

## Experience of the development of the system of financing of higher education sector on national and international levels

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**Abstract.** Higher education is an important social institution that functions to satisfy society's needs, and therefore it reacts quickly to internal and external changes and processes. Constantly increasing in volume and ever more diversified in their content the cross-country economical connections form the need for versatile expert personnel who getting professional training at national universities. This leads to the fact that the content of a national higher education system naturally gravitates to so called "world standards", being produced by world science and technology. Globalization processes also require from the national higher education system the new goal orientation which is taking into account the needs in international solidarity. In globalization conditions the universalization of the content of education and education technologies is inevitable and it is unstoppable under existing world information and communication systems as the internet.

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### Introduction

At the moments there are tens, or according to some sources hundreds of different systems of funding for higher education worldwide. Which of these systems could be considered as optimal? Lately in other countries there has been a tendency of redistributing the financial burden between students and taxpayers in the disfavour of students who have started to pay considerably more. The main reason for this is the fact that science and education nowadays has significantly grown in its economic value.

By the calculations of the World Bank produced in 1994, approximately 76% of national assets of the USA accounts for population skills and knowledge applied at both the production process and in everyday life. Physical capital accounted for 19% of assets in the USA, and the natural factor accounted for around 5%. In Western Europe these variables comprise 74%, 23% and 2% accordingly. In Russia, human capital equals 50% of welfare, reproducible capital is 10%, and natural resources are 40% [1,2,3].

In foreign countries there is a significant difference between the balance of private and public higher education. For example, in Western Europe state higher education institutions dominate and account for 95% of students. Despite the fact that the most famous American universities are private, more than 80% of students study at state universities. In Asian countries (excluding China) 80% of students study at private higher education institutions [4].

Private higher education for a long time dominated in Japan, but now it almost 50% is funded by the state [5].

At the same time education fees are very high; students in state and municipal universities students pay 10-20 thousand used a year, in private institutions they pay 30% more. That is why 80% of students have to work part-time [6]. At the moment throughout the world there is a huge demand for higher education while at the same time there is no opportunity for state to provide full support for it. This increases the significance of private higher education. The size of funding of state and private higher education establishments have gradually moved closer to each other, this is caused by the rise in education fees. Taking into the account all funding sources, Denmark for education purposes uses 8,4% of GDP, Sweden - 7,8%, USA - 6,6%, Japan -4,9%, Greece -2,4% [7,8].

In this group of countries the main funding source for universities is the state budget.

In the West a great deal of attention goes into the search of optimal interrelation between state and private funding of higher education. Apologists for private funding took on board the theory of "human capital", looking at getting education as an investment into the human. As professional training gives graduates material benefits, they have to be contributors to its financing. Usually students who pay education fees are more successful in their studies, and moreover they can insist on the

implementing of study programmes that comply with their requirements. There are other arguments for the rising of private funding of higher education: paid education increases autonomy and widens the horizons for universities. The possibility of attracting funds of private investors with the purpose of paying education fees of their required specialists emerges.

Supporters of state funding of higher education justify their position by the imperfection of the market of education services, the presence of "external influence", and also reasons of a fiscal nature.

According to the opinion of some specialists the optimal solution to the economical problem of higher education is its mixed financing, but even in this case some problems arise. It is rather difficult to define the most reasonable interrelation between state and private funding, because of, firstly, difficulty in the quantitative count of external and individual benefits under the investments into education. If only economical effectiveness of investments is taken into account, then the social and legislative problem of providing equality in education emerges. In these countries the main source of funding universities is the state budget.

At the end of XX century in the higher education sector of many western countries a financial crisis occurred, caused by a reduction in the growth rate of universities' support from the state alongside the steady increase in the number of students. The state strived to shift much of the expenditures for the support of university budgets to students themselves. This fact explains the changes in the system of funding for higher education. The following included; changes in the conditions of granting stipends, implementing systems of educational loans and others, which in the majority of countries go with efforts to promote the development of market relations in this field.

From the second half of twentieth century the number of students in European countries increased by at least 10 times. The elite system of higher education was succeeded by a mass one that now covers one third to two thirds of all applicants. This process was accompanied by significant structural changes to the system of university education. Thus to the number of traditional universities, universities providing more specific and professional training were added.

In the last thirty years economic scientists and politicians have strongly criticized the university sector for the lack of recognition of labour market requirements, ineffectiveness of control and high cost. For example, in the 1980s and 90s the procedure of evaluation of university performance calculated per student was introduced. The funding received by

universities from the state was reduced and on the official level doubts about the worthwhileness of traditional funding system of higher school based almost completely on a public budget were risen.

Public expenditures on education in percentage to GDP in a significant majority of European countries exceed 1%, the highest are in Finland, Denmark, Norway and the Netherlands. State and private funding of higher education differs in different countries: so in Germany, Italy and Austria the amount of public funding in expenditures on higher education equals approximately 90%, in Great Britain and Finland around 80%, in Denmark and Sweden around 75%, in the USA and Canada 50% and 73% accordingly. In Western European countries until 1980 higher education predominantly was virtually free. Apart from this, in some countries students were receiving stipends, and thus were able to compensate a certain part of living costs during their studies. From the 1980s there were changes in the funding of higher education, and long since the 1990s Western European countries conventionally were divided into three groups by type of education fee; free-of-charge in Germany, Denmark, Norway, Finland, Greece, Sweden, Great Britain, Austria; average in France; and high in Switzerland, Belgium, Italy, Spain, the Netherlands, and Ireland. There are also differences in providing financial help to students from the state [9].

The introduction of education loans was one of the biggest reforms. These loans meant shifting part of expenditures to customers, because they are usually accompanied by cuts in state funding such as student stipends or the subsidising of educational fees.

In addition, universities themselves can provide loans to students. Such repayments force universities to accept only the best students and use study programmes that in the future will maximize student earnings.

In Great Britain in 1988 the White book was introduced, this offered a scheme of granting zero-percent loans to full-time students and of loan repayment depending on income and with no responsibility placed upon relatives. There payment has to be started 9 months after graduation. The amount of debt annually is measured taking into account inflation rate and the financial situation of the person [10]. At the beginning of 1990s in Great Britain all full-time students did not have to pay educational fee and were offered stipends and loans to cover their living costs. From the second half of 1990s the state help was equally presented as loans and stipends. Students do not receive the balance of their tuition fees from the state. Graduates without high salaries would get delays on repayments. The

majority of graduates have to repay money back within five years.

Some students will strive to pay for their education upfront and do not take a loan from the state, so people who have not got money can use this opportunity. The stimulation of upfront payment providing maximal economy of public finances in the short-term is possible. In Australia they do it by granting a discount on education fees if there is an upfront payment [11].

In many countries the new approaches to the allocation of the cost on higher education between students, their parents and taxpayers are being introduced. Attempts of attracting a fourth partner to participate in expenditures are in existence. Thus in the USA the important source of financial resources is individual and institutional philanthropy, to larger degree it is correct for private universities. Some British universities are trying to do the same. By the opinion of many specialists it is possible to attract entrepreneurs as the partner, as they profit from good performance of graduates and use the research outcome that is conducted by university stuff. In some countries there are attempts to attract industry by the introduction of a target tax for the education sector, and also by providing fringe benefits to sponsors [12].

Recent changes in the USA, Great Britain, Australia and Japan demonstrate an increase in the participation in education funding of parents and students with the decrease of the share from public foundations. Thus, in practice the Japanese programme of subsidizing was cut down, while lately the tuition fees in both state and private universities have risen significantly.

In Australia in 1986 a tax on higher education was introduced, and two years later the scheme of helping higher education was implemented based on the participation of customers who pay part of the cost via the tax system. From 1989 all people have to pay the tax to cover 20% of average cost for studying at higher education institutions [13]. In Sweden in the 1960s financial support to low-income students produced a noticeable sociable effect, but with time it vanished. This could be partially explained by the fact that in the Swedish system combining grants and loans, the adjustment of opportunities for getting higher education was not provided anymore. In connection with that, in 1989 the system was transformed and the relationship between grants and loans was revised. At that point students were provided with help where the share of grants was higher, and the loan return basis had become more tight. The other change meant that the amount of loan return is connected to income: specialists who were awarded a diploma will pay 4%

of their income annually to repay the loan. Interests in such approaches exist in many countries, but there is no common opinion about the size of debt repayment of the debt. The size of debt repayment ranges from 3% to 15% of income. Thus, in Australia the loan repayment is 2-3% a year, in the USA it is equal to 9-10% [14].

In the USA the debates about the worthiness of complex systems of student support continue. Thus in Michigan state a programme of upfront tuition fee payment encouraging parents to save money for their children's higher education from their birth is offered. At the moment in USA there are three main types of educational loan: student, parental, and also private loans. Apart from them there is a fourth type, a combined loan allowing the borrower to combine all his loans into one for easing off the loan repayment. In student loans a low interest rate exists and there is no need for collateral. A federal loan for students' studying is called a Stafford loan and has two types [15]: firstly, loans awarded by private lenders, such as banks, credit unions (their repayment is secured by the federal government); secondly, loans which students and their parents can get directly from the government.

A Stafford loan could be subsidiary and non-subsidiary. In the first case the interest on the loan during the studying is paid by the government, in the second case the student pays the interest fee. Students who are dependants are given loan to the sum of 2625 used in the first year, 3500 used in the second year and 5500 used in all consecutive years. Students who have independent income are given additionally 4000 used in the first two years and 5000 used in all consecutive years. Postgraduates can get a loan of 18 500 used a year, but only 8 500 upsides subsidized from this sum.

Loans have a floating interest rate within 8,25% (set annually), based on a 91 day of return on Treasury bills, plus 1,7% during studying and increases on 0,6% after the completion of studies. The size of interest rate is the same with all creditors [16].

Students and postgraduates who have not got the finances are given a Perkins loan. Here the educational establishment is the creditor that operates with finances received from the federal government. The loan is subsidiary and its interest is paid by the federal government during studying, there is a 9 month delay in repayment, and the maximum repayment period is 10 years, with an interest rate of 5%. The parents of dependant students can obtain an external loan for providing material aid to children. As in the case with student loans, loans of this category can be given out by private lenders and the government. The interest rate could fluctuate, but

should not exceed 9%. The start of repayment is after 60 days after lending the whole sum, the repayment period is 10 years. Payment obligations are on parents [17].

In Russian higher education at the beginning of XX century there were state, public and private stipends, plus different forms of welfare in the form of lump sum benefits or of full or partial exemption from payment to educational institutions. In state high schools students were offered a wide choice of stipends. The main place was given to "state-owned" scholarships financed by the state treasury. The number of such scholarships in every school was strictly regulated by the school charter, with the exception of universities. State-owned scholarships were organised by different offices. For getting a state scholarship the student for each scholarship year had to serve a certain period in public service as per distribution. Those who wished to get out of the appointment in public service had to pay back the whole scholarship sum to the treasury [18].

In modern Russia the driving force for the development of higher education is not the labour market, but the market of educational services. Naturally, this situation is short-term. The needs of the economy in terms of personnel in the nearest future will become the main regulator of the scale and structure of higher education.

The implementation of the main direction in the context of the analysis of achievements of education policy fulfilled primarily based on external quality assessment of the education system of Kazakhstan. External assessment implies a comparison of the education system of the country with those of foreign countries on a number of quantifiable indicators. At that, this comparison can be carried out both in terms of effectiveness (availability, security) and in terms of the performance results of the system. Whilst carrying out the external assessment the results of international organisations' research are used.

According to the annual UNESCO Report on monitoring education for all, Kazakhstan is in the top four leading countries by the education development index (EDI). In 2009 our country was in the first position out of 129 countries and ahead of Japan, Great Britain, Germany (Table 1). The value of EDI is the average of four indicators - coverage by universal primary education, adult literacy rate, gender priority and the enrolment ratio of pupils who have been studying until the last grade of primary school [19].

The high position in the ranking was achieved due to the fact that preschool and eleven years of secondary education in our country is mandatory and free. The additional advantage is that

there is no discrimination in the access to educational services by gender.

**Table 1. Top-5 of UNESCO ranking by the education level, 2010**

№	Country	EDI	Coverage by universal primary education	Adult literacy rate	Gender index	Share of pupils being studying till year 5
1.	Norway	0,995	0,987	1,000	0,995	0,997
2.	Japan	0,994	0,998	0,992	0,997	0,990
3.	Germany	0,994	0,998	1,000	0,993	0,984
4.	Kazakhstan	0,993	0,990	0,996	0,992	0,995
5.	Italy	0,992	0,994	0,989	0,991	0,996

Source: UNESCO world report on monitoring the education for all, 2010

Another example of the high performance evaluation of Kazakh education system is the Human Development Index (HDI), annually calculated by the United Nations Development Programme (UNDP). The high level of human development index assumes the ability to live a long and healthy life ("life expectancy" component), to get necessary skills and knowledge ("education" component), and to have access to resources for decent standards of living ("standard of living" component). In this UNDP rating Kazakhstan is among the countries with high level of human development and took 66th place out of 169 countries, and rose in one year by 16 points.

**Table 2. Human development index among countries.**

Very high HDI		High HDI		Average HDI		Low HDI	
Country	Place	Country	Place	Country	Place	Country	Place
Norway	1	Belorussia	61	Turkmenistan	87	Kenya	128
Australia	2	Russia	65	China	89	Nigeria	142
New Zealand	3	Kazakhstan	66	Uzbekistan	102	Afghanistan	155
USA	4	Ukraine	69	Kyrgyzstan	109	Niger	167
Ireland	5	Georgia	74	Tajikistan	112	Zimbabwe	169

Source: UNDP Human Development Report, 2009

As the President said at II Congress of Education and Science workers, one of the main tasks of reforming the education sector in Kazakhstan is improving the material and social status of the teacher and scholar. By the initiative of the President the new, appropriate for market conditions principles of higher education funding were laid, and they were based not on financing providers of education services, but its recipients via educational grants. This allowed under the personal support of the President the transfer of 10 155 public education loans into public educational grants which as the result provided the creation of one system of education funding for students from the state budget.

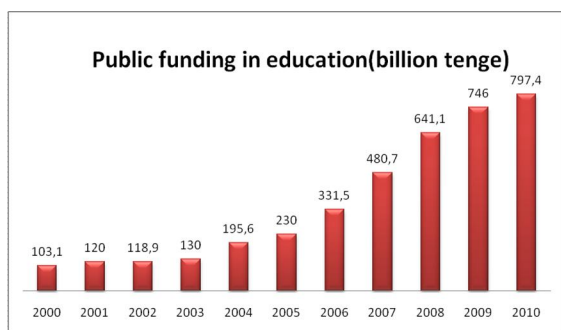
The analysis of data of the Statistics Agency of RK reveals the following picture of education funding. From the mid-90s the relative share of education spending in the state budget was quite instable: in 1995 - 17, 6%, in 1996 - 23, 4%, in 1997 - 21,5%, in 1998- 18,4%, in 1999 - 16,8%, 2000 - 14,1%. The comparison of data shows that if until 1997 there was an increase in the relative share of

education spending in the state budget, then from 1998 due to economic crises it started to decline. In Kazakhstan during the transition period the competition in the education sector becomes a reality. In the last few years the Ministry of Education and Science of RK started to use new approaches in education funding. Their special feature is that in Kazakhstan the transition from the principle "funding for all" to the principle "financing for each" was implemented. The core idea is the education funding of a specific student, rather than the educational establishment as the whole.

At the moment the educational funding is gradually becoming a multichannel one. For example, extra budgetary funds of state higher education institutions comprised 43% of total financing. So, new approaches in the funding of the higher education system made their adjustments to the forming of a new educational policy for the republic.

There is a growth tendency in the financing of the education system. In the last five years public funding in education in absolute terms increased more than 3 times and in 2008 was 641 061 million. tg.

The positive trend of increasing the share of budget allocations on education has being formed both in the state budget expenditures and in growth domestic product (chart 1).



**Chart 1. Public funding in education (billion tenge)**

Apart from public grants the student is able to get an education by consumer lending via commercial banks. The mechanisms of including private universities into the system of placement of state grants on a competitive base have been introduced. Diversification of funding sources of both state and private universities is fundamental. The payment is made from students' own funds.

The 2007/2008 academic year was the first time the share of students studying on a paid basis comprised more than half of the total number of students at universities. The share of students

studying on scholarship base comprised not more than 9%, on educational loans, approximately 6%. As a whole, the financing of the higher education system in Kazakhstan from the state budget is less than 3% of GDP (2007) which is significantly lower than the required level for providing long-term tasks of development of country's economy and achieving competitiveness. The state has introduced a minimal tuition fee for providing the quality of education. This effort aims to reduce the number of universities which do not satisfy this requirement and adopt a policy of "cheap education". The state provides various mechanisms for students' financial support. In particular, in 2008 republic budget allocated around 974 million tenge for transport allowances for students of universities and colleges by the state educational order. The stipend to students studying on public grants in 2008 for undergraduates is 6434 tenge, including a rise of 15% for excellent students is 7400 tenge; graduates - 19 166 tenge (for excellent students a 15% rise is 22 041 tenge); postgraduates - 23 000 tenge; doctoral students - 29 359 tenge. The stipend of the President of RK for the students is 12 868 tenge. The state holds a constant and systematic policy of further increase of the size of stipends of university students.

Funding from the republic budget in 2012 on the education projects exceeded 400 billion tenge, which is on 100 billion tenge more than in 2011. That is why, we can say that the promising priorities in the education sector are supported by the Government consistently and steadily'.

It is clear that vigorous tasks and the scale span of educational modernisation require serious financial support. As seen from budgetary infusions, historically the state demonstrates an unprecedented approach to the financing of the Programme.

International experience shows that the base of competitive strategy of the development of higher education is to focus on the quality management system. The process of introduction of democratic principles of management of universities via the creation of Boards of Trustees operating at 65 universities has began.

The international presidential programme "Bolashak" implements the training of students abroad. During the period of 2005-2010 3379 students studied at undergraduate level, at graduate level 2964 students. The aforementioned results tell of the huge efforts on introducing the principles of the Bologna Declaration aiming at the integration of Kazakh higher education into the global educational universe. However the most significant set of innovations is to be implemented in the nearest future.

Today Kazakh universities are implementing more than 80 memoranda for cooperation on introducing joint educational programmes with the leading universities of Great Britain, Spain, Germany, the Czech Republic, the USA, Canada, Russia, and other countries. The work on the development of international cooperation was especially active in 2009-2010.

In Kazakhstan the National information Centre for Academic recognition and mobility NARIC - Kazakhstan was created for dealing with practical issues. Its activity is directed towards the efficient use of opportunities of international informational educational cooperation in accordance with the decisions and recommendations of Bologna process [20].

At the leading foreign universities in 2005-2010 more than 700 university lecturers of Kazakhstan were trained. The exchange of teachers and students with the assistance of supranational grant programmes created by the EU (COMETT, ERASMUS, LINGUA, SOCRATES and others) was implemented. Scientific and educational connections with international, foreign regional and national organisations, foundations and programmes (UNESCO, TEMPUS, DAAD, World bank, IREX, INTAS, CARNEGIE, British Council). One of the leading principles of the Bologna Process is the implementation of academic mobility of students and university personnel. The introduction of the credit system into educational process is one of the most effective mechanisms contributing to the implementation of the principle of academic mobility. Businesses of Kazakhstan also are developing different programmes of financial support of studying at university. Several initiatives are regarding the socially vulnerable population, while others target gifted and talented youth who are provided special stipends and grants for studying at particular universities [21].

After declaring in the Strategy "Kazakhstan-2050" the goals of achieving the new level of state' development, Kazakhstan intends to radically reconsider its priorities in the national education system. For this reason the republic started implementing the large-scale modernization of educational process.

These expenditures are purely and simply the public investment into own human capital that subsequently would be the engine of economic growth, the base for a progressive social society and the core for a competitive Kazakhstani nation.

#### **Conclusion.**

Today there cannot be a single country claiming not only the economical and political leadership in the new millennium, but even the

economical and political self-sufficiency, which would not implement, in accordance with its objectives, an effective reform of its own professional education.

Higher professional education largely impacts the civilization, the rate of public, social-economic, and technological development and has a huge potential for self-organising and self-correcting.

While occupying a higher place in hierarchical structure of the education system, higher education defines the requirements for the rest of its levels, sets their standards and provides highly skilled personnel.

From exactly these positions the higher education system has to form the potential for its own renewal. Firstly it is true for the renewal of conceptual-methodological bases of higher professional education in compliance with the best national and foreign achievements of university education.

There is a need for system comparison analysis of content-related components of all levels of national and foreign education systems in compliance with its structural integrity, strategic connections and hierarchical interdependence of its parts.

The main goal of the development of the higher professional education system is the satisfaction of the long-term strategic interests of society, state and individual, the improvement of the quality of student training by the system and purposeful reforms of the university system.

These are the further development and improvement of the new model of moving the student body in the direction of providing accessibility of higher education in compliance with the principle of "education by choice" and widening the opportunities for choosing the type of university, the type of educational and professional programmes, and the mode of study.

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