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EDUCATION AS RETURNABLE INVESTMENT FOR BOTH INDIVIDUALS AND SOCIETY

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Annotation
University education plays an important role in overall chievements and prosperity of society. Therefore it should be the most cruacial agenda on political table to prioritise the financing of the education system.
Description of particular parts of the article: economic growth of the country in the so called new economy, position of young people in the job market, noneconomic contributions of univercity education, importance of tuition fees.
KEY WORDS: job market; unemployment; university education; school system financing.

Introduction

Economic analyses provide relatively convincing conclusions that investment in university education belongs in developed countries to an essential factor contributing to the economic growth which is the condition for common increase in prosperity of individual countries. The analysis published by professor Bano from Harvard University shows that one year of education plus in the average length of education given to the population of a particular country brings a raised level of economic output by 19 %. The real return of investment in education neglecting amortization and provided that one scholar year costs roughly the equivalent of GDP per capita (overvalued fact and more likely upper border) is 7 % per year, which means effectively invested funds from the point of view of public funds investment.

Economic analyses of "new economy" effects, economic environment created by coordination of new technologies and mostly university qualified staff, show the substantially changed characteristics of Philips curve of relation - inflation and unemployment rate. The increase in US job productivity in the 90´s contributed to lower so called natural unemployment rate by one third and the calculations show that a half of the decrease will keep a new level due to a long-term economic stabilization. The high degree of mutual interconnection between introduction of new technologies and requirements on highly qualified staff causes the disappearance of non-creative and routine jobs, and in many cases where few decades ago the secondary school qualification was sufficient, the university qualification, bachelor´s degree at least, is a must. The increase in percentage of university qualified population is one of the basic requirements of economic growth and the prosperity of the whole society that depends on it. The higher qualification means in long terms a higher employment rate for all, not only the prosperity for those who were successful. The analysis of unemployment of secondary school and university graduates is included for the illustration.

Position of young people on job market

The position of secondary school and university graduates on job market is significantly related to overall situation and development of job market and also to economic conditions. The fresh secondary school and university graduates in the Czech Republic, as well as elsewhere in the world, belong to them who are the most endangered with a downgrading development of job market. The employers are generally less interested in employing fresh secondary school and university graduates because they have mostly little or no experience with particular jobs.

The most endangered group in the Czech Republic is the group of young people under 18. The cause of considerable age handicap of young people under 18 is a great competion of those who left school prematurely. In the Czech Republic, this fact correlates additonally with average short time spent in education (ca 15 years in comparison with ca 17 years in developed countries) which means that a lot of young people end up very early on job market. Although they have accomplished their secondary education, they cope with considerable risks of being unemployed due to their immaturity and insufficient experience. These handicaps are decreasing with growing age (Nováček,1999)

The ratio of unemployed secondary school and university graduates to the total unemployment is cyclically changing within a year. The highest figure is always in September, when the graduates of previous school year start looking for jobs, the lowest figure is in spring months, on the contrary, lately in May.The average value of unemployed secondary school and university graduates share in the total unemployment has been 15 % since 1996. The development in recent years has shown a relative decrease in the share of unemployed graduates in the total unemployment as compared with last years.

Unemployment rates of graduates in accordance with accomplished education

The employment of graduates, from secondary schools above all, is often assessed according to total numbers of unemployed graduates of corresponding branches. But this assessment results into incorrect interpretations because the branches regarded as the riskiest are those where the number of unemployed graduates is the highest one. But there is one fact being neglected - these branches have the highest number of graduates. Their specific unemployment rate can be low. If we want to precise the risk for graduates of specific branches on job market, it is necessary to consider both total number of secondary school/university graduates and specific unemployment rate of them.

Long-term unemployment

It seems to be much more important to consider the length of unemployment than the total unemployment rate when considering risks of being unemployed. The ratio of people aged from 19 to 24 years in the long term of unemployment (over 6 months) has increased considerably in the last years. Due to the fact that the position of these people has not deteriorated on job market, it seems more certain that the unemployment is probably concentrated on a smaller group of people. In April 2012 the long-term unemployment (over 6 months) of graduates in the register of Employment Office was in the case of apprentices 59 %, apprentices having secondary school-leaving exam 56.2 %, vocational schools graduates 56 %, higher vocational schools graduates 47.6 % and university graduates 49.9 %. From the point of view of the total number of graduates and youngsters the ratio of long-term unemployment (over 6 months) is 54.3 % with the male and the unemployment with the female is lower - 52.2 %. (SR CSU, 2010,2011)**.**

The apprentices with apprenticeship certificate and graduates from secondary vocational schools are the most endangered group on the job market. These people are also the most affected by long-term unemployment. The unemployment in the case of secondary school and university graduates has a considerably regional character. The regions with higher unemployment also have a higher number of unemployed graduates. The highest figures are noticeable in Moravian-Silesian District, Ustecky and South-Moravian Districts.

The main goal of educational system is to prepare the students so that they are able to prove successful on job market and become employable. It does not mean anyway that the educational system as a whole should be subordinate to the world of labour. These areas – education and job market are more likely in mutual relation influencing each other, both are autonomous to some extent, but depending on each other.

The OECD project dedicated to macroeconomic conditions of growth has shown a substantial contribution of length of education to the pace of economic growth. D. J. Johnson, OECD general secretary, expressed it in the following words: *"The latest analyses done within the frame of OECD are very clearly and empirically based and prove that the education plays an important role in encouraging the growth. It is necessary to emphasize that a minimum of one year of education plus in a particular country means that a year production per person is rising by 4 – 7 % percent."* (České vzdělávání...,1999)

The average time of school attendance is an adequate criterion of the level of human resources development in a society and there are empiric data showing that the university education gives the graduates further and essential competences, and the university diploma does not provide only the indication of general capabilities which are independent on the accomplished educational grade. Our often repeated doubt about the need of university education for more and more secondary school graduates is in relation to macroeconomic parameters very questionable because of a high degree of saturation from the point of view of the volume of studying population.

According Škoda and Sláviková (2015) the character of university study is changing everywhere in the world from elite study of a small part of population to a mass study of a half of one population year. The economic benefits exceeding individual return for each graduate are one of essential driving powers of these changes and their political support. According to the last statistics 45 % of one population year join university study in OECD countries. More than 60 % of one population year study university programs in Finland and Sweden, more than 50 % in Poland, Hungary, Norway, Iceland, Holland, and Argentina, an average value of 45 % is exceeded in Korea, the USA, Great Britain or Israel. In the Czech Republic there were only 23 % of one population year entering university studies in 1999, which is the worst published figure among OECD countries, even worse than in Mexico with 24 %. One quarter or even one third of population year get the first university diploma in 17 OECD countries whereas in the Czech Republic less than 11 % manage to get university diploma. (OECD, 1996)

There are also economic benefits which cannot be neglected. These are direct expenses which the students and their families spend during the study. It also applies to the return of public expenses that seem at first sight as a loss. The fact that the law system enables Slovak students to study in the Czech universities and colleges is not only the benefit for the quality of students and create good conditions for Slovak students to remain and work in the Czech Republic, but it also brings a direct economic profit. Considering that the state budget spends roughly 40 thousand Czech crowns on each student per year, thus the direct expenses of these students at a place of study estimated at 100 thousand Czech crowns per year represent an immediate return of this export function of university study.

Noneconomic contributions of university education

Noneconomic contributions of university education are more difficult to be quantified than those which can be measured economically. The British research that was sponsored by Council for University Education Financing in England and Smith Institute shows the following results which have been evaluated mainly for population at the age of 33 and adjusted for influences of family environment and former education influence in the range between birth and 33 years old.

- In 10-year period, university graduates showed more significant qualification improvements than people who did not attend university (a good foundation for further studies is most significantly demonstrated in the use of information technologies, organizational skills and teaching).
- University graduates show better health conditions.
- University graduates are less inclined to depressions than people without secondary education.
- Men who attended university education are less likely to be victims in accidents or violent offences than nongraduates. Women who attended university education are in less risk to become victims of domestic violence in the process of relationship break-ups.
- Parents who attended university education have fewer problems with their children's education; these children also have more books on average than children of less educated parents. And preliminary analysis indicates that experience gained through university education is sufficient for compensation of former disadvantage in educational sphere.
- Although there is no substantial difference in election participation, university graduates are more active in civil issues and are less cynic in politics (it does not apply for unsuccessful students).
- University graduates are more tolerant to gender equalities and less likely to accept racism (without the consideration of a current position). University graduates have more confidence in political processes as compared to the people without university education including high school graduates.

These university education impacts are often neglected in discussions about Czech universities and too much attention is paid to the relevance of completed studies for a specific placement or actual position in the job market (or in a subconsciously planned structure, which is an idea that is still too commonly used among people who substantially influence political attitudes and strategies in education).

Financing

The quality of a university is necessary to compare with standards of comparable institutions in the world. The reason for that is, firstly, the comparability of education quality and experience gained from attending the university. Secondly, from the point of view of competitive ability, which require mobilization of academic staff, which should not be limited to trips to universities in wealthy countries. When assessing the quality of financing it is necessary to proceed from international comparisons and measure expenses in university sphere with comparable expenses in developed countries. This comparison is indeed not possible without considering the whole economic capacity and overall possibilities of public finances or other private sources for financing.

For comparing university expenses it is possible to use mainly two parameters, which are described in connection with economic possibilities of individual countries. The main one is the portion of expenses according to the size of GDP in a particular country. A lower level of GDP on a person in the Czech Republic in comparison with other developed countries should be the the reason for higher expenses in universities because reaching a higher portion of university education level would in return mean faster increase of GDP and smaller gap between other developed countries. We assume that there is an effect of previous losses in the economy, which decreased factual economic capacity of the whole country and which does not allow to use the portion of GDP for the necessary investments in university education. This is because a part of public expenses has to be used somewhere else. It would be possible to accept that the wanted portion of GDP for school system cannot be reached (parodical explanation would say that the economy is growing too fast and its efficiency is too high that we cannot manage the required portion of public finances to reinvest). In this case, an adequate measurement of comparable expenses in university education would be the portion of expenses of national budget. However, not even here, the Czech Republic performs well as compared with other countries' contributions in universities. In the Czech Republic it is approximately 1,6 % of overall public expenses, meanwhile the average figure in OECD countries is 3 %. For example, in Austria even 3,2 %. (www.budování státu.cs, 2004-2011)

The above mentioned parameters of the amount of total university financing from the budget of Ministry of Education indicate that universities should get two times more of current funds so that the average level of financing with regard to economic situations of the countires, in which the university exists, is maintained. The argument of university education as power of economic growth would show the need of higher investment from Ministry of Education.

Financing of university education within school system

In 1994, the number of 19-year old students reached the peak and at the same time the number of grammar school graduates and university students rose as a result of more unbounded environment in universities and their development. In 1990-94, financial pressure on university institutions substantialy contributed to their restructuring (similar effect of crisis as for the financing of university instituions was possible to notice for example in Great Britain after 1981 or in Finland after 1993) and to the establishement of new universities which reacted to the increased demand for universities studies. After this phase, however, the financing stabilization did not follow, but there was a permanent decrease of real level of student funding.

The development of actual expenses per one university student, during the second half of the 90's, illustrates that all declarations of education priorities or university education priorities are completely unpractical. This is the problem of not only the current government

but also the problem of all political parties. No political party in the government offers useful solution (or it does not take any practical steps), which would contribute to an increase of university education level that is necessary to achieve. The access to university education is a crucial problem, not financing of specific institutions; the current situation leads to the fact that the access is limited so that the instituions are possible to be financed from the state budget. The overall number of students during the 90's was not very impressive as compared with other developed countries.

The long term lasting deficit of university education financing must indeed influence on the quality of university education of Czech students. Deterioration of the education quality will be gradual but concerning the striking differences in financial resources compared with other developed countries, the deterioration will be inevitable. In fact, universities will not be the only victims. Rather the victims will become the university erudition and the access of young generation to education.

The way the state transformed the university education to public institutions contributed to the state getting rid of the responsibility. This is particulary noticeable in salary increase in state institutions (no matter they are regional schools or it is the Acedamy of Science) where the structure of salary tables is connected with automatic salary growth. This is in contrast with access to public universities financing because the financing parameters do not contain the parameter of a number of teachers related to the number of students. Expenses on salaries decide on the quality of academic staff who are willing to work at universities and at the same time determine the number of students who can be tought at our universities. The current salaries are not high enough to ensure the adequate payment for university staff and it is no wonder that young people are not willing to work in such situation.

The critical situation with financing the salaries of young academic staff in public universities cannot be possibly solved by creating special salary conditions for young researchers within the Science Academy. These people get around the natural environment which is characterized by a symbiosis of research and university teaching. It is not possible to permanently build on the fact that academic staff fluctuate between the Science Academy and universities or between other universities and thus lose their time and energy. We cannot accept a situation in which two employment contracts of our academic staff, one at university and the other in the Academy, become a norm, and this situation is considered to be an ideal solution of the relation between two kinds of institutions. Double or multiple employment contracts which are necessary in order to compensate the insufficient financial rewards in regular academic work threaten the quality of university environment. The effect of this situation is much worse than effects which are connected with an increase in number of students caused by the transformation from elite to mass university education.

Tuition fees

The substantial increase in the number of undergraduates cannot be done without introducing tuition fees.The aim of the tuition fee introduction is not only the considerable reduction in the budget of universities that depend on public finances. It is known that tution fees increase the responsibility of all who are integraded into study process (university staff, teachers and students) and it also increase the quality of education. It can be expected that the tuition fees help determine "value of education" with regard to job market. Properly determined tuition fees should reflect "value of university diploma" on job market. Reasonable tuition fees will be also an important motivation factor.

A certain calculation of "costs" and expected "effects" will make the choice of university and its study program more rational. The tuition fees together with teachers´ evaluation by students can play a role of an important mechanism of how to distinguish between quality, average and below-average teachers. It would increase teachers´ mobilty among the schools of different levels. (http://www.vsfs.cs, 2005)

The tuition fees must go along with the option to get students loans with the possibility to repay them in instalments after receiving an adequate salary. The tuition fee system must not install higher inequalities in the university education access for the children from families having low incomes. The loans, on the contrary, have to play the role of a tool eliminating unfavourable family environment (low income, low parents´motivation to let their children study, etc.) for those who are strongly motivated to study at universities. Together with tuition fees and students loans, it is necessary to start creating scholarship funds which enable the excellent students from families with low income to study at lower costs. In addition to scholarship, a system of social aid budget to help undergraduates has to be formed. It can be easily achieved without high expenses if the current system of overall subsidizing some student services (hostels, meals, transport benefits, etc.), which is less effective, will be transformed into a system of targeted social aids for those who really need them. All above mentioned measures, which will be integrated into the law of tuition fees, loans and social aids for students, should contribute to diminish social inequalities and chances to go through university education. The new law proposal of university financing was rejected in January last year, because of clearly ideological reasons and it means the continuation of public universities budget crises and also stronger enforcement of other reform elements of higher and university education (rationalization of demand for university study, responsability of universities towards students, responsability of students for their study, quality of tuition, etc.)

In current law system, the main factor restricting the access to university studies is the deficiency in state budget. The universities cannot offer commercial services and use the profit for subsidizing students who cannot be subsidized by the state. This financing and reinvestment out of university sphere would rapidly cause failing of competitive ability of these services.

One of the possibilities how to improve this unfavorable situation of universities is to introduce compulsory tuition fees. The proposals based on so called "Australian system" make use of the fact that individual return for graduates is high enough and thus a part of undergraduates can subsidize a broader access to tertiary education. The undergraduates are not obliged to pay tution fees instalments during their study but the state will ensure their recoverability after the graduates start working and their income is over the average income in the country. The tuition fees of 15 thousand Czech crowns per year might be repaid within a ten-year period. The postponement of payment does not bring more money into the monetary system immediately but in the course of few years the tuition fees financing can stabilize and add a quarter plus to the total amount of money for university education. It means the considerably increased number of undergraduates especially in bachelor´s programs.

Since in the Czech Republic the salaries of university graduates are on average 70-80 % higher than salaries of grammar school graduates, the ability of the graduates to pay up the debts resulting from their studies is pretty high. Opponents of tuition fees often argue that some groups of university graduates, especially teachers or doctors, do not reach such amount of income. In these situations the state has the possibility to intervene and help the graduates of certain professions to pay up the debts (in other words contribute to the stabilization of graduates placement in these professions) instead of current global study subsidizing regardless the graduate retention in an appropriate position. In fact, salaries of Czech teachers are absolutely lowest among other OECD countries in comparison with purchasing power parity or the level of GDP per individual. But their real value is a little higher than usually being said. The average salary in the Czech Republic was 25,128 Czech crowns in 2013. Nearly 206 thousand people worked in regional school system, in kindergarten, primary and secondary schools, higher vocational schools, music and art schools or after school care and 146 thousand out of them were teachers. The sum for salaries was 56.5 billion which means the increase by 0.8% in comparison with the year 2012. The average bonus part of a salary rose from 1884 to 2103 Czech crowns. The highest salaries are at higher vocational schools and they are 29,500 crowns. Teachers at grammar schools and educators of specialized pedagogical centers earn over 28 thousand crowns, teachers at secondary vocational schools earn a little bit less, teachers of primary schools get about 27 thousand crowns. Teachers in kindergarten have one of the lowest salaries, in average 23,200 crowns, but the lowest payment is in school administration where the average income ranges from 14 to 13 thousand. In private and religious schools are the salaries in average 25,200 Czech crowns, nonpedagogical employees get 18,200 crowns. OECD analysis (2011) offers one of a few international comparisons (Graph 1) of teachers´ costs of lost salary opportunities. Czech teachers´ incomes are among the lowest in OECD countries according to the analysis. Czech teachers having from 15 to 64 years of practice get only a half of the income of other university educated people. In other words, the profession of teachers in the Czech Republic is related to high costs of lost salary opportunities due to low salaries compared with other professions.These costs are little higher in Iceland, Hungary and Slovakia. (SR CSU, 2010)

The discussions about tuition introduction do not negate the fact that the university education would not be an important public good. In a modern society exposed to a multicultural existence and a high rate of global effects fastly influencing local conditions and requiring a smarter reaction to these changes, the higher quality of education plays an important role in the development of responsible citizenship. Racism and intolerance are easier to overcome with a greater degree of a general view. The educated population is more responsible and less susceptible to political party demagogy. The education is also an important condition for creating iqual chances in society and the whole society will profit from higher level of university education.The quality of life of population will improve, people will have better conditions for creative jobs and employment, people will be more informed and more responsible to influence public affairs and will understand better the complexity of modern democratic society administration. (http://www.euroaktiv.cz, 2010)

Even if we do not consider the effect which the tuition fees should have for the broader admission to university studies, the other effect of increasing students motivation to graduate in due time and teachers motivation to be more responsible to their students as clients of their educational institutions means that tuition fees can help to a faster change in the university educational structure. This seems to be even more important possible contribution to this change. The students paying the tuition and even the ones commited to future installments will be more motivated to exert pressure on the change of offered study programs so that it corresponds to the real demand for study.

University education plays an important role in overall achievement of individuals and prosperity of the society. If we do not deal with these questions in a more complex way, we are likely to create problems in the future which will not hurt the ones who were accepted to university studies, because these people are the most mobile labor force and are willing to leave their countries for more developed ones where they can get good jobs. These problems will paradoxically hurt the socially disadvantaged and the retirees because it will be difficult to introduce a sound system of financing for them.

Developed countries critically depend on an increased share of university educated population. The number of graduates in the more developed countries is twice as big as in the Czech Republic. In the Czech Republic the tuition fees introduction can be one of the factors which help remove the barriers to better access to education, but the tuition fees can never replace the need of higher expenses for education. On the other hand, it can help considerably make effective use of these expenses and the total amount of money from tution fees could represent a considerable contribution to Czech state budget.

Possible trends of the development of university education

To adapt factually consistent and courageous problems solutions of a society to fit political goals only means to degrade policy to technology of power. The sooner the citizens understand such a policy and will refuse it, the better for them and the future of their country as well.

We are facing the change being denoted as the transition to knowledge economy. Based on the latest studies on this subject and experience of the countries where the competitive ability has been growing for many years (Ireland, Finland, the Netherlands), this change raises significantly the importance of human capital and the research related to innovative entrepreneurship.

We must admit that after 25 years of transformation, our university education, science, and research end up in critical situation. More and more professionals, in contrast with fewer and fewer politicians, become aware of severity of this situation and political, economical and social linkage. The problems of university education, science, research and development are either played down or put away with provably populist promises by the leading representatives of political parties.

If we want in the future to achieve the turnover in the unfavourable development of the Czech economy competitive ability and stop the outflow of brains, the politicians have to change radically their attitudes to the problems of university education, science, research and development. It would not be an exaggeration saying that the decisions related to this area will have the key importance for the success of the Czech Republic in global economic situation.

Setting favourable conditions for the development of human capital and for the acceleration of innovative cycle in research and development cannot be carried out within the short-sighted policy oriented towards short-term goals. The policy oriented towards the increase in competitive ability is, on the contrary, characterized by the fact that its goals go beyond the time horizon of one election term. But the experience of transforming countries including the Czech Republic show that the development of human capital, transformation of educational system, modernization of research system and its funding, transformation of scientific and research institutions and finally the establishment of conditions for development of innovative entrepreneurship based on the partnership among universities, research institutions and business companies are key factors for the future development, but they are still on the margin of Czech policy interests oriented mostly towards short-term goals.(http://www.budovaní státu.cz., 2011)

The competitive ability of our economy is still very low considering starting conditions and as compared with other countries. In that regard, in the frame of OECD countries we come under the last. In 2000 we were the 28th out of 29th countries where we descended from the 21st place in 1996. The comparison with Finland, the Netherlands and Ireland is very interesting since their competitive ability is still rising. The common strategic feature of these countries is the orientation of institutions and population towards education, flexibility and adaptability of labor force. In other words, it is about countries which based their strategy of success on the development of human resources and human capital.

The tertiary education in the Czech Republic suffers chronic shortcomings which can complicate the favourable development of human capital in longer perspective. For many years, the unbearable excess of demand for university education over supply of university study has made the acquiring of university education impossible for a great amount of young people. They could have acquired easily such level of education in other EU countries due to their aptitudes. In fact, the tertiary education is in contemporary society a prerequisite of good chances for employment and success in life.

Statistical data show that the educational structure of Czech population is improving, but much more slowly than in the countries which set off a way up the ladder of competitive ability. According to tha latest data published by OECD, we are gradually loosing a relatively good position whereas the countries where the competitive ability has been rising for several years are reaching slowly top positions. From the point of view of educational structure, the group of old people (over 50 years old) belonged to relatively developed countries, certainly above Ireland and close to Finland and the Netherlands, while the group of the youngest (under 35) ranks among the poorest countries. But in fact, our main deficit arises from the sphere of tertiary education.

The majority of studies dealing with our educational system and its development after 1989 agree on the fact that our system is very inaccessible and highly selective. It applies especially to university system. Whereas in the countries that set off the way of economic growth based on the development of human capital, the inequalities in the admission to university study were going down (the Netherlands, Sweden and Ireland), they were rising in this country. When compared with developed countries, the chances of children of diversely educated parents to join university study are very poor and are getting even worse. According to the latest data, a wider admittance to universities after 1989 has not brought any distinctive change.

The main cause of great social inequalities in the admission to tertiary education is provably a huge excess of demand for higher education over a small supply of study opportunities, and tertiary education inaccessibility. This proves a known factor of the application of results of scientists, research teams and institutions in technological progress and innovative entrepreneurship (Lajčin, Pasternáková, 2010).

The support and development of partnership of private and public sectors are failing. Such a partnership has become the base on which the innovative entrepreneurship is founded. There is a lack of courage to open the door for the co-operation between state subsidized research and technologically oriented entrepreneurship. It results into one of the reasons why we are failing to modernize universities and colleges. Moderne universities are known to be able to balance the abstract seeking of the truth with the participation in commercial activities and production of economically valuable know-how. The experience of developed

countries shows that this situation can be achieved without giving up traditional mission of universities. The discussion about the change of university culture seems to be a taboo subject even for universities and colleges themselves. The representatives of most universities feel the applied research and the co-operation with industries as something inappropriate for universities. But this is exactly the co-operation of universities and business companies where new sources of funding, new occasions for graduates, and in some branches also new trends of research can be discovered.

The university education, research, development, and innovative entrepreneurship must form a complex of mutually interrelated activities, the main goal (not the only one) of which is the growth of competitive ability based on the development of human capital and innovative cycle acceleration. The essential problem is that after years of shuffling around and failing to fulfill political promises, it is necessary to solve the crisis in both university funding structure and institutional structure, and research and development funding.
It means namely:

- to stop the decrease in real values of public expenses in tertiary sphere and to achieve the OECD average (1.1 % GDP) of public expenses on tertiary sphere;
- expenses on one undergraduate(ca 5 thousand USD/PPP) approximate as much as possible to the average level in OECD countries (ca 10 thousand USD/PPP) ;
- to accomplish the university system reform (transformation of higher vocational schools into colleges, to create a hierarchical university education system, consistent transition to structured study, wider space for universities, industries, business companies being active in innovative entrepreneuship co-operation, etc.) ;
- to change the system of tertiary sphere funding (strengthen multi-source funding, to determine expenses for university education system in multi-year cycles, to introduce tuition fees, student loans, scholarship, and financial aids for the students whose families have low incomes, to permit for tax saving investment into education, to create the system of innovative entrepreneurship development in universities, and to support the establishment of spin-off firms, etc.). (Priority, 1999)

According to developed countries experience, the broadly shaped pyramid of diversely demanding university education cycles is able to react much better to the demand for university education. For majority of students, the bachelor´s degree will become target education which can react flexibly to job market. The postgraduate education, provided by research universities, will keep on the contrary the continuity of elite education more resistent to job supply changes. The programs of lifelong learning will complete this structure with higher education opportunities which enable elderly people to complete university qualification and also continuous updating of knowledge and skills of bachelor´s degree graduates with regard to changing needs for jobs and requalification.(see appendixes in detail)

The clear structure of tertiary sphere study programs is a necessary condition for introduction of tuition fees. The student who shares tuition expenses must have the possibility of the choice between differently long study programs and between different majors in the course of study.

The tuition fees cannot be introduced into the system in which long master´s degree programs predominate. The amendment to the law of universities, which was accepted despite the opposition of government, sets the principal parameters of transition to structured scholar system. It means the first important step in the above mentioned course and it opens the door for those who should prepare the law of tuition fees.

In higher education hierarchical system, the admission of university applicants must be changed from current type of admission using admission exams to testing applicants´ scholastic aptitudes. This testing should be performed out of universities and it can be a part of a standardized secondary school leaving exam. Universities and colleges can determine different levels of admission requirements on their students, they can require, if need be, further specific testing of skills and talent. It is also important that these specific tests for particular majors (e.g. mathematics, law, languages, etc.) are a maximum of standardization and shared with other universities and colleges. This can be achieved if they are prepared and administred by independent institutions issuing anonymous assessment and with a prior determination of required level of success for different types of schools and study programs.

As far as research and development are concerned, all strategically important steps start implementing a much stronger interconnection of research and tuition at universities (especially research universities). Institutional separation of university tuition and academic basic research is an anachronism being typical for communist time and it prevents immediate and secondary effects from influencing on the prosperity of society and competitive ability of its economy.

It is necessary to commence without delay the evaluation of current colleges and universities and their profile programs of study on the basis of several criteria (results of the accreditation of branches of habilitation, publishing activity of teachers and impact factors, standardized students´evaluation of courses, study programs, and teachers, success in obtaining research grants, number of lectures for foreign students, etc.). The results of such evaluation should serve as one of the main sources for accreditation process the result of which would be the gradual transformation of quality universities into research universities.

At the same time, it is necessary to create legal framework for the transformation of the Academy of Science institutes or its professional groups to basic research centers and postgraduate courses, and this is how to create equal conditions for their further possibility to join the group of research universities as the institutions focused on advanced studies. The current Academy of Science staff will be enabled to compete with current university teachers.

The consistent differentiation of university system and the accomplishment of Academy of Science

transformation by gradual integration into newly established research universities are the conditions for the commencement of real scientific schools/universities where the great part of staff will be formed by young generation who is in the research the most dynamic element all over the world. If individual institutions carrying out basic research are not able to integrate their research assignments into university postgraduate, alternatively master studies, the activity of such institutions financed by national funds should be principally suppressed.

This method will mean the contribution to required competitive environment, weakening of solutions of power, personal or group interests and it will create a more transparent environment for real creative competition and viable development in our basic research.

According to other countries pattern, it would be good to establish an independent executive body (e.g. Ministry of Research, Development, and Tertiary Education) being responsible for funds spent on tertiary education, research and development. This body within its authority would provide the co-ordination of research, development, universities, and entrepreneurship in the area of innovations and technological development (Lajčin, Sláviková, Várkoly, 2014). Proposed sequence of main steps:

- to accelerate the structuralization of tertiary sphere programs and achieve the definite predominance of structured programs as soon as possible;
- to accelerate, by means of law, the transformation of higher vocational school system into institutions providing tertiary education (to introduce credit system, to transform gradually a part of higher school into “colleges of science and technology” providing bachelor’s degree programs);
- using the same law, to determine various types of higher education (colleges of science and technology, universities, and research universities);
- to introduce tuition fees, student loans and system of social aids, found scholarship funds, prepare and put into practice the system of savings for education with state subsidy;
- to cancel current university admission exams and introduce standardized testing of scholar aptitudes, establish the institution for testing in education;
- to pass laws following each other which determine the position of research and development, research and development funding and protection of intellectual property in research and development;
- by the change of authority law, to establish executive body (ministry) that executes state administration in tertiary education, research, development, and innovative entrepreneurship;
- by means of a new tertiary education law, besides other things, to create space for innovative entrepreneurship of university teachers and students;
- to create an effective system of public and private sector partnership, provide tax stimuli for the development of innovative entrepreneurship, create funds for risk business, enable formation of regional clusters – co-operation of firms, schools and research institutions.

Conclusions

University education is an essential factor that contributes to the prosperity of all population in the country, not only of the high educated individuals. Highier qualification in long term means highier employment rate for all.

Young people under the age 19 are at the highest risk of long term unemployment. Due to their short time spent in studying environment (about 15 years) their insufficient experience and immaturity leads to lower oportunity of employment. Such disandvantage leads to a long term unemployment (over 6 months). Secondary school graduates are the most endangered group on the job market. The main goal of educational system is to prepare students for successful future and their employment. These two aspects (education and job market) are in direct relation.

There are also noneconomic contributions of university education.

- Uni graduates show significant qualification improvement in use of IT, organisational skills, teaching.
- They show better health conditions
- Less inclined to depression
- Less likely to fall for victims in accidents, in domestic violence
- Uni parents have less problems helping their kids with education.
- Uni graduates are more tolerant to gender equalities, less likely to accept rasism

University education plays an important role in overall achievements and prosperity of society. Therefore it should be the most cruacial agenda on political table to prioritise the financing of the education system. More financial stability in the school system, the better prosperity of the whole society. University that is financed accordingly will have better salary options for their staff (teachers, students, uni staff). Employing experienced academic teachers will result in better educated students. Students seek those universities that provide better teachers. Better equipped university(with better teachers)will result in high demand for such institution. Young people will be motivated to study here rather than seek education overseas. Current critical situation of financing, the salaries of academic staff leads to seeking other forms of financial rewards. Tuition fees should be introduced. The Australian system uses the fact that the individual return for graduates(income) is high enough. The undergraduates are not obliged to pay the fee in advance or during their studying time.Rather they pay the tuition fee back as soon as they are employed. The posponed payments are not available to

the unversity right away, however they secure a long term stability in the finances.

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