



# Russia: The Institutional Landscape of Russian Higher Education

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## INTRODUCTION

In this chapter we explore changes in the higher education institutional landscape, analysing the case of the largest post-Soviet higher education system. In the post-Soviet period, Russian higher education (HE) has expanded tremendously. Dramatic growth in the number of students and institutions has been facilitated by the introduction of additional tuition-paying tracks in the public as well as the new private higher education sector. Shifts in social and economic demand for professional fields have affected the disciplinary and organisational structure of higher educational institutions (HEIs).

External forces (economic, political and social conditions) and higher education policy have been changing during the last decades. In the first part of the transitional period, the state provided limited regulation for the higher education system, but in the 2000s it has regained its role as the main agent of change in the design of the higher education system. The variety of institutional types that have evolved in Russian higher education

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illustrates the consequences of massification and marketisation, such as a new “demand-absorbing” segment of the higher education system and institutional programme drift. Also, the governmental role in shaping the landscape has been reflected in attempts to increase vertical diversity (e.g. the excellence initiative) on the one hand, and to restrain it by closing down lower-tier institutions on the other.

The first part of the chapter presents a brief description of the HE landscape by the time of independence as the starting point of post-Soviet transformations. In the second part, we will discuss the key socioeconomic changes and major trends in higher education including massification, privatisation of costs and changes in the subject mix at HEIs. The key HE policy changes that affected the institutional landscape since independence are discussed in the next part. In the final part we present the results of an analysis of the recent HE landscape.

### THE HIGHER EDUCATION LANDSCAPE IN SOVIET RUSSIA

In the last decades of the USSR, Russian higher education played a major role in the whole Soviet “machinery”. The Russian Soviet Federative Socialist Republic (RSFSR) was a part of the Soviet Union (USSR), and the Union spent about 39% of expenditure on higher education in its largest republic. This higher education expenditure represented 17% of all education expenditure in Soviet Russia (compared to 10% for the Soviet Union, Table 13.1).

**Table 13.1** Expenditure on education (total and higher education) in the USSR and Russian SFSR in 1981 and 1987 (in billion rubles and %)

<i>Year</i>		<i>1981/1982</i>	<i>1987/1988</i>
<i>USSR</i>	Expenditure on education (total), billion rubles	31.9	42.5
	Expenditure on higher education, billion rubles	3.86	4.17
	Percentage of expenditure on higher education in all expenditure on education	12%	10%
<i>Russian SFSR</i>	Expenditure on education (total), billion rubles	7.2	9.9
	Expenditure on higher education, billion rubles	1.54	1.64
	% of expenditure on higher education in all expenditure on education	21%	17%

Source: *Statistical Book on Higher Education* (1992, 100)

In contrast to higher education trends in Western Europe and North America, during the last decade of Soviet Russia enrolment decreased (by about 6% in 1980–1990). The number of students per 10,000 inhabitants also dropped by 13.2% (*Statistical Book on Higher Education* 1992, 166).

The federal design was a distinctive feature of the RSFSR from other Soviet republics. It consisted of several dozen regions, which affected the deliberate dispersion of HEIs within the Russian “subjects of federation” (hereafter referred to as regions). Moscow and Saint Petersburg were the two largest regions (they were in fact cities with the status of regions) and accumulated more than 28% of students (528.7 and 272.9 thousand students, respectively) in 82 HEIs in Moscow and 41 in Saint Petersburg.

Each region had at least one HEI, but often more. The regular set consisted of a comprehensive university, a polytechnic institution, a pedagogical institution and a specialised HEI (described below). This “package” varied according to the size of the population and the distribution of industries across the regions. By 1990 there was a group of regions with 10–18 HEIs and a large number of regions with 3–4 HEIs (*Statistical Year Book* 1992, 278–280).

By the end of the Soviet era, 2,825 million students studied in 514 HEIs within Russia. About 58% of the student population were full-time, about 10% took evening courses and about 32% studied in correspondence courses<sup>1</sup> (*Statistical Book on Russian Federation* 1993, 276). There were 42 comprehensive universities with 328.1 thousand students. Yet, the majority of HEIs were highly specialised and affiliated to a relevant industrial ministry or department.

Thirty-seven per cent of all students studied in 135 specialised industrial HEIs (the largest group of HEIs), with 26% in 94 pedagogical HEIs (the second specialised); most of the other HEIs were small institutes (see Table 13.2).

The number of HEIs specialised in economics and law was limited. Moreover, these institutions mostly provided part-time education. About 70% of students took evening and correspondence courses in such institutions, while in all other types of HEIs the percentages ranged from 30% to 50%. The exception were medical institutions where the share of full-time students was about 92%.

In general, the Soviet Russian higher education system, as in the rest of the Soviet system, reproduced the German-style industrial education model (strict segmentation of vocational and higher education) and the Humboldtian academic tradition (although with a Soviet slant). The

**Table 13.2** Number of HEIs by type, number of students by form of learning and their shares, 1990

Sector	Number of HEIs	Total number of students	Students in evening and correspondence courses	
			Number of students, thousand	Percentage of total student numbers
Industry	135	1,026	406	40
Construction	21	104	49	47
Transport	23	143	76	53
Communication	5	31	16	52
Agriculture	60	261	119	46
Economics	31	170	119	70
Law	4	27	21	78
Healthcare	46	186	14	8
Physical training and sport	9	28	13	46
Education	14	52	32	62
Pedagogical HEIs	94	446	179	40
Art and cinema	30	21	7	33
Universities	42	328	125	38

Source: *Statistical Book on Higher Education* (1992)

model reflected “a merger between the need for speedy mass education with the reality of few university centers in the country” (Kuraev 2016, 182). These centres of knowledge were established by the most prestigious universities, such as the Lomonosov Moscow State University. With regard to the typology of Soviet HEIs (Froumin et al. 2014), we can distinguish six types of HEIs in Soviet Russia (Table 13.3).

### MAJOR CHANGES IN HIGHER EDUCATION UNDER NEW CONDITIONS

The 25 years of Russian HE can be divided into three periods with different key policy intentions. The major HE reforms are shown in Fig. 13.1.

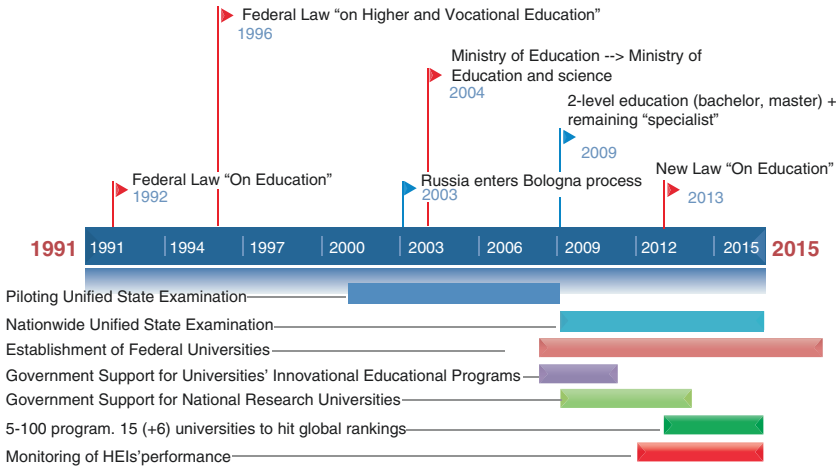
The first post-Soviet decade can be characterised as “laissez-faire”. After the adoption of the main federal laws on education in the early 1990s that set the framework for HEI activities, the government did not intervene in the higher education system until the early 2000s.

**Table 13.3** Types of HEIs in Soviet Russia

	<i>Leading</i>	<i>General</i>
Comprehensive universities	Old prestigious universities, research centres, located in capital/regional centres, subordinated by MoE ~5–10 universities ~80–120 thousand students For example, Lomonosov Moscow State University	Established for regional socioeconomic development; some were opened on the basis of pedagogical HEIs, graduates, faculty for other HEIs, and staff for research institutes, widespread within regions, subordinated by MoE ~32–37 universities ~180–240 thousand students For example, Tyumen State University
National industrial HEIs	Specialised HEIs related to the Soviet industrial clusters, performed the role of curriculum development centres, subordinated by the particular ministries, located in Moscow, Leningrad or other large industrial cities ~ 20–30 HEIs ~ 200–250 thousand students For example, Moscow Aviation Institute	Specialised HEIs related to the Soviet industrial clusters and particular factories, subordinated by the particular ministries, located in large industrial cities, widespread within regions ~100–110 HEIs ~750–800 thousand students For example, Kazan Aviation Institute
Regional HEIs: Agricultural, pedagogical, medical, economic, polytechnics, arts and theatre	Established for socioeconomic development of the region; the role of methodological centres, Specialised HEIs, subordinated by the particular ministries, located in Moscow, Leningrad or other large industrial cities ~10–20 HEIs ~100–150 thousand students For example, Moscow Timiryazev Agricultural Academy	Established for socioeconomic development of the region; Specialised HEIs, subordinated by the particular ministries, spread within all regions ~280–300 HEIs ~1,150–1,300 thousand students For example, Chelyabinsk State Pedagogical Institute

Source: Developed by the authors based on Froumin et al. (2014)

The period of reforms in the 2000s started with the introduction of a unified national exam. In this period, the government also stimulated institutional reforms, such as meeting the expectations of the Bologna Process and the integration of education and research. Moreover, the state



**Fig. 13.1** Timeline of key higher education reforms in Russia, 1991–2015 (Source: Developed by the authors)

launched its first support programmes for federal universities and national research universities.

Since 2012, the government has taken the reins even more explicitly regarding the reform of the Russian HE system and its institutional landscape. It started with the performance-based monitoring of HEIs, which led to mergers and reorganisation. Excellence programmes urged more internationally oriented research activity in selected universities. The ideas of new public management including performance evaluation, transparency of data and managerialism were key drivers for change in this period.

Higher education transformations have been closely related to the political and socioeconomic changes in Russia since the USSR dissolution. Liberalisation and the establishment of a new market economy inevitably affected the education system (Balzer 1994). Within the framework of wider socioeconomic changes, we emphasise three main trends in HE development in Russia that significantly influenced the landscape: massification, privatisation of costs (cost-sharing) and changes in the subject mix.

### *Shift in Demand for Educational Fields*

The Russian economy has experienced explicit structural transformations, with a major expansion of the tertiary sector (services) (see Table 13.4). From

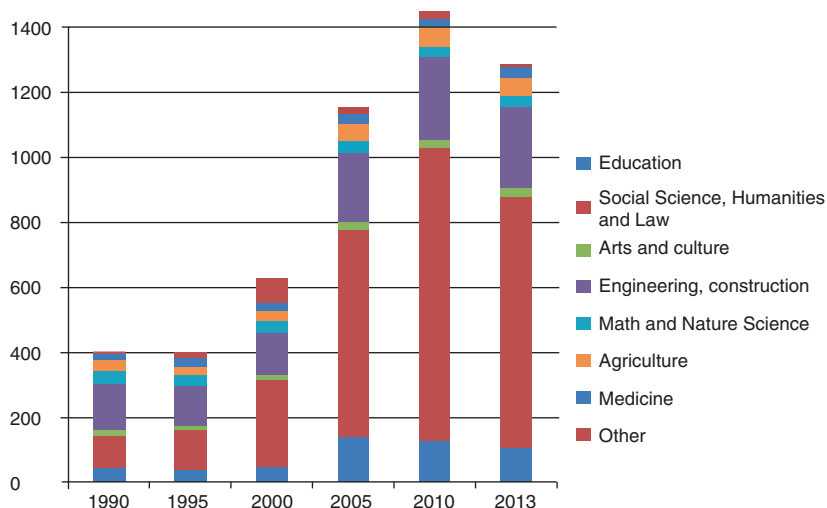
1990 to 2002, the cumulative loss in the number of employees in the industry sector was extremely dramatic, amounting to about 36%. There were comparable changes in other production sectors such as agriculture (−20%), construction (−23%) and transport and communication (−16%) (Gimpelson et al. 2010, 4). These changes in the labour market generated a perception of low demand for “hard sciences” and led to a decline in the popularity of engineering HEIs. The services and healthcare sector grew significantly. Employment in the trade sector increased by 85%, in the financial sector by 103% and in public management by 85% (Gimpelson et al. 2010, 4).

Such changes in the economy and the labour market also affected student choices. Figure 13.2 shows the dramatic increase in social science graduates.

**Table 13.4** Structural transformations of the Russian economy 1991–2014

	1991	1995	2000	2005	2010	2014
Agriculture, value added (% of GDP)	14.3	7.2	6.4	5.0	3.9	4.2
Industry, value added (% of GDP)	47.6	37.0	37.9	38.1	34.7	35.8
Services, value added (% of GDP)	38.1	55.9	55.6	57.0	61.4	60.0

Source: World Bank: World Development Indicators



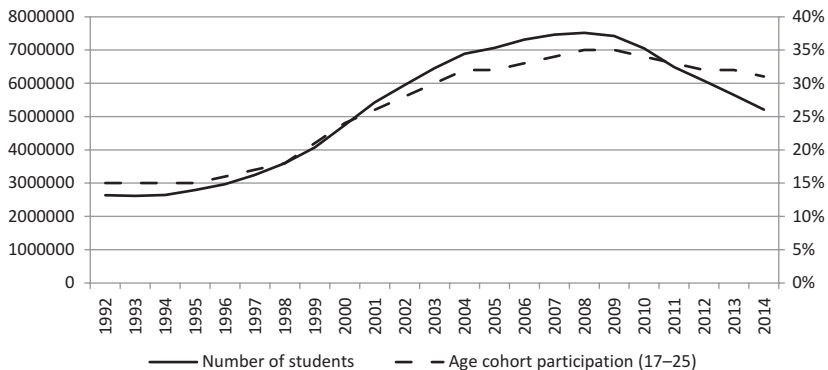
**Fig. 13.2** Number of graduates by study field (Source: Aggregative groups calculated by authors based on data from the Federal State Statistics Service (2015))

### *Massification*

New economic conditions and changes in social attitudes underlie the rapid massification of higher education in independent Russia. Contrary to the previous period (1990–1995) when student enrolments were declining, from the mid-1990s new social values led youth to invest in long-term targets, such as continuing their education. This phenomenon, which can be explained by the quick rise of the wage premium after central control on salaries was abolished (Kapeliushnikov 2006; Gimpelson et al. 2007), is defined as “*proobrazovatel’nyi sdivig*” (the shift towards education in the life strategies of young people) (Magun and Engovatov 2004).

Figure 13.3 shows the pace of massification in absolute numbers and the gross enrolment rate according to national statistics. All indicators have been growing since 1994, and it was only after 2008 that the trend turned downward. Today, the age cohort participation among 17- to 25-year-olds in higher education is about 32%. OECD data show the same upward trend. The tertiary<sup>2</sup> enrolment rate among 20- to 24-year-olds increased from 28.8% to 30.3% between 2005 and 2014 (OECD 2016). Russian higher education has thus become “universal” in the last decade according to Trow’s terminology (Trow 1973).

As a response to the massive demand, the number of HEIs doubled from 1991 to 2011. Moreover, the establishment of HEI branches (satellite HEIs<sup>3</sup>) provided wider access to higher education in the regions. The



**Fig. 13.3** Number of students in HEIs and age cohort participation (17–25), 1991–2014, Russia (Source: Calculated by the authors. Data from Federal State Statistics Service (2015))



majority of satellite HEIs has shaped a demand-absorbing segment along with small private HEIs. In 1993 there were only about 200 public satellite HEIs (National Centre for Public Accreditation n.d.), but in 10 years the number increased more than six times; taking into account private establishments as well increases the number to eight times. The growth originated from local initiatives for new HEIs as well as a liberal governmental attitude towards newcomers on the higher education market. Moreover, the demographic situation and the financial abilities of some households to enrol in higher education also contributed to the expanding supply.

The government had concerns about the quality of education provided by satellite HEIs and there was a general perception that the number of satellites increased too fast. Hence, the government limited the growth of these entities in 2006 by revoking the licence of several dozen satellites. In 2005 there were about 2200 satellite HEIs (1823 public and 378 private), while in 2007 there were only 1646 (1114 public and 532 private). The same concerns in the period between 2012 and 2015 led the Ministry of Education and Science (MoES) to once again reduce the number of satellites, this time on the basis of performance evaluation.

Massification is also associated with the influential trend of expansion in part-time HE. The number of part-time students increased three times over the 25-year period. In 1991, the share of students learning in evening and correspondence courses was 39%, and by 2014 it had risen to 53%. The majority of part-time programmes are not supported by state funding.

### *Private Sector and Cost-Sharing*

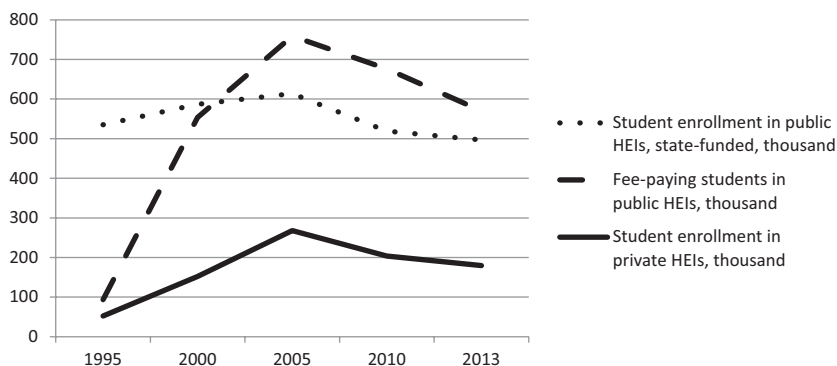
The new legislation adopted in 1992 allowed the establishment of private HEIs (the Federal Law “On Education”). The expansion of the HE system was therefore partially due to the growth of the private higher education sector. The number of private HEIs grew to 358, although only 7% of students were enrolled in the private sector.

After 2000, the private sector formed a substantive part of the higher education system, not only in terms of the number of HEIs (there were more than 400 private HEIs) but also in terms of student body. About 14% of students were in private HEIs in 2014. Moreover, private education expanded through the privatisation of public HEIs. New legislation adopted in 1992 allowed public HEIs to attract so-called non-budgetary funding. In line with that regulation, HEIs started to introduce a *dual*

*tuition track system* (Johnstone 2004). This means that in public HEIs the state provides tuition-free student places and that HEIs can add private tuition tracks. A student can apply for either state funding (more competitive) or pursue a self-paid place in public or private HEIs (less competitive). The competition for state-funded places is based on merit. In general, students with the highest entry exam scores enrol in public HEIs for state-funded places, and students with the lowest exam scores enrol in third-rate private HEIs. The latter are less competitive HEIs that accept the majority of low performers.

As Fig. 13.4 depicts, the balance between the numbers of state-funded students and students paying tuition is inverted when the 1990s are compared with the 2000s. In 1995 only 13.7% students enrolled in public HEIs without state support, but since 2000 more than 40% of students enrolled in public HEIs are paying fees. If private HEI enrolment is included, more than 60% of students in Russia are paying for their education by themselves (since 2002).

Most of the higher education private sector is oriented towards providing popular programmes (e.g. economics, law and management). The government made several attempts to restrain the growing supply, including quotas for privately funded places in public HEIs in 1996, but the quota was abolished (Klyachko et al. 2002, 17).

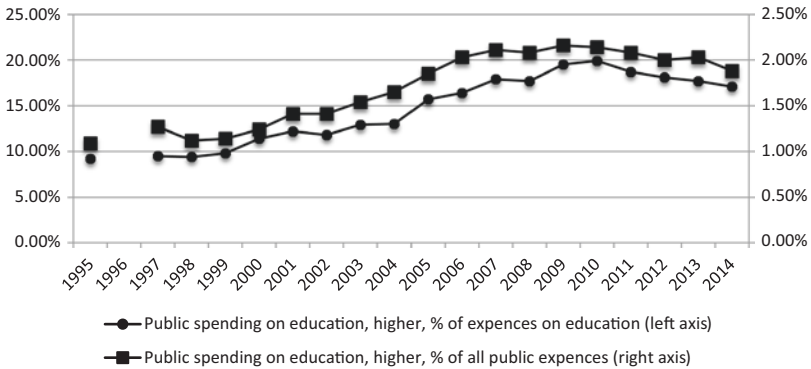


**Fig. 13.4** Enrolment by source of financing and type of HEIs, 1995–2013, Russia (Source: Calculated by authors. Data from: before 2000, *Education in the Russian Federation* (2006); for 2000–2010, *Education in the Russian Federation* (2012); after 2010, Federal State Statistics Service (2015))

The explicit higher education financial policy was thus cost-sharing that took the form of a double tuition fee track system. Students with high exam scores almost automatically get free access to a public HEI, whereas students with lower grades can register for a tuition fee track. The support for regularly admitted students at public HEIs has not changed since Soviet times and is implemented through the dispersion of state-funded slots to HEIs. In the mid-2000s, there was an attempt to introduce a student grant system; however, it faced opposition from academics and society in general (Zaretskaya and Kapranova 2003).

The lingering economic crisis partially determined the financial policy directions during the first decade of independence. By 1998, the funding allocated per student decreased by 70% compared with the end of the 1980s (Klyachko and Rojdestvenskaya 1999, 4). Figure 13.5 shows the gap in HE funding during the late 1990s. Compared with Soviet Russia, the importance of HE in public expenditure on education dropped from 17% in 1987 to less than 10% in 1995–1999.

Public resources, or lack thereof, affected the operation of HEIs. Most HEIs accumulated bad debts due to inability to pay for utilities. Financial



**Fig. 13.5** Public spending on higher education as a share of total public expenditure on education and public spending on education as a share of total public expenditure (*per cent*) (Source: Calculated by authors. Data for expenditure from: before 2003, Education in the Russian Federation (2006); after 2003, Roskozna (2015) and FSSS (2015))

Note: Due to the reform of the financial system in 2003, the data before and after 2003 cannot be directly compared.

distress and new legal abilities provided a catalyst for active fundraising through the creation of fee-paying slots and the leasing of facilities (Klyachko and Rojdestvenskaya 1999).

From the beginning of 2000, government policy was focussed on education as a priority (Johnson 2008). The new legal basis for the development of HE (e.g. National Doctrine for Education, 2000; the Concept of Modernisation for Russian Education, 2001; and the Federal Strategic Programme for the Development of Education, 2005) along with rapid economic growth enabled large-scale changes in the design of the HE system (Abankina and Abankina 2013). Firstly, these circumstances conditioned substantial growth of public expenditure on HE from 2000 to 2010 (see Fig. 13.5), although this share dropped between 2009 and 2014.

The described developments affected the horizontal differentiation of Russian higher education. Before 2010, the main changes took place in the field of HEI education activities (mix of subjects, as addressed earlier). Economy and labour market transformations, along with lack of public financing and state deregulation, urged HEIs to find new sources and broaden their supply. Liberalisation and decentralisation supported “natural” differentiation by legitimising the emergence of a private sector, a dual tuition track system and relatively unrestricted internal programme diversification.

## HIGHER EDUCATION GOVERNANCE AND REFORMS

### *Governance Structure*

Despite the fact that Russia is a federal country, the decentralisation of state authority over higher education did not go far. In the 1990s some regions established their own HEIs, but very few HEIs were actually under regional control. Since the early 2000s, greater centralisation has affected the HE system. There are few HEIs subordinated by regional authorities (70 HEIs, including satellite HEIs with only 2.5% of students, see Table 13.5) and more than 95% of budgetary funding is federal (Froumin and Leshukov forthcoming).

HEIs report directly to the various bodies of executive power. By the end of Soviet times, there were 28 different ministries supervising HE. In modern Russia there are still 21 different bodies, including the MoES. In general, the MoES provides a broad framework for HE system operation through its right to grant licences, accredit institutions, assign admission quotas and implement federal programmes for HE development.

**Table 13.5** Distribution of HEIs by ministry and other agencies, Russia, 2014

	<i>Number of HEIs (satellites and parent)</i>	<i>Number of parent HEIs</i>	<i>Share of students (head count) in total number of students</i>
Ministry of Education and Science	825	274	58.49%
Private HEIs	816	368	14.89%
The Russian Government	88	7	4.30%
Ministry of Agriculture	76	55	7.47%
Regional authorities	70	53	2.54%
Ministry of Culture	55	45	1.32%
Federal Agency for Railway Transport	51	9	2.64%
Ministry of Health and Social Development	48	46	4.13%
Ministry of Sport	22	14	0.78%
Federal Agency for Marine and River Transport	20	6	0.76%
Ministry of Justice	13	1	0.33%
Supreme Court	11	1	0.29%
Federal Communications Agency	11	4	0.53%
Federal Fishery Agency	8	6	0.77%
Federal Air Transport Agency	5	3	0.32%
Federal Customs Service	4	1	0.17%
Russian Academy of Arts	3	2	0.05%
The Ministry of Foreign Affairs	2	2	0.16%
Ministry of Economic Development	2	1	0.06%
Russian Science Academy	1	1	0.00%
The Federal Service for Intellectual Property, Patents and Trademarks	1	1	0.01%

Source: Calculated by the authors. Data from Monitoring (2015)

Most HEIs (catering for 60% of all students) report directly to the MoES. The two other major ministries are the Ministry of Agriculture and the Ministry of Health and Social Development (medical HEIs).

### *Higher Education and Science*

After two reforms of the ministerial body that oversees higher education (1991–1995, the State Committee of Higher Education; 1996–2004, the Ministry of Education), the governance structure changed profoundly in

2004. The new Ministry of Education and Science united two former separate spheres, which are higher education and science. However, the Academy of Science was not abolished. In 2013 the government launched an academy reform, which faced considerable resistance and has not brought crucial changes yet.

In general, in contrast to Soviet HE, research activity in universities is receiving ample support in modern Russia. For example, the federal programme “Integration of Science and Higher Education” (2002–2006) supported the involvement of graduate and postgraduate students in large research projects and leading research centres. The development of HEI research activities and the research university as a model for leading HEIs is legitimated by direct support for research projects from several state foundations, special federal programmes and requirements for academic performance. With the introduction of a new federal law (2012), the qualification framework supports a three-cycle education system.

Although there are no PhD programmes in Russia, the government moved *aspirantura* (corresponding level to PhD) from the postgraduate to the higher education level. Before the reform, *aspirantura* was a specific learning track more focussed on self-directed learning in preparation for a dissertation. Now, as a part of higher education, *aspirantura* programmes are more oriented toward training research skills.

### *Bologna Process*

The Bologna Process is considered one of the major institutional reforms with a direct internationalisation aim and involvement in the global higher education system. Although the government’s intention to join the Bologna Process was much debated and faced strong opposition among university leaders and faculty as well as students and parents, Russia signed the Bologna Declaration in 2003 (Telegina and Schwengel 2012).

Since that time, the European Credit Transfer and Accumulation System (ECTS) along with a three-cycle degree system and quality assurance systems have been gradually introduced. The bachelor/master degree structure was optional for HEIs parallel to the 5-year specialist degree (gradually introduced since 1989, in 1992 proposed as the national multilevel degree structure) (Luchinskaya and Ovchynnikova 2011). From 2009, all educational programmes were expected to transform into two-cycle degree programmes (with some exceptions). Half of

all master students are enrolled in 65 HEIs, suggesting a high level of master student concentration in a relatively small set of HEIs. In 2015, 12% of all bachelor graduates transferred to master programmes. The government has emphasised the importance of master programmes by allocating about 40% of all publicly funded places to master degree programmes in 2016.

### *Admission: National State Examination*

The admission reform started in 2001 and was implemented nationwide in 2009. It included the abolishment of university-specific exams and the introduction of the state entry exam (Unified State Examination, USE). The reform aimed at increasing accessibility, equality and transparency of higher education (Bolotov 2004).

The exam is called “unified” as schools and HEIs use the same exam. The USE is designed for the assessment of all results for secondary education graduates and for the enrolment of prospective HE students. The USE is administered in test form and school graduates must choose several subjects to enter an HEI (two are obligatory, mathematics and the Russian language). Due to the double track tuition system with publicly and privately funded slots, students with lower grades can choose to study on a payment basis, yet “passing” scores vary between HEIs.

The USE project is considered one of the most influential institutional reforms in Russian higher education. A high score on the exam has become the aim of most school leavers. Selectivity became a measurable indicator of perceived educational success at HEIs. The higher the average entry exam score of the HEI, the more successful it is in attracting talented students and (presumably) the higher the quality of teaching; this is the guiding logic of the MoES. Selectivity has always been in place, during Soviet times as well, but transparency brought a clear framework for HEI hierarchy based on prestige and demand.

The distribution of HEIs by average exam scores is far from normal:

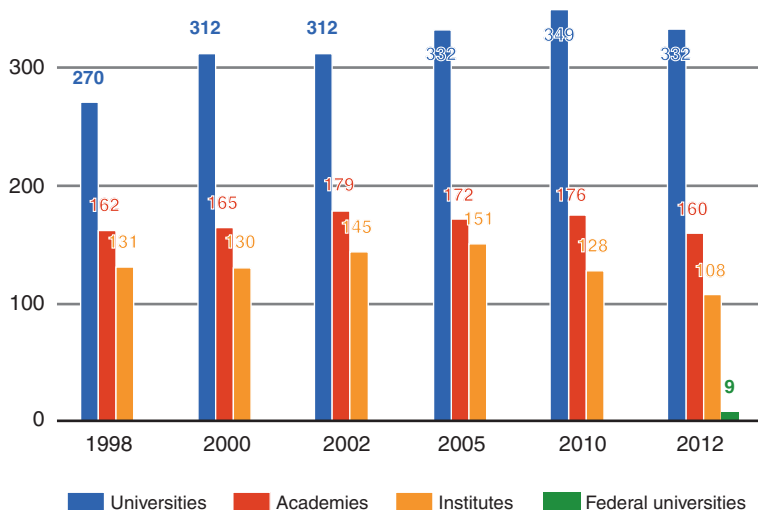
- Only a few HEIs accept students with very high exam scores (most of these HEIs are medical);
- Only 10% of HEIs have an average entrance score of more than 67.5 (out of 100);
- And 40% of HEIs have very low average exam scores (under 55), with a dominance of private HEIs.

### *Normative Types of HEIs in Russia*

The Federal Law (1996) defined the structure of the higher education system, considering the types of HEIs: universities, academies and institutes (see Fig. 13.6). According to this law, the distinguishing characteristics of these formal types were:

- University—wide range of education fields
- Academy—focussed on graduate education in one or more fields (often medical HEIs)
- Institute—HEIs mostly with a particular specialisation (inherited from Soviet times)

Due to the loss of federal funding in the 1990s, many institutes upgraded themselves to university status, except those with more stable public financing and attractiveness for tuition-paying students (Bain 2003). As the upgrades had to be permitted by the state, the acquisition of university status was associated with diversification of fields.



**Fig. 13.6** Russian HEIs by nominal types, 1998–2012 (Source: Education in the Russian Federation 2006; Federal State Statistics Service, 2015)



Soviet diversity with reference to specialisation is also rooted in the description of the HE landscape in post-Soviet Russia. Until 2004 the Federal Statistical Agency collected data on the number of students within such groups as engineering HEIs, agricultural HEIs, transport HEIs, pedagogical HEIs, arts HEIs and medical HEIs. The classification reflects merely path dependence, but does not reflect the actual subject mix.

As mentioned, the new Federal Law was adopted in 2012. It suspended the three HEI categories. In addition to proposing a general HEI category (“organisation of higher education”), the law labels Moscow State University and Saint Petersburg State University as leading classic universities with special status. Other categories included federal universities and national research universities (Federal Law 2012).

### *Leading University Programmes*

From the mid-2000s, the government made efforts to select a group of leading universities. In 2004, two universities (Moscow State University and Saint Petersburg State University) were assigned a special status, which implied a particular model of autonomy and funding. From 2006, the government has frequently launched special programmes to shape an elite higher education segment.

In 2006 the government started establishing “federal universities” by merging several regional institutions (e.g. comprehensive, teacher training and arts HEIs). The model implied a special focus on the regional economic context and special funding. Currently, there are ten federal HEIs.

In 2006–2007, 57 institutions received special funding for the implementation of “innovative education programmes”. This was the first example of targeted funding for selected universities.

In 2008–2009, 29 HEIs obtained national research university status with special government funding for research, internationalisation and curriculum development. The programme set incentives for research intensiveness and was intended to stimulate the strategic development of university R&D missions through annual performance evaluations.

Furthermore, in 2013, Russia launched its Excellence Initiative (“5–100”). The Russian government, with the help of the International Council, selected 15 Russian universities to receive special funding in efforts to place these universities among the top 100 universities (in major global rankings) by 2020. In 2015, the programme was extended by adding six more universities.

Although the number of institutions decreases from one project to another, in general the policy trend is to establish a benchmark for leading institutions, modelled on the idea of the research university.

Universities with special status differ considerably from all other HEIs in terms of size, funding, research activity and enrolments. Federal universities are the largest in the higher education system in terms of student numbers and federal funding. Research universities in the 5–100 programme rely mainly on federal funding. Moreover, the excellence programme spurs the internationalisation of education activity and research. The number of publications indexed in Scopus and the Web of Science is several times higher than in other universities. Vertical diversification, initiated by the structural reforms, has increased. The most talented students choose these universities. Almost 50% of school Olympiad winners enrol in 5–100 and national research universities.

### *Post-massification: Quality and Performance*

The topic of insufficient quality and quality assurance is a recurrent theme on the agenda in public and policy debates, fed by nostalgia with reference to the Soviet past. The government has made an attempt to reshape the accreditation system. The authorities decided to establish a special department inside the federal ministry which now exists as the Federal Service of Inspection and Control in Education and Science.

In 2012, the MoES launched HEI Performance Monitoring, an annual institutional assessment of HEIs. The MoES collects and publishes about 150 indicators for each HEI, and six to eight indicators that vary through the years are also selected as performance indicators. They describe all fields of activity such as education (average entry exam score), research (share of R&D revenues), international activity (share of international students), financial stability (revenues per faculty) and faculty salaries (ratio between average faculty salary and average salary in the region). High results on at least four indicators are considered critical for efficient HEIs.

A radical policy was implemented when the first results of the Monitoring Project were published. In 2012–2013, 52 HEIs and 373 satellite HEIs were either reorganised through mergers, or the Federal Service of Inspection and Control in Education and Science revoked their licences. In subsequent years, more than 200 HEI satellites were reorganised and even private HEIs could not avoid reforms.

## CURRENT HIGHER EDUCATION SYSTEM LANDSCAPE IN RUSSIA

As the Russian higher education system is large, we employ a quantitative analysis to identify the types of HEIs by implementing a cluster technique to categorise the classification of HEIs. In previous sections we described the major changes that influenced the HE landscape in post-Soviet Russia, and on this basis we suggest key indicators for the quantitative analysis in the table below (Table 13.6).

### *Approach, Sample and Data*

The general sample consists of 1,653 parent and satellite HEIs. For the quantitative analysis, we take only 772 parent HEIs, excluding the satellite HEIs as a relatively homogeneous group. We exclude some organisations that are in the process of reorganisation, as well as HEIs with unreliable data (according to the Monitoring Project), arts and military schools (due to the specificity of their activities) and significant outliers.

We use Ward's agglomerative hierarchical clustering technique. Euclidean distance is chosen as a metric, and all variables are standardised into Z-scores. Several parameters have high (and significant) levels of correlation.

All data are retrieved from HEI Performance Monitoring 2015 (Monitoring 2015). Considering the programme diversification index and

**Table 13.6** Indicators and measurement

<i>Indicator</i>	<i>Measurement</i>
Size of student body	Number of students, headcount
Part-time education	Share of full-time students in all students, %
Privatisation of costs	<i>Non-state revenues</i> from education activities as a share of overall revenues from education activity
Subject mix	Herfindahl-Hirschman index
Research	R&D revenues per faculty
	Number of publications in Scopus per 100 faculty
Balance between bachelor/ specialist and master programmes	Share of master students in all students, %
Unified state exam	Average exam scores
Selectivity	The number of students, admitted by the school Olympiad
State support	The share of federal funding in all revenues

following previous studies on programme diversification in universities (e.g. Rossi 2009), we use the Herfindahl-Hirschman index.

### *Empirical Results*

The hierarchical clustering technique is flexible in terms of arriving at the number of clusters. A step-by-step analysis of relevance for each division revealed five clusters. Hence, Table 13.7 shows the contemporary classification of HEIs in Russia.

**Table 13.7** Classification of HEIs in Russia, 2015

<i>Type</i>	<i>Features</i>	<i>1—# of HEIs</i> <i>2—% of HEIs</i> <i>3—% of students<sup>a</sup></i>
1 Research universities	Diversified subject mix, research-productive, selective, attract talented students, MA students, attract fee-paying students, location—particularly in Moscow and Saint Petersburg	1–22 2–3% 3–4%
2 Public regional universities	Very large, diversified subject mix, selective, large part-time, large state support, some R&D	1–84 2–11% 3–32%
3 Specialised HEIs	Small, highly selective, highly specialised, full-time, mostly medical	1–88 2–11% 3–8%
4 Public mass universities	Diversified subject mix, selective, large part-time, large state support, do not attract fee-paying students	1–248 2–32% 3–36%
5 Private HEIs	Small, only fee-paying students, large part-time, very low selectivity	
5a <i>Specialised</i>	<i>Specialisation in popular programmes</i>	1–167 2–22% 3–5%
5b <i>Diversified</i>	<i>Diversified subject mix</i>	1–95 2–12% 3–5%
6 Part-time HEIs	Only part-time fee-paying students, very small, specialisation in popular programmes	1–68 2–9% 3–10%

<sup>a</sup>Share in the sample

Source: Calculated by the authors

Government policies resulted in the segregation of a group of research-intensive universities. *Research universities* (cluster 1) pursue high selectivity, are oriented towards the provision of master programmes and cater mostly for full-time enrolment. Despite the long history of division between research institutes and universities during Soviet times, the global movement towards world class is reflected in the Russian higher education landscape. However, very few of these universities have achieved global recognition yet.

Post-Soviet expansion also provided an opportunity for some universities to grow into large institutions alongside an internal diversification and growth of part-time enrolment. These large *regional public universities* (cluster 2) are often situated in provincial centres and are usually significantly supported by the state. Examples of such giants can be found worldwide, but mostly in big federal countries. In Russia, these HEIs attract talented students and focus on their teaching mission but still engage in some research.

The Soviet legacy of specialised training in particular fields remained vital for another group of institutions. The peculiarity of *specialised HEIs* (cluster 3) is their limited internal diversity, relatively small size and high selectivity. These are mostly medical institutions accompanied by Soviet-type industrial universities that managed to sustain their narrow orientation in the reconfigured economy.

The next groups represent the consequence of higher education expansion that can be identified in all high-participation systems worldwide as a reaction to the growth of demand. In order to achieve economic sustainability, the higher education system grew through internal diversification in Soviet institutions, as well as through the emergence of new institutions, an increase in part-time education and privately funded places (both in traditionally public HEIs and others). *The demand-absorption HEIs* constitute a large share of the higher education system.

The group of *mass public universities* (cluster 4) is close to the group of regional giants (cluster 2), but they are smaller, less selective and more dependent on public funding. With regard to their funding model, we can assume they represent the state's function of providing widened access to higher education.

Three groups of privately funded institutions (clusters 5 and 6) represent different aspects of popular demand. The small specialised HEIs (5a) provide education in particular low-cost popular fields (usually economics, management and social sciences). The diversified HEIs (5b) also have a

low level of selectivity and a low share of full-timers, but a broader range of fields. The group of “open” HEIs (cluster 6) focusses entirely on part-time distance education and provides credentials in popular fields.

## CONCLUSION

The post-Soviet social and economic higher education environment along with massification, new regulations and targeted government activities have shaped the institutional landscape in Russia in the past decades. Decreased funding pushed existing HEIs to seek new sources in order to survive. Old and newly established institutions, both public and private, entered a new competition that went along with regulatory liberalisation. The expansion was moreover fed by popular demand in reaction to the new social and economic conditions. Yet, many HEIs continued playing the “higher learning tradition” card by addressing their legacy, mostly Soviet, in order to legitimate their existence in current times. Many internally diversified HEIs even kept their old names in order to demonstrate their commitment to parent industries. This conservatism combined with general organisational adaptability has sustained path dependency.

From the 2000s, the comeback of the state as financially stronger and more managerial brought several policies that introduced new rules of the game: the Unified National Examination, and two-level (later three-level) degrees.

The initiatives that aimed at system segmentation (from 2006 on) shaped the Russian institutional landscape even more, in both the vertical and horizontal dimension. The creation of federal universities and assignment of national research universities resulted in the coercive adoption of new functions: regional labour market supply, research efficiency, and international recognition.

Public claims for education quality and the governmental intention to spend resources efficiently drove the system to the “optimisation” period (from 2012 on). Along with licence withdrawals, the state widely used mergers to correct the system to a manageable size and assumed higher levels of efficiency. The government is continuing with system segmentation to build an institutional hierarchy.

The aspiration of a clearly arranged structure for the higher education system is not new. The Soviet design also outlined clearly defined functions. However, the size of the system and the emergence of popular

demand as defining factors closed the door on a renaissance of the Soviet masterplan, but also on a wholesale introduction of Western concepts and structures. For the state and society, it is still a work in progress to find balance in the institutional landscape with regard to regional differentiation, the country's global ambitions, its path dependency from historical developments and the relevance of higher learning in the contemporary and future socioeconomic environment.

## NOTES

1. There are two forms of part-time education in Soviet and post-Soviet countries. Here we use correspondence courses to indicate the form of education in which students visit HEIs twice per year. Part-time education was also called “on-site education” (study without leaving the workplace).
2. The tertiary system includes both the higher education and secondary vocational education systems in Russia.
3. It should be noted that in Russia a satellite HEI operates as a representative of the parent HEI, but it is a separate (independent) legal entity. The ties and relationships with parent HEIs can vary from direct “supervision” to absolute independence.

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