



Journal of Applied Research in Higher Education

Emerald Article: The effects of reform on the performance of higher education institutions

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Article information:

To cite this document: Irina Abankina, Tatiana Abankina, Liudmila Filatova, Elena Nikolayenko, Eduard Seroshtan, (2012), "The effects of reform on the performance of higher education institutions", Journal of Applied Research in Higher Education, Vol. 4 Iss: 1 pp. 23 - 41

Permanent link to this document:

<http://dx.doi.org/10.1108/17581181211230612>

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The effects of reform on the performance of higher education institutions

Higher education
institutions

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Received 7 October 2011
Accepted 26 October 2011

Abstract

Purpose – The purpose of this paper is to analyze the outcomes of the financial optimization process launched by the recent reforms in the Russian higher education sector and its impact on access to higher education, its quality and competitiveness within the sector. The study of the economic performance of higher educational institutions includes complex analysis of financial and educational components of their structural dynamics and their impact on their development strategy.

Design/methodology/approach – The methods used in the study of the segmentation of the higher education sector involve a combination of theoretical developments in economics and the modeling of the economic behavior of universities on the market for educational services, procedures for the evaluation of transaction costs in the markets with asymmetric information and recent conceptions of the interrelation of factors affecting quality and accessibility of higher education.

Findings – In this paper, the economic potential of Russian universities is considered, making use of a segmentation of the higher education sector, based on sampling of state and municipal higher education institutions from different industry groups, depending on their development strategy under changing social and economic conditions. The research data for 2006-2009 help to define five clusters of the higher educational establishments with different approaches towards public funding and different strategies.

Originality/value – Based on the research data, the paper evaluates the current situation in the Russian higher education sector and some skewed structures of the reforms and outlines some policy implications.

Keywords Russia, Universities, Higher education, Educational innovation, Educational funding, Reforms, Budgetary and non-budgetary funding, Universities' development strategies

Paper type Research paper

Introduction

The development of Russia's society and economy has resulted in both an expansion of higher education and the growth of new types of higher educational institutions. There has also been an increase in networking among such institutions and the adoption of new regulations governing their operation. The ongoing reforms and the challenges of social and economic development should result in more research into higher professional education in conjunction with the effectiveness of state funding.

The urgency of such studies is dictated by the need to make well-informed decisions in the process of the reforms in public funding allocation system for the universities, practically worldwide. These reforms should help to overcome the effects of the economic crisis and insufficiency of the educational system to ensure the graduates' competitiveness on the global labour market. Considerable number of the researches is focused on possible effective strategies during the transition towards performance funding model. This public funding system should give a better fit for the new trends and changes in the professional education models (Helms, 2008; Hüfner, 2003; Impact



of the economic crisis on European universities, 2011; Jongbloed *et al.*, 2008; OECD, 2011; Salberg, 2006; Salmi, 2009; Salmi and Hauptman, 2006; Tilak, 2010).

Financial support for the Russian higher education sector is provided through federal and regional budgets and extra-budgetary funds from commercial educational services (tuition fees paid by the students themselves) as well as donations and special-purpose contributions, a system of educational loans, government education grants and the proceeds of government bonds. Research projects of universities are now funded separately from their educational activities (Federal Law, 1996b).

The public funding of the higher education sector in Russia has set a new framework for the operation of state-funded institutions as a result of changes in their legal status and increasing fiscal responsibility (Budget Code of the Russian Federation, 1998; Russian Federation Law, 1992; Federal Law, 1996a; RF Government Decree, 2009). So, the effectiveness of public investment ensuring access and quality of higher education becomes one of the key issues for educational research.

The object of the present study is to analyse the outcomes of the financial optimization process by higher educational establishments and its impact on access to higher education, its quality and competitiveness within the sector (the study was implemented in the framework of the Programme of Fundamental Studies 2010, Higher School of Economics, Moscow).

The study of the economic performance of higher education institutions including the complex analysis of financial and educational components of their structural dynamics and their impact on their development strategy was conducted under the following conditions:

- economic recession;
- demographic decline;
- changing admission rules to the Russian Universities (introduction of Unified State Exam (USE)); and
- increased competition among higher education institutions.

The budgetary reform, demographic decline, new types of educational institutions introduced, the shift to university autonomy and changed mode of final certification in the secondary school significantly affect the universities' economic situation as well as their development strategies. The study confirms further differentiation among higher education institutions depending on their economic potential, effective demand, quality of the proposed educational programmes and the universities' attractiveness for the entrants.

Strong institutions with multidisciplinary specializations and diversified strategies, will be able to attract strong entrants, to secure the enrolment of budgetary students and tuition paying students and taking advantage of their autonomy and competent asset management, to remain competitive in the education market. The group of strong institutions may shrink; change its geographical configuration depending on regional economic situation during the crisis, stability of the household income and the unemployment rate.

The research also gives support to the hypothesis that weak educational establishments will lose a part of their budgetary-funded students, will not manage to attract tuition paying students thereby their economic position will take a turn for the worse. A possible way out could be a strategy of integration with strong institutions.

However, the process will have uneven pace in temporal and territorial aspects. Some educational institutions with strong positions in the period of economic growth, can shift to the group of weak institutions in the crisis times when losing students' tuition fees, using inadequate management technologies and lacking established links with the employers.

The current stage of Russia's development sees a necessary transition from the pre-existing instructive mechanism defining student enrolment numbers to more competitive regulative mechanisms defining national demand for specialists with higher education.

In modern conditions the students demand both knowledge and skills offered by universities in the form of different courses and educational programmes and those competencies and cultural standards provided by the educational process itself and the university milieu. It concerns primarily professional education for the tertiary sector of the economy which in post-industrial economy places new demands on the general social and cultural competences of the employees. To ensure the development of professional higher education and at the same time to give an impetus to improve its quality, it is necessary to make a transition from managing educational institutions to managing educational programmes.

The recent studies show that mobility of the younger generation in Russia is quite high: many of them change their jobs within two or three years after graduation. Young people move easily, join new communities and create for themselves a new development point if they could see the future. Mobility is a resource for development and it shapes a generation with different social background. Today a significant creative potential is concentrated in the universities, not only in those elite ones but in all universities that are dynamic and open to new developments. Horizontal mobility and movement of the human capital, undoubtedly, change its quality and help remove the outdated and to introduce new things.

Modern university can be considered as a micro model of a future society with the new economy, as an incubator of the knowledge society. Academic freedom, students' self-governance, research teams of students and faculty members working together, dynamic production of new knowledge, the drive to develop new competences, ability to concentrate intellectual and financial resources on the key growth points – these are desirable characteristics of a modern university. The same description could be applied to the knowledge society, therefore by giving the universities more freedom within the funding mechanisms and more autonomy to use financial resources, we could get a chance to move from tactical decisions based on the cost management principles to strategic decisions on the principles of performance management, to investments in the creative class which, according to Richard Florida (2007), could change our future.

In this paper, the economic potential of Russian universities is considered making use of a segmentation of the higher education sector based on sampling of state and municipal higher education institutions from different industry groups depending on their development strategy under different social and economic conditions; in addition, the paper evaluates asset management patterns in the reform period. It analyses public fund management mechanisms used by universities and how their prestige affects the segmentation process. The research in this area made it possible to combine objective analysis of the universities' financial positions and the "quality" of school-leavers entering different universities, so the objective characteristics are assessed along with the subjective perceptions of university entrants and their families.

The methods used in the study of the segmentation of the higher education sector involve a combination of theoretical developments in economics and the modelling of the economic behaviour of universities on the market for educational services, procedures for the evaluation of transaction costs in the markets with asymmetric information and recent conceptions of the interrelation of factors affecting quality and accessibility of higher education.

For model calculations describing economic performance of universities under conditions of budgetary reform and of their increasing autonomy (Vavilova, 2008), we developed a special database, software and information module which allowed us to collect and process the necessary indicators of educational and financial activities in the given sample of the universities. The software module empowered relational databases and empirical studies.

Economic potential of universities: development path options

To study the dynamics of educational and financial performance of higher education institutions for the period 2006-2009, we singled out a stable sample of Russian state and municipal higher education institutions with different profiles and with high annual growth rates of budget funding from 136 per cent in 2006 to 129 per cent in 2009, including:

- classical universities;
- technological universities;
- pedagogical, humanitarian and linguistic universities;
- economics universities, colleges of law and commerce; and
- architectural and art colleges.

To analyse structural dynamics of budget funding, we indentified the following groups of higher education institutions:

- small institutions with annual funding < 100 million rubles per year;
- medium-sized institutions with annual funding from 100 to 250 million rubles per year;
- big institutions with annual funding from 250 to 500 million rubles per year;
- large institutions with annual funding from 500 to 1,000 million rubles per year; and
- super-large institutions with annual funding over 1,000 million rubles per year.

The dynamics of appropriations for the given period evidence the emergence of a new structure in the funding of higher education: in 2006, 236 institutions (of the total sample) could be referred to a group of small- and medium-sized institutions; in 2009, their number decreased by almost half, to 113 institutions (Figure 1). According to the structure of 2009, the proportion of small- and medium-sized institutions was about 30 per cent of the sample studied.

In the higher education sector there has been no process of mergers and acquisitions which could have promoted small- and medium-sized institutions to the group of big and large ones. The number of institutions in the sample remained almost unchanged for the period of study (2006 – 335 institutions, 2009 – 332 institutions), and the group of large and big institutions expanded, i.e. the government funding level of small institutions has been pulled up to the funding level of the medium sized, and the



Figure 1. Structural dynamics of budgetary funding of higher education by group of higher education institutions, 2006-2009 (number of institutions by level of funding, in current prices)

medium sized moved up to the funding level of big and large institutions; a process for which there are practically no analogues for social sector.

At a time of financial crisis, demographic decline and changing admission rules (introduction of the USE), higher education institutions were overprotected having preferential funding conditions without any need to compete in the market of educational services.

The number of super-large institutions increased to 28 in 2009 (in 2006 there were only three of them) furthermore, this category is not now restricted to “national” universities. Dramatic shifts in the structure of sources of finance over this period were brought about at the expense of government resources. Mega higher education institutions are located not only within the capital areas – Moscow (eight institutions from the sample) and St Petersburg (five institutions from the sample). Other Russian cities such as Novosibirsk, Tomsk, Vladivostok have two super-large institutions each; Rostov-on-Don, Saratov, Orenburg, Saransk, Perm, Yekaterinburg, Chelyabinsk, Krasnoyarsk, Yakutsk – one each (Figure 2).

In these cases, one can hardly quarrel with such a level of funding – all of them are well-known universities – and so we can speak of a network of supergiant universities covering the whole country (Table I).

In 2006, super-large higher educational establishments received some 2.5 per cent of the total amount of budgetary funding, whereas in 2009, they received some 31.7 per cent of budgetary resources allocated to higher education (Figure 3). In addition, in 2009, large institutions got 30.1 per cent of the general budget appropriations for the sample studied. Thus, over 60 per cent of the budgetary financing in 2009 went to cover the costs of large and super-large universities; it was different in 2006 when about half the budgetary resources (45.8 per cent) committed to higher education were used to provide financial support for small and medium-sized universities.

So in 2006, the size of an economic entity in higher education sector was completely different but the following four years, including the years of economic decline, saw a strong growth of funds from the budgetary sources in higher education sector. It should be noted that volume of budgetary financing was increasing at different rate for different groups of institutions. If the average growth rate over three years is

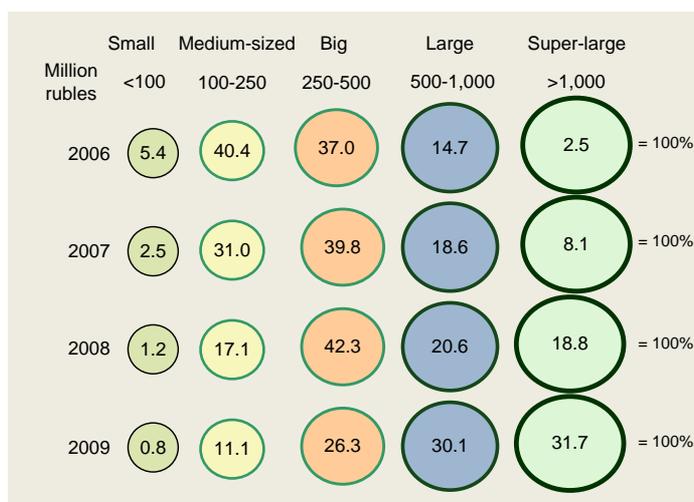
8-Moscow
5-St.Petersburg
2-Novosibirsk, Tomsk, Vladivostok
1-Rostov, Saratov, Orenburg, Saransk,
Perm, Yekaterinburg, Chelyabinsk,
Krasnoyarsk, Yakutsk



Figure 2.
Geographic location of
super-large institutions

City	Higher educational institutions
Moscow	Bauman Moscow State Technical University Moscow State Pedagogical University National Research Nuclear University MEPhI Moscow State University of Civil Engineering Moscow Power Engineering Institute (technological university) State University of Aerospace Technologies (national research university) Peoples' Friendship University of Russia
St Petersburg	Russian State Social University Saint Petersburg Electrotechnical University Herzen State Pedagogical University St Petersburg State Polytechnic University St Petersburg State University
Novosibirsk	State Mining University (technological university) Novosibirsk State University
Tomsk	Novosibirsk State Technical University National Research Tomsk State University National Research Tomsk Polytechnic University
Vladivostok	Far Eastern State Technological University Vladivostok State University of Economics and Service
Rostov-on-Don	Southern Federal University
Saratov	Saratov State University
Orenburg	Orenburg State University
Saransk	Mordovia State University
Perm	National Research Polytechnic University
Yekaterinburg	Ural Federal University
Chelyabinsk	South Ural State Research University
Krasnoyarsk	Siberian Federal University
Yakutsk	North-Eastern Federal University

Table I.
Super-large institutions



	2006	2007	2008	2009
Official exchange rate – Russian rubles to 1 US dollar (at the end of the year)	26.33	24.55	29.38	30.24

Source: Central Bank of Russian Federation.

Figure 3. Annual allocation of total budgetary funding, groups of institutions (per cent)

plotted on the x -axis, so all large and super-large universities had growth rates significantly above the average, while small- and medium-sized institutions had the rates below the average (Figure 4). Obviously, changes in the groups happened at the expense of small- and medium-sized institutions.

It looks paradoxical when with demographic decline and consequent decrease in the number of students which is affected as well by new tough admission rules with the USE, higher education institutions rapidly gather volumes of budgetary financing and become bigger and bigger.

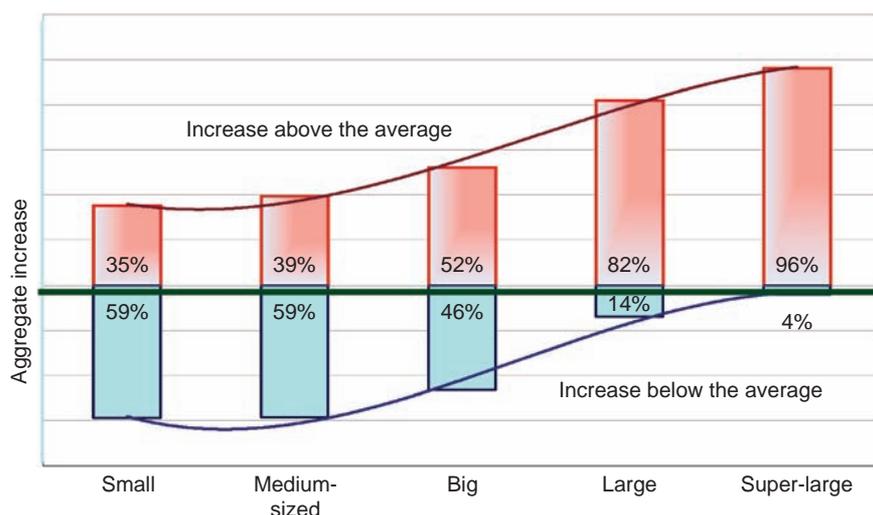


Figure 4. Increase in government funding, groups of institutes, in 2009 compared to 2006 (per cent)

On-budget expenditures per student (full-time equivalent student) in the sample of higher education institutions also showed a considerable growth over the period. In 2006, there was an increase of 139 per cent; in 2009, – an increase of 133 per cent, which is even faster than the growth of the on-budget funding amount in general.

In 2006, 68 per cent of higher educational institutions had the amount of public funding per student below the average that amounted to 49.1 thousand rubles in current prices. And 32 per cent of institutions had the amount of budgetary funding per student at or above the average.

In 2009, the scene has changed completely as the average level went up to 101.4 thousand rubles. And the group of universities with budgetary financing per student at or above the average had enlarged and accounted for 77 per cent of the sample studied. The share of institutions with below the average budgetary funding per student had dropped to 23 per cent.

Thus, the assessment of per student budgetary funding in 2009 indicates that the proportion of the groups is in inverse ratio to the average level of funding (Figure 5). Such a situation would not have been surprising (and should have been obvious) in the absence of demographic decline and in accordance with the principle of “cash following the student” (i.e. in conditions of per capita funding) (Government Funding for Higher Vocational Education, 2008).

However, the number of students whose study costs are covered by the government budget, has not increased; in the 2008/2009 academic year it fell by 3 per cent; at the same time the increase in specific budget funding per student has grown and made up 33 per cent in 2009 compared to 29 per cent in 2008.

Thus, the number of budgetary-funded students goes down and the specific budgetary funding goes up, resulting in inappropriate patterns of financial support and non-market forms of distribution, and the mechanisms for the allocation of budget funds do not take account of the competition factor in the higher education sector.



Figure 5.
Dynamics of budgetary financing for a budgetary-funded student place (thousand ruble)

Let us consider the proportion of wages and corresponding tax charges within the amount of budgetary funding to understand changes in the universities during 2006-2009. For the group of small universities, the share of budgetary funds allocated for wages and tax charges for the period under review has not changed much, ranging from 54.0 to 53.4 per cent (Figure 6), i.e. their structure was rather stable.

For the group of super-large institutions this proportion has changed significantly and fluctuated between 63.1 and 43.3 per cent. Here, it is important to note that the reform period did not see proportional investments in human resource development which is clearly evidenced by the changing share of wages in the group of super-large universities (Figure 6).

Increased amount of financial support allocated for wages from the public sources in 2009 did not bring about human resource development even with the hardly changed number of faculty members. In our opinion, enhanced financial capacity without investing in human potential and changes in motivation policy cannot be effective. For higher education institutions need more support secured if not for all faculty members, but at least for key professors and researchers.

One more material change has taken place over the period of 2005/2006-2008/2009 academic years; those years saw annual decreases in the number of full-time students admitted and increasing enrolment in distance learning, part-time programmes and non-resident study (Figure 7, the data are given in absolute values).

Undoubtedly, the demographic decline has led to a reduced number of school-leavers/university entrants. The critical point evidencing this obvious decrease was in 2003 (Figure 8).

The decrease in the number of first-year students in vocational education institutions is less than the decline in the number of school-leavers (Figure 8). After 2007, the number of students, finishing school became smaller than the total number of students enrolled in further vocational education institutions. At the same time higher education institutions did not experience a sharp annual decline in student admissions and were in a better position compared to institutions of primary and secondary vocational education. Only after 2007, higher education institutions faced the inevitable consequences of the demographic decline which directly affected the number of

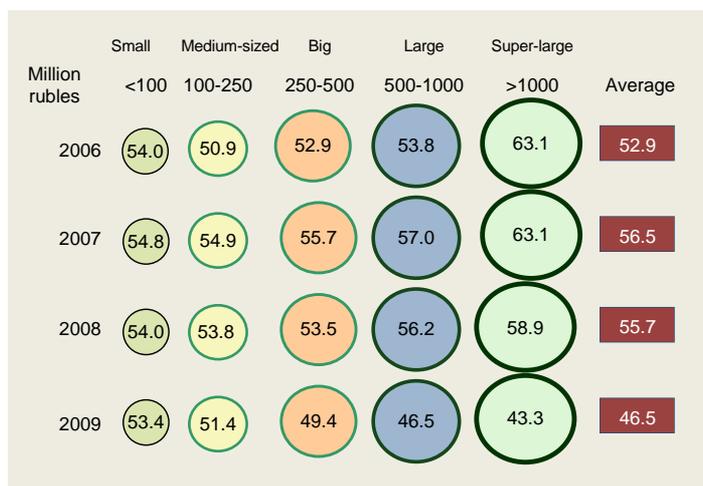


Figure 6.
Wage costs within the budgetary funds allocated for the groups of institutions (per cent)

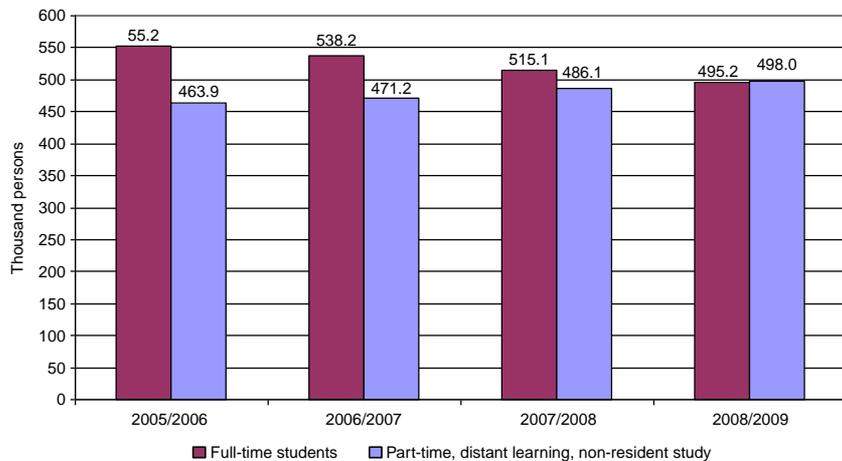


Figure 7.
Student enrolment in the sample higher education institutions

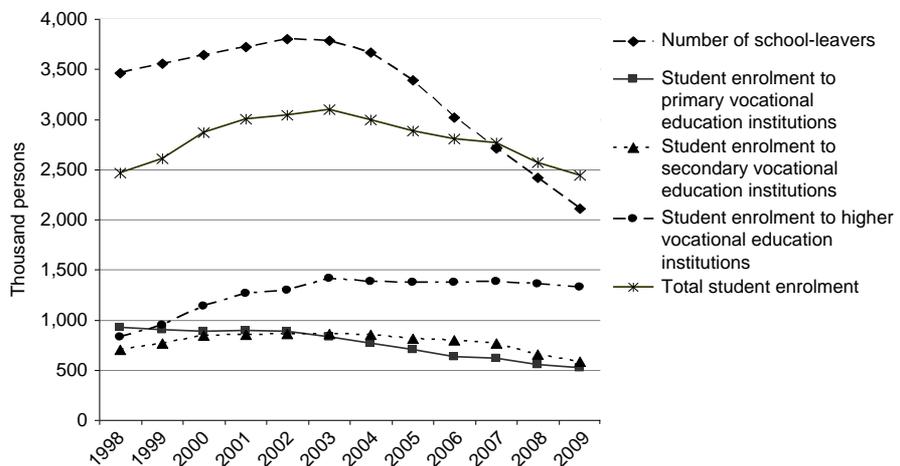


Figure 8.
Student enrolment to vocational education institutions and number of school-leavers in Russia

Source: www.gks.ru/dbscripts/Cbsd/DBInet.cgi#1 – key performance indicators of selected sectors of economy

students enrolled and indirectly caused structural changes in the modes of study selected by the students.

In this case higher education institutions are trying to keep admission quotas of budgetary-funded full-time student places, i.e. universities' orientation towards stable educational activities protected by financial subsidies from the public funds. The dynamics of full-time student enrolment also indicates a decrease of 10 per cent in the 2008/2009 academic year compared to 2005/2006. However, with the retained admission quotas for budgetary-funded student places, the share of those studying at the expense of the federal budget is growing though insignificantly as it is evidenced by an increase up to 61 per cent of full-time state-funded students enrolled in 2008/2009 academic year as compared to 56 per cent in 2005/2006.

In addition, if we take the number of students enrolled on the first year in absolute values (i.e. without calculating in full-time student equivalent), it will become clear that share of full-time students decreased from 54.3 per cent in 2005/2006 to 49.9 per cent in 2008/2009, giving way to other educational formats, including distance learning, part-time programmes and non-resident studies. Thus, over time the structure of enrolments for different educational formats has changed and universities now offer more alternatives to a full-time course of study which can be chosen by students.

At the same time, the stream of students paying tuition fees (estimated in absolute values) considerably drifted towards distance learning programmes and non-resident study and accounted for 57 per cent in 2006 and up to 66 per cent in 2009 (when tuition fee paying students – 100 per cent).

The given data of the student enrolment structured according to different educational formats reflects the choice of families in favour of higher education for their children and aspiration to get it by any means possible. But for the universities and colleges focused on attracting students' tuition fees this shift means a decrease in their income as study costs for a full-time student are at least two times higher than for other students.

Thus, the tactics of families (or their demand to have higher education by any available means) influences the strategies of universities. That is, universities facing a decrease in the number of full-time students paying tuition fees and in their income from tuition fees, tend to make up this "gap" through attracting students and their tuition fees for distance learning programmes and non-resident studies, considerably increasing their share as compared to the previous years.

Segmenting higher education sector: distinctive characteristics of higher learning institutions' behaviour

The next stage of the analysis estimates various patterns of economic behaviour of universities and colleges dependent upon their position and focus on state-subsidized or fee-paying students. For this, the numbers of equivalent full-time students were charted and sorted by difference between budgetary and non-budgetary students. A second order polynomial trend line was added to the distribution of budgetary and non-budgetary students to find out the trajectories of budgetary and non-budgetary contingents.

Then we add the budget funding data in 2009 to the trajectories of budgetary and non-budgetary student contingents, an approximation of budgetary funding is created by a fifth order polynomial (Figure 9).

Estimating segments by the polynomial trend line fluctuations that reflect the budgetary funding trajectory combined with the trajectories of the student contingents, we can single out several different clusters. There are five clusters representing, in fact, various attitudes of universities and colleges towards the attraction of students and the use of budget financing sources.

Cluster 1 includes universities with a high level of budgetary funding and high proportion of students on budget. The behaviour of these institutions can be described as that of budgetary organizations, backed by a very large amount of subsidies from the state, and moreover there is no need for them to increase rapidly the number of students paying for educational services. This is also confirmed by the estimation of non-budgetary financing from all kinds of income-generating activities by universities in this cluster, which is significantly lower than their budgetary support (Figure 10).

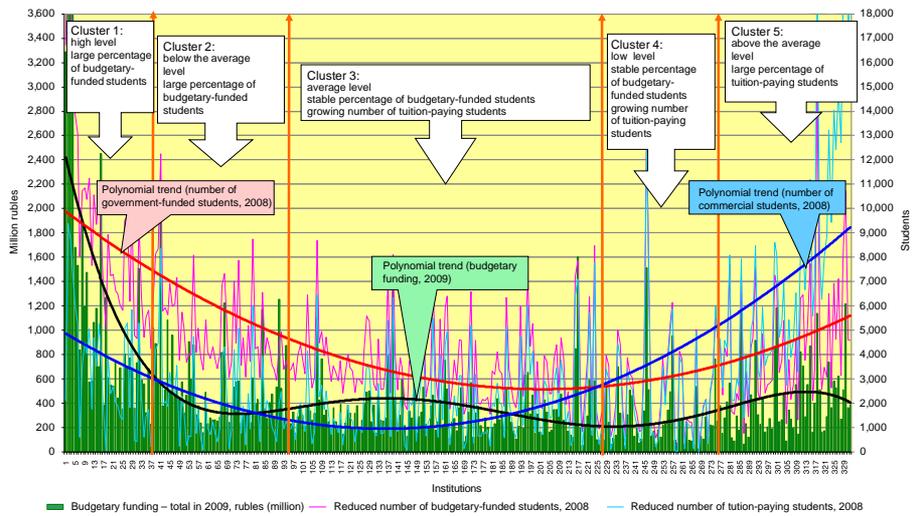


Figure 9.
Groups of institutions
clustered by total level of
budgetary financing, 2009

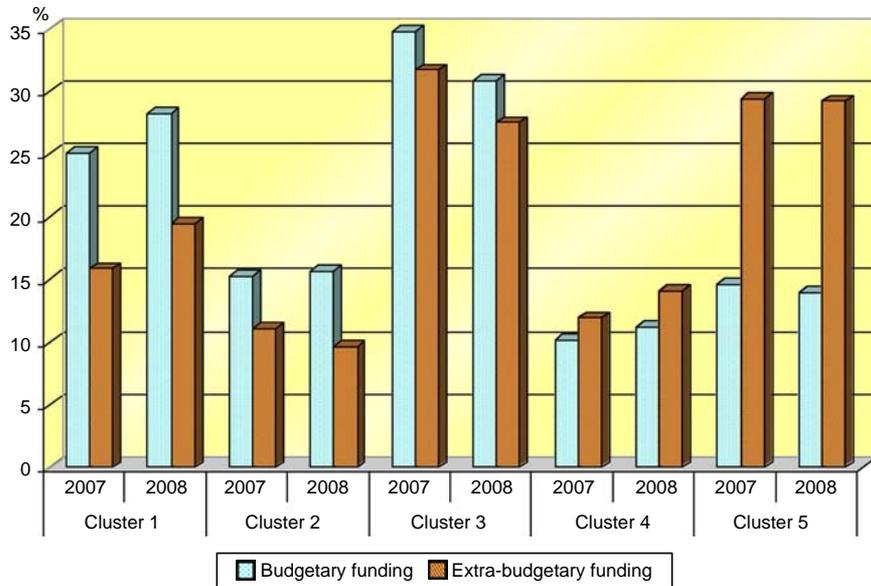


Figure 10.
Proportion of funding
from different sources
(2007-2008)

Higher educational establishments in cluster 5 are the opposite of those in cluster 1 and accordingly have a different proportion of funding from budgetary and non-budgetary sources and a different structure of users of the educational services they provide. These institutions have adopted a proactive policy to attract students paying tuition fees and their number far exceeds the number of student places subsidized by the state; the fact that the volume of budget funds in the institutions do not fully provide all their growing demands required for the development of educational programmes, spurs them in pursuing such a policy.

These are the two clusters flanking the sample of universities and colleges that we have analysed; those in cluster 1 are focused on building up the budgetary funds; while those in cluster 5 have much lower amount of budget funding and are focused on expanding the enrolment of students on a tuition paying basis. The institutions in cluster 5 are interested in attracting students paying tuition fees and have a high proportion of extra-budgetary income (Figure 10).

Large and super-large institutions are concentrated in clusters 1 and 5; cluster 5 also includes big- and medium-sized institutions.

The fourth cluster includes mainly small- and medium-sized universities. It is attractive for the students interested in the humanities, comprising mostly of linguistics, architectural and arts universities and colleges. Institutions of this cluster due to their “creative” attractiveness have rather high numbers of students paying tuition fees and at the same time retain their budgetary student quota.

The main source of support for the first three clusters is budgetary funds as Figure 10 clearly demonstrates.

A large group of universities and colleges (more than half of the sample studied) which have budgetary funding around the average and above, are located in clusters 2 and 3. The distinction between the two clusters is very unclear; the institutions in these two groups differ mainly in their policies on recruiting non-budgetary students. Some of them do their best to keep up the number of budgetary student places and to reduce number of non-budgetary students; these institutions belongs to cluster 2 (Figure 9), most of them are large and super-large universities including classical universities, technology institutes and teacher-training establishments.

The other part of the institutions being no longer able to cover their growing needs from budgetary funds, focus on changing their behaviour that is typical for the institutions in cluster 3 and recruiting more and more non-budgetary students and funds they provide (Figure 9). The institutions in the cluster are mostly large and medium sized, including classical universities, technology institutes, teacher-training establishments, humanitarian and linguistics colleges.

So, the segmentation of the institutions reflects their various economic behaviour patterns, different priorities and orientations towards student enrolment and enlarging different funding sources. However, higher education institutions have to conform to the requirements of the education licenses, to secure certain standards of educational activities as well as to comply with the legislation and a certain performance level.

There are some institutions which link budgetary financing to quality indicators and thus create all possible conditions to attract competitive students. At the same time among them are the institutions that have high-quality educational programmes and standards, good enrolment characteristics but by doing so they also want to be able to recruit “weak and average” students who would be willing to pay high tuition fees. Some universities and colleges take the opposite position and provide average quality education while extensively recruiting students with low tuition fees.

To analyse specific costs per student subsidized from budgetary sources, we compare the costs in the clusters under study. In this case institutions of cluster 1 do not look as impressive as they do, when evaluating the overall amount of funding which creates an illusion of their prosperity. The largest amount of budgetary funding in 2006-2008 was in cluster 4 institutions. But if we consider the institutions’ income from the charged tuition fees (per student), the cluster 1 institutions fall into the most expensive category. Undoubtedly, given the size of the institutions and their economic

orientation, they aim to attract public funds but not to develop an active economic policy and to attract more students paying tuition fees (Figure 11).

Relating funding to a target student group for each cluster leads us to the types of behaviour of higher educational establishments described above and to their responses to the current funding system. Institutions of cluster 1 and cluster 5 represent opposite positions in the “struggle” for their economic sustainability, furthermore the average cost of education in the cluster 5 institutions is among the lowest.

Also, cluster 4 institutions demonstrate more weighted assessment of their educational services in the opinion of their consumers, and a more stable reaction to the conditions of budgetary funding and rational use of their income, which is reflected in the relationship between budgetary expenditures and fee income shown in Figure 11.

The institutions’ efforts to draw means from different funding sources produce different results. Cluster 3 institutions are ahead of the others (Figure 10), but every year it becomes more and more difficult for them to maintain the previously attained level of funding. Being active in promoting commercial educational services and in attracting students paying tuition fees, the institutions use extra-budgetary sources to increase their funding.

The position of universities within a cluster did not change during the period studied; changes occurred in the structure of clusters as a result of the movement of institutions to different clusters (Figures 12 and 13).

That is, some institutions change their trajectory and focus more on extra-budgetary funding to secure their economic sustainability. Figures 12 and 13 show change in share of clusters in 2006 and 2009.

The major change happened with the move of institutions from cluster 2 to cluster 3 (Figures 12 and 13), and from cluster 3 to cluster 5, so educational institutions intensified their activities to attract students paying tuition fees. This, in turn, saves budget funds allocated to finance the most sluggish institutions of clusters 2 and 3 as illustrated for 2009 and 2006.

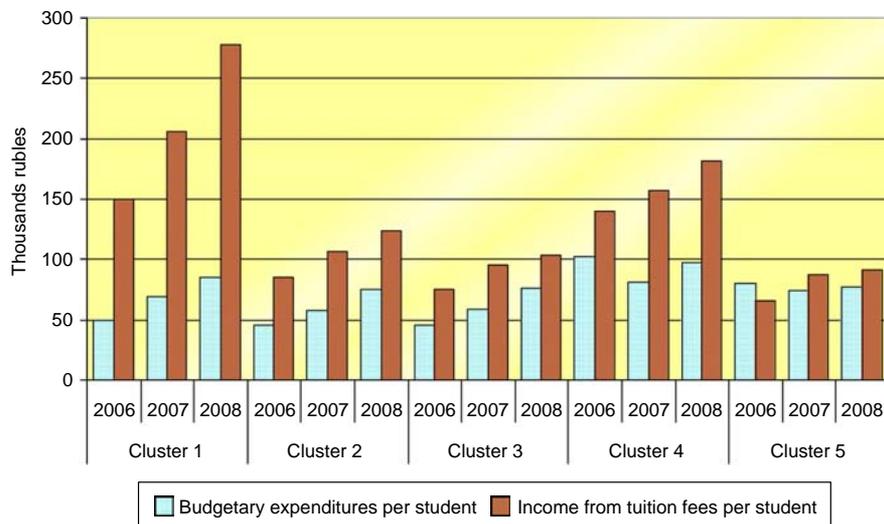


Figure 11. Budgetary expenditure per student and income from fees per student for the sample of universities by cluster (2006-2008).

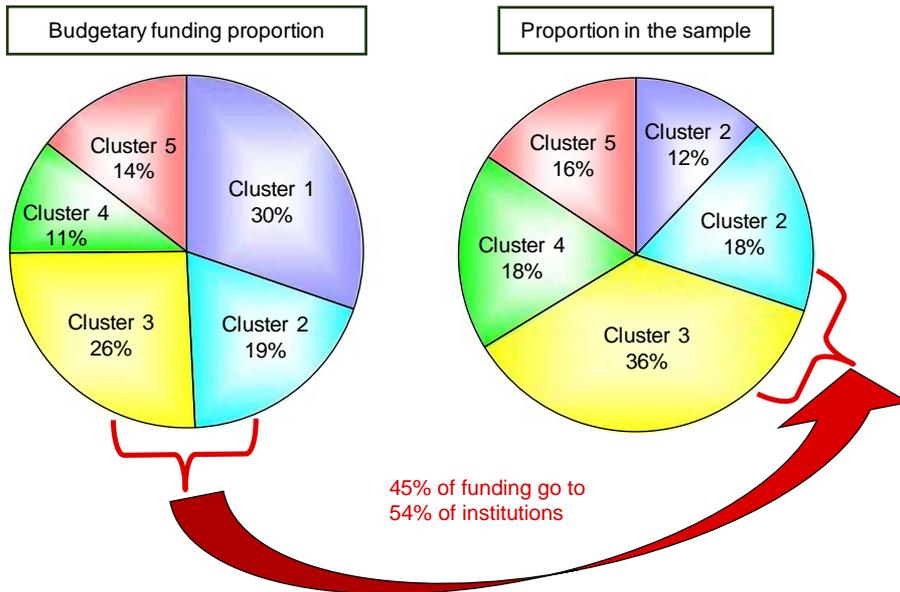


Figure 12. Correlation of budgetary funding and clusters' sizes (2009)

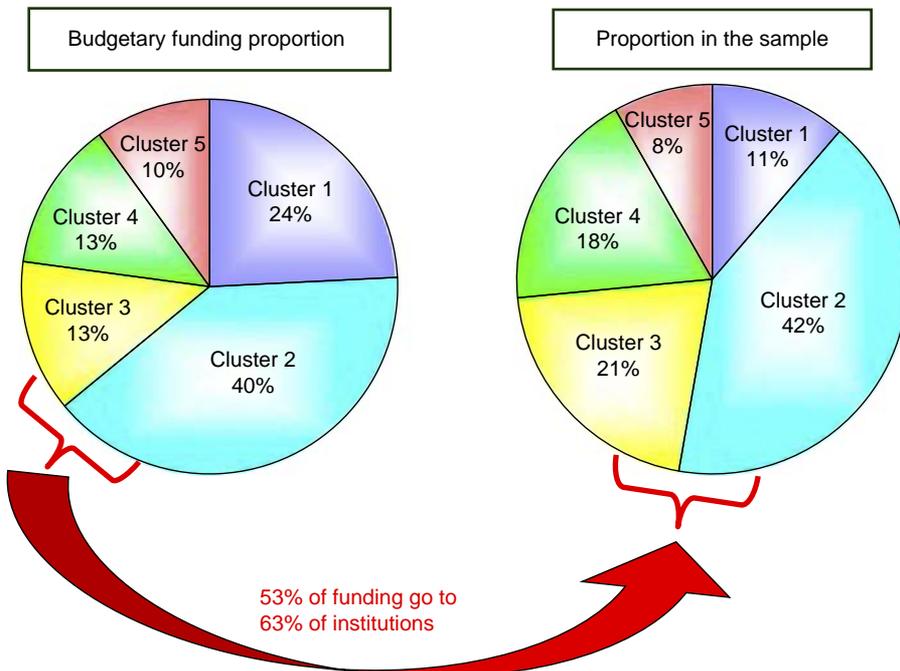


Figure 13. Correlation of budgetary funding and clusters' sizes (2006)

Institutions which relied primarily on budgetary funding accounted for 63 per cent of the sample in 2006 and they drew 53 per cent of total amount of budgetary funding (Figure 13); in 2009, such institutions made up only 54 per cent of the sample and their share in total budgetary funding fell to 45 per cent (Figure 12) that evidences a further polarization of higher education institutions.

The institutions of cluster 4 throughout the period studied kept up a certain level of budgetary funding and due to the “creative” attractiveness and prestige that they have, they were able to face competition in the market for educational services, offering specific programmes according to the profile of these institutions.

The institutions in cluster 5 spare no effort to keep up the level of budgetary funding but they manage to balance their funding through enhancing their activities to attract additional non-budgetary funds as well.

Conclusion

The results of the research suggest that the current development stage of the Russian higher education institutions can be described as having a Leviathan effect[1] with the following characteristics:

- rapid extensive financial growth;
- concentration of financial resources in large and super-large institutions;
- emerging giant institutions;
- polarization of the economic positions of institutions;
- lag in institutional reforms in the universities;
- gap between current project management tools used in major universities and their increased financial assets;
- universities’ poor sensitivity to external threats; and
- freeze on human resource development.

The economic situation seemed quite healthy in 2006-2007, Russian universities were not yet experiencing the implications of the demographic decline but it was the period of breaking trends and increasing external threats. Anyhow, 2008-2009, the years of world economic crisis and evidenced demographic decline have not breached the “hothouse” where Russian higher education institutions continued their operations, despite a new system for the admission of students with the introduction of the USE; the universities’ low sensitivity to external economic threats bears serious risks for their strategic development.

The relentless pressure of the situation forces higher education institutions to adapt their behaviour and some focus more on securing stable budgetary funding while the others do their best to fit in with the financial capacity of students and their families, providing educational offers of different quality. But the project and resource management universities commonly apply at the present moment is not adequate to the tasks and expected outcomes; it requires significant institutional changes inside the universities.

During 2009, the inadequate investments in the human resource development (compared to the total amount of funding the higher education institutions received) led to freezing human potential and a newly introduced remuneration system (RF Government Decree, 2008) has had no effect.

It may seem somewhat premature to pose the question of the effectiveness of the reform now as higher education institutions do not respond to these reforms so soon after their introduction. We observe lag in institutional reforms, inconsistency between commonly applied management tools and increased financial flows, higher education institutions' low sensitivity to external threats but the critical point is the freeze on human resource development and the retention of outdated management techniques. Higher education institutions do not use the opportunities given by their more expanded autonomy and the money received from the state only reinforces the industrial model of universities and does not catalyse reform.

The complex and contradictory situation in the Russian higher education sector is largely due to the persistence of sectoral approaches, an attempt to revive the old industrial model. This model is closely related to the administrative system of university governance, to the centralized appointment of rectors, and focuses more on closing the gaps than on creating strategy perspective, promoting creativity and professionalism. To overcome the intellectual and technological gap we have to build the capacity to be creative.

Though the decisions taken in Europe and in Russia are sometimes alike, the principles on which those decisions are based are often different. The concept underlying actions of the European countries to introduce new public funding mechanisms and performance funding model, includes ensuring maximum support for the universities' strategic decisions and minimum government official intervention in the universities' operations. The autonomy of the universities has been generally recognized as one of the main factors contributing to increasing education quality and competitiveness. The autonomy allows the universities to manage their assets, to take investment decisions, to take responsibility for and to control the financial operations, including long-term programmes, to take independent decisions on hiring and staffing. The Russian laws on autonomy are similar to those in the European countries but in fact they do not provide the expected freedom in strategic decision making and resource allocation, do not protect them from petty-minded meddling and vigilant monitoring and do not secure their sustainable strategic development (Russian Federation Law, 1992; Vavilova, 2008).

As a result, strategic decisions are hampered by the invalid funding mechanisms and over and over again we have pre-existing funding mechanisms reproduced rather than sustainable funding providing the universities with more space and freedom for development. Though public funding for the universities is increased, they do not enjoy the rights to manage their financial resources and fail to implement systemic change. There is quite weighty increase in funding but no qualitative change: the universities continue to loose positions in international rankings and the dissatisfaction of the society and employers is growing. So year after year the increased funding goes to support poor quality and gives no opportunity to implement institutional change, to introduce strategic management in the universities.

With some contradicting labour market signals, the professional higher education establishments re-oriented themselves towards the customers and the educational programmes they would like to have. Thus, young people and their parents began to combine two roles in relation to the higher education – they are both its users and customers. The education system became totally focused on their requests and poorly reactive to the labour market signalling. The lack of the established feedback channels between education system and labour market has caused uncoordinated actions of the state, education system and employers. Most employers have no strategic plans for their businesses, they know what they need today and tomorrow but not in ten years.

Professional standards, which could become the basis for new educational standards are developed very slowly, and key industries have not yet had them. In such circumstances, one of the possible solutions would be a thought-out policy to support partnerships of higher education establishments, business and non-profit sectors as well as to provide timely upgrade of the educational programmes, ensuring the quality of education meeting current economic and social challenges, rather than guessing a demand in five or ten years. Yesterday one might hear of the irrelevance of the engineer's degree, today we have "overproduction" of economists and lawyers. To keep off this imbalance we have to invest in the students, their skills and competences, in the quality of education, in new curricula and programmes, based on scientific research. Creative potential of the future university graduates is an essential condition to create new quality jobs.

Note

1. Leviathan – a well-known political symbol introduced in the book by Thomas Hobbes to describe autocratic state. It is titled after the biblical Leviathan, a large sea monster.

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