HIGH PARTICIPATION SYSTEM OF HIGHER EDUCATION IN RUSSIA: STRATIFICATION BY THE STATE AND THE MARKET
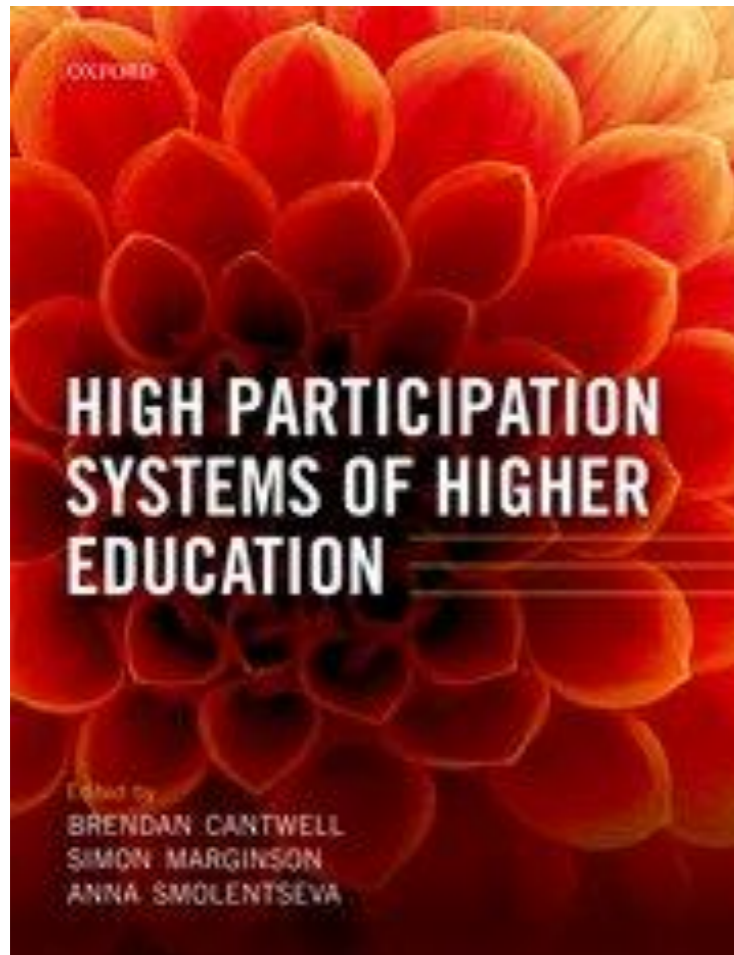
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- International non-funded project resulted in a book 'High Participation Systems of Higher Education' ed. by Brendan Cantwell, Simon Marginson and Anna Smolentseva. Oxford University Press, 2018.

- Part I of the book measures, maps, and explains the growth of participation, and the implications for society and higher education. Conceptual chapters theorize the changes in governance, institutional diversity, and stratification in higher education systems, the subsequent effects in educational and social equity.

- Conceptual findings are formulated as 17 theoretical propositions and then tested in the country case studies in Part II (Australia, Canada, USA, Poland, **Russia**, Finland, Norway, Japan)
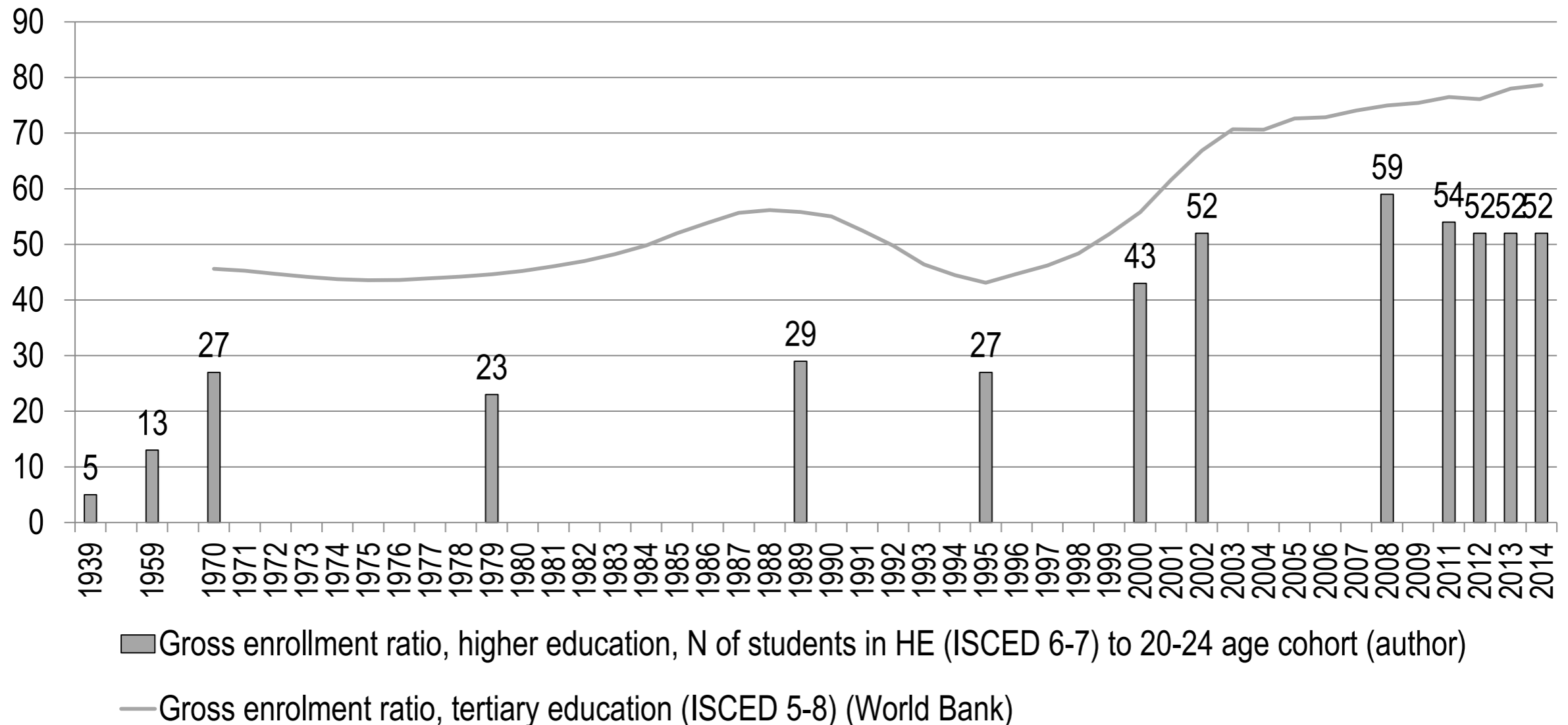
- This presentation is based on chapter on Russia

Enrolments and the number of HEIs

The expansion of public and non-state sectors of higher education: Number of HEIs and enrolments, Russia, 1950-2015
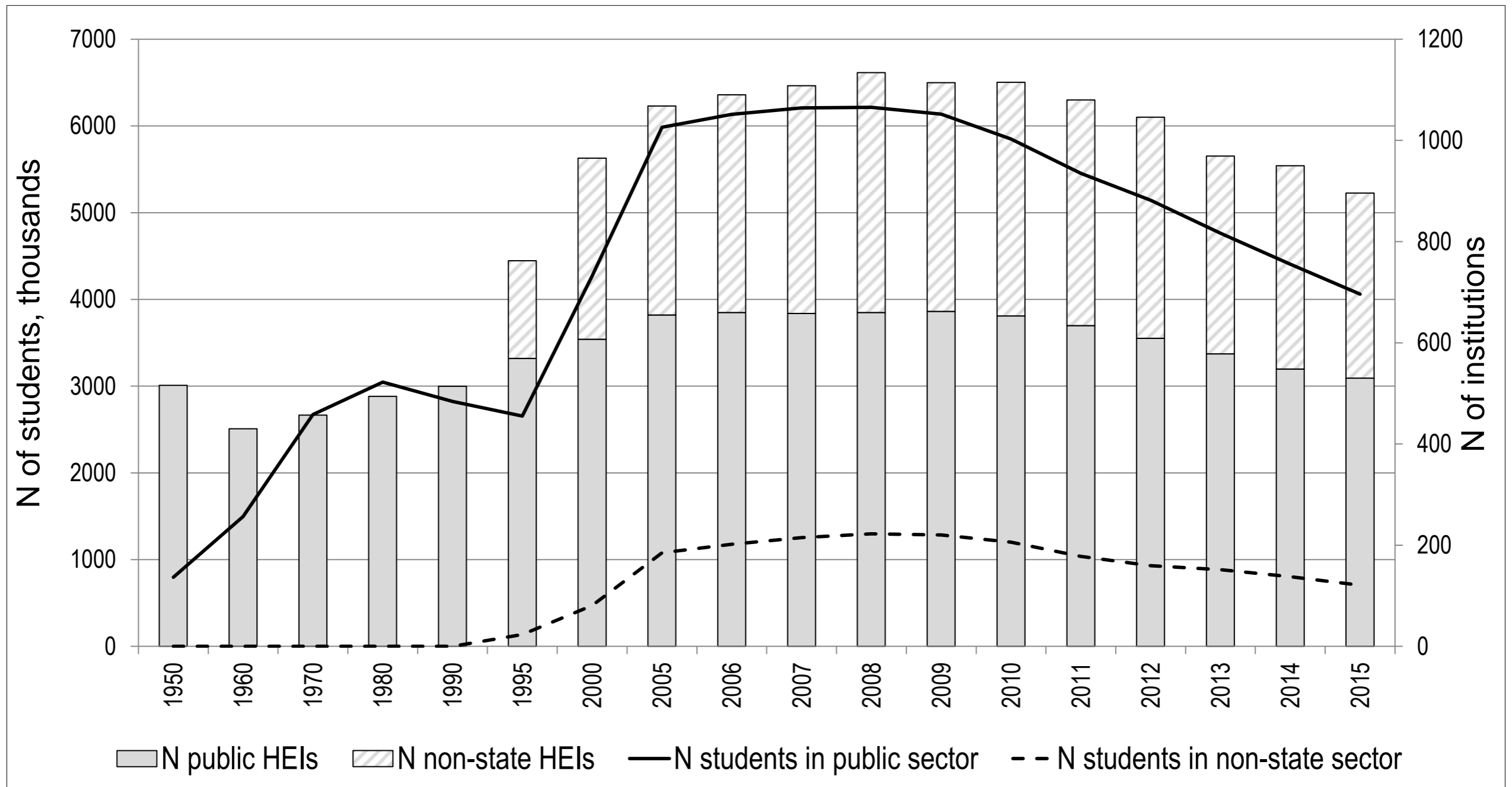
Gross enrolment ratio, Russian Soviet Federative Socialist Republic and Russian Federation, proportion of age cohort, (%)

Gross enrollment ratio, higher education, N of students in HE (ISCED 6-7) to 20-24 age cohort (author)

Gross enrolment ratio, tertiary education (ISCED 5-8) (World Bank)

- ISCED 5 is not higher education in Russia, although now HEIs run programs at this level.
- 40.5 per cent of the 25-34 age cohort held degrees (national micro-census of 2015), though there was a gap between men (34 per cent) and women (47 per cent).
- Coupled with adults still working towards their degrees, it is apparent that Russia might be close to achieving Trow's definition of 'universal' participation, meaning the HPS level of 50 per cent.

1. A combination of structural and agential factors in the Soviet period: large institutional systems of secondary and higher education + a high social value on higher education.

2. Structural transformation of the economy required a new map of occupations, skills and knowledge.

3. Economic returns to higher education were relatively high, especially for women, compared to the OECD countries (Gimpelson and Kapelyushnikov, 2011). Advantage over vocational degrees.

4. The break-up of the old social structures reinforced the need to maintain or strengthen one's status and life chances. Higher education had become a social norm (Konstantinovsky, 1999; Dubin et al., 2004; Shishkin, 2004).

5. Supply-driven nature of quasi-markets in education: HEI expanded the number of places.

Higher education as a positional good providing a relative advantage (Hirsch, 1976; Marginson, 1997) as a means of advancing, securing or hedging status and income

Number of tuition free and tuition paying students in public and private sectors, 1995-2015, thousands of people
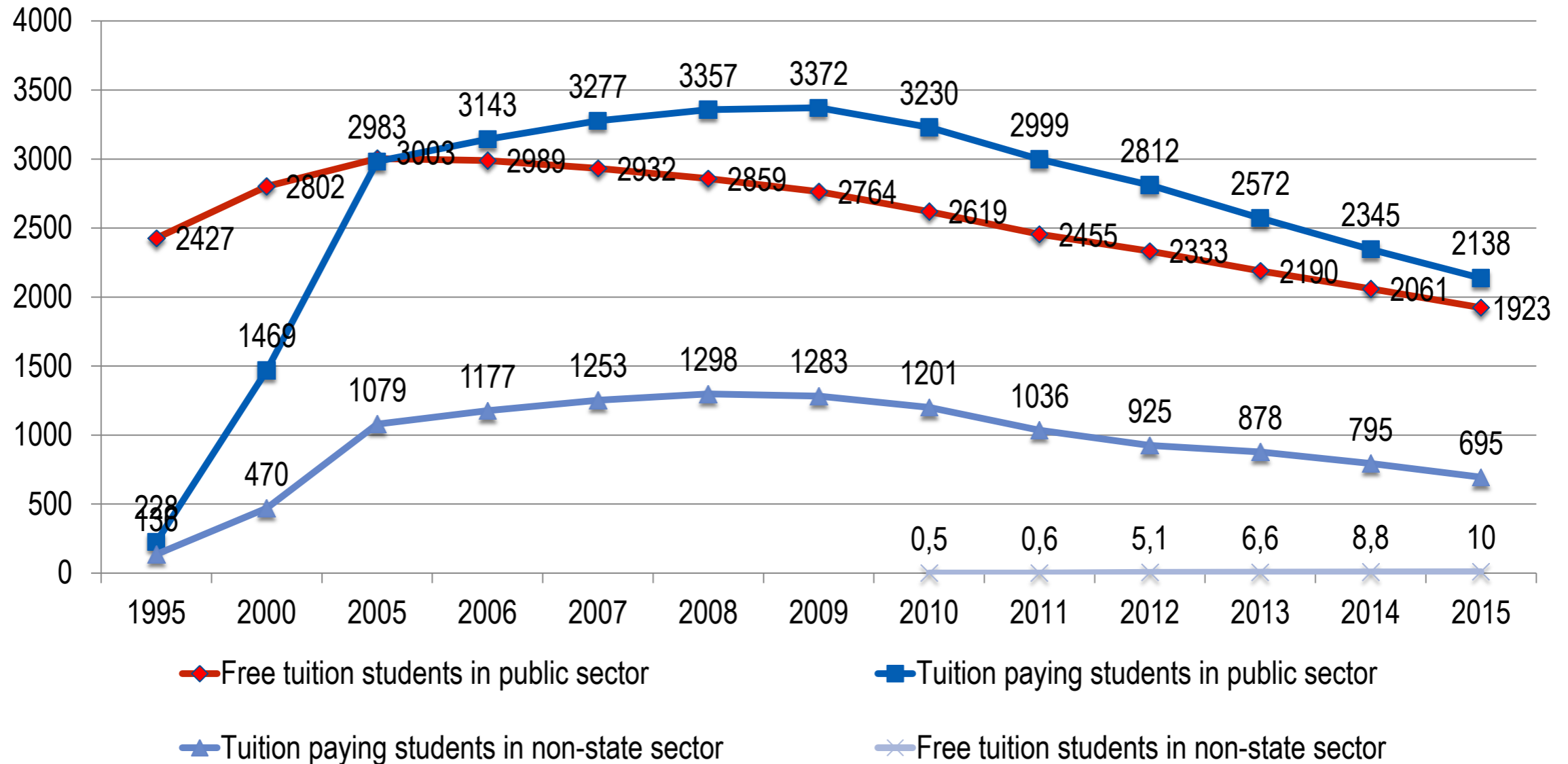
Source: Authors using data from Federal Statistics Service, Indikatory obrazovania 2017 (2017).

In HPS there is no intrinsic limit to the spread of **family aspirations** for participation in higher education until universality is reached; and no intrinsic limit to the level of social position to which families/students may aspire.

Once transition from a primarily agricultural economy is achieved, the long-term growth of High Participation Systems (HPS) **is independent of** political economic factors such as economic growth and patterns of labour market demand, patterns of public and private funding of higher education, and the roles of public and private institutions; and system organization and modes of governance.

Governance: centralisation, not multi-level

Distribution of public HEIs by subordination, 2015

	Number of HEIs, main campuses	Share of HEIs, main campuses, %	Number of HEIs, main and branch campuses	Number and share of students in total number of students
Ministry of Education and Science	261	50.8	668	2.6 million (66.7%)
Regional and municipal authorities	49	9.5	63	0.1 million (2.6%)
Various federal ministries and agencies, including the government of the Russian Federation	204	39.7	405	1.2 million (30.7%)
Total	514	100.0	1136	2.9 million (100%)

Source: Authors using data of Monitoring of performance, 2016

Funding of higher education institutions by source, 2015

Sources of funding	Public HEIs, %	Non-State HEIs, %
Public/budget, total	60.8	2.9
federal	57.8	2.4
regional	2.8	0.3
local/municipal	0.2	0.2
Industries	12.1	14.6
Individuals	24.1	79.3
Off-budget	1.7	0.8
Foreign	1.4	2.3
Total	100.0	100.0

Source: Authors using data Federal Statistics Service.

- Higher education governance reflects the old Soviet control pattern of a centralized top-down federal system.

- The timely development of the new public management facilitated 'steering from the distance'.

- The current policy goals are efficiency, excellence, matching higher education to the labour market and enhanced international visibility. Regulation is reducing the number of HEIs.

- Government-devised indicators, graduate employment and international rankings have added to the existing control mechanisms.

Horizontal diversity: decline of external (between HEIs) institutional diversity, rise of internal diversity

A multiversity becomes a dominant form

Type	Features	Number of HEIs	Share of HEIs	Share of students
Public research universities	Diversified fields, research-productive, selective, MA level, attract fee-paying students, mostly Moscow, St Petersburg	22	3%	4%
Public regional universities	Very large, diversified subject mix, selective, large part-time, large state support, some R&D	84	11%	32%
Public specialised HEIs	Small, highly selective, highly specialized, full-time, mostly medical	88	11%	8%
Public mass universities	Diversified subject mix, selective, large part-time, large state support, do not attract fee-paying students	248	32%	36%
Non-state specialised HEIs	Specialization in popular programs	167	22%	5%
Non-state diversified HEIs	Diversified subject mix	95	12%	5%
Non-state part-time HEIs	Only part-time fee-paying students, very small, specialization in popular programs	68	%	10%
Total		772	091%	100%

Source: Adapted by authors from Platonova and Semyonov (2018); data from Monitoring of performance, 2015.

Bifurcation: gap between elite and non-elite sectors is increasing

- Several waves of governmental programs to select and support best institutions from 2006 onwards: innovations program, federal universities, national research universities, 5-100 global excellence initiative

- Public financial resources are redirected towards the elite group from the rest of the system

The allocation of the government subsidy for education to the HEIs under the Ministry of Education and Science, per cent

Year	Top HEIs	The rest HEIs
2013	38,1	61,9
2014	40,5	59,5
2015	42,5	57,5
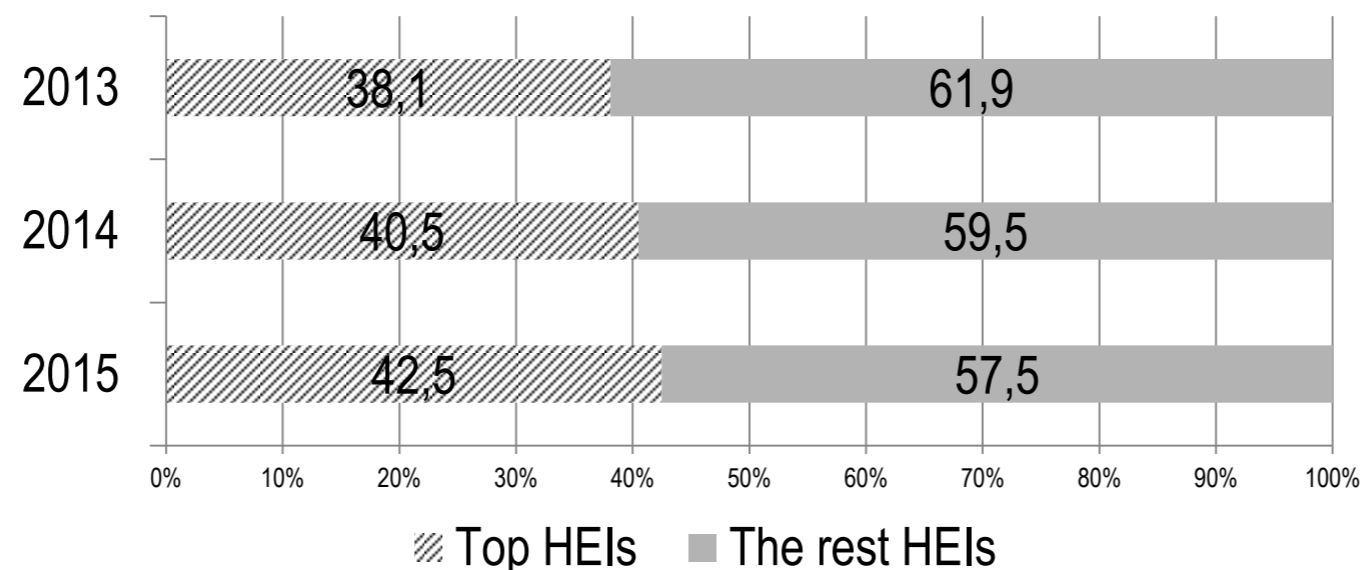
Source: Adapted by authors from Abankina et al., 2016.

Bifurcation: gap between elite and non-elite sectors is increasing

	All Leading (federal, NRU, 5/100, MSU, StPSU)	National Research (29)	5/100 (21)	Federal (10)	Non-Leading	Total public HEIs
Average income, million roubles	5627	4801	6445	5533	879	1311
Overall income per number of students, roubles	544,000	612,000	531,000	361,000	307,000	329,000
Share of income from federal budget %	63%	63%	64%	71%	57%	58%
Share of income from regional and municipal budgets %	6%	6%	6%	6%	8%	7%
Share of income from off-budget sources %	36%	36%	35%	28%	35%	35%
Income from off-budget sources, million roubles.	1988	1616	2278	1711	354	502
Average admission score, full-time, tuition free places	75	76	77	69	64	65
Share of income from educational activity %	56	53	52	61	78	76
Average amount of R&D, million roubles	1153	1218	1205	662	71	169
Share of income from R&D %	22	26	21	11	8	9
Citations in Web of Science over 5 years per 100 academic staff	297	364	422	78	99	117
Citations in Scopus over 5 years per 100 academic staff	316	378	422	104	103	122
Citations in Russian citation system over 5 years per 100 academic staff	635	626	819	505	567	573
Publications indexed in Web of Science 5 years per 100 academic staff	35	44	54	17	6	8
Publications in Scopus over 5 years per 100 academic staff	46	55	67	27	9	12
Publications in Russian citation system 5 years per 100 academic staff	192	182	203	215	179	181

Source: Authors using data from Monitoring of performance 2016.

Vertical differentiation

The position of middle layer of institutions tends to form, shaped by the combination of upward aspirations (drift) with systemic scarcity of resources and status.

How to identify the middle layer:

- 'public mass universities' (32% of HEIs, 36% of students): half are public HEIs with programs in multiple fields, relatively selective admissions, large governmental support and a high volume of part-time education (Platonova and Semyonov 2018)

- 'universities of good standing" : selective admissions, difficulties with research funding, rely on government funding for education, mostly classical universities and engineering institutions (Abankina et al 2016).

- 53 HEIs which experienced a decrease in total funding, R&D funding, incoming student quality, ageing of academic staff, deterioration of physical facilities. Most are comprehensive institutions, of average size (5-15,000 students), average income (601-2,000 million roubles) and average selectivity (Lisyutkin 2017)

- Elite sector established in the previous stage maintain their advantage (Trow 1973).

- Russian policy has helped to form a contemporary elite group built on older reputations and resources.

- A few elite HEIs maintain an advantage without being named in official programs; these specialize in prestigious fields (e.g. medicine, international relations, economics).

- Less is known about the middle tier and bottom tier demand-absorbing HEIs that enroll most students.
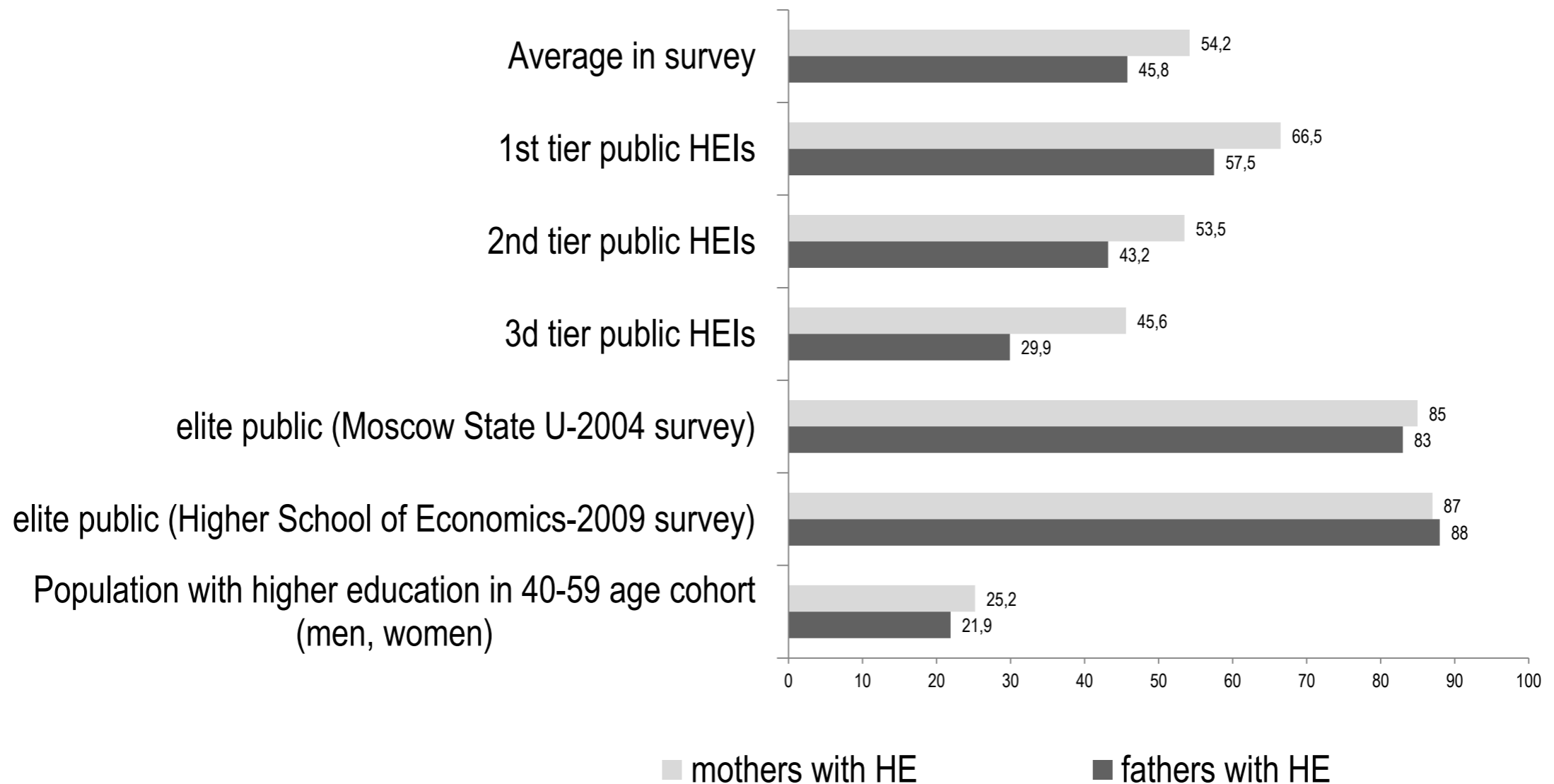
Social equity in the form of social inclusion increases
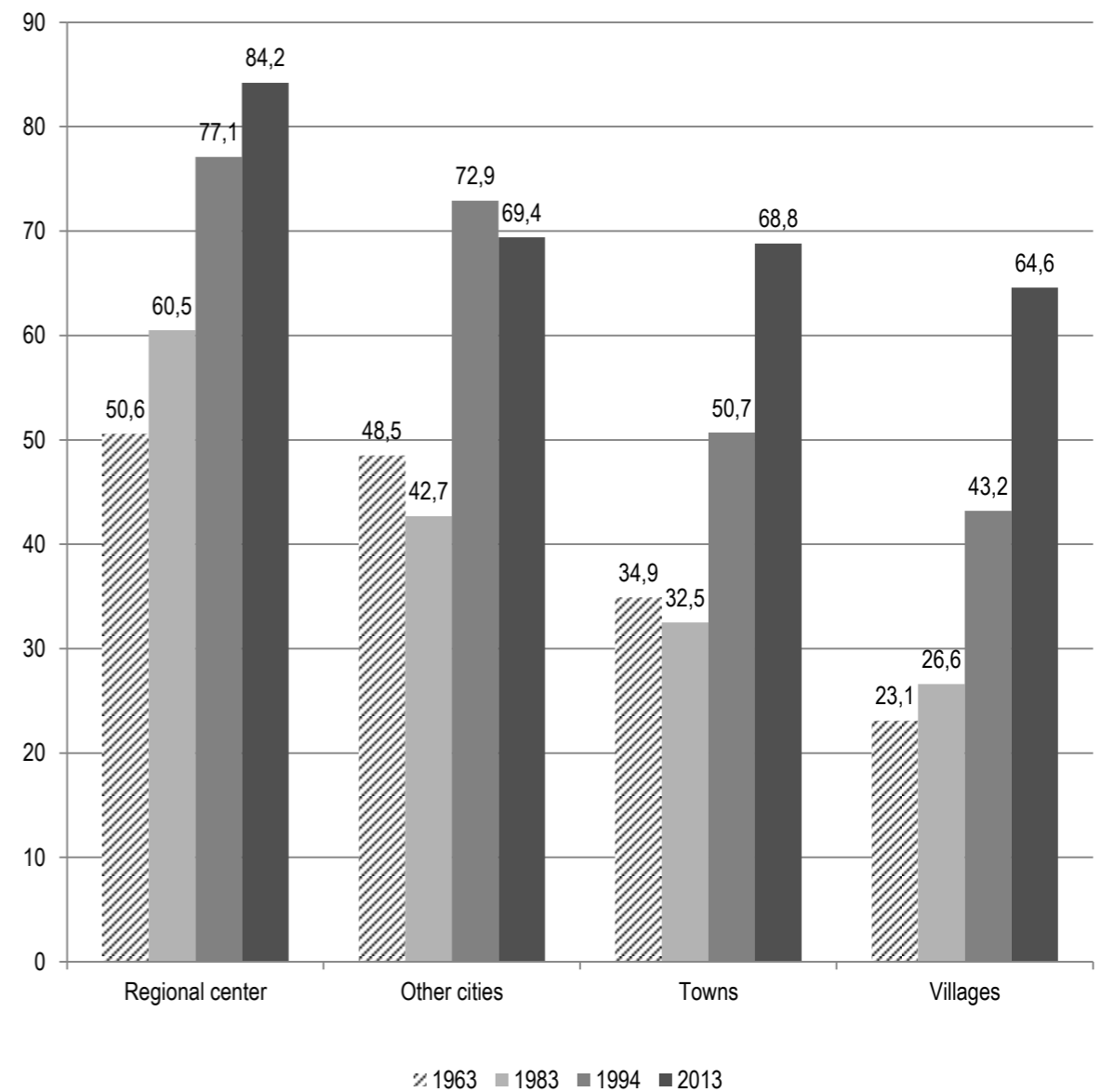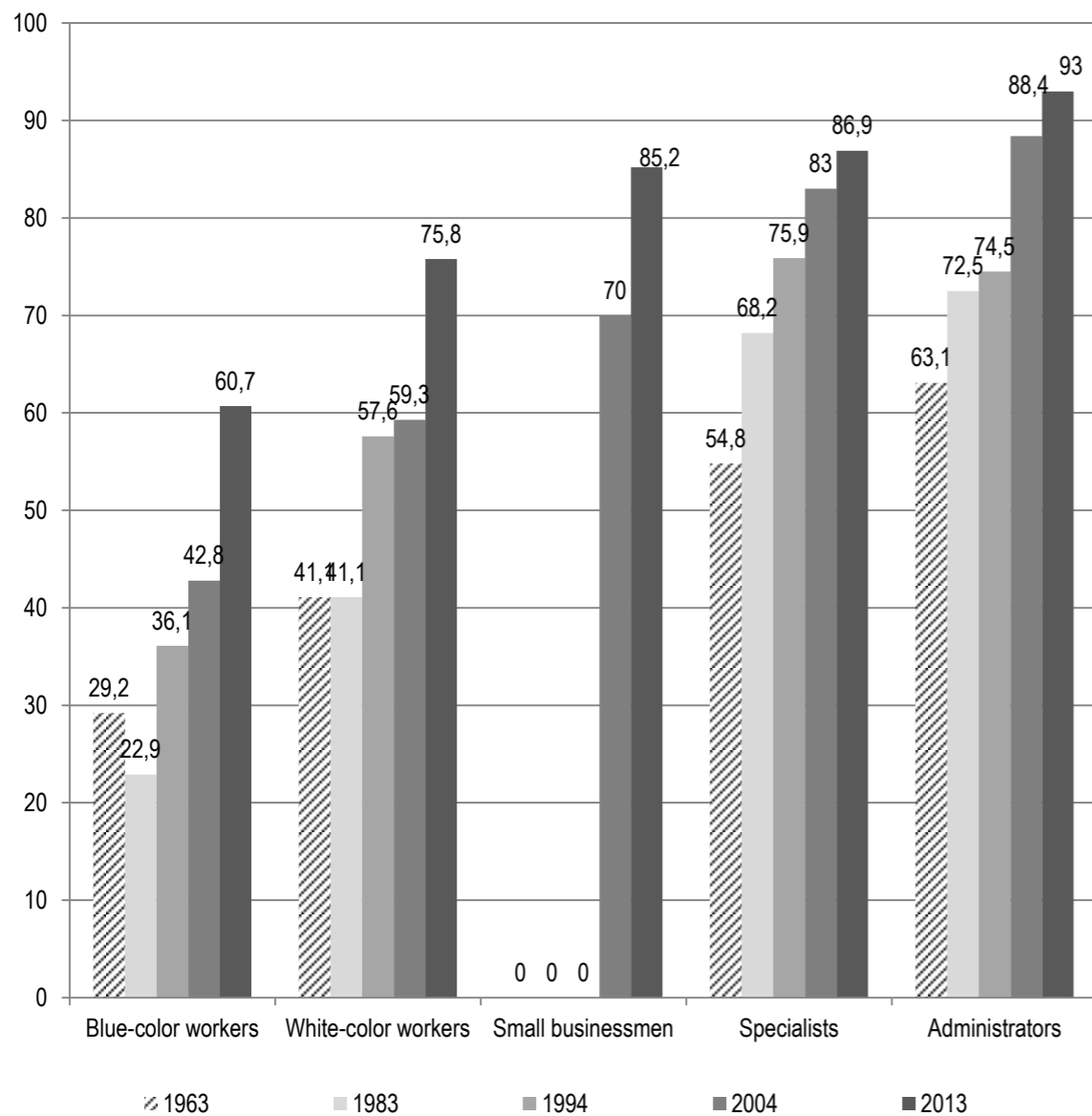
Source: Authors adapting from Konstantinovsky, 2017.

Social inequality on the basis of institutional stratification increases

Parental education of higher education students by HEIs tiers, % of students

Sources: Adapted from Smolentseva, 2017a. Tier is defined by the average national test admission score.

Equity: most selective/popular fields of studies

Field of study	Average test score of students admitted	Number of first-year students admitted	Field of study	Average test score of students admitted	Number of first-year students admitted
International relations	85.5	919	Healthcare/medicine	74.7	24,669
Art theory	83.9	225	Philosophy	74.5	507
Oriental and African studies	83.1	496	Philology	74.0	2370
Journalism and creative writing	79.9	1234	Cultural studies	73.7	354
Linguistics and foreign languages	79.8	2858	Public administration	73.1	1475
Law	79.1	6213	Applied art (painting, sculpture)	73.1	169
Advertising and public relations	78.8	879	Architecture and construction	73.0	3436
Political science	78.6	936	Management	72.3	7786
Economics	77.5	7913	Oil and gas	72.2	2095
Publishing	76.9	161	Choreography/dance	72.0	34
Design	76.6	1467	Information security	71.8	4085
Applied art (music)	75.7	239	Physics	71.8	4971
History	75.3	1746	Sociology	71.7	1924
Nuclear physics and technology	75.0	1089	Mathematics	70.4	9710
Business informatics	74.9	1668			

Equity of outcomes

	Graduate salaries in the first year (roubles), first degree full-time student graduates, full-time, roubles		
Average in Russia			31,041
Public HEIs			30,936
Cities and federal districts (first degrees)		Some HEIs (first degrees):	
Moscow	45,969	Vaganova Academy of Russian Ballet	82,746
St.Petersburg	35,855	Moscow Physics and Technics Institute	78,551
Far Eastern	31,757	Moscow State Institute of International Relations	66,150
Urals	29,389	NRU Higher School of Economics	62,490
Northern West	26,531	Gubkin Russian State Oil and Gas University (NRU)	60,097
Siberean	25,803	Moscow State Technical University of Civil Aviation	57,707
Central	24,884	Bauman Moscow State Technical University (NRU)	57,345
Volga	23,414	National Research Nuclear University "MIFI"	57,080
Sevastopol'	23,071	Pirogov Russian National Research Medical University	50,435
Southern	22,496	St.Petersburg National Research University ITMO	44,762
Northern Caucasian	18,597	Russian People's Friendship University	43,467
		Sechnov First Moscow State Medical University	42,679
		St.Petersburg State University	42,509
		Tomsk Polytechnic State University (NRU)	35,700
		Tomsk State University (NRU)	25,896

The present Russia HPS has been shaped by
- the Soviet legacy,
- post-Soviet marketization and lack of state determination of 1990s,
- post-Soviet centralized state control.

Established system is
- Centralized, no multilevel control, unlike other HPS
- Multidisciplinary universities as a dominant form, like other HPS
- Rather steep hierarchy of institutions shaped by the state policy and market competition as a state instrument, like other HPS, unless government intervenes (Nordic countries)