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Assessment Of Investment In Higher Education: State Approach

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Abstract

By assessing what damage and benefits experience the state when investing in higher education, is faced with the following problems: the lack of data, the delay of data. Therefore, the state attitude to persons with higher education is very important, because the state for some people pays a part for their studies, and for part of them organizes the same system work. There should be a clear state approach to investment losses due to immigrants with higher education. Problem Statement - Is the state's investment in higher education useful? Personal factors include personal human qualities, attitudes, beliefs, norms, motivation, skills, knowledge, habits and routines. The research was carried out for public funds invested in higher education, loss due to emigration, showed that every year the state is losing its invested more money into the education system because of the "brain leakage." The study showed that for the state is more worthwhile to subsidize university education than college studies. Lithuania, having a formed knowledge evaluation culture, insufficient uses its knowledge resources - people, education systems, scientists, businessmen and etc., resulting the loss of the ability to compete internationally and with potential economic and revenue growth opportunities.

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1. Introduction

Political, economic and social reforms, which began in early 1990's in Lithuania, led to fundamental changes in all spheres of public life, as well in business and paid work field: production decline inevitably had an effect on the declining number of workers and on the unemployment rate growth, privatization and economic modernization

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processes result was the changes in employment structure of population, appeared new groups according to economic status of the employed group: recruiters, employees and self-employed workers. The demand for skilled professionals began to increase. Because of the change the requirements for staff qualifications and competence also changed, which encouraged people to decide on the investment in education. Statistical data shows that the total number of students has grown till the 2009-2010 school year and thereafter, because of a complex demographic situation began to decline. More and more individuals choose higher education, but not Universities of Applied Sciences. The number of people who acquired higher education by the number of different years shows the development in the higher education level, the need of higher education and the student's motivation. In Lithuania the most prepared professionals who have a Bachelor's degree. Some of the individuals, who have completed a Bachelor's degree, continue their education, pursuing a Master's degree. Investment in higher education as a main human capital form provides not only a private, but also a public benefit. In modern economy the investments in human capital are constantly increasing. On the national level, human capital affects economic growth; increase national competitive advantage (Drucker, 2004, Nehru & Swanson, E. & Dubey, 1995, Porter 2008). By increasing investment is very important for the return on investment. In many countries, investment in higher education as a main human capital form, performance indicators are calculated (Lemelin, 1998, Wahrenburg & Weldi, 2007, Education Indicators, 2009). Based on the investment in human capital performance indicators could be explained a wage differentiation according to age, occupation, gender, and can adjust the allocation of resources for science, education, vocational training, to determine, whether investments in one or another field of science are effective. Investment process involves not only the individual, but also the state, so the efficiency of investment should be assessed not only by the individual, but also for the state approach. By evaluating the efficiency of investment in human capital by state approach, it is very important to take into account the problem of brain drain, which is very important for these days economy. For the development of education and scientific fields, it requires long-term and large investments. These investments are necessary to assess in the social aspect. On the one hand, investment in human capital should be encouraged, and on the other, it should be assessed their effectiveness. Such evaluation practices and methods do not give a straight answer, so the investment in human capital is a challenging problem both for practical as well as for scientific point of view. It is important to assess the efficiency of investment, to determine the time ratio and uncertainty, money flows: income, expenditure; high level of funding is allocated to higher education, brain drain's, so it is important to assess the benefits not only for the individual but also to the state. In today's economy, more and more are valued intangible resources, the more experience, skills, higher education the employers have, and the value of the organization is increased (Makštutis, 2007). Loss of human capital due to migration has a negative impact on the country's economic growth (Čekanavičius & Kasnauskienė, 2009). However, it is noted that neither foreign nor Lithuanian authors did not provide a coherent labor market and education indicators connection with investments into higher education evaluation, which would help to determine the investment in higher education benefits to the individual and the state (Giziene, Simanaviciene & Palekienė, 2012).

Scientific problem: Is state approach to higher education adequate for getting benefits from it?

Research object: investment in higher education evaluation in state approach.

Higher education is certainly useful for the individual - for the one who paid for his studies themselves, and for them who state paid for their studies (otherwise nobody would invest in higher education). An analysis of macro-economic study confirmed the fact that individuals with acquired education earn more, and it leads many to invest in your own knowledge. The cost of higher education can cover the student itself (from his savings, parents saved or borrowed funds), philanthropic organizations, businesses, requiring specialists with some knowledge and state. If an individual expects better earnings because it will have the appropriate education, it dedicates its resources in the acquisition of education. Resources are received in many kinds. The first and the simplest is working and saving. The more complex and long-term way is that parents take care of their children, i.e., their work and saving. In the conditions of extensive market, it opens up more mechanisms. Money can be lent for the study (in this case, in the funding mechanism, banks and other lenders are activated) or paid as an advance payment for future work (in this case, the funding includes the employer).

2. The impact of investments in higher education on the state

More than half of all individuals admitted to Lithuanian higher education institutions, pay for their studies themselves, and for the remaining, the study fee is covered by state.

Higher education is certainly beneficial not only for the individual but also for the state. State funding for higher education provides the individual the opportunity to pursue higher education and knowledge to gain the required competencies for the labor market. At the same time higher education funding also can have a negative impact in both individual and the state approach - if individuals seeking for higher education funding, will choose inappropriate study field (Fleischhauer, 2007) .

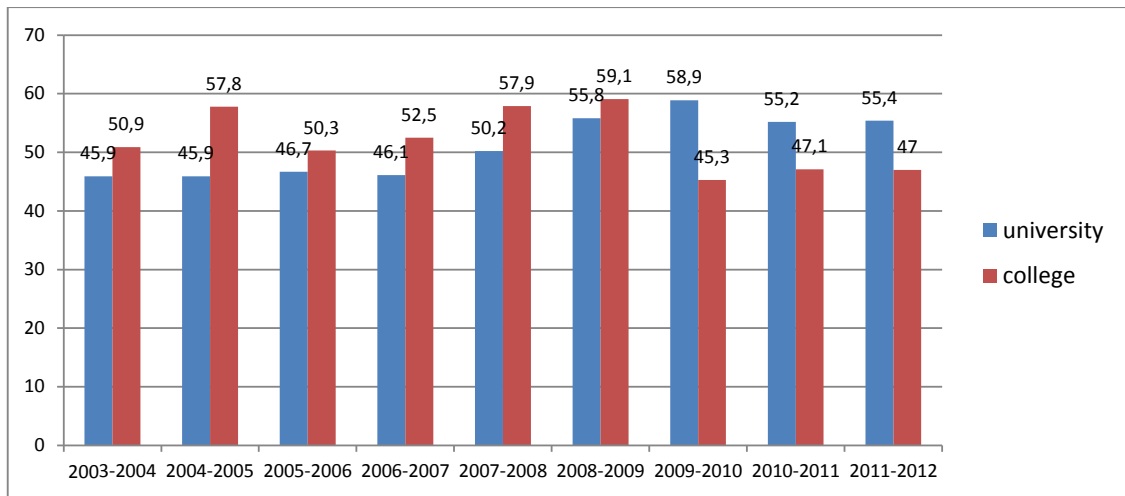


Fig. 1. To the universities and colleges admitted students, which pay for the studies, part of the total number of students enrolled, % (Statistics Lithuania, 2014).

State budget allocations for higher education's share of per student for the 2011-2012 school year, was 6 thousand Litas (Figure 2.) So if an individual, who has exercised the state appropriation, will acquire bad profession, both for an individual and for the state, these investments will not be profitable, because the individual will not work a job according to their qualifications. In this case, the individual's salary will not grow, and state won't gather more taxes (European Commission, 2005)..

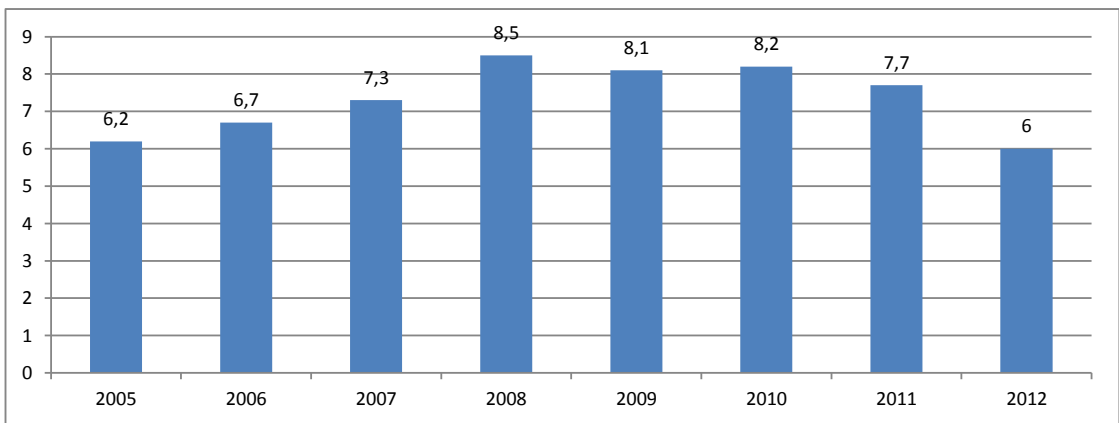


Fig. 2. State budget allocations for higher education costs per student, thousands Lt (Statistics Lithuania, 2014).

Another very important issue in terms of investment in higher education influence to the state is the "brain drain", the emigration of skilled labor. Statistics show, that in 2003, emigrated individuals with higher education were 1.6

thousand, and in 2007 this number increased to 3.1 thousand (an increase of almost 2 times). These trends indicate that every year more and more individuals are emigrating with higher education. Department of Statistics does not provide later statistics for this indicator, therefore public investment loss for emigrants with higher education is assessed by emigrants who have completed higher education, but have not declared their departure.

By assessing what damage and benefits experience the state by investing in higher education is facing with the following problems:

- Lack of data. Department of Statistics since 2007, do not have data on emigrants with higher education. Till 2007, statistics contains only immigrants who have higher education, but not declared their departure.
- Data delay.

3. The loss of public funds invested in high education. Return on investment

There are no most important skills needed for the successful functioning of the knowledge economy in Lithuania determination, in a way which would allow the entire training process focus not on individual knowledge building, but to the training of certain competences. It is important to note that these skills should be achieved already in secondary school, and in a high school, they should just be improved. Clear identification of competencies for various levels of studies would ultimately define what the labor market should be expected from a person who has acquired the non-university higher education, having completed a bachelor's, masters or doctoral studies. In determining the competencies, the employers should actively participate.

Table 1. Public funds, invested in higher education, loss due to emigration (Statistics Lithuania, 2014).

	2005	2006	2007	2008	2009	2010	2011	2012
State and local government budget spending's on education: higher education studies, million LT	898,6	965,7	1058,3	1259	1189,5	1158,3	1063,6	784,9
Graduates (with higher educations), individuals	38772	42117	42539	41876	43720	43579	42555	41436
State budget allocations for higher education costs per student, thousands LT	6,2	6,7	7,3	8,5	8,1	8,2	7,7	6
State funded, I level study places	65612	63255	61209	57660	52994	47256	42445	38394
State funded college student places	28116	28012	27300	26058	25206	25990	28712	26374
Loss of public funds due to emigration ("brain drain") thousands, LT	21700	18090	22630	29750	31590	38872	36917	32075
Loss of public funds due to emigration ("brain drain"), %	2,88	2,26	2,56	2,94	3,56	4,28	5,2	6,36

Public funds, invested in higher education, the loss due to emigration study carried out (Table 1), suggests that each year more and more state funds invested in the education system is losing because of the "brain drain." 2005 - 2012 year, the loss of funds increased by 2.2 times (reached 6.36 %). As the investigation, which was carried, by assessing only the emigrants with higher education, but have not declared their departure; represented inefficiency of public investment is likely to be higher. Empirical studies have shown that educational attainment contributes to an individual's income growth. Investment in human capital is positive even when suffered direct and indirect costs. Educated individuals income is higher than average, which means that the state collects more tax. In order to retain highly skilled professionals Lithuania, it is necessary to improve both the education system and labor market. After performing the investment in higher education in a negative impact on (loss) assessment, it is necessary to carry out and positive effects (benefits) evaluation. Evaluation is performed by calculating the rate of return (ROR) of public investment in higher education. Table 2 data shows, that $ROR_{state}(\text{University}) > ROR_{state}(\text{College})$. This leads to the conclusion that for the state it is more worthwhile to subsidize university education than college studies. University study rate of return is higher than college studies. An individual who has attained a university degree earn more than the person who has acquired college education. We can't say that college studies are not effective, because the evaluation of public investment in higher education is not measured by factors such as the personal characteristics of individuals, their abilities, because success in the labor market depends not only on the acquisition of higher education, but also on the individual's personal characteristics.

Table 2. Investment rate of return (ROR) for state

	2006	2010	2011	2012
State funding per individual, LT	4800	6900	7100	6600
ROR _{University} , %	4.84	4.92	4,92	5,36
ROR _{College} , %	1.23	1.61	1,61	1,75

Lithuania, having a formed culture of evaluation of knowledge, has a lack of exploiting its knowledge resources - people, education systems, academics, businessmen, etc., resulting in a loss of ability to compete internationally, and thus the potential of economic and revenue growth opportunities.

4. Conclusion

Studies have shown that results of investment in higher education can be a positive and negative. Positive investment in higher education effect occurs mainly at the level of an individual - depending on the study cost, living costs, expected wage increases, an individual's personal qualities. The negative effect occurs mainly at the level of the state - the brain drain and investment doesn't buy off. The estimated public investment in higher education, a short-term rate of return (ROR) showed that $ROR_{state}(\text{university}) > ROR_{state}(\text{college education})$ $5.36 > 1.75\%$. This shows that to the state it is more beneficial to subsidize university education than college studies. The analysis of the labor market and the education system showed that investment in higher education research is a relevant question. Statistical data analysis suggests that the salary and the opportunities to enter to the labor market directly depend on the educational qualification. A large population attitude for studies change the structure of the labor market – the number of people with higher education will significantly increase, but the number of jobs that would be required for such high qualifications, will not increase at such high rates. So, potential students for their decision to start studying will more motivate them on economic basis, rather than psychologically, such as prestige, self-realization, and incentives. There is still lack of recognition in Lithuania, that higher education should be competitive (although universities are competing for prospective students) - this is clearly reflected in the financing private and public institutions differences. Also the system of loans for education system is not working systematically. Every year, the government allocates less funds of the budget for compensation of student's education. This means that the student has to look for ways to pay for his studies himself. State funding increase study access to people from all social backgrounds, and also increases the stability of institutions of higher education. In Lithuania investment in education funding system does not work properly. Many of the students are paying for their education themselves and have to find ways to pay for the studies, get a loan.

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