connection between the foreign direct investments to Kazakhstan and its position in foreign ratings.

Poland: The multiple regression form of the model is:

$$y = 1169.916 + 0.079537 x_1 + -159.122x_2$$

The Significance of F = 0.25. It means that there is a 25% chance that the Regression output was merely a chance occurrence. It doesn't allow us to make a conclusion that there is any dependency between foreign direct investment of Poland and its place in ratings. Moreover, the R Square is just 49%, which is not very high.

Romania: The multiple regression form of the model is:

$$y = 5637.887 + -93.371x_1 + 138.9195x_2$$

The R square is 70% and the Significance of F is higher than average. It means that there is some dependency between foreign direct investment of Romania and its place in ratings. But we should take into consideration that there is a 8.8% chance that the Regression output was merely a chance occurrence. Moreover, the P value of X Variable 1 and 2 is higher than 0.05.

Ukraine: The multiple regression form of the model for Ukraine is:

$$y = -58.29579 + -2.52384x_1 + 91.69683x_2$$

From the analysis we see that there is no big relationship between the foreign direct investment and a position in the rating, as far as R Square is just 11%. It means that maybe other variables will explain the variability as well (for example internal factors, which are not included to the indexes). Also we have to take into consideration that the standard error is very high and the P value is more than 0.05. Thus, we can't reject the null of a zero slope and conclude there is no relationship between foreign direct investment and place in a rating for Ukraine. A high Significance of F also adjusts the output.

3 CONCLUSION

Ukraine is one of the biggest, but also the second poorest country in Europe. Given its territorial size, its geographic position, its almost 46 million population and its role as the main transit state for Russian oil and gas exports to central and western Europe, Ukraine has been a critical strategic factor for Euro-Atlantic and Eurasian security in the two decades of its independence. Today, it stands at a critical crossroads between developing a more open society increasingly integrated into the European space of democracy, prosperity and market-based economics grounded in respect for human rights and the rule of law, or an increasingly autocratic system, mired in the economic stagnation and political instability that is historically characteristic of Europe's borderlands.

Nowadays it's very important for the country to have clear future directions within geo-political and geo-economic development. In this research we checked the hypothesis regarding the correlation between the countries' attractiveness to foreign investors and their position in international ratings. Due to the initial conditions, with the help of this research we wanted to elaborate the recommendations regarding the vector of further economic development of Ukraine: the scenario of the European Union, pro-Russian countries or its own way.

The results of the regression showed us, that from 8 countries (including Ukraine) only 2, Lithuania and Uzbekistan, have this dependency. Moreover, the influence of the ratings on the foreign direct investments in Ukraine is not very high. It means that there are a lot of other factors, which are more important for the country. The general tendency is that the position of a country in the ratings may be more or less influential factor (within 10%) for foreign investors.

As for the first block of the countries, we can see that the investors to the economy of Lithuania, among other factors, take into consideration the position of the country in ratings. But the investors to Latvia are directed by other factors more. There is a clear correlation between the foreign direct investment and the position of Uzbekistan in ratings. As for the other countries from the second block, we hardly see any dependency there. The investors to Poland and Romania are not driven by the factors within the indexes as well.

Furthermore, the results of the research didn't provide a scientific background to make a conclusion regarding the further directions to improve the investment attractiveness of the country regarding the initial 3 blocks of directions. Ukraine should choose its own way to build the strategy on improving Ukraine's investment attractiveness. It should concern not only the position of the country in the world ratings, but mainly the indices of sustainable economic and political development, such as: monetary and fiscal policy, the level of corruption in the country, infrastructure, court systems reform, land reform, administrative leverage, social safety net etc.

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**THE MIGRATION OF ASEAN'S WORKER TO JAPAN:
THE IMPACT TO THE SOCIAL, CULTURE AND POLITIC OF JAPAN**

Azhar Harun, Shafee Saad

Universiti Utara Malaysia

Abstract

The research will analyze the causes and consequences of the recent dramatic increases of migration from Malaysia and selected ASEAN countries (Thailand and Philippine) to Japan. The research aims at learning some general characteristics of the migrations, and linking them to theoretical explanations of migration and its place in the process of globalization. The research main question is; how do Malaysian and selected ASEAN countries migrants enter to work in Japan both legally and illegally? And what are the possible consequences for the receiving countries, in terms of social, cultural and political change? To answer these questions, the researcher have to do some field research both in Japan as a host country and in Malaysia and selected ASEAN countries (Thailand and Philippine) as a home country. Three equation has form as hypothesis to answer these question. The output of the study shown that the largest number of ASEAN country's emigrants, will be created more social problem and also affected the culture changed to the Japanese society than the smaller number of ASEAN country's emigrants.

Key word: ASEAN, Worker, Migration, Japan, Social, Culture and Politic

1. INTRODUCTION

The migration became to be the important problem of the period currently. These is because the lack of the work in their respective country. Most of workers from the ASEAN countries entered to developed countries like US, Japan or Korea to obtain the work (Ministry of Labor Malaysia, 2004). Japan also become to be the popular country and as the target of the foreign worker from ASEAN countries to enter. The admission of foreign workers has become an important issue in the Japan. Although Japan has had a long history of relative isolation, the shortage of labour in certain occupations and jobs has drawn foreign workers into the country in increasing numbers. They have grown from a few thousand in the early 1980s to current estimates of anywhere from 60,000 to 100,000. Almost all of these workers are working in the country illegally. Because of their illegal status, most receive wages and other terms of employment that are significantly inferior to those of Japanese workers in the same occupations.

The growing presence of foreign workers in Japan is closely related to the tightening of the labour market and the consequent wage explosion. Their presence is still very small, insignificant in comparison to other industrialised countries, but the growth has been rapid, and likely to continue if state policy permits it. If the unfilled vacancy estimates of the Ministry of Labor truly reflect labour shortages, then the number of potential jobs for foreign workers are already double to triple the present number of foreigners overstaying in the country plus those who have been admitted as trainees.

Labor shortage in Japan made the new rule which come to grips with the slightly opened the door for foreign labor coming to Japan. Increased life expectancy of age accompanied by a decline in birthrate, bring labor shortages in Japan. Although industrial enterprises strive to reduce their dependence on

human power and replace them with robots, but in the health service sector cannot be done. Shortage of health workers in Japan could be make national health service sector has become paralyzed. In initially, Japan only open up opportunities for foreign workers with specialized capabilities to be working in Japan.

At the end of the 80's where the Japanese economy in various areas has progress, the need for labor has increased rapidly. The using of foreign labor is felt as the right solution to overcome the decline of workforce. The data getting from the organization in international training association of Japan in 2004, 79.2% as large as the current Japanese foreign workers originating from China, followed by Indonesia (8.8%) and the remaining is Vietnam, Philippines and Thailand. Most of these migrant has working in the textile and clothing manufacturing, machinery and metal manufacturing, agriculture, fisheries and construction of buildings sectors. (Organization for Economic cooperation and Development, 2004)

1.1 MIGRATION IN JAPAN

The number of foreigners entering Japan has been rising sharply. The number of foreign arrivals in 1992 was four million, the number of foreigners registered as living in the country was 1.3 million, and the number of foreigners who overstayed the tourist visas most foreigners use to enter Japan was about 300,000.

There are only about 100,000 legal foreigners among the country's 62 million workers. About one-fourth of these legal foreign workers are entertainers, one-fourth are engaged in international services, including English teaching, and 10 percent are engineers.

Japan does not permit the importation of unskilled foreign workers, but it is believed that 300,000 to 500,000 illegal foreign workers in the country, mostly filling so-called 3-D jobs--dirty, dangerous, and difficult. Over 60,000 foreign workers were apprehended in 1992 and 1993, with which two-thirds were from three home countries namely, Malaysia, Iran, and Korea. Each country accounted for about 14,000 apprehensions. About four-fifths of the illegal foreign workers were men, in which half of them were working in construction and one-fourth were working in factories. Mean while, One-third of the women detected were hostesses, and another one-sixth were working in factories.

1.2 DATA OF THE FOREIGN POPULATION IN JAPAN

The number of registered foreigners working in Japan is 1,778,462 as of December 2001, which is 1.4% of the Japanese population. The number of foreign females is 945,149 (53%). The number of those with permanent residency status is 684,853 (Table 1). The number of foreigners who have overstayed their visas is 224,067 as of 1 January 2002 (Table 2).

Table 1: The numbers of registered foreigners as of December 2001

	Korea	China	Brazil	<u>Philippines</u>	Peru	US	Total
Male	298,984	164,803	145,924	24,552	27,512	29,265	833,313
Female	333,421	216,422	120,038	132,115	22,540	16,979	945,149
Total	632,405	381,225	265,962	156,667	50,052	46,244	1,778,462
Permanent Residents	503,610	62,838	20,291	26,994	11,064	6915	684,853

(Source: Japan Immigration Association, *Statistics on the Foreigners Registered in Japan 2002*)

Table 2: The numbers of overstaying foreigners as of 1 January 2002.

	Korea	<u>Philippines</u>	Mainland China	<u>Thailand</u>	<u>Malaysia</u>	Taiwan	Total
Male	20,747	10,456	15,749	8,020	5,280	4,346	118,122
Female	34,417	19,193	11,833	8,905	4,817	4,644	105,945
Total	55,164	29,649	27,582	16,925	10,097	8,990	224,067

(Source: Ministry of Justice, 2002)

2. OBJECTIVE OF THE STUDY

The research will analyse the causes and consequences of the recent dramatic increases of migration from Selected ASEAN Countries to Japan. The ASEAN countries are include 10 countries, likes Malaysia, Thailand, Indonesia, Philippine, Singapore, Brunei, Myanmar, Kampuchea, Vietnam and Laos. But, this research will selected some ASEAN countries like, Malaysia, Thailand and Philippine. This is because, from the above data shown many people from Malaysia, Thailand and Philippine enter to work in Japan.

The research aims at learning some general characteristics of the migrations, and linking them to theoretical explanations of migration and its place in the process of globalization. The research main question is; how do the people from Selected ASEAN Countries migrants enter to work in Japan? And what are the possible consequences for the receiving countries, in terms of social, cultural and political change? To answer these questions, the researcher have to do some field research in Japan as a host country and some selected ASEAN countries as a home country.

The specific of the objective study is to analyse the possible consequences of Malaysian emigrants and selected ASEAN countries emigrants on Japan, in terms of social, cultural and political change.

3. METHODOLOGY OF THE STUDY

The research will include some field research both in Japan as a host country and in Malaysia and selected ASEAN countries (Thailand and Philippine) as a home country. The data will base on secondary data and primary data as below:

3.1 Secondary Data:

1. Library research on material related to the Malaysian people migration and selected ASEAN countries people to Japan.
2. Data compile by government agency (Malaysia) including Department of Statistics, Department of Immigration and Embassy of Malaysia and selected ASEAN countries in Tokyo.
3. Data also compile from International agency namely, Embassy of Japan, Thailand and Philippine in Kuala Lumpur and Department of Statistics in Bangkok (Thailand), Manila (Philippine) and Tokyo (Japan).
- 4.

3.2 Primary Data:

1. Data from interviewing government agency, Ministry officer, embassy officer from Embassy of Malaysia, Thailand and Philippine in Tokyo and Embassy of Japan, Thailand and Philippine in Kuala Lumpur. Data also will get from interviewing custom officer
2. Data from interviewing Japanese company who have experience in the Malaysian and selected ASEAN country's worker migration.

To obtain the good results, the data from above methodology will be analysed through the regression, crosstabulation and frequency technique by SPSS Program (The System Package for Social Sciences Program). And for facilitate in analysed these data, several models will be formed from the objective studies. These models will be tested through the several hypothesis that will be formed. With this empirical results, it could support strongly to this study. These methodology has choosing because it expected to give the data and the exact result with support the objective study.

4. LITERATURE REVIEWS

The literature survey on past and on-going studies on migration of ASEAN countries' people to the East countries like Japan and Korea has been carried out after the Prime Minister of Malaysia introduced 'Look East Policy'. The literature survey can be show are;

The paper from International Symposium at Nihon University (1994) has discuss the problems involved in managing migration during the Pacific century. The paper discuss on the challenge of managing migration to Japan. From the paper, the number of foreigners entering Japan has been rising sharply. The number of foreign arrivals in 1992 was four million, the number of foreigners registered as living in the country was 1.3 million, and the number of foreigners who overstayed the tourist visas most foreigners use to enter Japan was about 300,000. The focus of the papers was on foreigners who work in Japan. Japan is well aware of the gap between its policy of no unskilled foreign workers and the reality that at least several hundred thousand such workers are at work. However, there seems to be little consensus for a large-scale immigration solution. If legal immigration to Japan were at British levels of 0.1 percent of the population, Japan would accept about 125,000 immigrants annually. If Japan took as many immigrants as the US, it would accept 500,000 immigrants annually, adding about 0.4 percent to the population annually via immigration. However, there was widespread criticism of the short-term perspective through which most Asian policy makers evaluate migration issues, producing many skeptics of the notion that there will be yet another Asian miracle in finding a mutually beneficial way to manage labor migration and avoid unanticipated results.

Hachiro NISHIOKA, Keiko WAKABAYASHI, Hisashi INABA, Chizuko YAMAMOTO (1991) focused on the migration in Japan in their survey on 'Trends of Migration in Japan'. The sample in this survey include 34,781 persons from the 265 census districts in Japan. They produced Markov transition matrices with one-year/five year transition probabilities The result from this survey, from comparison between stationary distribution of one-year matrix and of five-year matrix, it was shown that from 1985 to 1990 interregional migration patterns in Japan changed toward decentralization of population. Since it was observed that on the average 23 per cent of each regional resident are stayer who never moves from birth place, they tried to apply the mover-stayer model to their migration data and calculated ultimate distributions. The trend of decentralization of population was again supported by the mover-stayer model. Up to 1960's, the causes in which people migrated from non-metropolitan to metropolitan areas had been greatest in magnitude. The main reasons for in-migration urban is "occupation",

"schooling" and "marriage". Since 1980's, it is interesting to note that the migration within metropolitan areas has been largest in volume. The main reason for in-migration is providing the better residential and natural environment.

Manolo I, Abella (1998) from International Labor Organization (ILO) discussed on the Labor Migration to Japan and the East Asian NICs in his article 'Issues in Contemporary Migration in Asia'. From his article, he find, labor shortages in the dynamic growth centers in the region have created another opening for labor migration which is potentially larger than the one that the oil boom created in the Gulf. The growth during the 1980s of migration flows to Japan and the Newly Industrializing Countries (NICs) of East Asia -namely, Hong Kong, Taiwan and Japan - have been impressive and are much larger than what official records reveal. Official records of eight selected Asian countries of emigration show that about 150,000 workers left in 1988 bound for one of these countries compared to only about 30,000 in 1980. We suspect that if clandestine migration is taken into account the actual numbers could easily be double these reported figures. In Japan alone, labor shortages are widespread in spite of the considerable relocation of labor-intensive industries to neighboring countries through direct foreign investment and in spite of the automation and robotization of many industrial processes. The development of this new migration front has raised a number of new issues and problems. One is the lack of legitimate avenues for the entry of unskilled labor; or where legal entry is possible, very unrealistic quotas have been set on the numbers of those who are permitted to come in. This has led, for example, to a large clandestine flow to Japan where thousands of small enterprises are desperate for workers and where wages are as much as 60 times those in China, 16 times those in the Philippines and eight times those in Malaysia. Japanese authorities estimate that there may be as many as 300,000 foreigners working illegally in the country today. They include many thousands of Chinese workers from the mainland as well as people from Taiwan, Korea, the Philippines, Thailand, Bangladesh, Pakistan and even Iran.

All three literature was discussed the increase in Japanese migration are happen quickly, with this increase has caused problems for Japan, particularly the problems of society, culture and politics. With this discussion, it has helped researchers to developing research hypotheses in this study as in model part.

5. MODEL OF THE STUDY

From the above objective and literature review parts, we can create three equations of hypothesis. For easy to understand, these hypothesis will create in the function form. Variables in these hypothesis will separate to independent variables and dependent variables. The empirical method that will be use to test or analyze these hypothesis is Multiple Regression. The three equation of hypothesis, can show as below:

1. $SOCIAL_J = f(EM_M, EM_T, EM_P)$
2. $CULTURE_J = f(EM_M, EM_T, EM_P)$
3. $POLITIC_J = f(EM_M, EM_T, EM_P)$

5.1 DEFINITION OF INDEPENDENT VARIABLES

1. Malaysian Emigrants (EM_M) The number of Malaysian peoples who work in Japan by year from 1992 – 2002 (both legally and illegally emigrants)
2. Thai Emigrants (EM_T) The number of Thai peoples who work in Japan by year from 1992 – 2002 (both legally and illegally emigrants)

3. Philippine Emigrants (EM_P) The number of Philippine peoples who work in Japan by year
From 1992 – 2002 (both legally and illegally emigrants)

5.2 *Definition of Dependent Variables*

1. Japan's Social ($SOCIAL_J$) the possible consequences to Japan social change, because of Malaysian, Thailand and Philippine emigrants [Qualitative Data]
2. Japan's Cultural ($CULTURE_J$) the possible consequences to Japan cultural change, because of Malaysian, Thailand and Philippine emigrants [Qualitative Data]
3. Japan Political ($POLITIC_J$) The possible consequences to Japan political change, because of Malaysian, Thailand and Philippine emigrants [Qualitative Data]

6. OUTPUT OF THE STUDY

6.1 *Equation 1*

$$\begin{aligned} SOCIAL_J = & -138.647 - 0.00598EM_M + 0.02416EM_T^{**} \\ & \quad \quad \quad (-1.046) \quad \quad \quad (2.845) \\ & \quad \quad \quad + 0.009170EM_P^{**} \\ & \quad \quad \quad (2.470) \end{aligned}$$

Note ** Significant at 95 % level

*** Significant at 99 % level

F – Test = 3.319* (* Significant at 90 % level)

R - Square = 0.587

This equation try to analyses the affect of the select ASEAN countries emigrants to the Japan social life. The number of each country's emigrants may be effect the Japan's social life in aspect of social problem like drugs, gangsterism or robbery. This hypothesis expected that the largest number of ASEAN country's emigrants like Philippine (EM_P), will be affected more problem to the Japan social than the smaller number of ASEAN country's emigrants (Thailand and Malaysia). And, between Thailand and Malaysia, the number of Thai emigrants are larger than Malaysian emigrants, so this hypothesis expected that Thai emigrants may be make more problem than Malaysian emigrants. The output of the study shows that the Philippine emigrants are the major factor influencing the Japan social life. It is followed by Thai and Malaysian emigrants. This output has supported the early hypothesis that the number of the country's emigrants affect the Japan social life in many aspects like drugs, gangsterism or robbery. Because the Philippine emigrant number is the largest, this factor (EM_P) is the major determinant in influencing the Japan social life ($SOCIAL_J$).

6.2 Equation 2

$$\begin{aligned} \text{CULTURE}_J &= -150.052 - 0.00365\text{EM}_M + 0.01390\text{EM}_T^{***} \\ &\quad (-0.629) \quad (4.245) \\ &\quad + 0.02040\text{EM}_P^* \\ &\quad (2.052) \end{aligned}$$

Note * Significant at 90 % level

*** Significant at 99 % level

F – Test = 10.757 *** (***) Significant at 99 % level)

R - Square = 0.822

This equation tries to analyse the affect of the selected ASEAN country's emigrants to the Japan culture (CULTURE_J). The number of each country's emigrants also may be affected the Japan's culture in aspect of culture change. The output of the study has supported the early hypothesis. This hypothesis expected that the largest number of ASEAN country's emigrants (Thailand and Philippine) will be affected some Japanese culture changed than the smaller number of ASEAN country's emigrants (Malaysia). The output shows that the emigrants from Thailand and Philippine has significant with the Japanese culture variable. Many of emigrants from Thailand open the restaurant in Tokyo, especially Tom yam restaurant (Tom Yam is Thai's special food). This kind of food became to be the major food for Japanese people. Japanese people also interest in Philippine's food like seafood. Although some culture like foods from Thailand and Philippine can influence the Japanese food, but all of these factors cannot influencing in the other Japan culture. This is because, the Japan people has an unique culture that cannot be influencing by the culture from another countries.

6.3 Equation 3

$$\begin{aligned} \text{POLITIC}_J &= 14921.765 + 0.628\text{EM}_M + 0.07966\text{EM}_T - 1.963\text{EM}_P \\ &\quad (0.673) \quad (0.151) \quad (-1.229) \end{aligned}$$

F – Test = 1.908

R - Square = 0.450

This equation tries to analyse the affect of the selected ASEAN country's emigrants to the Japan politic (POLITIC_J). The number of each country's emigrants also may be affected the Japan's politic in aspect of worker association rule or election problem. The output shows, all factors (independent variables) do not significant with the dependent variable (POLITIC_J). This mean that the output of the study did not supported the early hypothesis. It shows that all factors like EM_M, EM_T and EM_P do not influencing Japan politic (POLITIC_J). This is because, the Japan political change or any movement in politic will be control by Japan peoples themselves.

7. DISCUSSION AND RECOMMENDATIONS

This paper has utilized selected ASEAN countries and Japan's economy time series data for the period 1992 – 2002 to ascertain the influence of a number of variables that are commonly cited by previous researchers as important determinants of the migration growth from selected ASEAN countries to Japan. (Asia weekly Magazine, 2002)

The models of all three equations used social, culture, politic in Japan as the dependent variable and total of migration worker from selected ASEAN countries as independent variables. The study found that increase in total of emigrant from Philippine and Thailand will created the social problem, like drugs, gangsterism or robbery. The increase in total of emigrant from Philippine and Thailand also influence the culture changed in the Japanese community. This is because, the totals of Philippine emigrant are the largest, followed by the Thailand emigrant and the Malay emigrant are the smallest. For peace, The Japan government should consider or more control to the Philippine and Thailand emigrant.

Japan appreciates the contribution of migrant workers to help the economic development of Japan, particularly in the manufacturing sector. They become to be the part of the social institutions in Japan. However, the entry of foreign workers into the country has sparked a variety of polemic among the people in this country. A variety of negative effects were felt by most of the adult population. Rising crime in Japan is said to be many years due to the influx of foreigners into Japan. This case is because most of them came to this country in order to get rich quickly. Therefore, they are willing to do whatever job even illegal. For example they will do involve with robbery, kidnapping and others to get more money. Indeed, common crime in areas inhabited by them. In addition, the population lives in that area to be miserable. This is due to the attitude of not respecting cultural and religious communities. With this, they will cause a conflict with the local population. Their manufacture is certainly angered residents who eventually trigger fights and so on. Besides that, local jobs would be affected because most employers want to hire workers low wages. Thus the employer will reduce local employment but at the same time increasing the number of foreign workers. Low wages to foreign workers have always been the main cause for this problem occurs. Influx of foreigners into Japan has created a chronic social problem. Therefore, the authorities should ensure that immigrants will not be a problem in the future. With this fate locals more secure. Indeed, the undeniable arrival of foreign immigrants has a negative impact on the social life of the community in the country.

In terms of society factor, an increasing of immigrants both legal and illegal in Japan as restaurant workers, factory workers, grocery workers, laborers or servants will always cause problems to the Japanese people. Migrant in Japan appears to be a bad effect on the eyes of the Japanese. Results of the survey note that almost Japanese population rejects foreign workers in Japan. An increasing number of foreign workers could make them afraid. Have an opinion from the group in Japan, when Japanese accept foreign labor, the opportunity for Japanese people themselves will become narrower, the young men will only work on the "3K" - kitsui (rough work), kitanai (dirty worker / low) and kiken (occupational hazard) (Ministry of Labor Malaysia, 2004). Japanese people also fear the advent of the issue of terrorism and evil foreigners as was reported in the Japanese media.

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**KANO ANALYSIS OF CLIENTAL RELATIONS IN THE SECTOR
OF AGRICULTURAL SUPPLIES ENTERPRISES IN GREECE**

Chris A. Vassiliadis

Department of Business Administration, University of Macedonia,

Egnatia str. 156, 540 06 Thessaloniki, Greece

chris@uom.gr

Anestis K. Fotiadis

Computer Science Department, General Hospital of Katerini,

7th Merarxias str. 26, 60200 Katerini, Greece

Anesfot@gmail.com

Shirley Kuo

School of Tourism Development- Maejo University

63 Moo 4 Chiang Mai - Phrao Road, Sansai, Chiang Mai, Thailand 50290

Shirleykuo426@gmail.com

Abstract

The managing of the relation with the customer has acquired an important meaning, as it constitutes one of the most popular fields of modernization in an enterprise, which has direct impacts on the receipts of an enterprise. Thus, the managing of the relation of the enterprises with the customers and the direct improvement of the selling and supporting procedures which will strengthen and consolidate this relation, have been recognized as a primary need, and also as a critical parameter of development and stability for any enterprise which wishes to differentiate from the others by acquiring a significant comparative advantage. In this framework we examine the study of the cliental relations in the sector of agricultural supplies, with an emphasis on the role of the perceived quality of the offered services.

For this research a questionnaire is used, which is filled by the customers. This questionnaire is based on the Kano model and on the Servqual model. The offered services are graded and evaluated by using indexes of satisfaction and displeasure. According to the results of the research and how the customers perceive the services offered to them, the crucial elements are to keep what has been agreed, the good communication-relation with the seller and good service.

INTRODUCTION

Recently there has been a quite extensive discussion over the need of the enterprises to change, to become customer-centered, to invest on the “customer” factor and to form a flexible and mainly effective relation with them (Aaker and Joachimsthaler 2000; Cai 2002; Morgan and Pritchard 2002; Konečnik, and Gartner, 2007; Boo et al , 2009). Within the framework of this discussion, the managing of the relation with the customer becomes crucial, as it represents one of the most popular fields of modernization in an

enterprise today, which has direct impacts on the receipts of an enterprise. The aim of the relation with the customers is the continuous satisfaction of the customer, which brings devotion to the company with the final result of the formation of long-term profitable client relations. (Massey, et al., 2001; Winer, 2001; Bose and Sugumaran, 2003).

According to Galbreath and Rogers (1999), the management of customers is the sum of actions performed by an enterprise in order to identify, evaluate, acquire, develop and finally keep loyal and profitable for the enterprise customers, by providing the right product to the right customer, through the appropriate distribution channel, on the right time and on the right cost. The management of customers incorporates sales, marketing, services, systems of managing and planning of the company resources and of the supplying chain of the enterprise. In this way there is an increase in the potential of the enterprise to communicate with each customer individually and its relations with other enterprises, customers, suppliers, commercial partners and employees are facilitated.

According to Swift (2001), the management of customers is a corporal approach-strategy aiming at the comprehension and the influence through communication of the customer's behaviour, while improving the techniques applied to attract the prospective customers, who then become its customers, gradually develop a sense of loyalty to the company and finally become profitable customers for the enterprise. (Alexandris et al, 2006; Chi and Qu, 2008)

The customer management constitutes a business strategy designed with the aim to increase the size, the efficiency and the profit of the client basis through the development of higher value to the customers (Juttner, Christopher and Baker, 2007). It is a strategy applied for the better understanding of the needs and the behaviour of the customers in order to develop "stronger" relations with them. The development of good relations with the customers is the core of the enterprising success.

The collaboration of marketing, sales, service and technology for the acquisition of loyal customers aims at profit through improved competitiveness and service (Chalmers, 2006). Some of the main profits from the client relations are the development of long-term connections with the customers of the enterprise, the improvement of the services regarding the understanding of the customer's needs and the corresponding readjustment of the provided products and services; therefore, the redefinition of the functions of marketing and production is essential. The maximization of the degree of client satisfaction and the growth of their trust and loyalty to the products/services of the enterprise are crucial. The potential to increase the customer's satisfaction contributes to the decrease in the number of customer walkouts, which has vital importance for the enterprises in fields of intense competition (Fakeye and Crompton 1991). Additionally, aiming at the continuous satisfaction of the customers, which leads to devotion as it has been previously mentioned, greater customer profitability is achieved (Kelley, et al., 2003).

In the Greek field there are many agricultural supplies companies, each with a different subject. There are companies of seeds, fertilizers, medicine, irrigation systems, gardening, machines etc. The seeds companies include the ones of vegetable gardening, of vast agriculture e.g. corn, wheat, cotton and floriculture. The fertilizer companies include the ones with liquid fertilizers, the grainy and the crystalline (powder). The medicine companies include the ones with insecticides, fungicides. The ones with the lawn and the garden equipment belong to the gardening companies. Many companies belong to more than one of the above categories, as they trade many types of products in order to have the widest possible range of products.

The majority of these companies import their products from foreign companies, while there are some who produce their own products. These companies mainly address the agriculturalist shops in the

country and in the urban centres. They also address seedbeds or smaller wholesale companies-distributors of their products. The final consumer in most companies is the farmer-producer and in some cases the amateur buyer.

The aim of the research is to classify the agricultural supplies offered services and measure their quality as perceived by the customers. The difficult part of the research was that there were no elements from previous research, so as to achieve a continuity which would finally confirm the previous one or would provide new data. Therefore, in many cases researches on other sectors with relevant content have been used. Thus, the Kano model has been used as methodology along with some elements from the Servqual model during the formation of the questionnaire.

METHODOLOGY

Firstly, a qualitative research was conducted with personal interviews in order to identify the most important offered services in the sector of agricultural supplies according to the opinions of the customers in agricultural supplies companies. These interviews were 25, which is an adequate number according to Griffin and Hauser (1993), so as to determine the majority of possible service requirements. At these interviews, there was an effort to identify the problems the customers face daily by the companies basically due to the lack of some services, and also to identify their wishes, but in a smaller extend.

The interviews took place from 12/11/2008 to 20/11/2008 to customers in the prefecture of Thessaloniki, Halkidiki, Xanthi and Rodopi. After the completion of the qualitative research, the results were collected and lead to the formation of the first 14 questions of the Kano quantitative research questionnaire. At the same time 14 more questions from the Servqual model were added which fit the agricultural supplies sector.

Questionnaire Structure

At the first part of the questionnaire there is a short reference to the reason why the research is conducted and the questionnaire is given. Then, there are 28 double questions, with a functional and non-functional form. They ask how the customer feels when he/she is offered a service and how he/she feels when the same service is not offered. The answers are according to five-scale the following: 1=I like it this way, 2=It should be like this, 3=It is indifferent to me, 4=I can tolerate it, 5= I hate it.

Afterwards, although it is not part of the Kano model, there are questions related with the quality of services, related with which is the main reason why they choose a supplier and value for money received from the cooperation. The standard questionnaire was completed through personal interviews, because in this way we would have a higher level of response and the researcher could provide explanations whenever needed. The sample consists of agriculturalists, owners of retail shops with agricultural supplies, owners of seedbeds and flower producers. The questionnaires were filled in the prefectures of Thessaloniki, Halkidiki, Xanthi, Rodopi, Larissa, Imathia and Kavala. The questionnaires were completed from 2/12/2008 to 23/12/2008.

The questionnaire was filled by 2009 customers, while there were 6 refusals due to lack of time. The elements collected were coded and through the SPSS program we received the analysis of the results.

Prefecture	N	%		Age	N	%
Thessalonikis	51	24.4		21-30	21	10.1
Xanthis	51	24.4		31-40	92	44.2
Xalkidiki	45	21.5		41-50	75	36.1
Rodopis	38	18.2		51-60	10	4.8
Imathias	12	5.7		>60	10	4.8
Kavalas	9	4.3		Total	209	100
Larissas	3	1.4				
Total	209	100		Education	N	%
				University	99	47.4
Gender	N	%		Technological	65	31.2
Male	182	87.1		Lyceum	35	16.9
Female	27	12.9		High school	9	4.5
Total	209	100		Total	209	100
Profession			N	%		
Agricultural Products			125	59.8		
Agricultural Supplies			46	22.0		
Floricultural Products			38	18.2		
Total			209	100		

Table 1. Demographic Characteristics

As we can observe in table 1, most of the customers who completed the questionnaires come from the prefecture of Thessaloniki (24.4%) and Xanthi (24.4%), Halkidiki(21.5%), Rodopi (18.2%) and fewer from the prefectures of Imathia (5.7%), Kavala (4.3%) and Larissa (1.4%). 87.1% of the persons interviewed were men and 12.9% women, as expected in the clientele of agricultural supplies companies. Concerning the age groups, most of them are between 31 and 50 years of age. Specifically, 44.2% is 31-40 years old and 36.1% is 41-50 years old. As regards their educational level, most of them (47.4%) have a bachelor's degree and 31.2% have a degree from technological education institutes; this is reasonable as the owners of agricultural retail shops of agricultural supplies represent 59.8% of the persons interviewed and only the agriculturalists and the technologist agriculturalists have license for such shops. 59.8% of the persons interviewed were owners of retail shops with agricultural supplies, 22% were producers of floricultural products and 18.2% were owners of seedbeds-garden centers.

It is crucial for the research that 87.1% of the persons interviewed had stopped their collaboration with a supplier because of bad offer of services. This fact itself shows that the quality of services in the sector of agricultural supplies is not always the best. From the 12.9% who have not stopped their collaboration

with a supplier, 88.9% would do it in case of bad service. This statistical element shows that the offer of good quality services is very important for the businessmen of this sector.

Kano Analysis

From each functional form question we get an answer which is combined with the answer of the non functional form question. Thus, with the help from the Kano Estimation Table each service is characterized as follows: **O** (one dimensional requirement), which means that it is one desired one-dimensional characteristic whose low performance causes displeasure while its high performance causes satisfaction. **A** (attractive requirement), it is an attractive characteristic whose high performance causes great satisfaction while its low performance does not cause displeasure. **M** (must be requirement), it is a basic characteristic; only its non accomplishment causes displeasure, while its accomplishment does not cause satisfaction, as expected. **I** (indifferent) indifferent characteristic which does not cause neither satisfaction nor displeasure. Finally, there is **R** (reverse), which is the reverse characteristic that expresses the opposite expectation, thus its low performance causes satisfaction and its high performance displeasure; and **Q** (questionable result) which shows that the question was not understood and it has to be re-examined.

							*SF	**DF
Offered services	I	A	O	M	R	Q		
Sending the whole order	42 (20.1)	31 (14.8)	85 (40.7)	51 (24.4)	0	0	0.5550	-0.6507
Direct order sending	23 (11.0)	48 (23.0)	93 (44.5)	45 (21.5)	0	0	0.6746	-0.6600
Mistakes at the accomplishment of the order	21 (10.0)	0	0	0	188 (90.0)	0	0	0
Presentations of new products	93 (44.5)	80 (38.3)	8 (3.8)	28 (13.4)	0	0	0.4210	-0.1720
Response to call about problems	11 (5.3)	16 (7.7)	92 (44.0)	90 (43.0)	0	0	0.5167	-0.8708
Problem solution	20 (9.6)	31 (14.8)	104 (49.8)	54 (25.8)	0	0	0.6459	-0.7559
Innovative products	90 (43.1)	101 (48.3)	12 (5.7)	6 (2.9)	0	0	0.5406	-0.0860
Keeping agreed prices	18 (8.6)	0	95 (45.5)	96 (45.9)	0	0	0.4545	-0.9138
Seller with regular visits	101 (48.3)	54 (29.9)	27 (13.9)	24 (11.5)	3 (1.4)	0	0.3932	-0.2572
Informing about lack of ordered products	21 (10.0)	20 (9.6)	81 (38.8)	87 (41.6)	0	0	0.4832	-0.8038
Offering meals or recreation trips	69 (42.6)	99 (47.4)	38 (18.0)	3 (1.4)	0	0	0.5194	-0.1004

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Replacement of defective products	18 (8.6)	12 (5.8)	78 (37.3)	101 (48.3)	0	0	0.4306	-0.8564
Market research for products & services	119 (57.0)	36 (17.2)	12 (5.8)	42 (20.0)	0	0	0.2296	-0.2583
Attractive facilities	167 (79.9)	39 (18.7)	0	3 (1.4)	0	0	0.1866	-0.0140
Modern technological equipment	156 (74.6)	42 (20.0)	2 (1.0)	9 (4.3)	0	0	0.2105	-0.0520
Informative brochures for products	117 (56.0)	33 (15.8)	14 (6.7)	45 (21.5)	0	0	0.2248	-0.2822
Attractive and functional website	141 (67.5)	59 (28.2)	6 (2.9)	3 (1.4)	0	0	0.3110	-0.0430
Keeping promises	9 (4.3)	9 (4.3)	117 (56.0)	74 (35.4)	0	0	0.6028	-0.9138
Informed Cards	33 (15.8)	3 (1.4)	86 (41.2)	87 (41.6)	0	0	0.4258	-0.8277
Update on order sending	107 (51.2)	36 (17.2)	29 (13.9)	37 (17.7)	0	0	0.3110	-0.3157
Willingness to help	38 (18.2)	28 (13.4)	89 (42.6)	54 (25.8)	0	0	0.5598	-0.6842
Response to cases of limited time	17 (8.1)	103 (49.3)	62 (29.7)	27 (12.9)	0	0	0.7894	-0.4258
Sellers who inspire trust & security	32 (15.3)	39 (18.7)	84 (40.2)	54 (25.8)	0	0	0.5885	-0.6602
Kind & reliable sellers	44 (21.1)	9 (4.3)	87 (41.6)	69 (33.0)	0	0	0.4593	-0.7464
Sellers with knowledge answering questions	45 (21.6)	39 (18.7)	83 (39.7)	42 (20.0)	0	0	0.5837	-0.598
Individualized attention to each customer	80 (38.3)	78 (37.3)	36 (17.2)	15 (7.2)	0	0	0.5454	-0.2440
Understanding customers' wishes and needs	53 (25.5)	28 (13.4)	50 (23.9)	78 (37.2)	0	0	0.3732	-0.6124
Communication at time & places convenient for the customers	59 (28.2)	68(32.6)	46 (22.0)	36 (17.2)	0	0	0.5454	-0.3923

*SF (Satisfaction Factor) = $(A+O)/A+O+M+I$

**DF (Dissatisfaction Factor) = $-(M+O)/A+O+M+I$

Table 2. Table of analysis of the sum of responses based on customer requirements; C.R., of the Kano type questionnaire about the perceived quality of services in the sector of agricultural supplies

After the combination of the answers, the requirements are rated per category at the Table of Results (Table 2), where each service is characterized according to the frequencies. At the same table there are the factors of satisfaction and dissatisfaction.

A satisfaction factor close to 1 (one) shows great influence on satisfaction from the specific service, while the influence is smaller when the value is close to 0 (zero). A dissatisfaction factor close to -1 (one) shows great influence on the dissatisfaction by the specific service, while the influence is smaller when the value is close to 0 (zero).

Thus, the 9 following services are characterized as desired-one-dimensional-analogical; keeping promises 56%; solution to problems 49.8%; the direct sending of order 44.5%; response to call in case of problems 44%; willingness to help 42.6%; kindness and consistency of sellers 41.6%; sending the whole order 40.7%; sellers who inspire trust and security 40.2% and the sellers who have knowledge and answer the customers' questions 39.7%. If one of these services is not accomplished by the agricultural companies, dissatisfaction is caused, while when it is accomplished, there is satisfaction. Analogically, the higher percentage of a service, the greater the satisfaction it causes.

The following 5 services are characterized as self-explanatory-expected-basic; the replacement of defective products 48.3%; keeping the agreed prices 45.9%; keeping correctly informed customer cards 41.6%; information about the lack of products during the ordering 41.6% and understanding the wishes and the needs of the customers 37.2%. Thus, these services as self-explanatory for the customers can cause dissatisfaction only if they are not provided.

The following 4 services are characterized as attractive; the response to cases of limited time 49.3%; innovative products 48.3%; offering meals and recreation trips 47.4% and communication at times and places convenient for the customer 32.6%.

The following 9 services are characterized as indifferent; attractive facilities 78.9; modern technological equipment 74.6%; attractive and functional website 67.5%; market research for products and services 57%; distribution of informative brochures about the products 56%; update for the sending of the order 51.2%; regular visits of the sellers 48.3%; presentations of new products 44.5% and individualised attention to each customer 38.3%. The high percentages of the first four services and their classification in this category are impressive, especially if we consider that 80% of the persons interviewed have had higher education (university, technological institutions, and masters).

Finally, there is a service with a reverse characteristic; the mistakes during the accomplishment of the orders with an especially high percent of 90%. It is a service which causes dissatisfaction to the customers when it is present.

According to the level of satisfaction, the services which can result in high level of satisfaction are the response to stressful times with $CS=0,7894$, the direct sending of orders $CS=0,6764$ and the solution of problems $CS=0,6459$. Moreover, the services which result in low level of satisfaction are the attractive facilities $CS=0,1866$, modern technological equipment $CS=0,2105$, the distribution of informative brochures $CS=0,2248$, the market research for products and services $CS=0,2296$, the attractive and functional website $CS=0,311$ and the information about the sending of the order $CS=0,311$. The rest of services have a medium impact on satisfaction when provided.

According to the level of dissatisfaction, the services which can cause a high level of dissatisfaction when they are **not** provided are not keeping the agreed prices $CS= - 0,9138$, not responding to calls about a problem $CS= - 0,8708$, not replacing defective products $CS= - 0,8564$, incorrect customers cards $CS= - 0,8277$, the lack of information about the ordered products $CS= - 0,8038$, not solving

problems CS= - 0,7559, the lack of kind and reliable sellers CS= - 0,7464. Additionally, the services which cause low level of dissatisfaction when they are **not** provided are the lack of attractive facilities CS= - 0,014, the lack of an attractive and functional website CS= - 0,043, the lack of modern technological equipment CS= - 0,052, the lack of innovative products CS= - 0,086, the lack of meals and recreation trips CS= - 0,1004, the lack of presentations of new products CS= - 0,172, the lack of individualised attention to each customer CS= - 0,244, sellers without regular visits CS= - 0,2572 and the lack of market research for products and services CS= - 0,2583, the rest of the services cause medium dissatisfaction when they are **not** provided.

CONCLUSIONS

The research has discovered that almost the whole sample has stopped their collaboration with a supplier due to bad quality of the offered services. This shows that the agricultural supplies companies do not pay much attention on the services they provide or they are not aware of which services are important for their customers to satisfy. It is important to mention that the research is about the quality of services, but the majority of the sample prefers the most usual supplier not because of the good quality of services but due to the characteristics of his products, their prices, the discounts and the credit he gives. This is obvious during the visits of sellers at the shops of agriculturalists when products are ordered or when they try to attract a customer; the basic arguments are firstly the characteristics of the products and their possible advantages over the products of the rivals, and then there is much effort about discounts, the payment method and long-term credit. In particular about the last one, the sector of agricultural supplies is known for very high credits, which in many cases overcome one year.

The situation is similar for the flower producers; during the orders a real battle takes place over the prices, which is more intense in the case of “big” flower producers and therefore they have started recently to import themselves the products they want in great quantities from other countries. The same conditions occur in seedbeds but in a smaller extend than the other two categories of customers. As far as the offered services are concerned, the consistency in the keeping of promises and agreements, the personal relations with the sellers and good service come first among the reasons of choice, therefore these services should be the basis for a company in order to have satisfied customers. The high level of satisfaction, the positive value of the exchange and the tendency to re-buy are the characteristics of the most usual supplier for all. The level of satisfaction seems to influence the view of the exchange value and the tendency to re-buy, since their results are relevant. This is logical because when a customer feels satisfied by his/her supplier, this means that he/she believes that he/she gains profit from their collaboration and when there is satisfaction there is no reason to stop the collaboration, so there will be re-buy. At this point we should be very careful since especially the value of the exchange and the tendency to re-buy based on the quality of the offered services, it is easy to be accomplished due to product characteristics or pricing policy.

Each company should conduct a research on its customers in order to identify the services they wish to be offered. Since the satisfaction increases when there is an increase in the services which are one-dimensional and attractive, and the satisfaction decreases when there is a decrease in the offering of one-dimensional and self-explanatory services, the companies of agricultural supplies should focus on certain services, in order to keep their customers and attract new ones. Thus, according to the results of the research the mistakes during the accomplishment of orders should be avoided. The companies should respond even in cases of limited time and overcome the burden of stress. They should provide solutions to problems. They should replace the defective products. The customers' cards should be correctly informed to avoid confusing customers. They should in general keep their promises and especially the

agreed prices. Then, they should employ sellers who inspire trust and security, are well informed and answer customers' questions, are consistent and kind. The company should willingly help a customer. The orders should be sent whole and directly. The communication should take place at times and places convenient for the customers. They should have innovative products, so that their customers can also differentiate from their rivals. Moreover, they should respond to calls in problem cases and not try to avoid it with excuses. They should provide meals and recreation trips. They should understand the wishes-needs of their customers.

In addition, they could focus less on services such as attractive facilities, modern technological equipment, attractive website, unless they wish to impress without gaining comparative advantage. The same are the market service for products and services, the distribution of informative brochures, the presentations of new products and the update for the order sending. Finally, there is no need for individualized attention and regular visits of sellers, concerning the three groups of customers, we could claim that they are demanding customers, the agriculturalists being in general more tolerant customers as in many cases of lack of certain services they seemed less rigid to their suppliers. It is also impressive that the agriculturalists, even though they are scientists, do not consider as important services such as functional website, modern equipment, market research and attractive facilities. If we wished to try and adapt the offered services of the research according to the five Servqual dimensions, we could claim that the tangibles are less crucial and the empathy follows. On the other hand, responsiveness, reliability and assurance seem to be crucial dimensions for the sector of agricultural supplies enterprises.

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¹⁾ Faculty of Military Health Sciences, University of Defence, Třebešská 1575, 50001 Hradec Králové, Czech Republic

²⁾ Emergency Medical Service of the Hradec Králové Region, Hradecká 1690/2A, 50012 Hradec Králové, Czech Republic

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¹Medical University of Plovdiv, Faculty of Public Health, Department of Health Care Management,

Health Economics and General Medicine, bul. Vasil Aprilov 15-A, Plovdiv, 4002, Bulgaria

²Medical University of Plovdiv, Faculty of Medicine, Department of Dermatology and Venereology,

bul. Vasil Aprilov 15-A, Plovdiv, 4002, Bulgaria

³Medical University of Plovdiv, Faculty of Public Health, Department of Social Medicine and Public

Health, bul. Vasil Aprilov 15-A, Plovdiv, 4002, Bulgaria

⁴Medical University of Plovdiv, Medical College, Bratja Bukston 120, Plovdiv, 4002, Bulgaria

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²⁾Emergency Medical Service of the Hradec Králové Region, Hradecká 1690/2A, 50012 Hradec Králové, Czech republic

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Department of Economics of enterprise, Odessa State Academy of Civil Engineering and Architecture,

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Anestis K. Fotiadis

Computer Science Department, General Hospital of Katerini,

7th Merarxias str. 26, 60200 Katerini, Greece

Shirley Kuo

School of Tourism Development- Maejo University

63 Moo 4 Chiang Mai - Phrao Road, Sansai, Chiang Mai, Thailand 50290

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