

Educational Migration of Young People and Optimization of the Network of Universities in Cities of Different Sizes

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Abstract As a result of measures related to the liquidation of inefficient universities and low-quality education, the university network in Russia in 2013–2019 has significantly changed its configuration. In particular, the total number of universities decreased by 42%, including parent universities by 23%, and branches by 56%. At the same time, the number of students decreased by 33% over the same period, the reform occurred during a period of demographic decline in the youth age cohorts. However, the consequences of the reform to optimize the network of universities could have a different impact on the structure of urban and regional higher education systems in different parts of the country. Most of the federal and departmental statistics describing the situation in the field of higher education, and, accordingly, the results of research, are presented at the national or regional levels. However, almost all universities are located in cities, and this key level from the point of view of spatial localization of educational institutions falls out of the pool of educational analytics and research. Large cities everywhere attract young people with a wide range of factors. One of them is the possibility of choosing a university and an educational program. Other factors are related to the quality of the environment and services, and the breadth and diversity of the labor market, which positively distinguish large cities from less populated places. The available data do not allow us to divide the migration attractiveness of the city for young people into those related to the presence of a university and the quality of educational services provided by it and

those related to other possible factors of attractiveness. However, we can analyze whether the representation of universities in cities of different sizes is correlated with their migration attractiveness, expressed in net migration indicators of 15–19-year-olds. The conducted research has shown that the cities with a population of over 250,000 people are the most attractive for migration and at the same time the least subjected to the reorganization of the university network. The concentration of universities in the largest cities of the country contributes to the strengthening of the centripetal migration of young people. Small towns have experienced the main consequences of the implementation of state policy measures aimed at improving the quality of higher education. For many applicants from small and medium-sized cities, having one university or branch was the only opportunity to get a higher education without leaving their hometown.

Keywords youth, higher education, youth migration, cities, universities, university network, optimization, educational policy.

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All over the world, the establishment of universities and the networks of universities is inextricably linked to urban development [Bender, 1988]. In the course of the development of the education systems and the functional specialization of cities, a de facto division in terms of university presence emerged between large cities, which housed large higher education institutions (HEIs) with a universal set of programs, and smaller towns, where the university often played a role of a growth center and shaped the image of the locality.

Under the Soviet system of facilities planning and siting, cities of different administrative status and size had a particular number and particular types of HEIs, so that educational institutions providing training in the most widespread professions were relatively evenly distributed across the regions of the country [Daynovskiy, 1973]. Parent institutions of higher education were located in the largest cities, primarily in the regional centers, and a wide branch network — in the secondary cities. The closure of some branches, whose education quality had been questioned even before the 2012 reform, has aggravated the problem of financial, social, and spatial accessibility of HEIs to the population. Ensuring accessibility of education is one of the major multifaceted challenges to the socio-economic development of the country, each of its regions, and individual cities — those with universities, those that no longer have them, and those that have never had any. The problem of accessibility of universities affects people of different ages — not only students but also their parents, of different wealth levels, and from different types of localities.

Participants in the discussion on the contribution of universities to the socio-economic growth of regions and individual cities agree that HEIs' influence on urban development is growing. HEIs and students are increasingly acting as placemakers within their territories. Young people who come to a city to study become an important part of its society. Such cities are sometimes called college towns [Gumprecht, 2003] as their landscape includes a university campus and youth infrastructure. In some cases, universities accelerate the recovery of urban economies [Goddard et al., 2014; Massey, Field, Chan, 2014], and have an impact comparable to that of gentrification [Smith, 2005; Revington et al., 2021]. The transformation of universities into a driver of the knowledge economy and a means of attracting talented youth has multiplier effects [Florida, 2005]. In particular, it contributes to the widening of human capital gaps and intensifies the spatial manifestations of the "Matthew effect" (further concentration of initial advantage) [Rigney, 2010] in the context of the massification of education [Hornsby, Osman, 2014].

In practice, it is difficult to separate the effects of student migration and the emerging university landscape from other factors of urban development. It can be difficult to say what comes first: the development of a university with its own campus, which stimulates the inflow of young people, or the influx of youth into the city that can provide them with a thick, diverse, and potentially attractive labor and leisure market, which is easier to access through educational channels and university infrastructure. The demographic consequences of universities' activities in their territories are visible and measurable: the influx of a young and motivated population has a positive effect on birth and death rates. At the same time, the inflow of such population to some territories substantially worsens the demographic and subsequently the social and economic situation in others, although this effect is not so evident due to its lower concentration.

On the one hand, the ability of large cities to provide quality education and attract young people is predetermined by Russia's existing settlement system and institutional factors that involve the concentration of all kinds of resources in the centers. Given the ongoing development and intensification of center-periphery gradients, and of spatial and demographic compression, it is impossible to imagine that the university network and educational migration of young people will ever start to deconcentrate. On the other hand, the excessive concentration of universities in capital cities can cause additional compression of inhabited space and reduce the availability of higher education in other regions of the country. As D.I. Mendeleev wrote in the early 20th century, "It is well known that Oxford, Cambridge, Heidelberg, and similar small cities, almost entirely dependent on the universities located there, have provided the

best breeding ground for the development of independent science in many countries, and <...> selecting such a place in our country would be useful in every respect.”¹

In developed countries, universities and their branches located in outlying settlements fulfill an important territorial and no less important social function by providing access to higher education for the residents of these territories, since most students, when choosing a place of study, still consider universities that can be reached within a few hours [Fonseca, Bird, 2007]. The evidence from international experience suggests that a significant proportion of students at universities located in remote areas are low-income local youth [Frenette, 2007], which is due to the fact that low-income families are not willing to bear the high cost of transportation for their children to get higher education, and if there is a university near home, they are more likely to choose the educational track for their children once they finish high school.

Thus, the migration behavior of young people is largely determined by the spatial localization of universities, but not predetermined by it: migration may or may not take place, may be long- or short-distance, in the direction of one’s “home” capital city or the largest city in another region. The diversity of educational migration trajectories is due to their dependence on a variety of factors and combinations thereof — from applicants’ personal characteristics, family composition, and its financial situation to the configuration of transport networks and unequal access to schools and tutor services [Chapman, 1981; Litten, 1982]. They have been long and comprehensively studied abroad, but have only recently come into the focus of Russian researchers [Varshavskaya, Chudinovskikh, 2014; Verbetsky, Friedman, 2016; Prakhov, 2015; Khavenson, Chirkina, 2018; Chirkina, Guseynova, 2021]. Moreover, educational migration itself in terms of its direction and intensity in the intra- and interregional educational space and in terms of its localization at the level of regions and municipalities has been analyzed only since 2011 [Gabdrakhmanov, Nikiforova, Leshukov, 2019; Kartseva, Mkrtchyan, Florinskaya, 2021; Kashnitsky, Mkrtchyan, Leshukov, 2016], when, after a change in the methodology of statistical recording, migration of people of the relevant age became “visible” in Russian statistics and these data became publicly available [Zakharov, 2020. P. 291–292].

Russian studies on the spatial organization of higher education and educational migration of young people, firstly, are scarce, and secondly, existed for a long time in parallel, separately from each other. In his work [2003], A.P. Katrovskiy summarized the So-

¹ Mendeleev D.I. (1995) *Zavetniye misli* [Cherished thoughts]. Moscow: Mysl. P. 286.

viets stage of the spatial organization of higher education in Russia, paying some attention to the educational migration of the population. The works of the researchers from the Institute of Education of the National Research University Higher School of Economics (HSE University) and the Russian Presidential Academy of National Economy and Public Administration conducted in the 2010s in this research area focus primarily on the analysis of opportunities for university development and universities' impact on regional economies [Belyakov, Klyachko, 2016; Leshukov, 2020]. They imply that the organization of the higher education system, including reforms aimed at changing the landscape of the university network, and migration flows are in alignment. However, this alignment obviously has its limitations, logic, and variability. The purpose of this paper is to analyze the migratory activity of young people in cities of different sizes, taking into account the availability of universities in them, as well as to examine the orientation towards educational migration among school leavers in such cities. To this end, we need to reach the following objectives:

- 1) provide an overview of studies into youth migration and key sources of information, including federal statistics and field research;
- 2) analyze the main indicators of youth migration in cities with different population sizes;
- 3) evaluate the concentration of universities and migration preferences of young people in cities with different population sizes;
- 4) discuss the consequences of the reduction of the university network in cities with different population sizes and different numbers of universities.

1. Data Used in the Study

In order to achieve the research goal, several sources and databases have been used:

- the database of the project “Cities and HEIs” carried out by the Institute of Education of HSE University allowed us to analyze the dynamics of the number of HEIs and their students across Russian regions and cities for the years 2013–2019. Relating these parameters to the population size of the corresponding territories can provide insights into the institutional trends in the organization of higher education across the country. Statistics at the level of individual cities have been collected and analyzed for the first time;
- data on the net migration of the population aged 15–19 across Russian municipal formations (municipal divisions) for the

years 2012–2019, obtained from the Rosstat (Federal State Statistics Service) Database of Indicators of Municipal Formations,² and the indicators of the intensity of age-specific net migration, calculated on their basis, make it possible to assess the migration attractiveness for young people of certain municipal formations, such as those with and without universities, and those with different population sizes. Using this information source has its limitations. First, it is a running record of migration events: the number of arrivals and departures includes migrants who are registered at their place of residence or stay for nine months or longer. Second, these migration events are recorded per municipal formations, instead of per localities (cities), and the two are not always identical. The way migration events are recorded and certain vagueness stemming from the connection of these events to territories (for example, the data can refer not to the city of Engels, but to Engelssky Municipal District) do not allow us to unambiguously interpret the changes in migration parameters captured by the statistics as trends in dynamics and associate them only and unambiguously with changes in the localization of HEIs;

- data from the survey of high school graduates conducted by the Center for Internal Monitoring of HSE University from June 23, 2020, to July 2, 2020. A quota sample used in the survey reflected the distribution of the general population by federal districts and by the indicator of the family's financial situation. The distribution of respondents by federal districts was as follows: Central — 25%, Northwestern — 9, Southern — 11, North Caucasian — 7, Volga — 19, Ural — 9, Siberian — 13, Far Eastern — 7%. The distribution of respondents by the indicator of the family's financial situation: "Not enough money even for food" — 2%, "Enough money for food, but buying clothes is problematic" — 10, "Enough money for food and clothing, but buying durable goods is problematic" — 35, "We can afford durable goods, but buying a new car is still impossible" — 39, "We can afford to buy almost everything, except an apartment or a dacha (country house)" — 10, "We can afford to buy everything, including an apartment or a dacha (country house)" — 4%. The survey was conducted on the Internet (using river sampling), with 3,230 people having filled out the questionnaire completely. A part of the answers was randomly excluded from the final array in order to meet the quota sampling criterion. As a result, the final array contained 3,000 responses from school leavers.

² <https://www.gks.ru/dbscripts/munst/>

2. Results

2.1. Youth Migration

Youth migration to a significant extent determines the overall landscape of population migration in the country. A sharp increase in the absolute numbers and intensity of movements begins at age 15 and continues over the next ten years. Similar to other countries, young Russians aged 18–25 are the most mobile population group (Fig. 1). Official statistics on arrivals and departures, along with field³ and sociological studies [Mkrtchyan, 2017; Odintsov, Shipitsin, Marchenko, 2020] confirm that young people are oriented towards relocation.

Figure 1. **The Number of Arrivals per 1,000 People of the Corresponding Age, Migration Within Russia, 2017–2019**



Compiled by the authors based on the Rosstat data.

Peaks of youth migration reflect the educational strategies of young people: 15–17-year-olds migrate intensively within their region to study in institutions of secondary vocational education, while 17–19-year-olds demonstrate more varied migration trajectories, which can be intra-regional, interregional, and even international. The ratio of intra- and interregional movements is determined by a combination of objective and subjective factors at the level of regions, particular localities, and families. They include factors that

³ Expedition of the Fund for Educational Innovation of HSE University “Return migration of youth to non-capital territories (the case of individual localities in Voronezh and Saratov Oblasts)”, August 17–28, 2021: <https://foi.hse.ru/openrussia/saratov-migration>; Expedition of the Fund for Educational Innovation of HSE University “Causes of the high level of out-migration from the Udmurt Republic”, June 27 — July 8, 2018: <https://foi.hse.ru/openrussia/udmurt-migration>; Expedition of the Fund for Educational Innovation of HSE University “Long-term and temporary migration in the eastern region of the country in view of the long-lasting influence of the ‘western drift’ (the case of Sakhalin Oblast)”, June 27 — July 11, 2021: <https://foi.hse.ru/openrussia/sakhalin-migration>

determine the attractiveness of a destination — the potential and opportunities for getting settled in a given locality, and the quality of life in it. As for educational migration, the most important factors determining its scope are the quality of school education, the availability of places at educational institutions, the family's ability to pay, ideas about which specialties are "good" and prestigious, and the attractiveness of migration destinations for long-term residence. For example, the expedition to Udmurtia in 2018 showed that the most prestigious migration destination for schoolchildren from Mozhga in the 2010s was Kazan, and later — the capital city of their home region, Izhevsk;⁴ the expedition to Voronezh and Saratov Oblasts in 2021 revealed that school leavers from Balashov, a city in Saratov Oblast,⁵ more often preferred Voronezh to Saratov, while schoolchildren from Kamen-na-Obi preferred Novosibirsk to Barnaul [Florinskaya, 2017].

The changes introduced in 2011 in the methodology of statistical recording of migration events [Mkrtchyan, 2017] do not allow us to analyze any long series of migration movements due to their non-comparability. In general, the movements of young people aged 15–19 are upward within the urban hierarchy [Plane, Henrie, Perry, 2005]. That is, schoolchildren from rural areas often go to neighboring small and medium-sized cities, schoolchildren who grew up in these cities move to regional centers, etc. In 2013–2019, 45–49% of all arrivals of 15–19-year-old migrants were recorded in regional capitals. This figure is substantially higher than the total share of 15–19-year-olds living in regional capitals in the total population of this age (38–39.4%). The ratio of these two indicators suggests a sustained interest in moving to regional capitals among young people, primarily those living in the corresponding regions. One of the main reasons for this interest is the availability in the regional centers of usually several universities, which allows applicants to choose a field of study, and gradually and with low costs start to adapt to the new city and get their footing in it [Karachurina, Florinskaya, 2019; Gabdrakhmanov, 2019].

If we evaluate the attractiveness of cities for young people as described above (by comparing the share of 15–19-year-olds coming to a given city and the share of 15–19-year-olds living in it in the total population of the country of this age), the most attractive cities would be St. Petersburg, Voronezh, Krasnoyarsk, Tomsk, and Ufa.

⁴ Expedition of the Fund for Educational Innovation of HSE University "Causes of the high level of out-migration from the Udmurt Republic", June 27 — July 8, 2018: <https://foi.hse.ru/openrussia/udmurt-migration>

⁵ Expedition of the Fund for Educational Innovation of HSE University "Return migration of youth to non-capital territories (the case of individual localities in Voronezh and Saratov Oblasts)", August 17–28, 2021: <https://foi.hse.ru/openrussia/saratov-migration>

Among non-capital cities with a population of more than 100,000 people, the most attractive ones would be Novocherkassk (Rostov Oblast), Sterlitamak (Bashkortostan), Novokuznetsk (Kemerovo Oblast), Ussuriysk (Primorsky Krai).

Among smaller municipal formations with at least one university, only Vsevolozhsky Municipal District of Leningrad Oblast stands out by this indicator. However, the attractiveness of this territory should not be attributed solely to the presence in Vsevolozhsk of a single small branch of the Russian State University of the Humanities. Migration to this area, as well as to Moscow Oblast, is largely due to intensive house building [Karachurina, Mkrtchyan, Petrosyan, 2021].

Negative net growth of the population aged 15–19 on average in 2013–2019 is found in 16 regional capitals, or 19% of this type of localities; for all other localities with HEIs, this indicator is 77%, and for all localities without HEIs, it is 94.2%.

Regional capitals with a negative net growth of young population are, except for Lipetsk and Pskov, either the capitals of the North Caucasian Republics, which traditionally have almost no interregional population inflow, or capitals of northern and eastern Russian regions, including Murmansk, Petropavlovsk-Kamchatsky, and Magadan, which have long been facing a steady migration drift. Almost all of these regions have few universities, so the outflow of young people is not surprising.

Among the non-capital municipal formations with HEIs, there is a group of 62 located less than 50 km away from regional centers. Thirty-five of them show a positive and in some cases an exceptionally high net growth of the young population. Suburbs of large cities are currently quite attractive for living, also for young people [Karachurina, Mkrtchyan, Petrosyan, 2021]. Such municipal formations are especially numerous in the suburban areas of Moscow and Leningrad Oblasts. Among the municipal formations with HEIs located in Moscow Oblast, the net increase in the young population is observed in 76.5% of localities with a population of over 100,000 people and 50% of localities with a population of less than 100,000 people. Among the localities without HEIs, the net growth is found in 33% of cases.

Moscow, St. Petersburg, and the regional centers in general are characterized by a steady net growth of the young population (Table 1). The cities of Moscow and Leningrad Oblasts, which are within the reach and zone of influence of the capitals, regardless of whether they have universities or their branches, are attractive migration destinations for the entire population, including youth. Relatively small population size and a non-capital status are factors that drastically reduce the migration attractiveness of a city, even if it has one or two small HEIs. At the same time, the absence of HEIs, regardless of the size of the city, is a factor contributing to the outflow of young people.

Table 1. Intensity Rate of Net Migration of 15–19-Year-Olds in Municipal Formations of Different Types, 2012–2019, %

	2012	2013	2014	2015	2016	2017	2018	2019
All regional centers	46.3	48.2	31.9	43.5	35.4	34.1	32.1	25.2
Moscow and St. Petersburg	45.3	44.1	27.2	54.0	39.8	53.1	42.7	33.0
Regional centers without Moscow and St. Petersburg	46.6	49.5	33.4	40.0	33.9	27.2	28.1	22.3
Moscow and Moscow Oblast*, St. Petersburg and Leningrad Oblast*	36.1	33.3	21.3	36.9	30.5	39.2	33.7	27.6
Cities with a population of over 100,000 people with HEIs (except Moscow and Leningrad Oblasts)	0.2	–2.4	–1.7	–9.4	–7.1	–8.4	–8.6	–4.0
Cities* with a population of less than 100,000 people with HEIs (except Moscow and Leningrad Oblasts)	–10.6	–16.8	–11.7	–21.3	–17.3	–20.7	–20.3	–12.1
Municipal formations without HEIs (except Moscow and Leningrad Oblasts)	–42.2	–39.4	–25.5	–30.2	–23.3	–21.9	–22.6	–15.4

* In some cases the data refer to the municipal districts that include these cities.

Compiled by the authors based on the data from the Rosstat Database of Indicators of Municipal Formations.

2.2. The Concentration of Universities and Migration Preferences of Young People in Cities with Different Population Sizes

Russia has one of the highest levels of participation in tertiary education in the world [Bessudnov, Kurakin, Malik, 2017]. According to the data of the Monitoring of HEIs' Performance in 2019,⁶ Russia has 1,218 HEIs, including 10 federal universities, 29 national research universities, and 21 universities participating in the "5–100" project. The enrollment in higher education programs in 2019 was 4,090,100 people, including 2,415,800 intramural full-time students, and 1,920,600 students studying at the expense of the state budgetary funds.

Furthermore, the majority of university students study in several largest cities, which indicates a high concentration of higher education. 35% of all HEIs are located in cities with a population of over 1 million people (Table 2), and more than half of all HEIs are concentrated in cities with a population of over 500,000 people. This same group of cities accumulates 70% of students, as larger cities also have larger universities. Fourteen cities with a million-plus population (Moscow, St. Petersburg, Kazan, Yekaterinburg, Rostov-on-Don, Novosibirsk, Voronezh, Ufa, Samara, Krasnodar, Omsk, Nizhny Novgorod, Chelyabinsk, and Krasnoyarsk) host exactly half of all Russian university students, which is more than 2 million people. Cities with 250,000–500,000 inhabitants account for 19% of all Russian HEIs, cities with 100,000–250,000 inhabitants — for 13% of all HEIs, and cities with less than 100,000 inhabitants — for 17%.

Parent universities, especially those located in cities with a million-plus population, are systemically important both for the regio-

⁶ <https://monitoring.miccedu.ru/?m=vpo>

Table 2. Breakdown of HEIs and Their Students by Cities With Different Population Sizes, 2019, %

City population	The proportion of the total number of HEIs	Including		The proportion of the total number of students
		parent HEIs	branches	
1,000,000 and more	35.1	50.3	15.8	49.3
500,000 to 1,000,000	16.4	17.2	15.3	20.1
250,000 to 500,000	18.9	17.9	20.1	17.9
100,000 to 250,000	13.1	8.6	18.9	7.3
Less than 100,000	16.5	5.9	29.9	5.4
Total	100.0	100.0	100.0	100.0

Compiled by the authors based on the Rosstat data and the data of the Monitoring of HEIs' Performance.

nal economy and for the higher education system. In 2019, Russia had 689 parent universities and 529 branches. Exactly half of the parent universities are located in million-plus cities. Their number in different groups of cities decreases as the population decreases and is minimal in cities with a population of up to 100,000 people: in 2013 they had 49 universities, and in 2019 — 42. Thus, we observe the ongoing concentration of HEIs in large cities with a potentially greater demand for higher education and better staffing of universities.

Until 2016, the branch network exceeded the network of parent universities by the number of institutions. Branches were created to provide access to higher education in remote areas. Performance indicators of the branches are usually lower than those of the parent university: branches have a lower enrollment, and poorer educational and research indicators. It is more difficult to ensure the proper level of education and to recruit qualified faculty in the branches. 70% of the branches are located in cities with a population of less than 500,000 people, and half of them are in cities with less than 250,000 inhabitants. Slightly more than a quarter of the branches are located in cities with a population of up to 100,000 people. At the same time, 88 branches operate in million-plus cities.

Regularly compiled rankings of student cities (e.g., QS Best Student Cities) usually include the largest of them. It seems not unreasonable to classify a locality as a student city based not only on the absolute number of students, but also on its ratio to the resident population, and to consider these cities in groups depending on the size of the resident population. By the end of 2019, Russia's student cities, or cities with the maximum share of students in the city population, include the following cities broken down by "weight classes":

- among cities with over 1 million inhabitants: Kazan, Rostov-on-Don, Voronezh, Yekaterinburg, and Ufa;

- among cities with a population of 500,000 to 1,000,000 people: Tomsk, Irkutsk, Krasnodar, and Saratov;
- among cities with a population of 250,000 to 499,000 people: Stavropol, Grozny, Simferopol, Belgorod, and Kursk;
- among cities with a population of 100,000 to 249,000 people: Maykop, Novocherkassk, and Khanty-Mansiysk.

Thus, the organization of the university network in Russia is such that young people from rural areas and small towns are forced to consider migration as a necessary step to obtain higher education. With the sharp increase in the supply of online programs and distance education sparked by the COVID-19 pandemic, the conditions of receiving higher education began to change. Yet today a significant part of the young population of remote regions and territories wishing to obtain higher education have to change their place of residence. Branches of universities play an important role in providing educational opportunities for residents of remote territories.

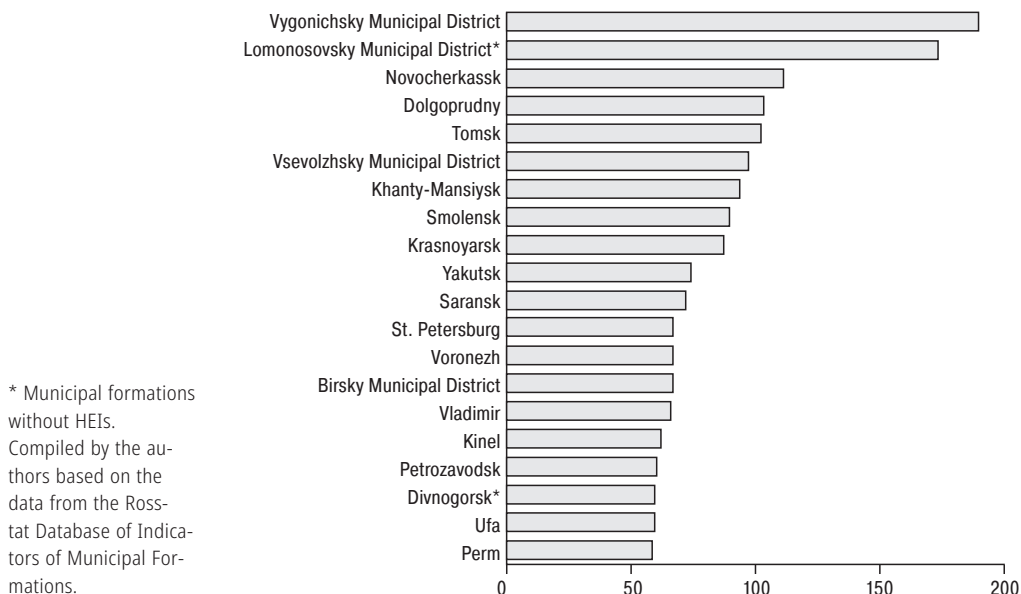
In 2013–2019, half of all 15–19-year-old students who changed their place of residence to continue their studies moved to 90–100 localities, or 4–4.5% of all municipal formations at the municipal district or urban okrug level. This group is formed by regional capitals (with few exceptions) and another 8–15 large cities, including Novokuznetsk (Kemerovo Oblast), Novocherkassk (Rostov Oblast), Sterlitamak (Bashkortostan), Balashikha (Moscow Oblast), and Ussuriysk (Primorsky Krai). Thus, the concentration of youth migrants is lower than that of students but is also very high.

The intensity of youth net migration is highest in municipal formations with HEIs. Among the top twenty municipal formations in this list, only two do not have any HEIs, namely Divnogorsk and Lomonosovsky Municipal District (Fig. 2), but these localities are situated in the agglomeration zones of university cities — Krasnoyarsk and St. Petersburg respectively.

In some cases, locating HEIs with special technological requirements for the educational process in municipal formations that are situated not far from regional centers and have a relatively small resident population, including young people, puts these municipal divisions at the top of the rating. One example is Vygonichi in Vygonichsky Municipal District of Bryansk Oblast, where one of the largest universities in the region, the Bryansk State Agrarian University, is located; another is Kinel with the oldest Samara State Agrarian University. However, the overwhelming majority of the leaders of the net migration intensity rating are regional capitals.

Thus, youth migration is centripetal [Mkrtchyan, 2017], contributing to the concentration of young people in higher education centers, large cities, and regional centers. Moreover, the spatial organization and the structure of the university network in Russia are

Figure 2. **The Intensity of Net Growth in the Population Aged 15–19 Years, Top Twenty Municipal Formations*, %, the Averages for 2013–2019**



such that in the vast majority of cases the above-mentioned characteristics coincide in one place. For instance, Voronezh, Tomsk, Krasnoyarsk, and Yakutsk are simultaneously large cities, higher education centers, and regional capitals with a high concentration of all kinds of resources.

2.3. Youth Migration from Cities with Different Population Sizes

The introduction of the Unified State Exam, as well as other changes in the admission rules of the Russian universities that make it easier for applicants from remote regions to be admitted to any university in the country [Francesconi, Slonimczyk, Yurko, 2019], have increased the number of non-resident university students: according to the federal statistical monitoring form VPO-1, on average, about 30% of students come from other regions. Digital footprint data indicate that young people remain oriented towards relocation [Gabdrakhmanov, Orlova, Aleksandrova, 2021]. In the present-day circumstances of Russia, the spatial and related factors still have a significant impact on the choice of an educational institution, with school leavers most often choosing or being forced to choose a university within their home region.

Obtaining education is one of the key “kick-off” events in life [Konstantinovskiy et al., 2011]. About 70% of university applicants who participated in a survey of HSE University consider higher education a necessity (Table 3). Furthermore, the survey did not reveal any significant differences in the value ascribed to higher educa-

Table 3. The Value Ascribed to Higher Education by School Leavers Living in Localities of Different Sizes

The population of the city/locality (thousand people)	Number of respondents (people)	Distribution of answers		
		I need higher education (proportion of respondents, %)	It would be nice to obtain higher education, but it is not a necessity (proportion of respondents, %)	I do not need higher education (proportion of respondents, %)
1000 and more	411	76.3	22.1	1.7
500 to 1000	237	76.5	22.1	1.5
250 to 500	432	65.5	32.8	1.6
100 to 250	350	70.0	28.0	2.0
50 to 100	307	75.8	22.1	2.1
10 to 50	472	73.4	24.5	2.1
Less than 10	725	71.8	26.3	1.9

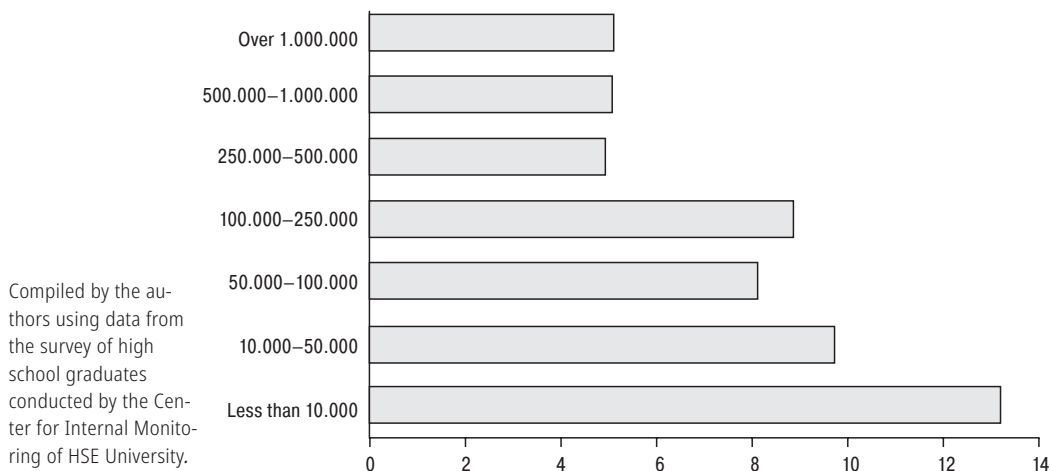
Compiled by the authors using data from the survey of high school graduates conducted by the Center for Internal Monitoring of HSE University.

tion by school leavers from the largest cities and those from small towns. Only 2% of respondents said that they do not need higher education.

Residents of different regions have different opportunities to obtain higher education. The reasons for that include differences in wealth levels, the presence of selective universities in the region, the spatial heterogeneity of the university network, and the quality of school education [Malinovsky, Shibanova, 2020]. The conditions prevailing in a particular region may impose limitations on the educational opportunities of local youth. The results of the surveys of school leavers on their educational plans after high school indicate that higher education remains a well-established social norm: almost all respondents who have completed all eleven grades plan to apply to a university. There are no significant differences between cities with different population sizes in the proportion of those who want to apply to an HEI, whereas the proportion of those who plan to apply to a college, a technical, or a vocational school to obtain secondary vocational education is significantly higher in the localities with a population of under 50,000 inhabitants (13%). Residents of densely populated cities are least likely to plan to enroll in institutions of secondary vocational education, with only 5% (Fig. 3). The popularity of the vocational track may be related to different levels of availability of higher education in cities with different populations.

When choosing a university, prospective applicants consider the quality of education at a given university, the possibility of studying for free, the tuition fee, and employment opportunities after gra-

Figure 3. **Orientation Towards the Vocational Track Among Residents of Cities with Different Population Sizes, %**



duction. Residents of small towns are still more likely than others to be guided by the availability of state-funded places at universities (Table 4): the effective demand for higher education in these towns is lower than in other types of localities. The proportion of those who plan to apply only for fee-paying places averages 2%.

Table 4. **The Value Ascribed to the Opportunity to Obtain Free Higher or Secondary Vocational Education by High School Graduates From Localities of Different Sizes**

The population of the city/locality (thousand people)	Number of respondents (people)	Distribution of answers		
		Only state-funded places (proportion of respondents, %)	Only fee-paying places (proportion of respondents, %)	Both state-funded and fee-paying places (proportion of respondents, %)
1000 and more	383	60.3	3.1	36.6
500 to 1000	219	65.4	4.6	30.1
250 to 500	405	71.1	1.5	27.4
100 to 250	317	70.0	1.9	28.1
50 to 100	292	65.3	2.4	32.3
10 to 50	445	69.5	1.3	29.2
Less than 10	689	70.9	1.6	27.5

Compiled by the authors using data from the survey of high school graduates conducted by the Center for Internal Monitoring of HSE University.

School leavers from cities with different population sizes differ in their readiness to emigrate for higher education (Table 5). Applicants from small towns and settlements mostly consider intra-regional migration. Financial constraints most likely play a critical role in this choice. Residents of million-plus cities have a wide choice of

educational institutions providing high-quality education so that they do not need to move anywhere. School leavers from cities with a population between 100,000 and 250,000 inhabitants are more likely than others to apply to HEIs located in other regions.

Table 5. The Geography of Educational Institutions in Which High School Graduates Plan to Continue Their Education

The population of the city/locality (thousand people)	Number of respondents (people)	Distribution of answers			
		The region in which I live (proportion of respondents, %)	Another region (proportion of respondents, %)	Another country (proportion of respondents, %)	No preferred HEI, college, technical, or vocational school (proportion of respondents, %)
1000 and more	388	69.8	24.0	2.6	3.6
500 to 1000	224	62.0	33.5	0.9	3.6
250 to 500	410	48.5	47.9	1.7	2.0
100 to 250	323	44.6	52.6	1.2	1.5
50 to 100	294	47.1	47.7	1.4	3.8
10 to 50	454	51.1	43.8	1.3	3.8
Less than 10	696	64.3	31.3	0.7	3.7

Compiled by the authors using data from the survey of high school graduates conducted by the Center for Internal Monitoring of HSE University.

Those who want to get higher education outside their home region mention primarily financial constraints, which do not allow them to pay for living in another city separately from the family and to pay tuition fees, as well as family reasons as obstacles to their plans (Table 6). School leavers from localities with less than 50,000 inhabitants more often than others mention the need to help their families as a barrier to educational mobility, while school leavers from million-plus cities more often than others refer to their unwillingness to live away from family and friends. Another major factor that keeps school leavers from million-plus cities from relocating is the possibility for them to quite easily find a job in their region after graduation.

The narrowing of opportunities to obtain higher education is often associated with its massification while the current higher education infrastructure remains unchanged. Higher education is no longer elitist, and more and more people from different socio-economic backgrounds can afford it. At the same time, most of those who first in the family intend to go to university usually consider HEIs in their locality or in its immediate vicinity, to avoid living far away from home and bearing the financial costs associated with it. Distance remains an important factor in choosing an HEI [Cullinan et al., 2013].

When considering the economics and logistics of education, locating universities in large cities seems obvious and reasonable:

Table 6. Barriers to Educational Mobility as Seen by High School Graduates From Localities of Different Sizes, %

	Localities by number of inhabitants (thousand people)						
	1000 and more	500 to 1000	250 to 500	100 to 250	50 to 100	10 to 50	Less than 10
No financial means to live in another region	71.0	66.9	61.7	66.5	70.3	70.0	65.8
No financial means to pay for education in another region	31.8	36.6	46.9	40.1	33.4	31.9	41.2
The passing scores in my region are lower	11.3	18.8	11.7	10.4	19.4	13.9	9.6
The competition for state-funded places in my region is lower	8.1	7.5	8.4	8.8	9.2	4.0	12.3
In my region, it is easier for me to find a job	3.1	7.6	8.3	1.7	5.6	4.0	13.1
I do not want to live away from family/friends	31.3	27.4	21.5	24.6	24.0	18.0	31.6
For family reasons (I need to help my family; my parents won't let me go to a university far from home)	20.9	26.6	26.5	21.1	16.7	22.1	30.7
For health reasons	0.0	0.9	3.3	1.9	0.0	2.0	2.6
Number of respondents	160	106	60	57	108	50	114

Compiled by the authors using data from the survey of high school graduates conducted by the Center for Internal Monitoring of HSE University.

HEIs are located where the demand for educational services is higher. Cities have a large number of young people, so the demand for higher education there is high. Attracting a large number of students is necessary for the financial stability of educational institutions. According to the data of the Monitoring of HEIs' Performance, in 2020 the share of income from educational activities in the total income of universities averaged 82%. The orientation of universities' activities towards demand is therefore understandable.

2.4. Consequences of the Reduction of the University Network in Cities With Different Population Sizes

During 2013–2019 a significant reduction of the university network took place, caused, on the one hand, by measures aimed at improving the quality of education, and on the other hand, by the demographic situation — a decrease in the total number of enrollments [Zakharov, 2022. P. 9–49]. The annual average number of Russians aged 15–19 in 2013–2019 was only 60% of the 2001–2010 annual average, while for those aged 20–24 that figure was 73%. The number of HEIs over time changed following a similar pattern: their total number decreased by 42%, of which parent universities — by 23%, branches — by 56%.

This reduction of the university network marked the most significant restructuring of the system of higher education in modern Russia and was due to the introduction in 2012 of the Monitoring of

HEIs' Performance. This instrument was developed in execution of the paragraph of the Decree of the President of the Russian Federation⁷ on "the monitoring of the activity of state educational institutions in order to evaluate their performance and the reorganization of inefficient state educational institutions". Mergers of HEIs' had taken place before (during the establishment of the federal universities' network or as proactive mergers), but these were rather occasional cases of HEIs' reorganization. Based on the objective quantitative data collected annually in the framework of the Monitoring of HEIs Performance, a list of HEIs showing signs of inefficiency was compiled. As a next step, a dedicated interdepartmental commission considered the reorganization options for these HEIs. In particular, in 2015, the commission decided to optimize the activities of 18 HEIs and 190 branches, as well as to reorganize 197 branches.⁸ In some cases, institutions of secondary vocational education were also involved in reorganization projects. According to researchers, the mergers of universities served, among other things, to optimize the resource base of the higher education system and individual universities [Romanenko, 2018].

The regional differentiation of higher education has intensified due to the structural consolidation of HEIs in the context of the reduction of the university network. During mergers, medium and large universities were joined by smaller HEIs and branches. As a result, HEIs became larger on average, providing more places for students. For instance, while in 2012 large state HEIs (with a student body of more than 15,000 intramural full-time students) accumulated 9% of all intramural full-time students of state universities, in 2016 this figure rose to 16% [Malinovsky, Shibanova, 2020].

During the restructuring of the university network, small and medium-sized cities with a population of up to 100,000 people experienced the greatest reduction in the number of HEIs: it has decreased by more than half (Table 7). Cities with over 500,000 inhabitants were less affected, but even in these densely populated cities, the university network was reduced by 30%. The reduction in the number of HEIs and their branches was carried out in different ways, among others, by joining a university or a branch to another university, which implied that the student body remained the same, at least at first. In this case, the institution changed its legal status but was not closed. Such reorganization affected to a lesser extent the ability of the resident population to obtain higher education "locally", in relative proximity to home.

The most affected by the dissolution of parent universities were million-plus cities and cities with a population of between 100,000

⁷ <http://www.kremlin.ru/acts/bank/35263>

⁸ <http://government.ru/orders/selection/405/17013/>

Table 7. Decrease in the Number of HEIs and in the Proportion of Students in the Total Population of Cities in 2013–2019 (Calculated as a Proportion of Their Number as of the Beginning of 2013, %)

	All HEIs	Including		The proportion of students in the total population
		parent universities	branches	
All cities	–42.2	–23.0	–56.2	N/A
Including cities with a population of:				
1,000,000 and more	–32.1	–27.0	–47.0	–24.2
500,000 to 1,000,000	–33.4	–17.0	–48.2	–27.9
250,000 to 500,000	–40.7	–16.4	–55.4	–34.8
100,000 to 250,000	–51.3	–26.5	–59.3	N/A
Less than 100,000	–56.5	–14.3	–61.3	N/A

Compiled by the authors based on the Rosstat data and the data of the Monitoring of HEIs' Performance.

and 249,000 people, where the number of HEIs decreased by a quarter. However, while in cities with populations of over 1 million, between 500,000 and 1 million, and between 250,000 and 500,000 inhabitants, the reorganization of HEIs mainly took the form of mergers, in cities with smaller populations, inefficient HEIs were most often completely dissolved. As a result, there were no more HEIs in several of such cities. For instance, in the city of Shakhty, Rostov Oblast, one university branch was left, while in both Orsk, Orenburg Oblast, and Nizhnekamsk, Tatarstan, there were two branches left. In cities with populations of 250,000–500,000 and up to 100,000 people, the number of parent universities decreased by approximately 15%.

Yet, the most profound changes occurred in the branch network. Less than half of the branches that existed in 2013 were retained. The reorganization most affected cities with up to 100,000 inhabitants, where the number of university branches decreased by 61%. Approximately the same number of branches were dissolved in the cities with a population between 100,000 and 249,000 people.

Cities in which both parent universities and branches were dissolved included Nefteyugansk in Khanty-Mansi Autonomous Okrug, Pervouralsk in Sverdlovsk Oblast, Novocheboksarsk in Chuvash Republic, Bataisk in Rostov Oblast, Novy Urengoy in Yamalo-Nenets Autonomous Okrug, and Zheleznogorsk in Krasnoyarsk Krai.

3. Conclusion

As places of knowledge production and centers of attraction for talented, highly motivated young people, universities contribute significantly not only to the socio-economic development of the country but also to the prosperity of cities. Reforming education systems can strongly support some Russian cities while creating

additional challenges for others. Universities and their branches located in remote regions of Russia perform an important social function, providing access to higher education for the local population.

During the optimization of the university network aimed at improving the quality of education in the period under consideration (2013–2019), the number of universities decreased by 42%: 23% of parent universities and 56% of branches were dissolved. The number of students decreased by 33%. This study showed that the reduction of the higher education system most affected the interests of small towns with a population of up to 100,000 people: more than half of university branches were closed there. As a result of the dissolution of parent universities, the opportunities to obtain higher education narrowed to the greatest extent in cities with 100,000–249,000 inhabitants: the number of HEIs there decreased by almost a quarter. Approximately the same scope of reduction was observed in cities with a million-plus population. Nevertheless, because these cities originally had a wider choice of universities and their educational network was transformed by university mergers, the reorganization did not directly affect the availability of higher education there. Moreover, the reorganization stimulated an influx of young people from smaller cities, where the university network had been heavily restructured, into the largest cities. The optimization of the university network took place in the context of a decline in the number of young people and the consequent reduction of the scope of migration in the student age cohorts. It is impossible to compare the dynamics of the migration process before and after the reform: the change in the methodology of migration recording in Russia in 2011 led to a sharp increase in the number of all recorded migrants, but primarily in student age cohorts, and made the data for the 2000s and 2010s incomparable.

Thus, the optimization of the university network took place amid a reduction in the size of the target audience due to a demographic decline. However, the projected growth in the number of young people aged 18–19 in the coming years along with the ongoing concentration of universities in an ever-narrowing group of the largest cities may exacerbate the problem of access to higher education — even if the willingness of school leavers to participate in educational migration remains unchanged. Our study shows the need for regular analysis of the accessibility of higher education for different youth categories and the migration intentions of school leavers in different regions of the country while taking into account their socio-economic development programs.

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References

- Belyakov S.A., Klyachko T.L. (2015) *Metodologiya otsenki vklada obrazovaniya v sotsial'no-ekonomicheskoe razvitie Rossiyskoy Federatsii i eyo sub'ektov* [Methodology for Assessing the Contribution of Education to the Socio-Economic Development of the Russian Federation and Its Subjects]. Moscow: The Russian Presidential Academy of National Economy and Public Administration.
- Bender T.M. (ed.) (1988) *The University and the City: From Medieval Origins to the Present*. New York: Oxford University.
- Bessudnov A., Kurakin D., Malik V. (2017) Kak voznik i chto skryvaet mif o vseobshchem vysshem obrazovanii [The Myth about Universal Higher Education: Russia in the International Context]. *Voprosy obrazovaniya / Educational Studies Moscow*, no 3, pp. 83–109. <https://doi.org/10.17323/1814-9545-2017-3-83-109>
- Chapman D.W. (1981) A Model of Student College Choice. *The Journal of Higher Education*, vol. 52, no 5, pp. 490–505. doi:10.1080/00221546.1981.11778120
- Chirkina T.A., Guseynova A.G. (2021) *Sotsial'naya differentsiatsiya obrazovatel'nykh planov pri postuplenii v vuzy. Monitoring ekonomiki obrazovaniya: informatsionny byulleten', vyp. 12* [Social Differentiation of Educational Plans for Admission to Universities. Monitoring of Education Markets and Organizations, iss. 12]. Moscow: HSE.
- Cullinan J., Flannery D., Walsh S., McCoy S. (2013) Distance Effects, Social Class and the Decision to Participate in Higher Education in Ireland. *The Economic and Social Review*, vol. 44, no 1, pp. 19–51.
- Daynovskiy A.B. (1973) Voprosy razmeshcheniya seti vuzov po ekonomicheskim rayonam strany [Issues of Placing a Network of Universities in the Economic Regions of the Country]. Proceedings of the *All-Union Scientific Conference "Methodological Issues of Planning and Forecasting the Development of Higher Education in the USSR"* (Moscow, 1973, April, 04–06), pp. 78–84.
- Florida R. (2005) *Cities and the Creative Class*. New York, NY: Routledge.
- Florinskaya Y.F. (2017) Vypuskniki shkol iz malykh gorodov Rossii: obrazovatel'nye i migratsionnye strategii [School Graduates from Small Towns of Russia: Educational and Migration Strategies]. *Problemy prognozirovaniya / Studies on Russian Economic Development*, no 1 (160), pp. 114–124.
- Fonseca J.W., Bird C.P. (2007) Under the Radar: Branch Campuses Take Off. *University Business*, vol. 10, no 10, pp. 8–14.
- Francesconi M., Slonimczyk F., Yurko A. (2019) Democratizing Access to Higher Education in Russia: The Consequences of the Unified State Exam Reform. *European Economic Review*, vol. 117, no 4, pp. 56–82. doi:10.1016/j.euroecorev.2019.04.007
- Frenette M. (2007) *Do Universities Benefit Local Youth? Evidence from University and College Participation, and Graduate Earnings Following the Creation of a New University*. Statistics Canada, Analytical Studies Branch Research Paper Series no 11F0019MIE–283.
- Gabdrakhmanov N.K. (2019) Kontsentratsiya studentov v sisteme vysshego obrazovaniya na karte Rossiyskoy Federatsii [Concentration of Students in Higher Education on the Map of the Russian Federation]. *RUDN Journal of Economics*, vol. 27, no 1, pp. 7–17. doi:10.22363/2313-2329-2019-27-1-7-17
- Gabdrakhmanov N.K., Nikiforova N.Yu., Leshukov O.V. (2019) *"Ot Volgi do Eniseya...": obrazovatel'naya migratsiya molodyozhi v Rossii* ["From the Volga to the Yenisei...": Educational Migration of Young People in Russia]. Moscow: HSE.
- Gabdrakhmanov N.K., Orlova V.V., Aleksandrova Yu.K. (2021) Migratsionnoe povedenie studentov rossiyskikh vuzov na osnove dannykh tsifrovyykh sledov [Migration Behavior of Russian University Students Based on Digital Footprint Data]. *Vestnik Tomskogo gosudarstvennogo universiteta / Tomsk State University Journal*, no 467, pp. 106–114. doi:10.17223/15617793/467/14
- Goddard J., Coombes M., Kempton L., Vallance P. (2014) Universities as Anchor Institutions in Cities in a Turbulent Funding Environment: Vulnerable Institutions and Vulnerable Places in England. *Cambridge Journal of Regions Economy and Society*, vol. 7, no 2, pp. 307–325. doi:10.1093/cjres/rsu004

- Gumprecht B. (2003) The American College Town. *Geographical Review*, vol. 93, no 1, pp. 51–80. doi:10.1111/j.1931-0846.2003.tb00020.x
- Hornsby D.J., Osman R. (2014) Massification in Higher Education: Large Classes and Student Learning. *Higher Education*, vol. 67, no 6, pp. 711–719. doi:10.1007/s10734-014-9733-1
- Karachurina L.B., Florinskaya Y.F. (2019) Migratsionnye namereniya vypusnikov shkol malykh i srednikh gorodov Rossii [Migration Intentions of School Graduates in Small and Midsize Towns of Russia]. *Vestnik Moskovskogo Universiteta. Seria 5, Geografia / Moscow University Bulletin. Series 5, Geography*, no 6, pp. 82–89.
- Karachurina L.B., Mkrtchyan N.V., Petrosian A.N. (2021) Prostranstvennye osobennosti migratsionnogo prirosta prigorodov regional'nykh stolits Rossii [Spatial Patterns of Net Migration in the Suburbs of Russian Regional Centers]. *Vestnik Moskovskogo Universiteta. Seria 5, Geografia / Moscow University Bulletin. Series 5, Geography*, no 6, pp. 123–134.
- Kartseva M.A., Mkrtchyan N.V., Florinskaya Y.F. (2021) Mezhhregional'naya migratsiya molodyozhi v Rossii i vystraivanie zhiznennykh strategiy [Interregional Migration and Life Strategies of the Russian Youth]. *Journal of the New Economic Association*, no 4 (52), pp. 162–180. doi:10.31737/2221-2264-2021-52-4-7
- Kashnitsky I., Mkrtchyan N., Leshukov O. (2016) Mezhhregional'naya migratsiya molodezhi v Rossii: kompleksnyy analiz demograficheskoy statistiki [Interregional Migration of Youths in Russia: A Comprehensive Analysis of Demographic Statistics]. *Voprosy obrazovaniya / Educational Studies Moscow*, no 3, pp. 169–203. <https://doi.org/10.17323/1814-9545-2016-3-169-203>
- Katrovskiy A.P. (2003) *Territorial'naya organizatsiya vysshey shkoly Rossii* [Territorial Organization of the Higher School of Russia]. Smolensk: Oykumena.
- Khavenson T., Chirkina T. (2018) Effektivno podderzhivaemoe neravenstvo. Vybory obrazovatel'noy traektorii posle 11-go klassa shkoly v Rossii [Effectively Maintained Inequality. The Choice of Postsecondary Educational Trajectory in Russia]. *Journal of Economic Sociology*, vol. 19, no 5, pp. 66–89. doi:10.17323/1726-3247-2018-5-66-89
- Konstantinovskiy D.L., Voznesenskaya E.D., Cherednichenko G.A., Khokhlushkina F.A. (2011) *Obrazovanie i zhiznennyye traektorii molodyozhi: 1998–2008 gg.* [Education and Life Trajectories of Youth: 1998–2008 Years]. Moscow: Center for Social Forecasting and Marketing.
- Leshukov O.V. (2020) Model' federal'no-regional'nykh otnosheniy v upravlenii vysshim obrazovaniem v Rossii [Model of Federal-Regional Relations in Governance of Higher Education in the Russian Federation]. *Economy of Regions*, vol. 16, no 1, pp. 201–212. doi:10.17059/2020-1-15
- Litten L.H. (1982) Different Strokes in the Applicant Pool: Some Refinements in a Model of Student College Choice. *The Journal of Higher Education*, vol. 53, no 4, pp. 383–402. doi:10.1080/00221546.1982.11780470
- Malinovskiy S.S., Shibanova E.Yu. (2020) *Regional'naya differentsiatsiya dostupnosti vysshego obrazovaniya v Rossii* [Regional Differentiation of Access to Higher Education in Russia]. Moscow: HSE.
- Massey J., Field S., Chan Y. (2014) Partnering for Economic Development: How Town-Gown Relations Impact Local Economic Development in Small and Medium Cities. *Canadian Journal of Higher Education*, vol. 44, no 2, pp. 152–169. doi:10.47678/cjhe.v44i2.183813
- Mkrtchyan N.V. (2017) Migratsiya molodyozhi iz malykh gorodov Rossii [The Youth Migration from Small Towns in Russia]. *Monitoring of Public Opinion: Economic and Social Changes*, no 1, pp. 225–242. doi:10.14515/monitoring.2017.1.15
- Odintsov A.V., Shipitsin A.I., Marchenko A. Yu. (2020) Tsentrostremiye naya migratsiya molodyozhi iz rossiyskoy provintsii: prichiny i tendentsii (na primere Volgogradskoy oblasti) [Centripetal Migration of Young People from the Russian Province: Causes and Trends (Example of Volgograd Region)]. *Monitoring of Public Opinion: Economic and Social Changes*, no 3, pp. 335–354. doi:10.14515/monitoring.2020.3.788

- Plane D., Henrie C., Perry M. (2005) Migration Up and Down the Urban Hierarchy and across the Life Course. *Proceedings of the National Academy of Sciences*, vol. 102, no 43, pp. 15313–15318. doi:10.1073/pnas.0507312102
- Prakhov I. (2015) Bar'ery dostupa k kachestvennomu vysshemu obrazovaniyu v usloviyakh EGE: sem'ya i shkola kak sderzhivayushchie faktory [Barriers Limiting Access to Quality Higher Education in the Context of the USE: Family and School as Constraining Factors.]. *Voprosy obrazovaniya / Educational Studies Moscow*, no 1, pp. 88–117. <https://doi.org/10.17323/1814-9545-2015-1-88-117>
- Revington N., Zwick A., Hartt M., Schlosser J. (2021) Universities and Urban Social Structure: Gentrification, Studentification, and Youthification in Five United States Legacy Cities. *Urban Geography*. doi:10.1080/02723638.2021.1985306
- Rigney D. (2010) *The Matthew Effect: How Advantage Begets Further Advantage*. New York: Columbia University. doi:10.5860/choice.48-2997
- Romanenko K. (2018) Universitetskie ob'edineniya: chto menyaetsya dlya studentov [University Mergers: The Implications for Students]. *Voprosy obrazovaniya / Educational Studies Moscow*, no 1, pp. 154–173. <https://doi.org/10.17323/1814-9545-2018-1-154-173>
- Smith D.P. (2005) "Studentification": The Gentrification Factory? *Gentrification in a Global Context: The New Urban Colonialism* (eds R. Atkinson, G. Bridge), London: Routledge, pp. 72–89.
- Varshavskaya E.Ya., Chudinovskikh O.S. (2014) Migratsionnye plany vypusnikov regional'nykh vuzov Rossii [Migration Intentions of Graduates of Russia's Regional Higher Educational Institutions]. *Moscow University Economic Bulletin*, no 3, pp. 36–58.
- Verbetsky A.D., Friedman A.A. (2016) Politika priema v vuzy i konkurentsia abiturientov [Universities Admission Policy and Student Competition]. *Economic Policy*, vol. 11, no 5, pp. 68–91. doi:10.18288/1994-5124-2016-5-04
- Zakharov S.V. (ed.) (2022) *Naselenie Rossii 2019. XXVII ezhegodny demograficheskiy doklad* [Russia's Population in 2018: 26th Annual Demographic Report]. Moscow: HSE.
- Zakharov S.V. (ed.) (2020) *Naselenie Rossii 2018. XXVI ezhegodny demograficheskiy doklad* [Russia's Population in 2018: 26th Annual Demographic Report]. Moscow: HSE.