SOME ASPECTS OF IMPROVEMENT OF THE QUALITY OF HIGHER EDUCATION IN LATVIA

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Abstract

Sustainable development of the national economy is connected with ability of the system of higher education to ensure and prepare the specialists required for different branches of the national economy. Compared with other resources the human resources have a vital role in ensuring persistent and dynamic development of the economy in Latvia. Quality of higher education, infrastructure and funding of higher education are fundamental for emerging new specialists and innovations. Obviously, emerging students decide to enroll in higher education establishment if knowledge, skills and diploma of the establishment can ensure better position in the labor market. Result oriented algorithm for improvement of the quality of the higher education of Latvia and its international competitiveness have been worked out for development of the system of higher education.

Key words: quality of higher education, funding of higher education

Introduction

Development of Latvia primarily depends on the capability of the education system to produce the required specialists of various fields, as the current resources of the state cannot ensure a dynamic and steady national development. In the some economic theories human resources are regarded as one of the major growth factors and it is becoming even more important for small countries with limited natural and energy resources. The previous advantage – the comparatively cheap labour force is no longer topical and will not serve as a resource for development of national economy. The demand for higher education in labour force has increased over the last five years. The supply of labour force with higher education has also had a distinct tendency to grow over the last five years.

The supply of labour force has increased by 75 thsd. (31%), but its proportion in the total labour force supply has increased from 21,3% to 26%. Meanwhile, the labour force supply of secondary vocational education has decreased (-2,9%) and there has been a minor increase in the supply of general secondary education (4,4%) and primary (and lower) education (2,5%). The number of employed population is expected to decrease by approximately 16% in the basis scenario by 2010 and by approximately 13% in the target scenario. With the situation in economy stabilizing, the demand for labour force might be expected to resume growth in 2011-2012 [1].

In order to maintain national development, the education system of Latvia should be improved so that it produced specialists of modern education in national economy, conforming to the needs of national and global labour market and social development.

The object of this research is the higher education system of Latvia. The subject of this research is the influence of higher education funding on thematic forms of education, as well as the potential aspects of education quality improvement.

The goal of this research is to develop algorithm to improve the quality of higher education of Latvia and improve its international competitiveness.

Research methods - generally accepted qualitative and quantitative economic research methods have been applied in the elaboration of this study. In general, these are analysis and synthesis based methods for studying individual problem elements and process components in order to establish the underlying interactions.

The study draws on the results of research work done by distinguished foreign and Latvian scientists and economists. The different surveys and reports were used for the analysis. It has been concentrating on increasing national human resources potentials.

1. Funding of higher education and its influence on the quality of education in Latvia

The funding by the state budget to higher education in Latvia is low in proportion of the GDP. In 2008, it was 143 million lats or 0,88% of the GDP, which is considerably less than in other EU countries. According to data of the Information centre of the Ministry of Education and

Science, 69,3 million lats were earmarked for funding of the higher education from the funds of the state budget in 2009; after the first decrease, when ¼ was sliced of the funding, the funding volume was 52 million lats, and another reduction of funding left the higher education with 42 million lats (as of 1 June 2009 [2]).

As funding to the higher education has decreased due to crisis, it impedes the higher educational establishments in implementation of adequate investments in development of teaching staff and university infrastructure, thus making deterioration of the educational quality possible. Besides, reduction of funding might endanger equal opportunities to education for population of various social strata in the future. The education funding problems will particularly badly hurt families of low income.

The total expenses per student per year are considerably less in Latvia than other EU countries. According to Eurostat data for 2006, higher education funding in Latvia (public and private) was 3875 euro per student per year, which is the third lowest index in the EU after Estonia (3378 euro per student) and Poland (3630 euro per student). In the light of the considerable reduction in public and private finance resources in 2009, there are grounds to state that expenses per student in Latvia have significantly decreased at the moment.

The state budget provides funds for a definite number of study positions, not university or college as an institution. The Ministry of Education and Science annually establishes the division of higher education study positions, funded from the state budget, by thematic groups of education, in accordance with the granted volume of national budget funds.

The majority of study positions funded from the state budget (60–70% universities and 90% colleges) are granted in industries of priority as determined by the state – natural sciences, engineering sciences, the science environment protection and healthcare) [2].

Human resources are the most essential source of welfare of any nation. Each individual is driven by the concept of „economic person". The decision to enter university, unlike the decision to find a job, may be regarded an investment decision, in view of both the expenses and benefits.

Before making a decision about entering a higher education establishment, the would-be students weigh up the direct expenses, the expenses of missed opportunities, and the benefits. There is an obvious relation: the greater the income a higher education certificate promises to generate, the more attractive the higher education establishment and more students resolve to study there.

On the other hand – tuition fee or other direct expenses, or a loan becoming more expensive, it may cause the number of applications in this educational establishment to drop. The influence of obtaining secondary and higher education on the individual may be characterized by the following graph.

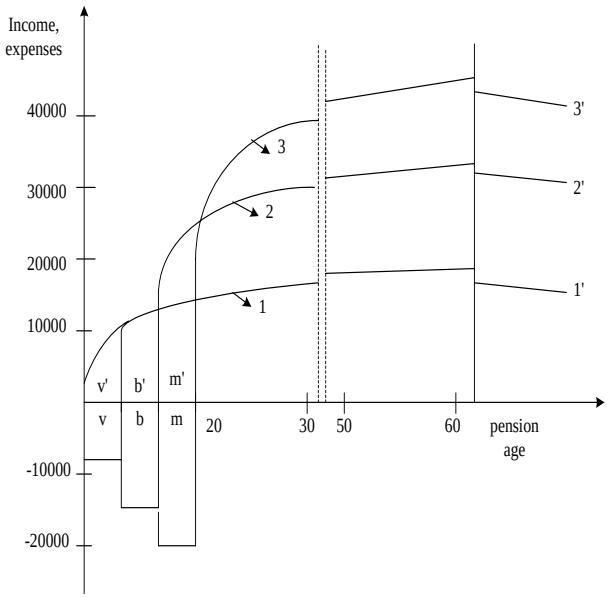

Fig. 1. Income of an individual, depending on the level of obtained education [3]

where:

v - direct expenses, obtaining secondary vocational education;

b - direct expenses, obtaining bachelor's degree education;

m - direct expenses, obtaining master's degree education;

v'- unearned income for the time spent obtaining secondary vocational education;

b'- unearned income for the time spent obtaining bachelor's degree education;

m'- unearned income for the time spent obtaining master's degree education;

1 – curve of earned income for an individual with secondary vocational education;

2 - curve of earned income for an individual with bachelor's degree education;

3 - curve of earned income for an individual with master's degree education.

1' – income at pension age with secondary vocational education;

2' - income at pension age with bachelor's degree education;

3'- income at pension age with master's degree education.

As the graph demonstrates, with the expenses for obtaining education growing, the unearned income grows correspondingly. In order to determine the economic efficiency of education, internal rate of return is used (r). The larger the internal rate of return, the more profitable the investments in education. The practice confirms that larger investment in obtaining the higher education guarantees larger amount of money earned. There is a general regularity that income of an employee keeps growing until retirement (60-65 years in average). Reaching this age, the income of employees of all educational levels tends to decrease.

The funding of studies is constituted by base funding, corresponding the optimum list of study programmes and the number of students, consisting of funds for public utility payments, taxes, infrastructure maintenance, supplies and equipment, and staff salaries, as well as fees for studies.

The volume of studies funding is identified on the basis of the number of study positions determined by the state for the respective university or college, base expenses of a study position and study expense ratios of thematic fields of education.

The expense ratios of thematic fields of education are indices determining the amount of study position expenses in the respective thematic fields of education versus the base expenses of a study position. According to the available data, the smallest ratios are for law sciences, humanities, social and behaviouristic sciences, sciences of information and communication, business and administration; in these fields, the minimum value of studies' expenses ratio is 1,0, and the optimum value – from 1,1 to 1,4. The largest ratios, in turn, are in the areas of military protection, dentistry and veterinary science; the minimum value of studies' expenses ratio in these fields is from 4,0 to 6,0, and the optimum value ranging from 5,0 to 6,0. Military protection is the only thematic field of education, where the minimum value of studies' expenses ratio is equal to its optimum value (6,0).

Transition from minimum values of studies' expenses ratios to their optimum values occurs gradually over a course of ten years, augmenting the studies' expenses ratio value by one tenth each year.

The values of studies' expenses ratio for master's degree study programmes is one and a half times and doctor's degree study programmes – three times larger than the studies' expenses ratio values for bachelor's degree and vocational studies' programmes determined of the respective thematic field of education.

It has been the fourth year in a row when the number of students in Latvia decreases. The number of students matriculated in 2009/2010 study year has decreased by 26% in average in comparison with the previous study year. The number of entrants in years 2015-2017 is forecasted to be yet by 50% smaller (due to demographic reasons). This means the existing education system will need a change. Evaluation of tendencies of changes in the number of foreign students reveal that their number keeps growing by little each year, although the growth is rather minute, by 4–6% a year on average and the number of foreign students accounts for merely 1,2% of the total number of students [1].

Comparing the expected labour force demand and supply by qualification groups in 2015, we may observe this tendency appears also here, that a fair of labour force surplus is forming in the group of higher qualification, whereas mid-level qualification employees might be in need.

On the basis of future labour market tendencies, the courses of the current labour market policy should be based on stimulation of supply of the mid-level qualification labour force and implementation of a more effective higher education supply, meaning the quality aspect instead of the quantity.

If to compare the funding for a study position of the state budget to the average tuition fee for full time basic studies from 2006 to 2008, by the profile of thematic fields of studies, we have to conclude that the budget funding per one study position up to now has been considerably higher than the tuition fee in the respective programme. With that in mind, the actual expenses of a study position should be identified, respectively planning the funding from the state budget per one study position.

Data from Figure 2 reveal that 57% of the funding of state universities and colleges come from national funds, the tuition fee covering less than one fifth.

From these data we may judge the level of dependency of the higher education on the funding assigned by the state, and we may just fancy

the extent of irretrievable damage the higher education would suffer due to funding cuts.

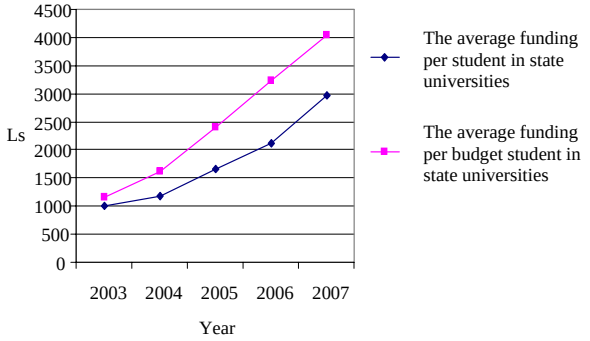

Fig. 2. The average funding per student / per budget student in state universities in 2003-2007 [2]

The picture shows that the funding per student/ per budget student has a tendency to grow, the average funding per budget student grows comparatively faster in the reporting period. The funding per budget student in state universities in 2007 exceeded the funding per student by 1078 lats or 36%. The breakdown of the average funding per student in state universities:

- 1693 lats - subsidy from general income;
- 535 lats - tuition fee;
- 416 lats - research funding;
- 326 lats - other sources.

The number of students financed from the state budget has increased in the academic year of 2008/2009, which is 33 355 (increase by more than 4%, in comparison with the previous year). Thus the proportion of budget students has increased by 2%, which comprises 27% of the total number of students, in comparison with 68% in the academic year of 1995/1996. The number of budget financed study positions in universities and colleges, as established by the state for 2009, is 31 059, which is by 566 positions more than in the previous year. Of the state budget positions, 24 761 positions are bachelor's degree and vocational studies, 5079 – master's degree studies and 1219 – doctor's degree studies [2].

Figure 3 displays that the proportion of those studying at budget funds ranges from 10% to 68%, depending on the thematic group of education. The largest proportion of budget positions (68%) is in natural sciences, mathematics and information technologies (industry of national priority), the smallest proportion (10%) being in social sciences, commercial sciences and law.

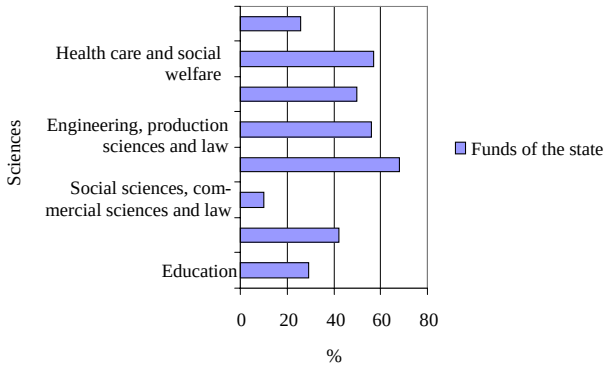

Fig. 3. The funds of the state budget in academic year 2008/2009 [2]

The distribution of students by thematic groups and fields of studies has not changes significantly over the last years. At the moment, every other student in Latvia is studying social sciences. The number of degree holders in natural and engineering sciences in Latvia is insufficient. In 2004 already, compared to other European countries, Latvia was at the tail end by the number of studying engineering sciences. Moreover, it should be emphasized that the proportion of students of engineering sciences, production and construction, regardless of rise in the number of study positions financed by the state, is growing rather slowly – from 9,2% in academic year 2004/2005 to 11,1% in academic year 2008/2009. To compare, this index was 20,5% in 1997/1998. In recent years there is a rise of the proportion of students in the thematic group of healthcare and social welfare.

In 2008/2009, social sciences, commercial sciences and law are in leading positions by three indices – the number of matriculated students, the total number of students and the number of graduates – over 50% in each of the selected indices [3].

When assessing the essential indices of higher education in Latvia, special attention should be paid to the number of students, who discontinue studies due to various reasons.

Reduction of student dropout rate is an essential problem from the resource economy point of view, which should be adequately addressed by universities together with the respective state institutions. Particularly now, when student and study loan system is implemented and the vol-

ume of funds available for lending is rather limited.

In accordance with agreements signed between the Ministry of Education and Science and universities, students from study groups for fee will replace the dropouts in the state-financed study positions by a way of competition. Therefore universities, which offer studies for fee, all study positions of the state budget financed should actually be filled.

At the moment, there are no punitive measures against persons, who have studied at the funds of the state budget and discontinue their studies, thus incurring material losses to the state.

The average proportion of dropout students (discontinued their studies) in academic year 2007/2008 was 16,5% among the full time and 19,8% among part time students. Reduction of student dropout rate is a very significant problem from the point of view of resource economy, it should be addressed appropriately.

2. Result oriented algorithm for improvement of the quality of the higher education of Latvia

To raise the quality of the higher education in Latvia and its international competitiveness, as well as streamline the use of the state budget, a result oriented algorithm for improvement of the quality of the higher education of Latvia has been developed. It has been developed upon proposals of principals and researchers of various universities, to furnish the Ministry of Education and Science a tool for improvement the performance of higher education and its international competitiveness. The goal of this algorithm is to attain improvement of the quality of a result oriented higher education and raise its competitiveness.

To attain this goal, three sub-goals are to be reached. These goals entail certain tasks, accomplishment of which require performing certain measures or implement a number of reforms.

This algorithm clearly identifies the certain tasks and the major measures to be implemented, for actual improvement of the quality of the higher education and its international competitiveness. This algorithm includes various measures of simple as well as very complicated degree of solutions. As the problems underpinned by the algorithm are topical in other countries as well, the algorithm could be suggested as a document for employees of universities, ministry of education and other, for addressing and solving in practice certain problems.

It is necessary to eliminate some negative influences on entry of labour market by persons who have obtained higher and secondary education. There are cases, when due to various subjective factors, graduates of these schools are hired irrespective to their speciality obtained, which in some cases reduce their positive effect on company performance. For instance, an MA in social sciences is hired in a position of engineering specialist, which does not contribute to company development. This specialist is required to master vocational knowledge not to mention the innovative experience.

Generation of specialists of like profiles in several universities at the time should be eradicated, as teaching and training has not materially changed between them, it only promotes migration of the teaching staff and strains the competition on labour market.

In the reporting period, various tendencies of furnishing funding could be observed, which serves as evidence to successful implementation of their strategy:

- decreasing of credit from the state budget funds;
- increasing of credit from credit agencies' funds.

If loan funds from the state budget accounted for a half of the total loan funds in 2002, then in 2004 this figure was 13%, in 2006 – less than 1%, but two years later the state did not assign loan funds, covering only the difference in interest; 100% of loan funds were granted from funds of credit agencies.

The volume of the state guarantees to study loans and student loans in the period of time from 2002 to 2008 was 92,3 million lats, including: 56,7 million lats – amount of guarantee to study loans, 35,6 million lats – amount of guarantee to student loans [2].

Implementation of the lending system may be considered successful on the aggregate, as the established target (relief of the state budget) has been reached.

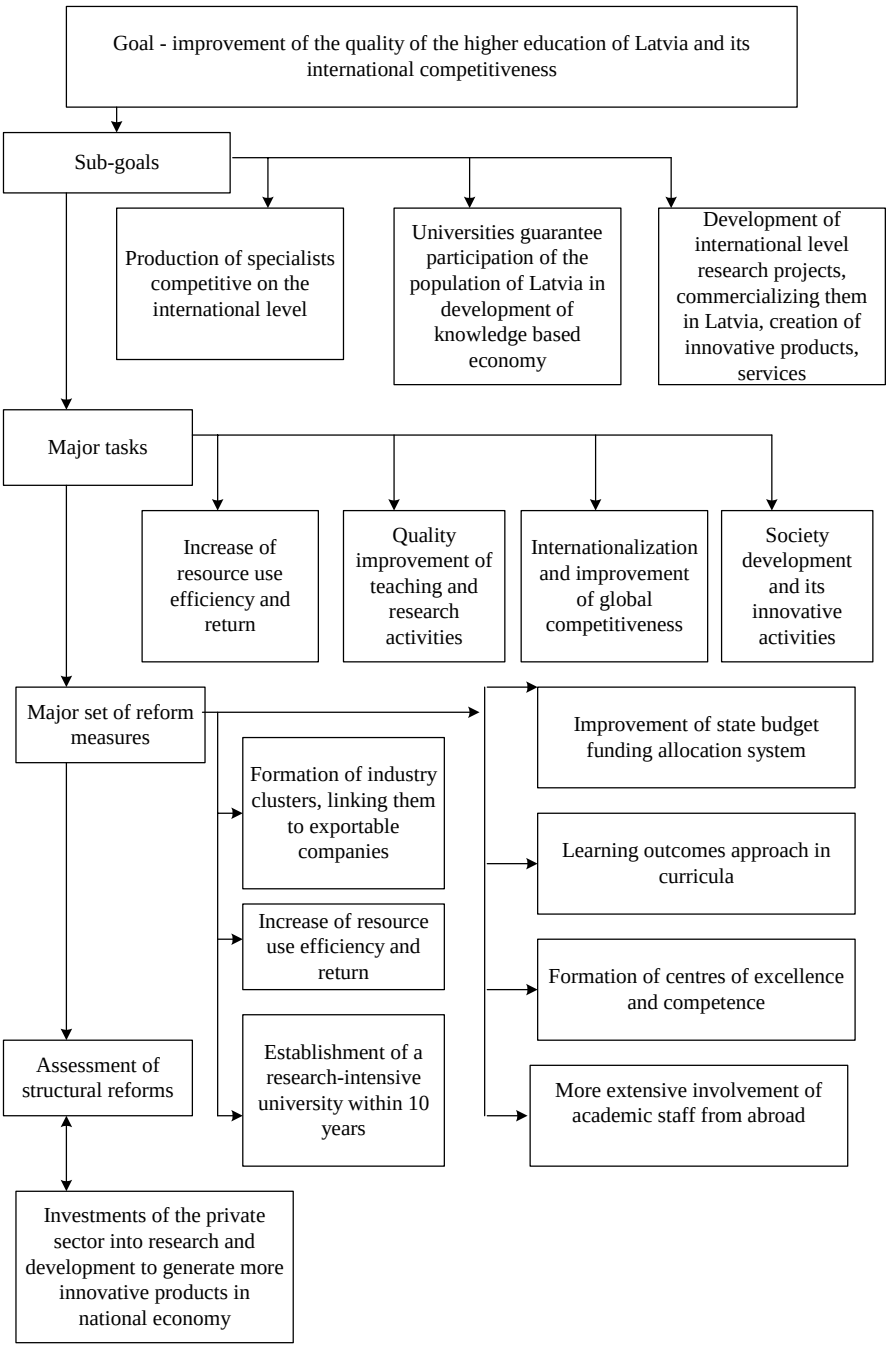

Fig. 4. Result oriented algorithm for improvement of the quality of the higher education of Latvia and its international competitiveness.

Conclusions

In environment of a knowledge-based society, education becomes a value per self - dependent. Higher education develops personality. It obtains better prospects of self-realization. That, and not knowledge materialized in gadgets and technologies, becomes the fundamental factor of contemporary society development. The period of formation of knowledge society commands a rapid growth of demand for higher education. To make sure this growth of demand is balanced by a supply of the size and quality, dynamic investment of financing into higher education must be maintained.

Reforms to the system higher education and science would stimulate faster growth in productivity, which would rest upon overall growth of the technology level in all national economy, as

well as shifting of its structure for high-tech industries. Such economy model is sustainable, as it allows embedding the growth on advantages of competitiveness of the national economy, stemming from high level of technology, which, at the end, does not cause so distinct disproportions in economy, as those forming in Latvian economy during the previous years of dynamic growth.

It should be noted, though, that the major benefits in relation to these reforms in education and science can be anticipated no sooner than after 5-7 years, i.e., after 2015. Until 2015, the productivity growth of Latvian national economy will pertain primarily to those processes of balancing, which must take place for the competitiveness of Latvian economy to restore, i.e., the development should be faster than the growth of employment and salaries.

It is not only the total funding volume what matters, division by funding sources as well is important. The goal of reforms is to attain, along a definite level of state funding, to activate the channels that encourage investments of the private sector into research and development, as only in such conditions the spending for research and development provides an adequate innovation process in the national economy.

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