

FUNDING OF HIGHER EDUCATION IN LITHUANIA IN THE CONTEXT OF FOREIGN EXPERIENCE

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During the last decade, a significant development of higher education in Western Europe (WE) and OECD countries took place, particularly in Lithuania. The general number of tertiary students increased up to 2.9 times within the period 1996–2003. However, at the same time funding per student significantly decreased. The article addresses private and public higher education benefits and states that to ensure additional periodic funding of higher education it is necessary to target more to the new funding mechanisms which allow for different process participants to share in a more efficient way the educational costs and benefits. Advantages and deficiencies of different types (models) of loans used by students in foreign countries are provided, stating that the greatest number of advantages when funding investments to higher education is found in income-contingent loans.

In the opinion of the authors, in order to increase the funding of higher education we should refer more to students' payments for studies, at the same time increasing financial support for students when granting loans and providing the opportunities for all students to get such support.

Keywords: higher education, costs and benefits of higher education, types of student loans

Introduction

It is known worldwide that investing into knowledge and skills when striving to increase competitiveness as well as to keep and improve the living standard within a country is very important, especially so at the time when serious changes have taken place in the educational systems of numerous countries: the age of students finishing school increased, many people can afford higher education, a turn has been taken from elite to mass higher education, continued education lasting the whole life is developed.

During the last decade (from 1995 to 2003), the number of universities in Lithuania increased 1.4 times. In autumn 2000, after legitima-

ting the binary higher educational system, seven higher non-university educational institutions (colleges) were established; their number amounts to 27 at present. The number of users of higher educational services increased 2.9 times within the period 1996–2003. Non-governmental higher institutions challenging the state institutions were established and consolidated, as well as higher studies were established, which are procured as services. The law of higher education reads that studies at state higher institutions are funded from the budget and at non-governmental ones are not funded at all.

Debates regarding the funding of higher education in developed and developing countries are predetermined by several factors: the rapid growth

of the budget expense of education, presence of social inequality despite the general acceptance of extensive public funding (particularly in Europe), the principle that primary and secondary education must be free of charge and funded openly.

The objective of the article is to discuss the issues related to funding of studies at state higher institutions, stating that in Lithuania as well as in WE countries it is necessary to increase the scale of private funding by providing students with income-contingent loans.

In the beginning of the article, general trends for funding of higher education in Lithuania are reviewed and assessed in comparison with other WE and OECD countries. The data confirm a decrease of the funding for higher education per student in Lithuania as well as the fact that it is rather low as compared to other industrial countries. Certainly, this is a problem, because the decrease in funding is related to activity degradation. Analysis is given to private and public higher education benefits, stating that in order to attract additional resources to higher education it is necessary to attract more private funding sources in addition to the state budget by changing payments for studies, granting loans, repayment which would depend on further income, as well as increasing the availability of loans.

1. Peculiarities of funding higher education in Lithuania in the context of foreign countries

The number of tertiary students has considerably increased over the last five years. In 1996, there were 57,488 full-time tertiary students, evening and correspondence departments, and in 2003 this number amounted to 168,386. As the number of tertiary students was increasing, the sex structure also slightly changed. In 1996, girls made 56.5% and in 2003 59.87% of all tertiary students. In Lithuania, versus the worldwide da-

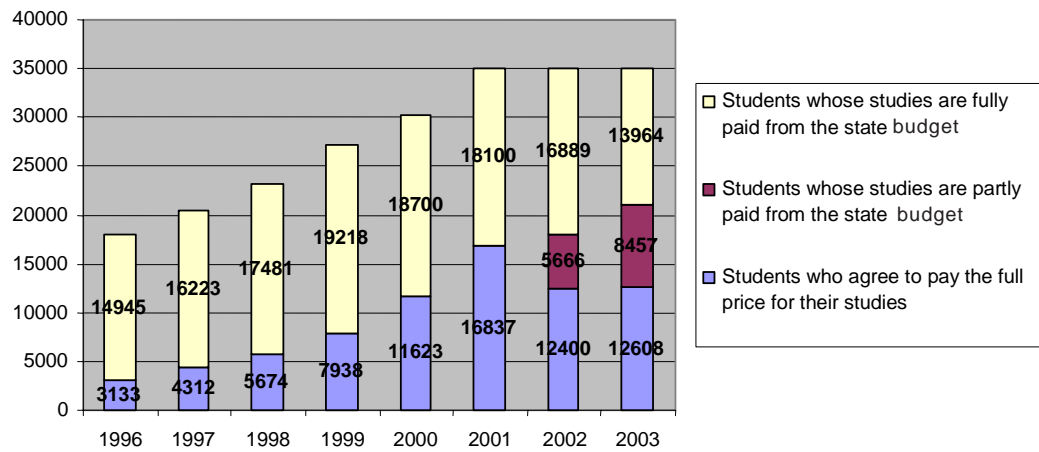
ta, there is the biggest number of school-leavers admitted to higher institutions.

The general educational funding source in Lithuania, as in other WE countries, is the state budget. In 2003, 1.03% of GDP was allocated for higher education. In many European countries also about 1.1% is spent for GDP, while in Canada and the United States of America it amounts to approximately 2.5% of GDP. The total level of spending on tertiary education tends to be higher in the countries that rely not only on government but also have substantial contributions from students, donations and other non-government sources. The countries (Canada, the United States, New Zealand and Korea) that have been able to channel more than 2% of GDP into tertiary education all rise a substantial share of funding from these alternative sources (OECD Economic Survey of the United Kingdom, 2004).

Since 1996, the number of students has increased in Lithuania and nearly in all OECD countries, despite the fact that the share of costs of higher education in the GDP has remained almost the same¹.

Although it is rather difficult to assess the amount of optimal resources required for preparation of a student for work and life in modern society, comparison of costs per student may be a good starting point when assessing the efficiency of different educational models. Expenditures on education per tertiary student range from US dollars 3222 in Poland to US dollars 20358 in the United States (OECD 2003). In Lithuania these costs were rather low, reaching 2554 USD in 2003. Comparisons are based on the purchasing power parity and not on the market currency exchange rates, what shows the volume of national currency on which it is possible to acquire the

¹ Calculated referring to the data from the Statistics Department.



Source: Data of the Ministry of Science and Education.

Fig. 1: Dynamics of the number of students admitted to the state universities in Lithuania

package of goods and services in a relevant country, which is the same as purchasing by US dollars in the United States (OECD 2003).

The amount of resources per student has been decreasing in Lithuania. One of the reasons is that the number of places funded by the government has increased, but the number of allocated resources remained the same. Secondly, the number of university students not funded or partly funded by the state has been increasing constantly (see Figure 1). These students pay for their studies less money than it is allocated for a student funded by the state; therefore, the more students are admitted to not funded or partly funded places at the state higher institutions, the more the average resources per student decrease.

In Lithuania, costs per tertiary student are rather low not only as compared to the previous years, but also to other countries, and therefore they amount to 23% of the OECD countries' average².

² In 2000, the average cost per tertiary student in OECD countries was equal to 11109 US dollars according to the purchasing power parity (OECD, 2003: 185).

During the last decade, due to the rapid increase in the number of students, even economically developed countries were compelled to reduce the budget funding per student. In six out of 22 OECD countries (Austria, the Czech Republic, Finland, Hungary, Norway and the United Kingdom) expenditure on tertiary education per student declined between 1995 and 2000 by 4.5% or more. In all of these countries, except Norway, this was mainly the result of the rapid increase in the number of tertiary students by more than 10% during the same period (OECD, 2003: 92). In eight out of 22 OECD countries, expenditure on educational institutions per tertiary student decreased in 1995–2000 whereas the GDP per capita increased over the same period (OECD, 2003).

As education is being funded, the role of private sources becomes more important in OECD countries. The proportion of expenditure on tertiary institutions covered by individuals, businesses and other private sources including private payments (subsidies) ranges from less than 3% in Denmark, Finland and Greece to around 0.5% in Australia and Japan, 0.7% in the Uni-

ted States and over 0.75% in Korea (OECD, 2003: 215).

Although it is impossible to assess the optimal amount of the higher education sector, it is important to increase the resources allocated for higher education in Lithuania. Public investments to higher education should be more supplemented by increasing private costs of higher education, because it grants not only public but also private benefits.

2. The benefits of higher education. Who benefits and how much?

2.1. Financial, social and cultural benefits to private persons

The simplest measure of the private benefits of tertiary education are higher salaries graduates receive compared with non-graduates, and it is straightforward to estimate the additional income earned by a graduate (over a non-graduate) over a working life³. For the first time, the research conducted in accordance with the methodology provided by the European Union Statistical Service (Eurostat) demonstrated that gross salaries of the employees in the country's economy, who acquired higher education in 2002 was by 91.6% higher⁴ than of those who finished a secondary school. The results of calculations performed by the authors show that the current value of supplementary gross salaries of the employees who have tertiary education is equal to 13937 Litass within the whole period of life, in case the

³ Certainly not all salary differences between persons with and without tertiary education are predetermined by the educational differences.

⁴ The average monthly gross salary for employees with tertiary education was 1713 Litass and for those with secondary education 894 Litass.

discount rate is 5%⁵. The average salary of men with tertiary education in the USA in 2000 was by 110%, in France 58%, Sweden 38%, Denmark about 40%, Germany 25% and in Japan only by 20% higher than of those who finished their secondary studies (Blondal et al., 2002). The average salary of men with tertiary education in Lithuania in 2002 was by 102% and of women by 89.7% higher than of those who finished their secondary studies⁶. These are useful statistical data, however, tertiary education income most often is provided when analyzing the internal rates of return.

In Lithuania, according to the data of October 2000, collected every five years by the Statistics Department regarding average gross salaries for the group of professional workers in the economy profession by economic activity types and sex as well as to the statistical data collected by "Hansa bankas" regarding the process of studies, the calculations performed by the authors show that the private rates of return for university studies are sufficiently high (12.87%), and therefore a strong incentive exists for the students who finished secondary schools to study at higher institutions. They are less than the private rates of return in the United Kingdom where they are the largest among all OECD countries, USA, France, Denmark, but larger than in the Netherlands, Sweden, Germany, Canada, Japan and Italy⁷.

⁵ Despite larger salaries, persons with tertiary education are able to better realize their professional skills, their unemployment rates are lower and there is less possibility that they will stay unemployed for a longer time (see Blondal et al., 2002).

⁶ Calculated according to the data of a research performed by the Statistics Department.

⁷ Calculating the private rates of tertiary education return, the costs are compared that are equal to the sum of lost salaries and costs related to education and incurred to a student, together with the private benefit. They are equal to an increase of the expected income after having acquired tertiary education, compared with persons with secondary education within the whole working life. The private rates of return are the discount rates comparing these two flows. A. Šileika and Z. Tamašauskienė wrote about the methodology of calculating the private educational rates of return (2003).

Assessments show that the rates of return of tertiary education for men in some of the countries are less than for women⁸, although the average salary of men having tertiary education in all countries is higher than that of women. This is due to men's higher salaries lost during studies. According to the data of the research performed by the Statistics Department, the average salary of men with secondary education in 2002 in Lithuania was by 26% higher than that of women and the average salary of men with tertiary education was even by 34.8% higher than that of women.

Social and cultural benefits. A typical tertiary student not only gets a higher salary, but also experiences a greater job and leisure satisfaction. Blanchflower and Oswald (2000) proved that when considering the other factors, including income, as permanent, the education-related higher fixed satisfaction with life and work exists among persons having acquired tertiary education. The educational benefit is discussed in more detail in Carr-Hill (2001) and OECD (2001) sources.

2.2. Benefit to society

Tertiary education renders not only private but also public benefit. Taxes to be paid in the future are the indisputable external benefit. Since education increases personal future income, it will also increase the person's taxes to be paid in the future. The investments to education will render "dividends" to the future taxpayers. In case of such external benefit, the flow of private investments to education will be inefficiently small. A properly established subsidy would be the standard decision. For these reasons, many coun-

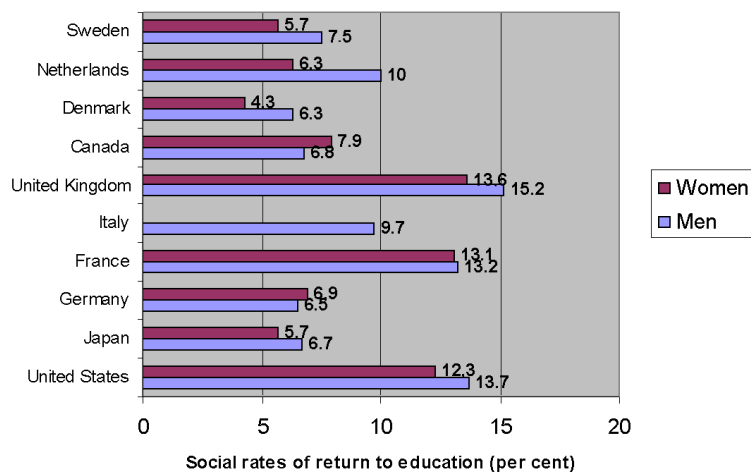
tries provide tax privileges for company investments to physical capital.

Production benefit is a second potential external benefit, which is formed due to the fact that educated people are more productive. They are able to better adapt themselves as well as to assimilate technological changes. The benefit measurement is rather complex, because it is difficult to discern the educational influence from the other factors determining a person's productivity, such as natural abilities, quantity and quality of physical capital.

The benefit includes cultural value transmission (McMahon, 1987), the conduct of better awareness when voting (Brennan, 1987). Bynner ir Egerton (2000) point to a clear link between higher education and participation in community affairs, democratic processes, egalitarian attitudes, parenting and voluntary work. In addition to that, education makes part of the socialization process; it contributes to the transfer of attitudes and values and therefore strengthens inter-dependence. However, the estimation of these external impacts is problematic. According to the data of the research conducted by Weeb (1977), less educated people often supplement their small income by involving themselves into criminal activity, there is a stronger inclination to criminal activity. Moreover, the society may benefit from investments to education, spending less money for social support and prevention of crime / assurance of laws. Children whose parents are more educated grow in a more favorable environment and thus become more educated themselves.

Therefore, the social benefit rendered by tertiary education exceeds the amount of private benefit. Unfortunately, a valid method for estimating the ratio between private and social benefit does not exist. There are assessment problems, as educational benefit comprises not only greater efficiency and direct benefit for a receiver, but also more intensive social relations and social concentration (inter-dependence).

⁸ Tertiary education rates of return are lower for men than women in Canada, France, Italy, the Netherlands and higher in Denmark, Germany, Japan, United Kingdom, USA (Blondal et al., 2003, Table 3).



Source: Blondal, S., Field S., Giroard, N. (2002) Table 4.

Fig. 2: Narrow estimates of social rates of return to tertiary education, 1999–2000 (per cent)

Social rates of return to higher education. Most often, they are calculated in a similar way as private rates of return, additionally including costs and benefit experienced by the whole society (tax payers in particular). Social rates of return are rates of discount, comparing social costs (estimated as the sum of lost production value and educational costs) with social benefit (estimated by higher salaries and tax return after acquiring tertiary education). Nobody has ever calculated social rates of return to higher education in Lithuania. According to Steel and Sausman's calculations (1997), average social rates of return to bachelor studies in the United Kingdom are equal to 11%. According to these authors, social rates of return in women are higher than in men; however, the rates of return among persons who start their studies at an older age are much lower⁹. According to Blondal et al. (2002), in many countries, except Canada and Germa-

ny, social rates of return of higher education in men are higher than in women and vary from 15.2% in the United Kingdom to 6.3% in Denmark (see Figure 2).

These calculations do not include external impacts of human and physical capital, which undoubtedly are positive but difficult to estimate. Moretti and Acemoglu and Angrist tried to estimate social returns via spillovers. Moretti (1998) calculates that the external effect of a 1% increase in the labour force share of college graduates in US cities increases the wages of all workers by 1.1% to 2.2%, with the largest effect on less educated workers. Acemoglu and Angrist (1999) have developed a scheme for estimation of social returns when studying the impact of the average education level on private wages of workers, controlling the impact of private education in different states of the USA.

Since tertiary education renders private and social benefit, private persons and society must cover its costs. The amount of social subsidies to education should depend on the size of social benefit. Social returns must be evaluated not on-

⁹ With respect to subject groups, they report highest return to Social Sciences graduates, lower returns for Science and Engineering, and the lowest for Arts subjects.

ly in order to set priorities for further educational investments, but also to be compared with private ones in order to choose the efficient mix, i.e. to avoid over-education if higher education is subsidized at a too high level, as well as underinvestment in the opposite case (Cohn and Osterbeek, 2000).

3. Alternative funding options of higher education

3.1. Why students' future income (loans)?

The small elite system of tertiary education of high quality could be more or less funded from the state resources. Currently, Lithuania as well as Western European countries strive for a mass system of tertiary education.

Why is the mass tertiary education necessary? First of all, is it possible to indicate investment arguments for development of tertiary education or does the development of tertiary education encourage economic growth? Secondly, is the development for the consumers' motives required and would additional resources improve the quality of life sufficiently, so that the development is efficient? From the investment point of view, it is possible to indicate several arguments for the development of tertiary education. Firstly, it is possible to assert that the human capital is the factor for the national economic development, which becomes more and more important upon the current technological changes. The nature of such technological changes determines the increasing need for qualified and the decreasing need for non-qualified workers. The scale of changes requires individuals to constantly improve their qualifications, i.e. to study during the whole life.

These arguments are strengthened by the international competitive pressure. To catch up

with other countries, it is necessary to increase the capital and work efficiency. Another argument is related to demographic perspectives. The efficient reaction to a decrease in the number of workers is an increase of the ratio between the capital and work; thus, investments to technologies and human capital are of great importance. Therefore, the educational development is imposed by technological changes. The last argument is that the costs of insufficient investment to tertiary education in the quantity and quality aspects will be larger than those of expansion, which will probably be not as important as the costs.

Despite that, a high quality mass system cannot be funded only from social (state) means. Large taxes create negative incentives, particularly under demographic stress and international competition. The funding of tertiary education when using taxes is regressive. The arguments are simple. If taxes are used for funding of the goods that are consumed solely (or mostly) by the poor part of society, this policy helps people living in poverty (is useful for them). Since tertiary education is mostly acquired by persons whose parents are well-to-do and educated, it is such persons that benefit most from this system.

Research conducted abroad shows that the state funding of studies makes a very limited contribution to the accessibility of studies by larger groups of people. The problem is that children from poor families more often than children from rich families do not even try to enter or are not able to enter higher institutions due the lack of knowledge. Then we have a paradoxical situation: the support of studies becomes targeted to those in a "better" social situation and later, as it happens in many cases, will receive larger income anyway. Meanwhile, such support is performed on the society's account and on its behalf. The regressive nature of social subsidies (Barr, 2000, 2002), when funding tertiary edu-

cation, shows an opposite re-distributory effect, because the costs are reimbursed by average tax payers while the benefit is acquired by the most talented ones.

Resources should be further accumulated from taxpayers. However, funding of the system of mass tertiary education of high quality should be to a greater extent supplemented by private means. This conclusion is based not on ideology but on deep practical reasons, because although wide-scale tertiary education is of high importance, it is too expensive to rely solely on social funding. To what scale tertiary education should be subsidized? A usual theoretic argument is that tertiary education gives more benefit to society than to a person. In such circumstances it is efficient if a student pays for private benefit and taxpayers contribute with a subsidy equal to external benefit. Unfortunately, it is impossible to estimate precisely an optimum volume of the sector of tertiary education (Barr, 2001). Macroeconomic possibilities in developed and developing countries as well as distribution fairness suggest that a large system of tertiary education requires social funding to be supplemented by private resources. Private funding is available from the following potential sources:

- family resources;
- students' wages, if they work when studying;
- students' future income, i.e. loans;
- employers;
- university business activities;
- donations, e.g., from charity organizations or inheritance.

Family resources are not a bad thing, but they do not improve accessibility to tertiary education for students originating from poor families. As a rule, students' wages are not high. Moreover, work activities compete with the studying time and leisure, thus also with the efficiency of studies. These are not the arguments against stu-

dents' work and wages, but a warning regarding an exaggerated reference to this particular source of funding. Employers' deposits, contrary to what is supposed by the public in Western European countries, in most cases are rather small. Earlier work, the same as marriage, was supposed for life. Therefore, it was reasonable for an employer to invest to workers' abilities, because he received the benefit from investments. Currently, on the contrary, work is mobile. In general, although employers wish their workers to be trained, every single employer wants to leave it for another employer and afterwards to attract (appropriate) such trained workers back. External impacts are formed and there is insufficient investment to training by employers. In most cases, university business activities generate small income. Donations are analogous to students' income opportunities: they are a useful potential source of means, but they should not be based on too much. Therefore, only students' future income has the potential to increase the resources for studies.

The World Bank supports the strategy regarding increase of the scale of private funding in tertiary education. Recommendations based on efficiency and equity considerations are supported by many studies. In most cases, they recommend an increase of tuition fees and a reform of student aid schemes (Guille, 2002).

In the proposals for fulfillment of recommendations provided for the World Bank "Lithuania. Knowledge economical development. March of 2003" it is noted that the problems of funding of tertiary education may be resolved by either drastically reducing the number of students (more than two times) or by totally changing the funding mechanism of tertiary education as well as legitimating the division of educational costs among those interested in the tertiary education results, i.e. students, employers and state (tax payers). In our opinion, it would hardly be purpo-

seful to reduce the number of students¹⁰ when WE countries are moving towards the system of mass tertiary education. Increase of general costs of tertiary education in the future should be related to a revision of payments for studies while increasing the financial support for those studying with the help of loans. Financial support should be available to all students who wish to borrow money in order to pay for their studies and to cover their living costs as well as to repay the loan from the future salaries after completion of their studies.

In our opinion, revision of the policy related to the fees for studies is justified by the following motives: a) justice, based on the understanding that those who receive benefit should also share the costs; b) efficiency, because certain payments for studies make students and their families be more astute purchasers of services (customers); the system of loans creates the conditions when a person himself is responsible for the funding of his studies and the state only assists in resolving the problem of the “lack of circulating means”; c) reaction of tertiary educational institutions to private and social needs. However, the schemes for division of costs may not be impartially applied to academically qualified but poor students without a relevant mechanism for students’ support.

The problems of funding are more or less urgent in all countries, including those economically well-established, therefore discussions take place regarding improvement of educational

funding as well as ensuring additional periodical funding (Guille, 2002; Greenaway, Haynes, 2002, 2003; Universities UK, 2001). Governments of OECD countries more and more target their educational policy to new funding mechanisms, allowing for different participants of the process to impartially share the educational costs and benefits provided.

Some European countries increased the fees for studies (here it had been very low until 1980) (Eicher, 1998a) and / or expanded the system of students’ loans, which is mostly funded from social means. Despite a clear trend towards higher fees in Europe, a minority of countries, such as Germany and Nordic countries, still impose no fees, while the basic French fee is around 112 euros and most countries impose substantial fees of between 300 and 3000 euros per year (Guille, 2002).

Loans are an important source of investment to tertiary education. In the countries where uncertainty is absent, the market efficiently provides loans and people decide on an individual basis on how much they should invest to human capital and what share of such investments they should borrow. However, in the real world, borrowing in order to invest to tertiary education is related to risks and uncertainty; therefore we will discuss it in more detail before passing on to the analysis of the general types of students’ loans.

3.2. Risks and uncertainty regarding investment to tertiary education

Risks and uncertainty are usually encountered when borrowing money and striving to invest to tertiary education. If you borrow money for purchasing a property, you have to repay the loan within a certain period as well as to pay a relevant interest rate. The main feature is that a monthly fee depends on three variables, namely size of the loan, its term, and interest rate. Purchase

¹⁰ It would be necessary to slightly reduce the number of students, since the largest number of persons with secondary education are admitted to universities in Lithuania as compared to other countries, although according to the data of a statistical research conducted in Lithuania in 2002, 29.3% of workers of all professions had tertiary education. Meanwhile, 37% of men and 41% of women in Canada, 37% of men and 35% of women in the USA, 34% of men in Switzerland had tertiary education in 1999 (Blondal et al., 2002).

of the property is of a relatively small risk to a person, because: a) the person buying the property knows what he is buying; b) there are small chances that the property will collapse; c) the real value of a property is usually increasing; d) if the person's income decreases and it gets difficult to repay the loan, he may sell the property; e) since the property is also a deposit for the loan, the loan may be received for good payment conditions. Due to these reasons, the market may provide loans for purchasing a property without the government's interference into the regulation of financial markets. The situation is opposite as regards the loans used for investment to human capital (tertiary education), because the problems of incomplete information, risks and uncertainty are encountered.

Not all tertiary students are well informed consumers, some of them may not be aware of the benefit regarding acquiring a qualification degree. This is the problem frequently encountered by students from poor families. The scale to which a person is well informed ((a) element) may be of social-economical character. Risks and uncertainty exist due to the fact that the qualification may not be acquired in the case of a failure of the debtor in passing his examinations. In this case he has to repay the loan, but does not have the qualification to enable him a better salary and thus repayment of the loan. Secondly, even well informed students may encounter risks: although the average rates of investment to human capital are positive, significant variations exist around the average. Therefore, the debtor encounters uncertainty and risks related to the future income after acquiring a certain qualification. Thirdly ((d) element), if a person having borrowed money for acquiring his qualification receives a low salary and the sum to be repaid is rather large, he will not be able to sell his qualification to anyone else, thus increasing the risk of borrowing. Due to these reasons, bor-

rowing for funding the investment to human capital is more uncertain than borrowing for purchasing the property. All students encounter these problems, but actually it is people from poor families that are affected more often.

In borrowing money for purchasing a property, the property is a deposit. If a borrower is unable to repay the loan, the loan-giver may appropriate his property, sell it and recover his money. Therefore, non-fulfillment of financial obligations is not a problem. A person may disappear, but he will not be able to take the property. Therefore, loan-givers are ready to provide loans for purchasing the property under favorable conditions. When lending money for acquiring tertiary education, there are risks and uncertainty, because it is not clear whether the loan-borrower will acquire the qualification and get sufficient income enabling him to repay the loan. Moreover, the average rates of return for separate professions are different, and variations for some professions in private rates of return are higher than for others. Although private rates of return have never been calculated in Lithuania, it is obvious that their variation is also high.

Human capital is not a suitable deposit to private loan givers, and the banks, contrary to the government, are not interested in the development of education, as it was demonstrated in Romer's endogenic models of growth. Therefore, the main obstacle hampering the private crediting of studies is that students usually do not have permanent sufficient income to repay the loan and to pay interest or to assure the payment of the loan, and their future prospects are difficult to forecast.

It is due to these reasons that the market is unable to efficiently provide loans for students. The system of loans for studies is usually partly supported by the state, i.e. part of the loan interest is covered and the loan guarantees are provided.

3.3. Types of student loans

Loans of different types are provided in different WE and OECD countries:

- Mortgage-type loans. Repayment of mortgage-type loans is organized as the mortgage or bank overdraft. Every month the loan receiver must repay a certain amount of money during a certain number of years. The loan repayment and duration are known in advance, and the endogenous variable is the part of the loan receiver's income that will be spent in order to repay the loan.
- Income-contingent loans are repaid when paying a certain percentage from the loan receiver's future income until he has repaid the loan. Therefore, the share of income allocated for loan repayment is known in advance and the endogenous variable is the time required for repayment of the loan. It is suggested that tax or social insurance institutions organize loan administration.
- A graduate tax is similar to the income-contingent loan, because it makes up a certain share of the student's future income, however, in general, it differs in a way that the loan repayment lasts the whole life (up to retirement). Contrary to the two previous cases, the repayment does not cease when the student has repaid the loan in full. Therefore, the endogenous variable is a general amount of money, which is paid by the student as the costs for tertiary education.

Now we will discuss in detail each type of student loans, emphasizing their advantages and imperfections.

Mortgage-type loans have certain advantages. The loan costs are clear (comprehensible) to a student and they may even reduce the current work incentives less than income-contingent lo-

ans¹¹. Despite that, mortgage-type loans have two strategic defects: first of all, the above discussed information problems involve the efficiency and justice problems; secondly, the service for mortgage-type loan investments to tertiary education is rather expensive.

The problems of efficiency and justice occur due to the fact that, first of all, some debtors, especially from poor families, may be poorly informed about the benefit of qualification degree, and secondly, all debtors encounter risks and uncertainty due to both the future income from investments to studies and the inability to sell the qualification if their income is low. Thus, technical problems occur on the demand side, because the loan market and borrowing for funding investments to tertiary education (human capital) are ineffectively small.

In the supply aspect, creditors encounter risks and uncertainty due to the risk rates related to loan claimants and thus they fix (take) extra pay regarding the risks. Extra risk pay estimated by a well-informed creditor is efficient (analogously, larger insurance fees for bad drivers). However, creditors are not well informed about the risk rates of claimants. Therefore, the risk bonus will be ineffectively large and will result in an ineffectively small scale of borrowing. Another problem in the supply aspect is that creditors will have incentives to provide less risky loans. A possible way to do it is to provide loans solely to students who provide deposit. As mentioned above, borrowing will be ineffectively small: creditors are interested in providing safe loans, the national interest is an optimum quantity and combination of investments to human capital. If the information is exhaustive, both in-

¹¹ Income effect increases work supply (contrary to the repayment of income-contingent loans) and there is no substitution effect to function in the opposite direction.

terests coincide in Fisher's simple model, and if it is not perfect they appear to be conflicting.

Mortgage-type loans are not correct, since their efficiency problems are mostly related to people from poor families who are insufficiently informed about the qualification benefit and are less prepared to take a risky mortgage-type loan. In addition to that, mortgage-type loans require a good modern collection mechanism.

In Lithuania, mortgage-type loans are provided to students by means of tender-for-payment study fees, living costs, partial studies according to international contracts and agreements. The loans must be repaid every quarter in equal shares, following the provision that the loan for study fees is repaid within the time that does not exceed three times the period of studies for which the loan was granted; the loans for partial studies according to international contracts and agreements are repaid within 15 years. It is anticipated that in some cases (due to invalidity, illness or injury, unemployment, etc.), upon decision of the fund administration and provision of relevant documents, the loan term may be extended by postponing the payment of the loan.

Income-contingent schemes reduce the creditors' and borrowers' risk and uncertainty and therefore increase the level of efficiency and justice. Repayment of the loan is automatically related to the income variations. The borrowers whose current income is low pay small debt repayment fees (or do not pay them at all); the successful borrowers repay the full loan and those whose life income is low only repay part of the loan. When reducing borrowers' uncertainty and repaying the income-contingent loan, misinterpretations which determine ineffectively small borrowings are avoided as well as an efficient level of investments to tertiary education is provided.

These efficiency arguments are very important. Ordinary loans (referring to which the mortgage-type loans are formed) and study loans are

granted under very different circumstances (material conditions). Loans for purchasing a property most often are granted to people when they receive income and have assets. Loans for studies, on the contrary, most often are granted to people who are not aware of their future income and assets. The latter situation is more indefinite than the first one and therefore it is necessary to use income-contingent loans.

In the aspect of justice, these loans have more advantages, because loan repayment is automatically related to the ability to pay when the availability of loans is larger for persons from poor families. If loans cover all living and studying costs, university studies are free of charge, all gifted students have a possibility to strive for studies despite their material status, and the loan repayment, being related to the future income, in this case does not differ much from the payment of taxes. Besides, repayment of the income-contingent loan (also the payment for the qualification acquired) depends not on a person's starting position but on the income he will receive after completion of his studies.

Therefore, we can conclude that income-contingent loans are efficient and correct, because they are compatible with the principles of benefit, ability to pay and social insurance.

The income-contingent principle manifests itself also in other forms. Suppose, a student graduates from his studies, his loan amounts to 10000 Litas and his initial salary after completion of his studies is 16000 Litas per year. In this case, the first year he will only repay 368 Litas of the loan (if the income share allocated for repayment of the loan is 2.3% of the salary). If the student takes a mortgage-type loan, paying 3% of real interest rate with an inflation level amounting to 3%, the first working year he will have to pay 600 Litas (6% from 10000 Litas). Thus, if an income-contingent loan is taken, the loan repayment will be very low the first year, it will not

even cover the interest, and the nominal debt will be increasing.

In the case of a mortgage-type loan, annual repayment of the loan is fixed. As the salary is increasing, the share of the income used for repayment of the loan is decreasing. In the case of the income-contingent scheme, on the contrary, not the annual installments but a share of income allocated for repayment of the loan is fixed. Repayment (installments) will be increasing together with the salary. In the case of the income-contingent scheme, nominal debt first increases, then starts decreasing and afterwards is decreasing very fast the last year of the loan repayment.

In Australia, New Zealand, United Kingdom, Sweden and the Netherlands, in order to reduce the risk of personal investments to tertiary education, income-contingent loans are provided, which are administrated through the tax system. In this system, a certain percentage of salaries is collected together with income taxes. The loans allocated for covering the living costs are repaid when paying 5% of income in Sweden; it is 9% in the United Kingdom, and the loan is started to repay when the income amounts to 50% of an average production worker's salary (APWS); in New Zealand the loan makes up 10% of the income exceeding 40% of APWS salary; Australia does not require to repay the loan, if the income is less than 75% of APWS (Debande, 2004: 177–178; OECD, 2004). However, most often this does not reduce the period during which loans must be repaid, and therefore the debtor has to pay more at a later date.

Although the graduate tax is correct (Oosterbeek, 1998; Johnes, 1993; Barr, 2001), because it equalizes the starting positions for students from rich and poor families and guarantees equal study starting possibilities, it is not a suitable resolution of the current problem related to the funding of tertiary education in the EU and Li-

thuania. Advantages of the graduate tax are: (a) it depends on the graduates' income; (b) its administration costs are low; (c) a lot of additional means are generated within a long period. However, this system is not correct, because persons whose life duration income is large will repay much more than they have borrowed to acquire this degree. This system confuses educational and income policies. It does not separate a general salary from the salary increase due to acquiring tertiary education.

4. Installments for studies, availability of loans and subsidization of interest rates in WE and OECD countries

In 2003, about 50% of university students funded by the state paid for their studies the fees amounting to 1000 Litas; however, the statistical data are insufficient to calculate what GDP share was made up of all students' fees for studies. In the United Kingdom, the funding of tertiary institutions from students' payments for education amounts to 0.15% of GDP and is much less than in Korea, USA, Japan, New Zealand, Canada and Australia; however, it is rather high as compared to many Western European countries. In Lithuania, the same as in the United Kingdom and the Netherlands, all university students pay equal fees, meanwhile, in many OECD countries payment for studies is different for different subjects, and at different universities for the same subject or degree payments are variable (OECD Economic Survey of the United Kingdom, 2004).

In many countries, loans are granted to students to fund fees for education and / or living costs. However, only in some countries (Australia, Island, New Zealand, Norway and Sweden) loans to students amount to approximately 0.2% of GDP or more; the greatest sums of student

loans are granted in New Zealand where they make up approximately 0.5% of GDP. The distinguishing limit between loans and grants may be very intangible, e.g., like in the Netherlands where first the loans are granted and later are converted into grants for students who meet the minimal academic criteria.

There are reasons due to which borrowers should pay the interest rate for loans, equal to the government borrowing costs. It should be slightly higher than the interests fixed in the loan schemes in many countries, which require tax payers' subsidies, but less than the interest which should be paid by borrowers for a non-insured commercial loan.

Such market interest rate, conforming to the government borrowing costs, has certain advantages with regard to efficiency. First of all, in the case of the subsidized interest rate, a student is encouraged to borrow as much money as possible, to put money to the bank (or to acquire the government bonds), to receive profit due to the difference in the interest rate and to repay the loan as slowly as possible. Secondly, the market interest rate has certain fiscal advantages, because interest subsidies are very expensive. Thirdly, subsidized interest is non-purposive and those who borrow the biggest amounts of money receive the largest benefit. It is better to allocate these interest subsidies to students from poor families and / or those whose income after completion of their studies is low. The market interest rate enables to replace a non-purposive subsidy by a purposive one. Thus, the interest subsidies are to be criticized, because they are inefficient, expensive and incorrect. "Repayment of the loan interest is a factor distorting the market, encouraging the taking of loans when there is no necessity" (Analysis and recommendations regarding funding of tertiary education in Lithuania: 26). The system of subsidized loans to students is functioning in the countries which have

a high level of participation in tertiary education (OECD, 2003).

In New Zealand, an interest rate similar to the market rate was applied to student loans until 1999, whereas today loans are interest-free while a person is still a student. This implies a subsidy of a magnitude similar to one third of the 0.54 per cent of GDP lent to students, illustrating how expensive it can be to have below-market interest rates. (OECD Economic Survey of the United Kingdom, 2004). The extent of subsidy will depend on how real interest rates evolve on capital markets in the future and therefore can be only roughly assessed now (IFS, 2003). However, the subsidies of interest rates not necessarily help those who need them most and, when applying the average market rates (as in the Netherlands, 2% higher than long-term government bonds) or partly subsidized interest rates (as in the USA and Sweden), real resources are released, which may be used "for availability by policies" having a larger impact on the improvement of availability objectiveness (OECD Economic Survey of the United Kingdom, 2004).

Conclusions and proposals

Currently, WE countries as well as Lithuania are striving for a system of mass tertiary education. With regard to efficiency it is important, because we require more diverse and more repeated education. With regard to justice, accessibility of tertiary education is very much limited when the system is small.

Moving towards the system of "mass" tertiary education, even when the costs for a student's preparation are reduced due to variation in work efficiency in the educational sector, increases the costs of the system which was free of charge in the course of studies. The system of mass tertiary education cannot be funded only from taxpayers' money. Tertiary education provides not only

a social, but also a private benefit manifested in a higher salary of workers having acquired tertiary education (in 2002, an average gross salary of people having acquired tertiary education was by 819 Litas higher than of those who finished secondary school), as well as by social and cultural benefits. These are the reasons why also private means are necessary.

In our opinion, in order to increase and ensure additional funding for state tertiary education, it is necessary to review fees for studies and at the same time to increase financial support through loans for those studying. Increased fees for studies and the support schemes replaced by the loan systems would increase the financial burden of students, but it could be justified, because it is the students that receive the largest benefit from their tertiary education. The efficiency is also getting better when individuals pay directly for the services rendered and not when these are funded while increasing the fees.

The market cannot efficiently grant loans to students, the system of loans for studies must be partly supported by the state due to higher risks and uncertainty, which are encountered by creditors and borrowers.

In our opinion, the main feature of a well-organized system of loans for studies is the repayment of loans related to the future income; in this case income-contingent loans would automatically be related to the principle of the ability to pay. In this case, repayment of the debt would depend not on the income received by a

student (or his parents) at the beginning of his studies, but on the income received by the student after completion of his studies. Loans should be sufficient to cover the fees for studies and all living costs, and thus tertiary education would be free of charge in the course of studies.

Another feature of the well-organized scheme of loans is that the students should pay for the loan the interest rate conforming to the government borrowing costs. Despite an incomplete repayment of the loan due to low salaries, early death, etc., income-contingent loans are self-funding. The subsidies of interest are inefficient, expensive and incorrect.

The increase of fees for studies and granting of loans, their repayment depending on the graduates' future income, as well as the increased availability of loans would improve redistribution, the means would be allocated to students (whose income is low in the course of studies), and the deposit would be taken after their completing studies and receiving high income. Such redistribution in a person's lifetime is preferable to fee exemptions, low market interest rates and other subsidies for students with a low-income background. This has an uncertain impact on equity, because it redistributes income to individuals who might be poor at the moment but richer than an average taxpayer in perspective. The justice is met while increasing an individual share of the financial burden of students, if those who benefit most from social subsidies come from the middle and higher social strata.

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AUKŠTOJO MOKSLO FINANSAVIMAS: LIETUVOS REALIJOS KITŲ ŠALIŲ PATIRTIES KONTEKSTE

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Santrauka

Pastarąjį dešimtmetį įvyko žymi aukštojo mokslo plėtra Lietuvoje ir Vakarų Europos šalyse. Bendras aukštosiose mokyklose studijuojančiųjų skaičius per 1996–2003 metus padidėjo 2,9 karto. Tačiau per tą patį laikotarpį finansavimas vienam studentui gerokai sumažėjo. Dabar VE šalys ir Lietuva eina link masinio aukštojo mokslo sistemos. Efektyvumo požiūriu tai būtina, nes reikia daugiau įvairesnio, labiau pakartotinio lavinimo ir mokymosi. Teisingumo požiūriu aukštojo mokslo prieinamumas yra smarkiai apribotas, kai sistema yra nedidelė.

Ėjimas link „masinio“ aukštojo mokslo sistemos, netgi sumažėjus vieno studento parengimo kaštams, didina sistemos, kuri buvo nemokama mokymosi metu, kaštus. Masinė aukštojo mokslo sistema negali būti finansuojama vien iš mokesčių mokėtojų pinigų. Aukštasis mokslas teikia ne tik visuomeninę, bet ir privačią naudą, pasireiškiančią didesniu aukštąjį mokslą baigusių darbuotojų atlyginimu (2002 m. aukštąjį mokslą baigusių žmonių vidutinis bruto darbo užmokestis buvo 819 Lt didesnis negu baigusių vidurinę mokyklą), socialine ir kultūrine nauda. Todėl būtinos ir privačios lėšos.

Straipsnio autorių nuomone, siekiant padidinti ir užtikrinti papildomą Lietuvos valstybinio aukštojo mokslo finansavimą būtina peržiūrėti įmokas už mokslą kartu didinant finansinę paramą besimokantiems paskolomis. Įmokų už mokslą didinimas ir paramos schemų pakeitimas paskolų sistemomis padidintų studentų finansinę naštą, tačiau tai galima pateisinti, nes jie gauna didžiausią naudą iš aukštojo mokslo. Efektyvumas taip pat padidėja, kai individai tiesiogiai moka už suteikiamas paslaugas, o ne kai jos finansuojamos dinant mokesčius.

Rinka negali efektyviai teikti paskolų studentams, studijų paskolų sistema turi būti iš dalies remiama

valstybės dėl didesnės rizikos ir neapibrėžtumo, su kuriais susiduria skolintojai ir skolininkai.

Straipsnio autorių nuomone, esminis gerai organizuotos studijų paskolų sistemos bruožas tas, kad paskolų grąžinimas Lietuvoje turėtų būti susietas su būsimomis pajamomis, tuo atveju pajamų-sąlyginės paskolos automatiškai bus susijusios su gebėjimo mokėti principu. Skolos grąžinimas priklausytų ne nuo to, kokias pajamas asmuo (jo tėvai) gauna pradėdamas studijuoti, bet kokias pajamas gauna baigęs studijas. Paskolos turėtų būti pakankamos, kad padengtų įmokas (mokesčius) už mokslą ir visus gyvenimo kaštus, taigi aukštasis mokslas taptų nemokamas studijų metais.

Gerai organizuotos paskolos schemos bruožas tas, kad už paskolą studentai turėtų mokėti palūkanų normą, sutampančią su vyriausybės skolinimosi kaštais. Pagrindinis šio argumento bruožas tas, kad nežiūrint nepilno paskolos grąžinimo dėl mažų atlyginimų, ankstyvos mirties ir pan. pajamų-sąlyginės paskolos yra save finansuojančios. Palūkanų subsidijos yra neefektyvios, brangios ir neteisingos.

Įmokų už mokslą didinimas ir paskolų, kurių grąžinimas priklauso nuo absolventų būsimųjų pajamų, teikimas bei jų prieinamumo didinimas padidintų perskirstymą, lėšos būtų skiriamos studentams (kurių pajamos mažos studijuojant) ir paimamas indėlis, kai jie baigia mokslus ir gauna dideles pajamas. Toks perskirstymas žmogaus gyvenime yra labiau pageidautinas negu atleidimas nuo mokesčio, mažesnės už rinkos palūkanų normos ir kitos subsidijos studentams, kilusiems iš neturtingų šeimų. Tai turi neaiškų poveikį teisingumui, nes perskirsto pajamas individams, kurie gali būti neturtingi šiuo metu, bet per savo gyvenimą bus turtingesni nei vidutinis mokesčių mokėtojas. Teisingumui tarnaujama padidinus studentų finansinės naštos individualią dalį, jei tie, kurie turi daugiausia naudos iš visuomeninių subsidijų, yra iš vidurinių ir aukštesnių sluoksnių.

Įteikta 2004 m. gruodžio mėn.