

THE ESTIMATION OF THE PROFESSIONAL COMPETENCES LEVEL WITH THE HELP OF MULTIPLE REGRESSION ANALYSIS (ON THE BANK STAFF EXAMPLE)

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Abstract

In this article the possibilities of the estimation of bank personnel's usage are examining with the help of the regressive model of the professional competence. The advantages of its usage are revealed in the HRM system. The most important competences for the banking activity are described. The results of the usage of the estimation of the banking personnel's activity under the working results for a period of half a year in one of the largest Russian banks are presented.

Key words: *HRM system Professional competence the multiple regression model Personnel's estimation during the half year period.*

The modern cyclically changing marketing conditions require advancing development of the human's factor. The effective progress of the HRM system on the enterprise is still the main factor of the competitiveness rise ability and effectiveness of each organization.

In connection with this the role of the HRM professional estimation is increasing. Investigating the results it's possible to get a certain information which could be the source for improvement of the HRM system in whole. The personnel's significance is great in the financial business area. The persistent banking technologies development involves the appearance of the personnel validation (worker's skill and knowledge, the profession level and education and so on.) with the aim of prognoses of the possibility of usage such estimations for the HRM system improvement with a glance of the bank commercial development. During the latest economical crisis some commercial banks had to cut the banking staff providing the flow of funds and costs optimisation. The crisis was overcome, nevertheless the bank staff cutting tendency is still continued. During the first quarter of 2010 Sberbank dismissed more people (13,000) than during the whole 2009 (7,900), VTB bank cut the staff for 11 % (approx. 4,200 people).

According the McKinsey Global Institute researches we can conclude that the Russian banking sector has a great potential because of the fact that the labour productivity here is low due to extremely bad labour management. [1]

It is possible that banking sector soon will get radical changes which may bring some new requirements to the staff.

It's necessary to mark that the competitive standards in the banking sphere a high on the federal level (the amount of banking branches), also they are high on the regional level (the amount of banks in region) and in cooperation with foreign credit institutes.

According to the analysis the articles from famous economical magazines it is possible to see a tendency of the pre-crisis period, for which is typical the development of branches and the complete net of the commercial banks in the region. It is possible that after the crisis overcoming that tendency will revive.

A lot of commercial banks to optimize the personnel size began to use the personnel activity validation every half a year to reveal those who have to be dismissed. But examining the personnel validation at the end of half a year it is necessary to specify, that in the network of this article the personnel validation at the end of half a year is considered to be a system of periodical and regular estimation of the certain skills, the ways of doing work during that half of the year under the aims, standards and tasks according to the working directions.

The validation period with a difference of half the year makes HRM more effective, because it affords to reveal important problems in the HRM system at the early stages and assume the certain measures to eliminate them.

So in the context of this work it is necessary to explain the difference in terms certification and personnel validation:

1. Juridical distinction. The personnel validation is regulated by local standard acts, the certification by federal ones written in Russian Federation labour code.
2. Formality. Certification is a formal act, needs to be marked in a certain procedure. The validation may be informal.
3. Systematic character. It's necessary to take any certification regularly, its periodicity is marked accurately in the standard acts. Validation depends on the aims and tasks.
4. The involved specialists. There is an exhaustive list of administrators and specialist who must be certificated. The validation may cover all the personnel.
5. The aim and purpose. The certification has only administrative purposes, the definition of the worker in accordance to his job position. The validation has at least three aims > administrative (adequacy to his job position), informational (informing the personnel about their possible directions of the progress), motivational (the estimation gives reasons to the worker's behaviour) and so on.[2]

So the validation has a large scale character, it pursues variable aims. Comparing with certification, validation may cover all categories of the personnel. In narrow, more practical definition, the personnel validation every half a year is the process of comparison of workers competences and their level, they need to do their work successfully.

In this article is examining the mathematical model of the bank personnel professional competences on the basis of multiple regressive analysis method. For analysis the Saratov Home Credit Bank branch (158, Chernushevskogo str. Saratov) have been chosen. In the first stage of that model creating we divide conventionally the whole personal into three groups.> managers, specialists and hired labours. For each group of the participants we are able to reveal a list of competences. On the basis of exploring the advanced foreign experience and banking staff practical activity the most adequate the banking sphere competences, which could form the basis for estimation of banking potential during the half a year period, were detached.

These competences may be combined subject to group's participants of bank's activity.

The main competences model includes in itself:

1. High educational level.
2. Execution management manages the company's effectiveness in achieving the aims and tasks.
3. The team management creates and develops the effective team pointing at result.
4. Trend to power (taking decisions, responsibility for result) demonstrates readiness to take decisions and responsibility.

The main competences model «Specialist» includes:

1. The orientation to achieve the result persistent - moving forward to solve the problem until it will have been solved.
2. Professionalism - demonstrates the working knowledge and professional examination.
3. Effective communication - shows the ability to arrange and maintain the resultant relations with clients and colleagues.
4. Orientation to the clients- shows the ability to concentrate the forces to reveal the needs of clients and to please them.

The main competences model «The hired labour» includes:

1. Selling practise - the worker demonstrates the selling technology knowledge.
2. The orientation to achieve the result persistent -moving forward to solve the problem until it will have been solved.

3. Professionalism- demonstrates the working knowledge and professional examination in the certain area.

Then according to its importance each special kind of competence was ranked. By method of finding the middle rank of the certain competence in a labour group the first 4-7 certain competences were chosen in each certain type of competence. The other criterions were not used in further work, because they were of low importance for bank workers. According to the tasks of investigation, in the third stage the rest competences were ranked and it was found their part in a certain type of competence. For that purpose the weight average estimation method was applied. During the ranking the part of each certain competence it was suggested to use the 100 scale system. Every specific competence was estimated by experts in mentioned range, so that the total score is 100, what is equal to a specific type of competence. As a result, the content of the general view of the professional competence was determined, as well as their part relating to the general professional competence of the bank worker.

So, the more financial resources the bank worker invests into his education and his self-development, the more intensive form his professional competence. The worker increases his gains. That tendency is typical for all groups of participants of banking activity. The most important is to increase permanently the top managers qualification level, who have to get the advanced knowledge and skills in HRM using their own means.

Table 1. Weight factors (GPA) of the estimation of the main components of the professional of bank works professional competence.

Legal competence	Grade point average
Internal standard act knowledge	36
Job description	28
Bank internal regulation	36
Professional knowledge	Grade point average
The worker's educational level	41
The working speed and quality	30
The additional professional skills level that depends on the self - development and self - financing degree	29
The informational competence	Grade point average
Grasp of text editors and electronic tables	25
Grasp of multimedia equipment	14
Skills to apply the existing informational technologies	24
Skills to estimate effectiveness and training results, taking into account the knowledge learning and skills mastering, the creative activity development with the help on computer technologies, including text editors and electronic tables.	37
The activity effectiveness	Grade point average
The high professional level in his(her) own working sphere	22

The presence of working in team	20
The financial management high level	24
The presence of advanced client servicing methods	17
The presence of the logically structured HRM system in bank	13
Communicative competence	Grade point average
Grasp of the installing of the contact with the clients who have different social position, circumstances and age as well with their own colleagues	40
Grasp of the conflict situations diagnostic methods	29
Grasp of interaction with the other specialists in solving the problem and realization of the project	31
Social competence	Grade point average
Skills to form the positive collective relations	30
Skills to form the positive microclimate in the network of the bank working culture	20
Skills to interact with clients and colleagues with the aim to increase the working quality in bank	25
Formation of their working activity in accordance with moral, ethical and juridical standards.	25
Reflexively analytical skills	Grade point average
Skills to estimate in adequate way the present state and dynamic of the worker's intellectual, moral and volitional development according to the method of the human's capital profitability	17
Skills to estimate the present state and dynamic of worker's learning the main working program with the help of calculation profitability of the human's capital usage method	18
Skills to point the aims to get success in client servicing	15
Skills to detach difficulties in worker's adaptation in correct form	17
Skills to estimate the staff's degree of forming the worker's skills and knowledge	16
Skills to estimate their professional activity in adequate way	17
Organizational skills	Grade point average
Knowledge of banking organization principles	13

Grasp of modern banking project technologies	16
Skills to organize united and individual activity of bank worker	19
Skills to organize the worker's advancement in the network of the individual trajectory	20
Skills to take stock the internal and external conditions of realization of their own activity and worker's activity aimed to achieve the results that had been planned.	16
Skills to choose the most convenient method of from different ones	16

The results shown in the table have their practical significance: the particular part of competence is determined for each kind of bank staff's special competence (of 6) (organizational skills, communicative competence, etc.). In some competences the particular ones may be equal weighted, i.e. they may have the same magnitude for integral characteristic of the bank worker's professional competence.

For example for reflexively analytical skills we see that all 6 special competences consist have approximately the equal parts in the structure of the competence which is given. The same regularity we can see in the activity effectiveness, where the biggest part (in comparison with the other special kinds of competences) has the professionalism in its activity.

In the third stage we got the multiple regression equations for HRM, detached equation for each group of the staff.

The multiple regression equation for group «Manager»:

Manager = 25,38+0,42 Reflexively analytical skills+0,21 Effectiveness of activity+0,14Social competence+0,26 Communicative competence-0,13 Juridical competence

The multiple regression equation for group «Specialist»

Specialist=37,98+0,44 Organizational skills+0,50 Professional knowledge+0,4 information competence-0,42Social competence

The multiple regression equation for group «Worker»

The worker= 32,8+0,44Professional knowledge+0,5 Effectiveness of activity+0,4 information competence-0,42Social competence

It's necessary to note that all correlation coefficients that had been got in 1,2,3 equations are static. The correlation sign means direct or inverse relation and doesn't carry an important meaning. In practise

Coefficient's negative sign has only a technical meaning when we compose the estimation lists, when the highest mark is given to the lower index of the competence, or on the contrary when the correlation is positive.

So, for managers the important kinds of competences are effectiveness, the high professional level, skills to organize, skills to work in team, to manage the team, to have computer skills.

Manager ought to know how to work in group, where the integration of the individual activity takes place.

For a specialist the most important thing is his (her) working professionalism (the quality and speed of clients servicing), exactly this determines their gains.

So the aim of this investigation is achieved, we got the multiple regression equations which determine the competences formula and their structure for the main groups of the bank staff. Competences are the most important subjects to estimate the personnel activity. The competence is just the thing that can give us the most reliable results which are able not only to bind the company's strategic purposes and the personnel individual ones, but to make the HRM process more ordered and only once determining the competence model it becomes possible to use it in different personnel procedures. In practice this result affords each worker realise the kinds of particular competences as a part of special competences structure are formed totally, in part or are not formed at all. And the criteria of necessity to apply the regressive analysis for the purposes of competence estimation in banking sphere are shown in the SWOT matrix.

Matrix SWOT

Strong points: 1. The qualified labour is the base of banking work and it is the main factor which provides success in competition 2. The high responsibility in acting and taking decisions (the work is connected with client's funds. 3. Practically the single specialist isn't able to execute all services and operations. The banking labour has a collective character.	Weak points: 1. The low degree of the possibility to estimate the personnel for the reason of banking operation limits. 2. The constant complication of IP technologies. 3. The overwork of the staff
Possibilities: 1. The existence of accurate criteria and possibility of accurate estimation according to these criteria¹. 2. Estimation of all groups of HRM system. 3. The possibility to organize an additional training². 4. The possibility to plan the personnel's promotion track.	Threats: 1. Wrong way to select the factors. 2. The calculating system malfunction. 3. Unexpected circumstances. 4. The probability of making mistake during personal estimation is high³.

¹ The clear criteria of the competence selection and possibility of estimation according to them (with the help of behaviour indicators) reduces the subjectivity of validation by responsible people.

² The possibility to organize an additional training based on the analysis of the difference between the expected and real evidence of competence.

³ At first it is necessary to point that the more mistakes make the company's managers in worker's estimation, the less confidence have the subordinated people to the HRM system. The main kinds of mistakes: «Nimba»: the estimation under the influence of the positive or negative overall impression. «The mistake of taking into account the latest events»: the tendency to use the last working events during the estimation without taking into account the wider period of time. «Priority level mistake»: the estimation based on the preference and the influence of such preferences to the total estimation. «Favour mistake the estimation based on relations»: the subjective relations influence more to estimation the quality of work.

5. The possibility of ranking in the sphere of labour motivation.	
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The possibilities to use the professional competences estimation model are great. One of the founders of competence method Boyatsis used to emphasise that the motives, special features, self-estimation, social role and skills. [3] were able to form the competence. And they all form some sort of hierarchy. Each competence may exists by its own on the different levels, self-estimation and social role> on the conscious level, and skills influence strongly on all the others. The personnel motivations, being in the basis of their labour behaviour form the basis for forming and demonstration of the competences. Integrating the staff competence estimation into the stimulation system is able to bring an adequate bonus mechanism to reward the most competent workers. [4]

Moreover, the competence estimation combining with the stimulation system directly binds the purposes of organization with the purposes of individual worker, because the comparison of personnel competences and the set of job position competences let each worker to understand>

1. What kinds and levels of competences is necessary to possess.
2. The self-financing ambits of his (her) educational activity.
3. What salary he (she) could pretend in the certain phase.
4. What competences are need to be developed for achieving the best results and consequently the bigger salary.

So the results of the regressive competence model can be the basis of the HRM system and on that basis the specific functional directions can be developed. That is the bank understands clearly the job position of the worker, his (her) salary, the possible additional training and funds to realise it with the help of half a year validation of the worker.

The applying of such model makes it possible to combine the purposes of bank and the purposes of the worker in the light of the permanent progress.

It's necessary to note that depending on the result of multiple regression equations it's possible to develop the HRM system and to create the strategy of personnel progress. To estimate the personnel of the Home Credit Bank the regressive analysis was applied.

Table 2. The progress of showings of the personnel competence estimation in banking.

The progress of showings	Behavioural showings	The recommended decisions about the personnel
The showings are getting low in all main competences	The worker is useless on his place	This kind of workers must be dismissed in the first place, but if it's difficult to find a good specialist, it is possible to train him even he is not so good. But before taking a decision it is necessary to estimate his potential for not to waste money.
The showings of 2 and less	The worker's labour doesn't	It is necessary to discuss what is

competences are getting low	qualify	good for his progress and to make a plan to eliminate his problems.
The showings are steady	The worker's labour is satisfactory	It is the large majority of such people and they deserve the pecuniary and moral stimulation.
The showings of some competences are getting higher but not very strong	The regular overfulfilment of the production plan	It is the large majority of such people and they deserve the pecuniary and moral stimulation.
The showings are getting higher with the time	The worker is over his job position	Such workers need to be in staff reserve. It is necessary to promote him, if it is not possible, is good to offer him another new working area in the same bank. Or there is a certain risk to lose him in the nearest future.

The Home Credit Bank staff estimation took place between 2011 and 2013. In 2013 it showed that 19% of personnel had lower competence level than it was expected, 56% of personnel had expected competence level and 25% had the higher one (according to 2011 results the part of such workers was 5% less). As a result of that estimation the recommendations to optimize the staff were given. Such optimization was possible with dismissing 3 workers, whose competence progress tended to get lower according to last three results of their estimation. The rest were recommended to get the higher quarterly bonus.

The suggested half a year estimation does not only help to determine those who ought to be dismissed but can be a motivation for more productive activity of the others. That kind of estimation determines the possible ways of progress and workers self-perfection, it may be an instrument of making dialog between the worker and company management and getting the feedback. So the half a year personnel estimation based on the competence regressive model validation is a good basis for creating effectively the whole HRM system with the purpose to complete and optimal usage of the staff's professional potential.

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