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## **11. DIVERSITY AND UNIFORMITY IN THE STRUCTURE OF RUSSIAN POSTSECONDARY EDUCATION<sup>1</sup>**

### INTRODUCTION

Massification is not a new phenomenon for the Russian higher education system. The 20<sup>th</sup> century witnessed several periods when the number of higher education institutions grew substantially, and higher education enrollment rates were expanding with improved access for more social groups. Higher education is an important means of social mobility, and the issue of access to higher education was always essential in a country where the structure of society was subject to state planning and control. Nowadays, when nearly all young Russians complete a postsecondary education degree, the issue is still relevant. The key question now concerns the quality of higher education and whether it provides the competencies that are in demand on the labor market.

Today, long after Russia switched to a market economy, the system of higher education is still not free of relics inherited from the Soviet-planned economy. This orientation towards a state-run economy does not allow the system to be flexible in adapting to changing market needs. Higher education institutions (HEIs) receive a significant share of their funding from the state, so it is the state that defines the rules of the game. Therefore, national higher education policy defines the country's higher education landscape and diversity in the sphere.

### STRUCTURAL CHANGES IN RUSSIAN HIGHER EDUCATION: SOVIET ERA

In the Soviet times, periods of massification were shaped by different historical and social forces using different mechanisms. Just prior to the revolution, there were fewer than 100 HEIs in the country with a total number of students around 135,000. After the Soviet revolution the rapid massification of the pre-war period was due to demand for highly skilled specialists needed for an ambitious industrialization processes initiated by the new state, as well as the challenge to nurture a new intellectual class of people with socialist values. In some years there were even substantial jumps in the

number of institutions. Thus, while in 1929 there were only 151 HEIs with around 191,000, in 1930 there were (after establishing new HEIs and splitting up existing ones) 537 institutions with 272,000 students.

Several mechanisms were used for increasing participation. The first one was the change in admission policy. In the years following the 1917 revolution there were initiatives to abolish entrance exams. As a result, some institutions were flooded with young people weakly prepared for rigorous training and completion rates dropped significantly with a majority of accepted students unable to finish their studies. Such low selectivity periods ended with the re-introduction of strict admission examinations.

The second important shift, was creating mechanisms to make higher education accessible to new social groups, particularly young people from families of workers and peasants. The problem, however, was that individuals from these social groups were not adequately prepared. New structures were created, aimed at helping individuals from these sectors to reach the academic level necessary while continuing to work. The first *rabfak* (worker's faculty), or remedial school for workers, was launched in 1919, and by 1932 there were nearly 1,000 of these schools with 300,000 students (Matthews 2011). In the second half of the 1930s, when the system of general secondary education and vocational training was better developed, such faculties were no longer necessary and were abolished.

The third mechanism involved new modes and models of higher education programs. Evening programs were introduced, allowing students to complete a degree while working. Most of the time these students would study something directly related to their job to achieve opportunities for promotion. A whole new sector of education developed, offering a high degree of independence to students, who lived in a city or region distant from a university and who needed to be present only to sit exams. These programs were often of low quality but produced a significant number of higher education degree holders.

Different kinds of HEIs aimed at different economic needs were created over the course of the 20<sup>th</sup> century. This was a result of a state-planned and controlled economy. Specialists were needed for various economic sectors and industries and some HEIs would prepare professionals for a specific industry under a commission from that particular industry. Some HEIs would even train specialists for a particular enterprise rather than a particular industry.

These are the factors that were in the heart of the planning system of higher education and, to a large extent, shaped the current higher education system and defined its important features. First of all, it forced an early choice of specialization. Essentially, when choosing a degree program, a young person was effectively choosing his or her profession. Secondly, the choice was made at initial enrollment and the curricula were fixed. There were very few elective courses because the specific competencies required from a future specialist were predefined.

Admission quotas controlled the number of specialists trained for each profession and industry. In case this number had to be increased, relevant HEIs would receive additional funding. Basically, there was no competition between HEIs; each was training professionals in a very specific area serving as a small piece of a large puzzle depicting the system of Russian higher education.

By the end of the Soviet era Russia had a fully developed and rather diversified higher education system (See [Table 1](#)). Kuzminov et al (2015) describe three types of HEIs in their paper on the institutional landscape at the end of the Soviet period:

- *Regional infrastructural HEIs* with a mission to train highly qualified specialists for specific sectors at the regional level (including medical institutes, teacher training institutions, agricultural institutions). The composition of these institutions as well as annual number of graduates in different disciplines aimed to correspond to economic demands of the region. In many cases, HEIs of this type were subordinated to specialized ministries, e.g., agricultural institutions were under the Ministry of Agriculture of the USSR.
- *Specialized industrial HEIs* were designed to train specialists for a specific sector of industry on the countrywide level. This group of institutions included, for example, technical HEIs affiliated with particular enterprises or groups of enterprises.
- *Classical (comprehensive) universities* that trained future academic and managerial elites and instructors for other HEIs. The fact that academic staff was trained at a limited number of universities led, among other things, to academic inbreeding.

Most students were enrolled at industry-specific HEIs and therefore were trained with niche expertise for certain enterprises. There was a system of obligatory job placement for all graduates, who were simply assigned to certain positions. Some HEIs actually worked directly with sizeable enterprises and trained professionals especially for them. There was a disproportionately large (in comparison to other spheres) number of teacher training HEIs and industrial and civil engineering HEIs, aimed at teaching engineering skills.

#### END OF THE 20<sup>TH</sup> CENTURY: NEW ROUND OF MASSIFICATION

In the 1970s and into the 1980s, enrollment in HEIs was relatively stable, followed by a small decline by the end of the 1980s into the early 1990s. A sharp increase in student numbers began after 1992, a trend that would last for a decade.

The collapse of the Soviet Union and transition from a planned to a free market economy affected the system of higher education. The changes were a result of new labor market requirements and by new labor market practices following the abolition of obligatory job placement. New kinds of specialists (economists, lawyers, managers) were suddenly in demand. Everyone was interested in getting a higher education

*Table 1: Higher education institutions in the USSR in 1985*

Types of higher education institutions	1985
Universities	69
Industrial and civil engineering HEIs	233
HEI of transport and communications	46
Agricultural HEIs	104
HEIs of economics and law	56
HEIs of health sciences and physical education	106
HEIs of culture and enlightenment (mostly represented by teacher training institutions)	289
HEIs of arts and cinematography	60

Source: Statistics digest Public Education and Culture in the USSR, 1989.

diploma. When external mechanisms for limiting enrollment weakened and new market mechanisms for regulating admissions emerged, HEIs reacted by offering new programs and lowering entry requirements with varying degrees of corruption to facilitate admission. Political limitations on access to higher education for some categories of students were lifted. This too contributed to growth in student numbers. Still, such large-scale massification would not have been possible without the emergence of two phenomena.

First, state universities started admitting self-financed students. It became possible not only to enroll students at public institutions who studied for free due to state subsidies, but also to admit self-funded students. HEIs were also given the independence to set tuition prices based on market demand. That was essentially the beginning of the current dual-track tuition system where state-funded and self-funded students study together in the same educational programs. The latter group may face less strict admission requirements while competition for state-funded places is high.

Secondly, a private higher education sector emerged. Private HEIs were free to set their own tuition prices, and the revenue they generated allowed them to engage academic staff from state HEIs where salaries were considerably lower. However, since these new HEIs had a relatively bad reputation for quality and were dependent on external staff, the two sectors co-existed in a kind a symbiosis for quite some time.

Professors from prestigious state HEIs would agree to teach at private HEIs because salaries significantly exceeded those offered by the state. Still, they did not want to leave their primary employers because they wanted the affiliation with higher prestige institutions. Private HEIs were also interested in leveraging the individual reputation of their external staff.

There were several factors contributing to the private sector's rapid growth. For example, at private HEIs, with relatively lax requirements, one could obtain a diploma at a relatively low price and even combine studies with full-time employment. Moreover, private HEIs absorbed the demand of people who only needed an official paper certifying that they had completed higher education and not necessarily any real competencies. Finally, these institutions profited from families where parents had no higher education or orientation to aid them in the selection of better quality program.

#### THE CONSEQUENCES OF MASSIFICATION IN RUSSIA

The quality of education provided by state HEIs became very diverse. There was growing disparity among students in terms of the level of competence: state-funded students were, in general, better prepared for higher education than self-funded students, which led to natural abatement of admission requirements at many HEIs. Additionally, formally specialized state HEIs started opening new faculties to offer degrees in demand. So, many engineering HEIs began opening faculties of economics, law, etc., with dubious quality.

Secondly, a vast sector of private education emerged. It was marked by low quality and graduates enjoyed significantly humbler career prospects compared to graduates of state institutions.

As a result of this rapid and large-scale massification, higher education became a social imperative: lack of a higher education diploma is negatively perceived by employers, even for semi-skilled jobs such as shop assistants and delivery persons.

There was also a concurrent massification of doctoral education with an explosive growth in doctoral student numbers and defenses in many fields: economics, psychology, sociology, law. As elsewhere, massification of doctoral education led to a rapid decrease in the quality of PhD dissertations, especially in the fields where having an academic title was associated with significant privileges in the non-academic labor market (e.g., in law, public administrations, economics, etc.).

#### CONTEMPORARY HIGHER EDUCATION SYSTEM IN RUSSIA

By 2015 there were 896 higher education institutions in Russia, including 530 state and 366 private ones. In 2014, more than one million new students were enrolled

which resulted in 5.2 million students in the academic year 2014/2015 in total: 85% were studying at state HEIs. The largest share of institutions is concentrated in Moscow and St. Petersburg; in 2014, 339 HEIs were located either in Moscow and the Moscow region that indeed creates inequalities in educational opportunities for young people from different regions.

Russia has achieved a high level of participation in higher education: the enrollment rate among the relevant age cohort is 80% (compared to slightly over 40% in the mid-1990s (Fig. 1)). Approximately 75% of all young people enter an HEI directly after leaving secondary school and about 80% of them successfully finish their studies and get a diploma.

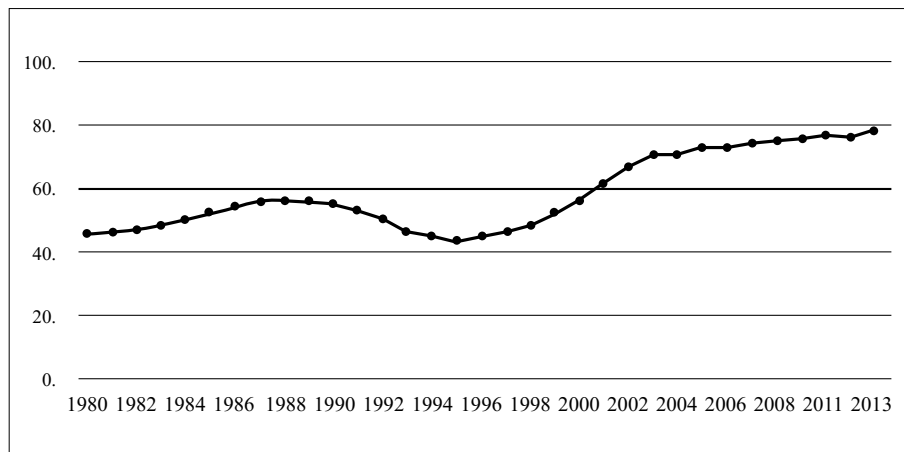


Figure 1: Enrollment rate in the youth cohort (gross enrollment ratio, %)  
Source: World Bank database 1980-2013

According to Federal Law №125 adopted in 1996, there are three types of HEIs in Russia: universities, academies, and institutes. A *university* is an HEI that provides undergraduate and graduate professional education in a broad range of fields; “conducts fundamental and applied research in a broad range of sciences; is a research and methodology leader in its domain.” An *academy* provides undergraduate and graduate professional education; conducts fundamental and applied research primarily in one area of science or art; is a research and methodology leader in its domain. Finally, an *institute* provides undergraduate professional education and often graduate professional education as well.

Nearly half of all HEIs became universities within the first 10 years after the law was adopted. In 2012 the public sector incorporated 332 universities, 160 academies and 108 institutes (with 781,161 and 88,000 students respectively). Thus, distinc-

tions between different types of HEIs were to a large degree depreciated (see Kuzminov, Semenov, & Froumin 2015). It is therefore difficult to discuss any substantive differentiation based on a HEI's legal status. Nevertheless, HEIs of each type vary greatly in terms of student quality as measured by the average score on the Unified State Examination required for admission, education quality, job prospects for graduates, etc. With rather blurred boundaries between HEIs of different categories, one might say that institutes are primarily teaching entities and resemble to some extent universities of applied sciences that exist in some countries while universities are broader in scope, more academically oriented and have bigger research ambitions, and academies are somewhere in between.

#### UNIVERSITIES WITH SPECIAL STATUS

Until very recently the government wasn't developing the structure of the higher education system strategically. HEIs were relatively independent in determining their areas of focus and setting quality standards. In the 1990s, for example, many technological HEIs reacted to market demands by creating faculties of economics and social sciences but the education provided was of rather low quality. Still, these HEIs managed to take advantage the fast-growing demand for specialists in those areas.

In 2012, the government began taking actions aimed at identifying HEIs that would be capable of fulfilling specific tasks to receive additional resources and, of course, comply with specific requirements. As a result, the university sector is increasingly heterogeneous. Important groups of HEIs with special status include federal universities and national research universities.

Federal universities were created in 2006–2012 by merging several local or regional large universities; there are currently nine. The Siberian Federal University in Krasnoyarsk became the first. It was created by merging several universities located in the city with Krasnoyarsk State University. Federal universities were meant to become centers of excellence that would train professionals for the regional labor market and increase the region's competitiveness through optimizing HEIs as a resource for economic development.

Unlike federal universities, national research universities (NRU) hold a special status that is usually awarded for a defined period of time and on a competitive basis. Two universities were awarded NRU status in 2006; another 27 from 2009 to 2010. Fifteen of the total of 29 NRUs are located in Moscow and Saint Petersburg. All participated in a competition that required submitting a 10-year strategic development plan with a set of goals and expected outcomes specified for each year of the plan. NRUs are expected to report annually about their progress to the Ministry of Education and Science, with the result that inefficient universities may lose their special status.

Participants in the global excellence program constitute another important subgroup of leading universities. The Ministry originally selected 15 HEIs (6 more later) that were charged with improving their positions in global rankings. According to a 2012 presidential decree, the goal of the program is to bring at least five universities from the project participants within the hundred best universities in the world according to the three most authoritative world rankings, thus the program was named Project 5-100. In order to reach this goal by 2020, the government has provided participating universities with additional financing. These funds are used for establishing new research centers, developing international recruitment plans, enhancing infrastructure, etc. Nine of the 21 participants are located in Moscow and Saint Petersburg; seven universities were previously awarded the status of national research universities; and five among the 21 are federal universities (with 10 federal universities in Russia, half are included in Project 5-100).

The 5-100 participants are, in fact, the most dynamic actors in Russia's higher education "market." They have quickly increased the number of international staff and students and created new academic units. They are building working ties with research institutes of the Academy of Science (this is particularly true for universities based in Novosibirsk, Tomsk and Moscow) to enjoy synergies in research potential and competencies, and to share equipment.

Diversity among HEIs has led to a diversity of outcomes as a result of an institutional hierarchy. Universities with average scores significantly higher on the Unified State Examination (Prakhov 2016) attract more research-oriented staff; they develop a high-quality academic culture; their research results are stronger (Kozmina 2015). HEIs differ in terms of prospects for graduates in the labor market as well, including better starting salaries.

In general universities that are participants in the 5-100 program are the most selective in terms of student intake and, along with national research and federal universities, enroll students with the highest USE scores, while other institutions are significantly less selective. At a leading university the minimal passing USE score could be higher than 90 out of 100, at a non-selective institution it might be around 60 or even lower on average. Moreover, in all charts that rank the employment opportunities of graduates these leading universities place students substantially higher than the rest of the institutions. Quite often multinationals that operate in Russia prefer graduates from the very limited number of universities. Again, these universities also differ in terms of internationalization. Improved research capacity as well as positive dynamics of research productivity in recent years (see Matveeva et al 2016) also distinguish this group of universities.



## POLICY SHIFTS IN SUPPORT OF MASSIFICATION

The main responses to the massification of enrollments in contemporary Russian higher education are state-driven. Before 2009, in order to be admitted to an HEI a candidate had to pass a set of specific entrance exams created and administered by the higher education institution. Since 2009, admission has depended on the results of the Unified State Examination (Prakhov & Yudkevich 2015). The examination is obligatory for all graduating high school students who take this exam simultaneously, across all regions, regardless of their future educational plans. The reform helped lower admission costs for a whole range of social groups. For example, under the old system candidates who applied to institutions in Moscow or big regional cities had to travel to sit exams at the universities they hoped to attend. Now they can sit the exam locally and send their applications to several HEIs at the same time. One can now be admitted to a Moscow-based HEI without traveling to the capital to sit exams.

The second factor was the law that allowed for the creation of private HEIs and that permitted admitting self-funded students to state HEIs. Still, the government's non-market tendencies remain because it continues to define HEI goals and select individual universities for special status, special tasks, and additional financial support. This is true for federal universities, for national research universities, and for Project 5-100 participants. In other words, diversification among HEIs, particularly among leading HEIs, is a result of shifting government policy rather than diversification that results from a reaction to market demand or changing external conditions.

## AUTONOMY ISSUES

On the whole, the level of autonomy at state HEIs is low. Since the state is their main source of funding, they depend on the state in determining the scale and focus of their educational activities; their expenses and curricula design are heavily regulated by the state. These regulations tend to burden HEIs with excessive paperwork. Moreover, when financial wellbeing depends on compliance, institutions are incentivized to manipulate results when reporting.

The country's leading universities selected to join Project 5-100 are closely controlled by the Ministry of Education and Science, and their key productivity indicators (KPIs) are monitored annually. The KPIs for the participants in Project 5-100 include publication rates, citation rates, percentage of international staff and students, student quality (based on the average score on the Unified State Examination). Therefore, program design motivates universities to focus on short-term goals, often at the expense of quality and long-term goals. For example, the recent increase in the number of publications in predatory journals by researchers employed by Project 5-100 universities was the result of incentives aimed at augmenting the publication count without establishing indicators of quality.

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Leading universities face ambitious goals that often require risky investments, innovation and experiments in the sphere of employment policy, internationalization, curricula development, and a diversified salary structure. Nevertheless, these universities have to function under close control with heavy limitations on resource allocation. Naturally, such a lack of autonomy is not conducive to building world-class universities.

#### QUALITY ASSURANCE MECHANISMS

In Soviet times there were key HEIs within the groups of industry-specific HEIs; they set methodological guidelines for developing educational programs, assessing quality, and training and re-training teaching staff. The fact that they were training specialists for a specific industry or even enterprise would both ensure a focus on certain competencies and assure some quality of education. Control by the Communist party, along with ministerial control and the influence of principal HEIs, played an important role too.

When these quality assurance mechanisms fell apart, quality control became problematic in many sectors. The sector of non-traditional and evening education virtually became a provider of paper diplomas rather than any real competencies or skills. This had a big impact on such popular fields as economics, management, and law. However, there are no market mechanisms for pushing low-quality actors out of the higher education system; all regulation depends on the decisions of the government.

There are heated debates both within Russian academic circles and the general public about the current admissions system based on the results of the Unified State Examination (USE). Although opinions vary, many agree that the USE provides students, their families, and governmental supervisory bodies with information about the quality of various HEIs and educational programs in a transparent way. Such transparency is an important condition for preventing entry-level corruption that was widespread under the previous system and has almost disappeared now. All other things being equal, high average USE scores for entering students indicate a high quality program, while a low average USE score means there are some problems. Average USE score monitoring initiated a couple of years ago by the Higher School of Economics and supported by the RIA Novosti news agency is used by the authors of several national university rankings, by students and their families, and by the Ministry of Education and Science. This parameter is also used in the Ministry's own HEIs Efficiency Monitoring. There have been cases of HEIs being reorganized (e.g., by merging them with more successful HEIs) or even closed, as a result of the Ministry's monitoring.

The different ministries supervising higher education regulate numbers of tuition-free places and quality by changing admission quotas; the government reduces

the amount of state funding allocated for some programs at some HEIs when they provide low quality education (as demonstrated by problems for their graduates in the labor market).

#### THE POSITION AND ROLE OF RESEARCH UNIVERSITIES

National research universities were selected based on their current performance and commitments based on publication performance, R&D funding, quality of student intakes etc., as well as responsiveness to the country's political priorities. In most cases, these were either technological universities or universities strong in the sphere of engineering, physics and natural sciences. At the same time, the chosen universities are leaders in their respective regions in terms of economics education. In this regard, they could be considered flagship universities (John Douglass's term, see Froumin & Leshukov 2016).

No matter how much extra funding these universities receive or what special status they get, they are still constrained by university-state relations and existing mechanisms in the sphere of academic recruitment, teaching workload and other requirements imposed by the state. In this sense, the advancement of Russian universities in international rankings and increased visibility in the global academic market will only be possible if both internal and external governance structures are reformed. The system of external HEI governance needs to be based on better cooperation between HEIs and the government rather than on the boss-subordinate, or principal-agent model assuming that the agent seeks opportunistic ways to minimize efforts while principal monitors agent activities and outputs tightly to prevent such opportunism (Laffont & Martimort 2009).

Nevertheless, even with a multitude of diverse HEIs, together they still resemble a snake-like procession (Riesman 1956) led by flagship universities followed by others trying to reproduce their practices, even though they have significantly fewer financial and human resources. In this regard, despite all their limitations, flagship universities do play an important role in terms of standard setting and creating an experimental playground for developing best practices although with limited possibilities for defining the system as a whole.

#### CONCLUSION

Russia is distinguished by the achievement of mass higher education, a level of education now considered to be a social imperative for Russian society. Yet the higher education market is heterogeneous in terms of quality and institution types. Unlike the structure of HEIs in the Soviet period when there was a highly stratified system of institutions with different missions, regional and industry focus and output quality, in

the contemporary system delineation of missions for different HEIs (universities, academies and institutions) is less clear, resulting in huge differentiation within each group.

The country has witnessed significant massification during the past couple of decades but the phenomenon is not new in Russia. This recent expansion was accompanied by the diversification of the HEI landscape, the emergence of private educational sector, a decrease in the overall quality of education, and structural changes regarding the number of professionals trained in different fields. The process also coincided with the transition towards a two-level model (bachelors and masters degrees instead of the traditional five-year specialist's degree<sup>2</sup>). Russia joined the Bologna system in 2003 and the 2000s represented the period of rapid growth in the number of masters programs and masters students (the number of masters students grew from 8,400 in 2000 to 26,300 in 2010, then tripled in next 5 years reaching 75,400 in 2014). However, we would not attribute this growth to the real incorporation of Russian HEIs into the broader European educational space but rather to the shift of institutions toward six years of education instead of five with the majority of bachelors immediately starting their masters programs in the same university.

The introduction of the Unified State Examination as a new admission mechanism played an important role in supporting massification. It helped students lower the costs associated with admission and provided a broader choice of educational options, making the country's leading universities accessible to students from small towns and low-income families.

However, diversification of the higher education market, an inevitable consequence of massification, was not market-driven; it was rather a result of state policy aimed at separating different segments of higher education and setting different missions for various groups of HEIs.

#### NOTES

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<sup>2</sup> Bachelors and masters degrees (following 4 and 2-year educational programs) were introduced by the Federal Law in 1996.

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