TRANSFERRED PRICE AND THE SECTOR OF PRODUCTIVE SERVICES AS THE KEY PRECONDITIONS TO SMART, SUSTAINABLE, AND INCLUSIVE GROWTH

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Abstract

The paper explain analyses the essence of human capital contract (HCC). It is usually suggested as a contract that can help people without sufficient amount of money to invest in their human capital and due to the investment receive higher future income. Although the idea of HCC is quite old its practice usage becomes quite rare. We try to find reasons why it is happen. One of the possible explanation could be that existed contracts works only in the field of education, But they can be used also in other areas, generally everywhere where a customer receive some services and quality of the service affects, at least partially, costumer´s future productivity. We therefore call such services as productive services and sector of all such specified services as the sector of productive services. The sector includes health services, spa, sport services, social security and so on. Key attention is further devoted to the main principle of human capital contract – transferred price. The paper analyses its characteristics and designs mechanism how transferred price should work as a convenient and useful tool of financing. The main point is that a customer of sector productive services pays through transferred price directly to its provider. At the end the paper shortly discuss main objections to transferred contract. It is shown that the objections serve as a pretext for hiding real reason that is that present systems of financing guarantees prevent providers of productive services privileges. Providers can so more easily achieve profit than in a system based on transferred price and human capital contract.

Keywords: *economic growth, human capital contract, transferred price, sectors of productive services*

1. INTRODUCTION

The issues relating to economic growth are among the most frequently discussed in economics. This is logical. Growth allows people to produce more goods, thereby satisfying more needs. Thanks to new resources that result from economic growth, we are able to cure previously incurable diseases, prolong the human life, and increase its quality. Nevertheless, it appears that economic growth has its limits. For example, it may have adverse environmental impact. As a result of the growing number of opportunities, the stress level of people, who are not able to take advantage of all the opportunities available, may also increase. Even during the period of economic growth, there may be some population groups that have no or only minor benefits (compared to other groups) from such growth. Therefore, other terms are used in addition to the growth itself, such as sustainable growth, inclusive growth or smart growth. These types of growth would address the aforementioned negative factors. There are many publications that deal with these types of growth, analyze their characteristics, and discuss ways of achieving such growth. In terms of factors affecting economic growth, investments in human or social capital, as appropriate, are often mentioned (e.g. Becker 1964; Barro and Sala-I-Martin 1999; Robaliano 2000, Grootaert and Van Bastelae 2002, Savvides and Stengos 2009; Roy, Roberts and Ali 2012). However, the ways of motivating people not only to invest in their human and social capital, but also to promote human/social capital investments of others, are only seldom discussed. The sector that offers or arranges investments in human and social services to/for its customers may be referred to as the sector of productive services. This sector offers services, through which customers increase their human and social capital, thereby becoming more productive.

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The objective of this paper is to show that transferred price and the sector of productive services represent key preconditions to smart, sustainable, and inclusive growth. The article is organized as follows: First section introduces concepts of sustainable growth, inclusive growth and smart growth. Second section describes characteristics of the sector of productive services. We, in addition to other things, explain why we chose this term and how our description of possibilities offered by the sector resembles the possibilities that were offered by the sector of industry during the Industrial Revolution.

The third section then brings connection between the sector of productive services on the one hand and smart, sustainable, and inclusive growth on the other hand. It is shown why we conjecture the sector of productive sectors is the key precondition to smart, sustainable, and inclusive growth. Fourth section concentrates on the essence of transferred price, explains its principles, and shows how transferred price is able to solve some risk associated with the situation, where some people that wish to invest in their knowledge abilities or skills do not have sufficient funds but other people are willing to lend them the necessary resources. We emphasize that the principle of transferred price is the general principle that can be used in many situations when income of one person depends on the quality of services that are provided to this person provided by another person. Human capital contract, sometimes suggested (e.g. Friedman 1962; Palacios Lleras 2004) as possible means how students can finance their education, then is a specific example of using the transferred price principle. Fifth section suggests how transferred price could be used in the sector of productive services. The suggestion is based on the idea that a provider of productive services should be lender who in some time provides its customers with the services. Customers are borrowers, who pay for the services not at time such services are used, but sometimes in the future, using their future income that is the consequence of such services, provided their income exceeds some threshold defined in the contract between the lender (provider of productive services) and individual customers. Sixth section shows that transferred price provides useful feedback about the productive service quality to its provider, client, and other subjects. The seventh and final section discusses the obstacles that prevent the broad use of transferred price. We believe that some of them are only imaginary, i.e. they only exist only in the people's mind and can be overcome relatively easily. Others are real; however, and their existence is the main reason why the transferred price concept is only seldom used. The barriers to entry into the market (sector) of productive services and tough regulations of the sector are among the most important in our view. We develop our opinion in the section and suggest what should be done for achievement of smart, sustainable, and inclusive growth.

2. CONCEPT OF SUSTAINABLE GROWTH (DEVELOPMENT), INCLUSIVE GROWTH, AND SMART GROWTH

This chapter introduces the concept of sustainable growth (development), inclusive growth, and smart growth. Let us start with sustainable growth/development. There are many definitions of these terms, but the most frequently quoted definition comes from the publication Our Common Future, also known as the Brundtland Report (UN 1987): "Sustainable development is development that meets the needs of the present without compromising the ability of future generations to meet their own needs. It contains within it two key concepts: 1. the concept of needs, in particular the essential needs of the world's poor, to which overriding priority should be given; and 2. the idea of limitations imposed by the state of technology and social organization on the environment's ability to meet present and future needs." Therefore, what can we derive from the definition? At first glance, it includes a clear ethical motive of responsibility to future generations, which have the right to live at least under the same conditions as the present generation. Moreover, it talks about the meeting of needs of the present; based on this, we can assume that the objective is not to suspend or limit economic growth. Quite the opposite. Only sustainable growth is the basic precondition to escaping the poverty gap and to meeting individual needs. UN (1987) explicitly mentions that the present needs always refer to the basic needs of the poorest people on the planet. Otherwise, the term "needs" could be statistically misinterpreted: although the global situation might seem relatively good, consequences of a potential disaster would most severely affect the poorest population groups (e.g. seaside populations of developing countries in case of more significant ocean level rise, where developed countries would be able to deal with such

defect relatively successfully). The development in the term "sustainable development" is a dynamic element, a process of constant change, where the meeting of the needs of the present generation and of the future generations is harmonized. It is not defined, which needs matter more. The decisive measure is the preservation of natural resources and the development of the quality of life. The phrase sustainable development fully characterizes the global perspective of future development. Development characterizes change in time, with the subject improving. Sustainable development emphasizes permanent, long-term nature of the given activity. Our paper will rely on the aforementioned, with some expansion. In our understanding, sustainable growth will refer to the following growth that also:

- Meets the needs of the present without compromising the ability of future generations to meet their own needs.

- Does not, in the conceivable future, hit the barriers given by the limitations of natural resources or the barriers determined by the limited ability of natural resources to absorb the consequences of human, and particularly economic, activity.

The expansion consists in the fact that the objective of sustainable growth is not only the preservation of natural resources, but also the limitation of people's dependence on the nature, i.e. to ensure that people need less natural resources to meet their growing needs or that the use of such resources is more effective, as appropriate. This also achieves the goal of the natural resources preservation.

Let us move to the terms inclusive growth and smart growth. OECD defines inclusive growth as[2] "a growth that combines strong economic growth with improvements in living standards and outcomes that matter for people's quality of life (*e.g.* good health, jobs and skills, clean environment, community support)." Ali and Hyun (2007, p. 1) write: "*Growth is defined as inclusive if it increases social opportunity function which depends on two factors: 1. average opportunities available at population; and 2. how opportunities are shared among population.". Generally speaking, the concept of inclusive growth emphasizes that the growth is beneficial to all people of the given society, where the growth takes place, and that if there are some population groups that do not profit from such growth, there should be instruments for including those groups within those that do. At the same time, the inclusion should not be in the form of redistribution, but by ensuring that those, who were previously excluded, will start contributing to economic growth through their activity, thereby increasing their income and ability to meet their needs.*

The term "smart growth" is associated with the terms inclusive growth and sustainable growth and is mainly used within the context of the European Union. All three terms can be found in The Europe 2020 Strategy, where the following is mentioned: "The Europe 2020 Strategy[3] *is about delivering growth that is: smart, through more effective investments in education, research and innovation; sustainable, thanks to a decisive move towards a low-carbon economy; and inclusive, with a strong emphasis on job creation and poverty reduction." The Strategy further declares that: "*Smart growth means improving the EU's performance in [4]:

- Education (encouraging people to learn, study and update their skills

- Research/innovation (creating new products/services that generate growth and jobs and help address social challenges)

- Digital society (using information and communication technologies)

[2] The definition is taken from http://www.oecd.org/inclusive-growth/about.htm.
[3] The details about Europe 2020 Strategy are cited from http://ec.europa.eu/europe2020/index_en.htm.
[4] EU targets for smart growth include: 1. Combined public and private investment levels to reach 3% of EU's GDP as well as better conditions for R&D and Innovation. 2. 75% employment rate for women and men aged 20-64 by 2020 – achieved by getting more people into work, especially women, the young, older and low-skilled people, and legal migrants. 3. Better educational attainment, in particular: reducing school drop-out rates below 10% and at least 40% of 30-34–year-olds with third level education (or equivalent).

3. CHARACTERISTICS OF THE SECTOR OF PRODUCTIVE SERVICES

It is clear from the above mentioned that all three terms (sustainable growth, inclusive growth, and smart growth) are associated with investments in human and social capital. The definition of the term smart growth explicitly mentions investments *in education, research and innovation*. Sustainable growth may only exist if we can find such ways that would make it possible to meet our needs without limiting the needs of the future generations. We can agree with the opinion of Kim and Lee (1999) that such fulfillment of our needs is only possible as a result of advanced technology, which is only possible thanks to investments in human and social capital, with people gaining knowledge, skills, and capabilities in respect of such technology and its application in the society. The concept of *inclusive growth*, when the members of disadvantageous groups are included among people, whose activities contribute to economic growth, can only be implemented if the members of disadvantageous groups develop their skills and abilities, but first they have to receive knowledge on how to develop them. In this paper, we rely on the conviction that a lot of knowledge, skills, and capabilities cannot be obtained and/or developed by people on their own. In such case, some people must exist that would assist with the obtaining and development thereof. These people may be parents and other relatives, neighbors, friends, as well as people working in specialized organizations that provide knowledge to their clients and develop their skills and capabilities. Schools, educational agencies, etc. are the typical example of such institutions. If we somewhat expand our view, such organizations may also comprise entities, the objective of which is to ensure that people maintain and are able to use their knowledge and skills, or to ensure that they are able to obtain and develop them for as long as possible throughout their life, as appropriate. This concerns, for example, medical facilities, spas, entities providing sport-related services, etc.

In general, entities that offer the acquisition, development, and preservation of knowledge, skills, and capabilities to their customers may be referred to as entities operating within the sector of productive services. Why did we choose this name? We believe there are the following reasons for this:

- The production of this sector may lead to sharp and long-term increase in the productivity of labor employed within industry and personal services associated with industry. In other words, this sector offers services that make it possible to increase the productivity of human activity.

- The production of this sector may lead to sharp and long-term increase in the productivity of all resources originating from land as the factor of production as well as resources in the form of capital goods in the area of industrial and agricultural production. Similarly as in the previous subsection, it holds true that the given sector offers services that make it possible to increase the productivity of human activity.

- The sector may gradually employ the decisive quantity of labor or human capital, as appropriate.

- The production of this sector may predominantly be applied within the sector itself. It also comprises the innovations' center of gravity.

- The sector may significantly expand the range of people's needs. At the same time, this concerns needs that are more and more met by the production of the educational sector. The substance of such needs consists in the fact that the meeting thereof as well as the utility associated therewith, including the pleasure associated with such utility, immediately relates to the development and preservation of human capabilities. The given needs may then be referred to as the capability needs.

- As a result of the above mentioned, this sector has a predominant share in the overall production and economic growth, the form of which is determined by the nature of its production (i.e. production, which is in the form of educational and other services aimed at the development and preservation of human capabilities).

In most subsections, we knowingly use the term "may" (e.g. "The production of this sector may lead to sharp and long-term increase in the productivity of labor employed within industry…"). The reason for doing this will be explained in Chapter 6. We believe the term sector of productive services is more precise than the normally used term knowledge society. The term sector of productive services is wider, encompassing not only the area of acquisition of knowledge, but also areas leading to their

preservation (e.g. through medical and spa care, sports) and longest possible application (by extending the period, for which people can be economically active). At the same time, the term sector of productive services emphasizes that this sector offers production, which is aimed at increasing the productivity of other sectors. Since the production is most frequently in the form of services, the given word is emphasized. We should also note that the given characteristics of the sector of productive services are based on an analogical role, which was played by the industrial sector during the 18th and 19th centuries, i.e. the period of the Industrial Revolution[5]. The following also applied for the industrial sector:

- The production of the sector led to sharp and long-term increase in the productivity of labor for people employed in agriculture.

- The production of the sector led to sharp and long-term increase in the productivity of all resources originating from land as the factor of production.

- The sector gradually employed the decisive quantity of labor.

- Industrial production is predominantly applied within the industrial sector; the sector also concentrates innovations.

- The sector significantly expanded the range of people's needs, which are more and more met by the industrial production – i.e. through products and services produced by industry.

- As a result of all the aforementioned factors, the industrial sector has a predominant share in the overall production and economic growth, the form of which is determined by the nature of the industrial production.

Economic effects, which come into being within the sector of productive services, take the form of accelerated professional fulfillment, better professional performance, development of productive fulfillment capabilities, and longer zenith and horizon of productivity in terms of its clients. In plain terms, customers of the sector of productive services are able to carry out more activities as a result of the services provided by the sector, whereas the given capabilities are obtained faster, given activities are performed more efficiently, and customers are able to perform at least some of the activities for a longer period of their lives. The productive services refer to services that make it possible to acquire, develop, preserve, and apply human capital. It concerns services such as education and healthcare, as well as relaxation, recreational, pedagogical, and cultural and other services. All these services may be included in the area of social investments and social insurance. Social investment refers to the provision of services, through which people acquire and develop their human capital or which are used to preserve it, as appropriate. Social insurance refers to any and all activities that protect people from the risk of losing human capital.

4. SECTOR OF PRODUCTIVE SERVICES AND SMART, SUSTAINABLE, AND INCLUSIVE GROWTH

How does the sector of productive services contribute to sustainable growth, inclusive growth, and smart growth? We will start with sustainable growth. The production offered by the sector represents substitutes of other goods and services. However, such other goods and services have more significant adverse impact on the environment – e.g. due to the fact that they utilize more natural resources or their effects impact the environment more. In case productive services play a major role within the economy, then the consumption will burden the environment less, consequently contributing to sustainability. Reduction of the environmental impact of people may be described as a first-degree effect of the sector of productive services. However, the importance of this sector lies within the second-degree effect. It is based on the fact that the development of people's capabilities (i.e. not only of individuals, but on a team basis as well, as part of the social division of labor, as appropriate) is also immediately associated with their ability to innovate. In case people acquire, develop, and preserve

[5] For detailed characteristics of the Industrial Revolution, see e.g. Watt (2009).

their knowledge, skills, and capabilities, they are able to innovate. Consequently, they contribute to economic growth. Moreover, the ability to innovate retroactively affects the development of other knowledge, skills, and capabilities. As a result of acquiring, developing, and preserving the given capabilities, people that had been previously excluded from the opportunity may participate in economic growth. Therefore, such growth may be referred to as inclusive growth. *Due to its nature, it may also be referred to as smart growth.*

The ability to innovate also relates to the sustainable aspect of the growth. As a result of innovations, we are able to reduce (even significantly or even radically in many cases) the quantity of natural resources per single unit of utility. In other words, the sector of productive services increases the level of productive human capabilities, which immediately determine how quickly and to what extent economic growth becomes independent on natural resources, i.e. to what extent the environmental burden and impairment are reduced. The resulting effect of reduced consumption of material or energy inputs per single unit of useful effect immediately depends on the technical and technological progress; such progress then depends on the level of productive human capabilities, whereas the level of productive human capabilities depends on the effectiveness of productive services that aim the acquisition, preservation, and application of human capabilities.

5. THE ESSENCE OF TRANSFERRED PRICE

In case it is possible to attain sustainable, inclusive, and smart growth through the sector of productive services, it is worth asking why such growth is not taking place. To answer this question, we will formulate a thesis that the transition to the economy of productive services requires the involvement of entities operating within the sector of productive services to ensure that their clients truly acquire, develop, preserve, and apply their human capital and that other clients have sufficient income and utility from such capital. In case an entity operating within the sector of productive services is motivated to develop its clients' capabilities to ensure that they maximize their income or utility, this sector will develop and may actually become the dominant economic sector. Therefore, we call for the creation of feedback between the effects of productive services and the financing of entities that provide the productive services.

Investments aimed at acquiring, developing, or preserving human capital meet the general characteristics of investments in many parameters. The given entity invests in the capital, because it assumes the given investment will generate returns. Some entities may have budget constraints – i.e. they may not have sufficient funds for the given investment. In such case, they may look for someone willing to lend funds to them to cover the investment. As already noted by Friedman (1955 and 1962), a lender that provides funds to a borrower for investments in human capital is disadvantaged compared to a lender that provides funds to a borrower for investments in physical capital. Physical capital may be pledged in favor of the lender – i.e. in case an investment in such capital fails, the lender may recover at least some of the loan by selling or using the physical capital. Human capital cannot be pledged. From this perspective, investments in human capital are riskier than investments in physical capital; the guarantee of recovering an investment is lower. It may easily happen that a person with low budget constraints is unable to convince any lender about the profitability of his investment and will fail to acquire a loan. If his investment could have been successful, then not only the given person incurs a loss, losses are also incurred by the lenders, he could not convince, as well as by the entire society, because he cannot contribute with activities he would have been able to perform as a result of acquiring, developing, or preserving human capital.

Economic theory (e.g. Friedman 1962; Palacios Lleras 2004) proposed a solution to the given problem in the form of human capital contracts that mainly relate to investments in education. A Human Capital Contract (HCC) is a voluntary private contract between a student and an investor in which the student commits part of his future earnings to an investor for a fixed period of time in exchange for capital to finance his education. The main parameters for producing an HCC are the percentage of income and the repayment period. Because of its voluntary nature it works best when market forces determine the contract parameters. The advantages of an HCC are that it decreases the risk of the

investment for students by adjusting the payments they will have to make according to the amount they earn after completing their education. If a student's investment in education does not result in higher earnings afterwards, the payments required for financing the education are small. Conversely, if a student can earn a higher income after his education, the payments are much higher. On average, those students who can pay, because of the higher earnings they obtain as a result of their education, cover the costs of those who do not obtain higher earnings.

The significant characteristic of HCC is the fact that the contract uses the transferred price principle. The principle[6] means that:

- A lender provides funds to a borrower today as an investment in acquiring, developing, applying, and preserving the borrower's human and social capital.

- The borrower only makes payments from the earnings generated from the funds provided by the lender and invested in a defined manner.

- The borrower makes payments based on the amount generated from the funds provided by the lender.

- The borrower makes payments directly to the person that provided the given funds (i.e. to the lender).

Briefly speaking, the borrower pays to the lender using his future earnings. It is a type of contract, which transfers the future earnings into the present – hence the name "transferred price". The basic contract parameters are set down today; the given amount to be paid is transferred from the future. The borrower's payments to the lender take place in the future - provided the contract terms are met, i.e. the funds invested by the borrower in human and social capital actually start to generate such earnings for the borrower that he is able to repay his liabilities. Therefore, the borrower's payment to the lender depends on the borrower's future earnings. In case the borrower's earnings are too low, no payments are made. The amount of the earnings then determines the success of the borrower's investments in his human and social capital. The transferred price eliminates the borrower's budget constraints, making investments in human and social capital possible even for those entities that currently do not have sufficient funds. Moreover, the transferred price increases the number of entities that are involved in the borrower's success. It is no longer only the investor – currently acting as the borrower – but also his creditor. The creditor (lender) provided funds to the borrower and in case the borrower fails to repay such funds, the lender incurs a loss. In case an investor might, for various reasons (e.g. lack of information, his personal qualities, etc.), prefer investments in such structure of human and social capital that does not lead to successful investments, the lender shall also act as the borrower's corrector. Obviously, even the lender may be wrong. However, if there are several lenders or in case one lender has several borrowers, the pressure on the elimination of error further increases.

We must underline that the transferred price does not have to work solely in the area of investments in education, but in other areas as well – investments in health (e.g. with regard to medical, spa, and sports services), old-age security, etc. Therefore, we believe the transferred price principle is applicable in all situations where one person provides some goods and services (most frequently services) to another person, whereas the other person's earnings are, at least partially, determined by the quality of such services[7]. This is why we use the term "transferred price" and not "Human Capital Contract" throughout our paper. We believe that an HCC, i.e. contract relating to investments in human capital, is only one of the contracts where the transferred price principle may be applied. In other words, we believe the transferred price principle is a universal principal, whereas an HCC is a specific contract that utilizes such principle. The transferred price differs from a "regular" price to some extent, specifically:

[6] We believe the transferred price principle is the most important part of the Human Capital Contract. This is why we given this principle such significant attention.
[7] The transferred price principle may be applied in purely commercial areas. For example, Valenčík (2014) mentions the compensation of tennis coaches from professional players, where the coaches' remuneration may be determined as a specific share from the players' earnings.

- Transferred price has more parameters: amount of earnings, from which payments start – payment amount set as a percentage, repayment period;

- Transferred price does not have a primary nominal value – its nominal valuation may only be determined on capital markets, on a secondary basis;

- Transferred price amount is derived from the valuation of the effect of services associated with the acquisition of human capital on professional markets.

6. HOW TO USE TRANSFERRED PRICE IN SECTOR OF PRODUCTIVE SERVICES

Economic theory (Valenčík and Budínský 2011) s out that in case the transferred price principle works on the basis of a three-way relation of the lender, borrower, and entity that provides productive services to the borrower, the lender is in a difficult situation. It is in his interest to monitor, whether the service provider really provides high-quality services, on the basis of which the borrower would get such human capital structure that would ensure the borrower's earnings are sufficient to repay his debt to the lender. Nevertheless, such monitoring is quite costly for the lender, whereas he may not be sure, whether his ideas about the borrower's investments are in fact met. This situation is referred to as information asymmetry (e.g. Akerlof 1970). In case the lender cannot eliminate such information asymmetry, he may not provide the funds to the borrower at all. Alternatively, the lender may request high interest rate during the period such funds are not being repaid or high share from the borrower's future earnings. The given conditions may discourage some potential borrowers, particularly the low-risk ones, who may find the repayments unbearable. This situation leads to a vicious circle: the lender's loans are only sought by high-risk borrowers with lower likelihood of success. In case lenders to not provide loans to risk-free clients that could cover the losses of high-risk clients, their demands will continue to increase, discouraging other lower-risk borrowers.

The situation discussed in the previous paragraph does actually occur in real life. The "My Rich Uncle" (MRU)[8] program offering loans to students in the USA covering their tuition fees and other costs of studying is one of the most remarkable examples. The company started its operation at the beginning of the 21st century, lending money covering the cost of university education directly to debtors (university students) at an annual rate of 7.85%. Borrowers had to return the principal and the interest over 10 to 15 years after the completion of their education. They had to pay a fixed rate of 0.1% to 0.4% of their gross annual income. Naturally, the owners of MRU did not have enough money to lend. MRU obtained funds from financial investors, who were not willing to continue financing MRU after the start of the financial crisis in 2008. As a result, the company filed for Section 7 US bankruptcy in February 2009 and suspended all its operations. The financial crisis was not the only problem that worried MRU. Even before the crisis its interest rate was higher than the rate of unsubsidized government loans. The company faced adverse selection: especially people who could not get government loans, i.e. people with a higher risk, were interested in borrowing from MRU. The delinquency rate of MRU clients was higher than the rate MRU investors were prepared to accept. The experience of MRU shows that the success of an HCC as a private market instrument depends heavily on the investors' willingness to give money for an appropriate time. Credit failure is quite probable in the time discrepancy between the period that investors are willing to lend money for and the period in which borrowers pay their loans. This was the case with MRU: investors gave the company money for a shorter period than the borrowers needed – borrowers could start paying money back after finishing their education (leaving school). MRU had to revolve its financial resources and could not do so during the crisis because of insufficient resources to continue revolving.

However, the solution of the aforementioned does not have to be complicated. The only thing that needs to be done is to directly involve the providers of productive services in their customers' success. How? It is necessary to ensure that the providers receive some of their customers' earnings. Therefore,

[8] The facts about MRU are taken from http://www.huffingtonpost.com/anya-kamenetz/myrichuncle-is-out-of-cas_b_165352.html and http://collegesavings.about.com/b/2008/08/26/myrichunclecom-legit-lender-or-loan-shark.htm.

customers will pay for the productive services rendered by means of the transferred price, i.e. certain percentage of earnings generated by the productive services. The contract between a customer and a provider may also define other parameters, such as: a) moment (together with other conditions), from which a customer shall start his payments (e.g. a customer must reach certain income level); b) period, for which a customer is required to repay his debt; c) circumstances, under which it is possible to suspend or discontinue the repayments, including a situation where the customer's earnings drop below a certain threshold; d) whether the payment is calculated from the customer's total earnings or only their part (e.g. difference between the customer's earnings and a minimum wage), etc. Therefore, the transferred price concept we propose comprises the following:

- Provider of productive services acts as the primary lender. The provider may be an educational institution, medical facility, spa resort, etc. We may even assume that if individual providers of productive services, who finance their services by means of transferred price, operate in different segments (e.g. one of them in education and another one in healthcare), they will start cooperating, because the earnings of one provider also depend – to some extent – on the services offered to customers by the other provider.

- Buyer "pays" for the provided service scheme based on the benefits of the acquisition, development, application, or preservation of his capabilities through the productive services system – i.e. he pays certain amount (e.g. 3 to 5% of his earnings) from his earnings after the service is utilized and usually after some income threshold is exceeded (a multiple of statistically expressed average earnings) either for a predetermined period of time (10 to 15 years), which settles the obligation (irrespectively of how much and when was actually paid), or until the full settlement of the debt (which may or may not be subject to interest).

In case the provider of product services is involved in the amount of earnings to be generated by his customers, whereas the amount of earnings is an effect of acquiring, developing or preserving human capital, as a result of which the customer has more and better capabilities, the provider will also try to provide the customer with such services that would develop and preserve his human capital and ensure the customer actually reaches the given income level. Naturally, some customers may fail to reach the given income level, thereby making no or only very low payments to the provider. However, in case the provider has many customers, the risk of the given loss (costs incurred by the provider in connection with providing the services to a customer) will be covered by the customers, who generate such earnings that would not only cover the provider's costs, including opportunity cost – i.e. including the provider's alternative returns, associated with the successful customers, but also the provider's costs associated with the unsuccessful ones. It is also necessary to underline the aspect of the long-term horizon. In case the provider of productive services receives returns from his customers for a relatively longer period of time, he will be committed to ensuring that the customers' knowledge, skills, and capabilities may be used for such prolonged period of time. This partly contributes to a long-term growth, and partly limits efforts aimed at short-term profits that may have negative effects in the long-run[9]. In case the customers of the productive services providers repay such services for a longer period of time using the transferred price, the following will happen:

- The given system allocates funds to the service providers associated with the acquisition of human capital, whose production is the most successful on professional markets. The providers' clients will logically prefer those providers, who will ensure the highest returns possible for them in respect of their investments.

- The given system "bridges" the specific "lender – borrower" relationship, which arises in connection with investments in human capabilities (e.g. a student / graduate, who "purchases" educational services and also acts as a borrower/debtor, and a university that acts as a "seller" and a lender/creditor simultaneously) and a capital market. This bridge consists in the fact that capital markets may be

[9] As an example of such short-term profits with negative effects, we may refer to mortgage loan financing during the first decade of the 21st century in the US, where providers of such loans were – in terms of their short-term returns and profits – interested in providing as many loans as possible, even to people unable to repay such loans. This subsequently led to the mortgage loan crisis emerging and long-term negative effects.

interested in purchasing contracts by and between customers and productive services providers – i.e. they may thus be subject to secondary valuation. In case the providers sell their receivables (even as a package of receivables) to capital market entities, they will receive the funds earlier. However, capital markets will only invest in contracts based on the transferred price, if they believe it might be beneficial. This will further promote the interest of the productive services providers in ensuring that their customers maximize their earnings, thereby maximizing the returns on the receivables of the providers from their customers, making them as attractive as possible for capital markets. The following applies in terms of the capital market entities: it is less costly to monitor a provider of productive services (one entity) than the provider's customers (many entities). It is easier for them to obtain information from the provider about the success of his customers. To some extent, this eliminates the problem of information asymmetry and the associated adverse selection problem[10].

- In case the productive services providers are truly involved in the success of their customers, it is safe to expect the characteristics of the sector of productive services described in Chapter 3 will be fulfilled. In other words, it will no longer be necessary to use the term "may" (e.g. "The production of this sector may lead to sharp and long-term increase in the productivity of labor employed within industry…"), but the theory will describe actual events (e.g. "The production of this sector leads…").

7. FEEDBACK OF TRANSFERRED PRICE

The transferred price meets all the traditional price roles (e.g. Besanko and Braueutigam 2008), i.e. informational, allocation, and motivational role. The allocation and motivational roles consist in the fact that the provider of productive services is motivated to maximize the quality of its services in terms of its customer's success on professional markets, receiving financial funds based on the success of its customers on professional markets. The informational role is connected to the allocation and motivational roles: based on the earnings generated by the customers of the providers of productive services, these customers as well as other people interested in the given services get information about whether the given service is beneficial, to what extent is the given provider competitive in relation to other providers, etc. In terms of the informational role, it is also worth noting that the repayment of the customer's liabilities to a productive services provider may take place through a central registration system, which provides information to all system participants (in an anonymous and appropriately aggregated form) about the forecasted earnings for various productive services. It is safe to assume that successful providers will be interested in the establishment of such system, solely for the reason that it would be easier for them to generate funds from the capital market entities (in the above mentioned form of purchases of receivables of the productive services providers from their clients, or in the form of loans and investments made available by the capital market entities directly to the providers).

In terms of the standard roles of a price, the transferred price also provides feedback. It provides feedback not only to the productive services providers and to their customers, but also to third parties (e.g. capital market entities or other prospective/actual customers of productive services, existing and potential competitors, etc.). All entities learn about the profitability of investments in productive services, about the success of individual providers of such services. In terms of economic theory, the feedback falls in the area of microeconomics. It will allow optimal allocation of resources – productive services providers and their customers will invest in the services they believe to be most profitable for them according to the feedback[11]. Nevertheless, the feedback also has macroeconomic implications

[10] It is necessary to emphasize that the problems associated with information asymmetry and adverse selection may be mitigated; however, not completely eliminated. These problems arise in respect of most human interactions, because individual participants do not have the same information in the vast majority of such interactions and to achieve the same level of information is too costly or even impossible. See e.g. Bowles (2004) for details. On the other hand, we are convinced that increasing human capabilities will make it possible to find solutions to the given problems, i.e. their effects will decrease.

[11] Naturally, we assume that the productive services providers and their customers also consider other information, in addition to the feedback.

that contribute to the fact that the development of the given system, where productive services are provided, is in the form of sustainable growth, inclusive growth, and smart growth. Why is feedback necessary for attaining the given growth and why is the transferred price able to provide it?

Feedback is necessary for creating sufficiently motivating and competitive environment on the productive services market. The nature of productive services contributes to promoting competition. As a result of the services, economic activities may be performed by people, who would not be able to perform them or would only be able to perform them to a limited extent without such services given. Thanks to the capabilities, barriers to market entry are either eliminated or reduced for such people, leading to increasing production and reduced price. Naturally, the sector of productive services is also a market. In case entities operating on the given market receive feedback, they will be motivated to maximize the effectiveness of their activities, including environmentally friendly activities, activities that use minimum resources, are available to previously excluded population groups, etc. Aggregate activities of all entities operating within the sector of productive services will then generate smart, sustainable, and inclusive growth. Thanks to their impact on other sectors, with innovations generated through the sector of productive services contributing to growing productivity of such other sectors (see Chapter 3), the smart, sustainable, and inclusive growth may take place in all sectors – i.e. on the level of the entire economy.

The feedback is necessary to ensure that the provider of productive services, who significantly contributes to growth, can expand its activities similarly as innovations are disseminated in any productive area. Moreover, it is necessary for ensuring that the dissemination of innovations process eliminates ineffective entities from the given area or, as appropriate, that they are forced to switch to effective forms of activities in the area of services that enable the acquisition, preservation, or application of human capital (as in any well-functioning competitive environment. In case all or most entities are forced to operate effectively, where such terms comprises the reduction of the material intensity of inputs, involvement of other people, utilization of innovations, it is clear that the growth of the given community will meet the characteristics of smart, sustainable, and inclusive growth.

We must emphasize that, in addition to the traditional roles, the transferred price also has other roles that are not ensured by “normal” price. We have already discussed these roles, so in short:

- Investment (credit) role: Each person has access to productive services, irrespectively of whether he/she does/does not have sufficient funds to pay for them;

- Solidary-insurance role: More successful customers of the productive services providers pay more than the less successful ones (those, who fail, do not pay anything). This concerns certain solidarity of less and more successful (unsuccessful) customers, a method of preventing / diversifying the risk borne by the provider of educational services. However, such risk may be transferred to another entity through the capital market.

8. DISCUSSION: BARRIERS TO APPLYING THE TRANSFERRED PRICE MECHANISM AND THEIR ELIMINATION

Generally speaking, the necessary precondition to attaining smart, sustainable, and inclusive growth is the development of the productive services sector (as we defined the sector), whereas the way for ensuring this sector becomes the dominant economic sector is to allow the payment for services offered by the sector through the transferred price mechanism. If this is the case, why do not various entities operating within the sector start using the transferred price mechanism on their own? After all, the implementation of the mechanism is an innovation. In case the given innovation is prospective, individual entities should be motivated to use it. Why is it not the case? Standard objections to the transferred price mechanism are roughly as follows:

- Effects generated by productive service customers will be reflected in their earnings in a long period of time. This weakens the ties between the services and the relevant earnings. Moreover, in case of a prolonged repayment of the given debt of the customer to the provider of productive services, the provider of such services will recover its costs and generate its profit a long time after the provision

thereof. Immediate benefits are not clear; providers are exposed to a number of risks (they may lose client's contacts, have problems with corroborating the amount of earnings – i.e. whether a client is/is not required to pay, etc.). All this causes the providers of productive services to opt for standard forms of financing their activities (directly or in the near future).

- The amount of client's earnings results from a number of factors. The fact a client was a customer of a productive service, contributes to the amount; however, it is not the only factor. It is difficult to estimate the impact of each factor, including the productive services, in advance. The impact of productive services may easily be overestimated or underestimated, which will be reflected in the transferred price parameters (contract duration, payment amount, minimum income amount – with clients not paying anything if the threshold is not reached, definition of the amount, from which clients make payments, etc.). Clients, for whom the impact of productive services was overestimated, will pay too much, thereby reducing their interest in productive services. On the other hand, clients, for whom the impact of productive services was underestimated, will pay too little, with the productive services providers not being able to cover their costs. Therefore, the easiest way is for clients to pay right away. In this case, the price may be determined based on the costs associated with the service, which at least reduces the risk of the service providers.

- In case the productive services customers generate higher earnings in the future, and such increase is not related to the productive services, it seems unfair for those customers to pay anything from the given earnings to the service providers. Customers may try to conceal the given earnings or to ensure their payments are made in a way that prevents the need to pay the relevant share to service providers. This is associated with high transaction costs. Some customers may not even accept the higher earnings, including a situation, where they do not start performing activities that are directly associated with higher earnings. All this has negative microeconomic and macroeconomic implications, including an impact on economic growth.

- Future repayments require high-quality monitoring system to limit the motivation of the productive services customers to hide their earnings. Moreover, it is necessary to ensure an effective debt collection system in respect of the providers' receivables from their customers. All this is difficult and costly. It is not clear whether the costs associated with the aforementioned would not outweigh the benefits. Some objections may also be ideological. Let us at least mention two of those:

- The application of the transferred price would result in an increased role of the market in areas that are traditionally viewed as areas ensuring public goods, providing positive externalities that contribute to the socialization of people, ensure interpersonal solidarity, raise individuals to citizenship, their involvement within the society, etc. This increased role of the market will lead to further moral devastation of the given segments, which have already been stigmatized by substantial commercialization and cease to serve their original purpose. As a result of such commercialization, some entities are already unable to consume public goods and goods and services with positive externalities, because of the barriers arising from the commercialization. Further promotion of the given market role will result in a rising number of such people.

- The proposed model works with the idea that people are able to think long-term and can be motivated by long-term expectations. This is not the case in reality. Most people prefer immediate benefits to long-term ones. After all, even economic theory (e.g. Perloff 2008) clearly states that the value of present goods and services is higher than the value of future goods and services. It is difficult for people to image all the potential benefits of investments in their human and social capital. The effect of such investments is too long to be comprehensible for people.

It is obviously true that customers will only start repaying the costs associated with the provision of productive services after some period of time and may be repaying for a relatively long period of time. However, there are other areas, where investments generate returns after the completion of the given investments, with a longer period of time from the moment they start to generate returns until the full settlement of all investment costs (including opportunity cost). There are various experiences with long-term repayments and mechanisms for addressing them. With regard to an objection that debtors usually have some assets that may be pledged in favor of their creditors in case of these forms of

investments (as mentioned above in Chapter 5) and that this is not true for investments in human capital, we can answer that even though it is not possible to pledge the human capital of a debtor (borrower), it does not mean that a debtor does not have or will not acquire after the conclusion of the transferred price contract other assets that could be pledged in favor of the creditor. The method of monitoring and other issues relating to the debtor's earnings may also be addressed in a repayment contract. With regard to the contract parameters aimed at ensuring that debtors do not pay either too much or too little, as well as potential repayments from earnings that do not result from investments in human capital, it is safe to assume that the invention of people will seek answers to the given issues. Realistically speaking, we can assume that the transferred price principle will start evolving gradually. For example, the providers of productive services will ask for a partial payment in the standard manner – i.e. at the moment the services are provided, whereas the remaining amount will be paid in the form of transferred price. The providers and customers will gradually learn how to valuate effects of the given service, distinguish the effects resulting/not resulting from the given service, and this will be reflected in the contract parameters.

The ideological objections may also be addressed. With regard to the fourth objection relating to the expansion of the market to areas previously reserved for the public sector, it applies that the role of the public sector is to eliminate imperfections of the market mechanism and provide goods and services the market cannot provide, or provides them in an non-optimal manner (produces more/less than the market optimum). The public sector is not set down forever. If, as a result of human invention, it is possible to expand the market to areas that were previously associated with market failures, if it is possible to eliminate or mitigate such market failures, then there is nothing wrong about this. After all, the market is gaining ground in other areas that were previously viewed as the public sector domain, whereas such progress is possible as a result of human invention. The financing of highway construction, previously viewed as the public goods, in the form of toll collection or public private partnership projects is a good example. Logically, even the area of productive services need not be predominantly or largely ensured by the public sector, but they may also be provided on the basis of the market mechanism.

With regard to the fifth objection that the nature of the transferred price promotes the tendency to long-term thinking of people: People react to incentives and in case such incentives (also include the transferred price) motivate them to long-term thinking they will start to act in such manner (or at least some of them). The long-term thinking is also associated with an attribute of responsibility – people, who tend to think in a long-term horizon, do not consider solely immediate (or short-term) effects of their thinking that may have negative consequences in the long run, but they also take into account wider implications of their actions. The fact that the transferred price works with a long-term horizon is not its flaw, but actually its benefit. We may, at the same time, express a hypothesis that our current global society (i.e. not sometimes in the future, but in the present) needs to extend the time horizon we take into account in our decision-making process. We need this to learn, from an early age, how to project a lifelong path of professional fulfillment and anything that is associated with it. The transferred price principle thus comprises not only a rational element, but also an ethical one. In this case, the ethical element is not an external precondition, but something that originates and will increase in importance proportionally to the increasing role of productive services. In other words: The ethical dimension of the problem area is not exogenous, but rather endogenous element. In terms of the game theory, the following applies: The ethical dimension is not a mere precondition to the game, but mainly its outcome[12].

Therefore, if the above mentioned and usually given objections to the transferred price application are not the most important ones, which in fact are? We believe it is the currently limited competition in many parts of the sector of productive services. Areas such as university education, healthcare, spa sector, etc. are subject to strict regulation, with barriers to enter these sectors. Let us, for now,

[12] We must underline that, in our view, the given fact (The ethical dimension of the problem area is not exogenous, but rather endogenous element. The ethical dimension is not a mere precondition to the game, but mainly its outcome.) generally applies to all forms of human behavior. Therefore, it is not specific to transferred price. Detailed analysis exceeds the scope of this paper. For details, see Graafland (2007), for example.

disregard the fact that some regulation makes sense to prevent risks to life or health of customers within the sector, to ensure at least minimum quality of the offered services. The public choice theory (e.g. Buchanan and Tullock 1999) s out that regulation may also serve in favor of the regulated entity – it may be set up in a way that limits (and sometimes even eliminates) competition of the regulated entity[13]. In such case, the regulated entities do not have to make such efforts to generate their profits. Moreover, the existing system insufficiently discloses, whether the services provided by such entities in fact have the required quality. Since customers pay at the moment a service is provided (if they pay at all, i.e. unless the costs of providers of productive services are covered from public budgets), there is no feedback that would clearly reveal/disclose the quality. The existing system is beneficial for existing providers; the application of the transferred price principle – even to a limited extent – would impair such benefits – this is why they prevent it[14]. Economically speaking, many providers of productive services operate in oligopolistic segments with low competition. Barriers to market entry are significant – i.e. the providers' earnings and profits are guaranteed.

Some providers may introduce the transferred price principle, in spite of the above mentioned, and agree that customers would pay for the services using their future earnings. At first glance, it should be beneficial for the provider: customers do not have to pay right away, but payments are postponed until they have money or until it is clear, whether the provision of the services was in fact meaningful, as appropriate. However, if this provider operates within a regulated industry, where some providers receive state support and are not forced to offer their services at market prices, it is disadvantaged. The services of such provider are mainly sought by clients, who are not – for any reason – eligible for the state-subsidized services. This usually involves high-risk clients. The example of the company My Rich Uncle mentioned in Chapter 6 is quite expressive. It clearly shows why most providers of productive services do not apply the transferred price principle. Their risk would increase, similarly as the likelihood of bankruptcy.

We believe that current regulated systems also fail to stimulate long-term thinking, create barriers to monitoring the customers' earnings and to assessing the contribution of productive services to such earnings. In case the customers' earnings are at least partially, often even indirectly, regulated, it blurs the relationship of the income level and productive services. This relationship becomes unclear, in case there are significant redistributions within a society, where earnings of some people are withdrawn *ex officio* and attributed to others. In this case, the income level also depends on different factors than the quality and success of productive services. Existing states, where the share of taxes or public expenditure in GDP, as appropriate, often exceeds 40%, may be described as societies with significant redistribution. This is only the visible part of redistribution. Further redistribution takes place, as some people have various privileges (e.g. are able to meet terms and conditions for receiving investment incentives, financial incentives for doing business in various segments) and other people do not. Both the existence and nonexistence of such privileges affects the performance and consequently remuneration of individual people.

In general, regulations prevent qualified estimates in respect of future development of earnings for a person that has used some productive services. As a result of the regulation, earnings may greatly depend on the regulation parameters and not on the quality of such productive service. Moreover, regulation may change – they reflect political cycles and other aspects of public choice[15]. Therefore, even if earnings of a person / recipient of productive services are, due to regulation, currently at a level that makes it possible to make payments to the service provider, this may not be the case after potential regulatory change. We believe the current environment is too risky, erratic, and unstable for

[13] In this context, we should recall the conclusion of the public choice theory (Stigler 1971) that regulated entities are often able to gain control of the regulator and set up regulation to reflect their own interests.
[14] For instance public universities in the Czech Republic, whose financing heavily depends on public budget, opposed a suggestion to establish deferred tuition although it could increase their revenue, and tuition was not established. The tuition could assist in revealing the quality of the public universities' services and such revelation was not in the interest of public universities. For example, see Wawrosz and Heissler (2012) for details.
[15] See e.g. Sobel et al (2001) for details.

the application of transferred price. For this reason, the given method of financing is only applied minimally. However, it results in a lower involvement of providers of productive services in the quality of such services as well as the fact that there are some people, who cannot pay for the services directly due to their existing budget constraints and will not ultimately purchase them. It further leads to insufficient level of economic growth, whereas such growth does not meet the required parameters to be referred to as smart, sustainable, and inclusive growth.

Naturally, we cannot rule out that the financing of productive services through the transferred price principle will win competition even in present condition and that the sector of productive services will actually start having a dominant role within individual countries' economies (expressed as a share of the sector in GDP, for example). However, unless the barriers to entry into the markets of productive services are reduced, such development will be difficult and subject to a longer period of time. Moreover, the principle may also be applied through undesired actions, where the current sources of growth are exhausted and where entities, whose income declines as a result of such exhaustion, will start to protest and perform other undesired actions. Therefore, we believe it is already worthwhile to eliminate various barriers to entry into markets of productive services. This is the only way we can, in our view, at least partially meet the goals of the *Europe 2020 Strategy, i.e. delivering growth that is smart, sustainable, and inclusive.*

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