

The Myth about Universal Higher Education: Russia in the International Context

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Abstract. It is widely believed that higher education in Russia has become almost universal and more people go to universities in Russia compared to most European countries. In this paper we explore this issue empirically with the Russian and European census data and the data from the Trajectories in Education and Careers (TREC), a longitudinal cohort study. According to the 2010 census, only 34% of people aged between 25 and 34 in Russia have university degrees, which is near-

ly the same as in most Eastern European countries and slightly fewer than in Western Europe. The TREC data show that only about 50% of 2012 ninth-grade graduates were university students in 2015. The expansion of higher education in Russia has been in line with the overall European trends. Similar to other countries, there have been changes to the gender composition of university students in Russia over the last two decades, with girls being more likely to attend university than boys. The analysis of social backgrounds of students with different educational trajectories reveals a considerable social inequality within the Russian education system. Eighty-four percent of school graduates with university-educated parents are admitted to university, as compared to only 32% of children from less-educated families. Graduation from ninth grade represents an educational fork that is crucial for inequality, as children from less socially advantaged families tend to opt for vocational education at this stage. Graduation from eleventh grade is a less important educational transition: at least 80% of high school students get admitted to university after graduating from 11th grade.

Keywords: educational inequality, education transition, higher education, longitudinal study.

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The belief that higher education in Russia has become almost universal is one of the most curious and important misperceptions shared by the public concerned as well as an essential part of the expert community. This belief has become almost axiomatic in recent years, being supported by a broad consensus, consistent with public expectations and instincts, and illustrated by out-of-context statistics in the best case. Experts disagree in assessing the scale of the “disaster”—rates of higher education attainment in Russia—sometimes going as far as an absurd 90%, as in the statements made by Sergei Ivanov, former Presidential Administration Chief of Staff¹, or Igor Kholmanskikh, Presidential Envoy to the Ural Federal District². Researchers keep up with politicians on this issue, always eager to incorporate the statement about universal higher education into their arguments [Klyachko 2016].

The increasing spread of higher education is often perceived from a regulatory, mostly negative point of view. Massification of higher education is no good because it implies degradation of education quality by default, as if it was under the law of conservation of matter. Mass higher education is a sheer waste of government funds that could be spent more wisely. In the end, massification causes structural damage to the economy: for example, the proliferating sector of Russian education is referred to as “malignant higher education” in an article by Vyacheslav Inozemtsev [Inozemtsev 2016].

So, why is this misperception so persistent? The myth of universal higher education in Russia originates from a number of sources. Some of them are related to social experience and intuitive reasoning of experts and the public at large, while others have to do with commonplace abuse of statistics. First of all, education is most often discussed by people from the most educated social tiers, where, indeed, nearly all high school graduates enroll in university. Secondly, participation in higher education is actually increasing in Russia just as in many other countries. Thirdly, many believe that higher education attainment rate corresponds more or less with the proportion of high school graduates enrolled in college, so about 40% of middle school graduates enrolled in trade schools and vocational colleges are simply left out. This article provides an insight into the extent to which Russians actually participate in higher education, whether these rates are high or not, and how they change and correlate with international practices.

The regulatory aspect of massification of higher education—both imaginary and real—is a complex phenomenon, which could make a

¹ Sergei Ivanov reports an excess of colleges in Russia / Interfax. June 16, 2016. <http://www.interfax.ru/russia/513813>

² Kholmanskikh calls on youth to give up on higher education / Interfax. June 18, 2012. <http://www.interfax.ru/russia/251046>

separate study. This paper provides a brief initial assessment of the correlation between participation rates in higher education and the economic structure. In doing so, it is necessary to keep in mind that it is not only purely economic effects but also the fundamental social and cultural mechanisms underlying the key institutional settings of today that education is associated with.

The flip side to this myth is the lack of attention to transitions after middle school, i. e. at the first formal fork of trajectories in Russian education. This article shows that the middle school graduation fork is a more important factor of social inequality than the stage of moving from high school to college. The article provides a close analysis of these two transitions and their effects, contemplating the institutional, social and economic mechanisms behind the choices made by people on the threshold of their career trajectories.

The article is structured as follows. First, we discuss the literature on the massification of higher education in Russia and abroad as well as social inequality in Russian education. Further on, we analyze Russian and EU census data to compare the proportions of the college-educated population. The next part confirms the key findings using the longitudinal study Trajectories in Education and Careers (TrEC) and probes the social inequality that manifests itself during transitions at different levels. In the conclusion we try to figure out to what extent the existing stereotypes about higher education in Russia describe reality.

Massification of higher education and educational inequality in Russia and abroad

As the data analysis shows below, massification of higher education is not an exclusively Russian phenomenon. Martin Trow was among the first to address this issue [Trow 1974]. He divided higher education into three tiers—elite (up to 15% of the relevant age grade), mass (15–50%) and universal (over 50%)—and showed how mass and universal higher education comes to replace the elite system in developed countries³. Trow also analyzed how the spread of mass higher education affected the role and structure of university and social inequality in education [Trow 2007]. In particular, he established that as higher education systems expand, social inequality manifests itself not only in access to higher education but also in the quality and standards of universities entered by students from different social strata. In this regard, his approach is consistent with the conception of effectively maintained inequality offered by Samuel R. Lucas [Lucas 2001].

Evan Schofer and John W. Meyer performed a statistical analysis of international data to find out the reasons for the global expansion of higher education in the second half of the 20th century [Schofer, Mei-

³ However, Trow argues, elite educational institutions are preserved despite the spread of mass and universal education.

er 2005]. Expansion of higher education is a global trend whose rates of growth accelerated in developed countries in the 1960s. Higher education systems grew more rapidly in countries with a greater expansion of secondary education, i. e. where more secondary graduates were willing to enter college. Strong governmental control over higher education slowed down the expansion, all other factors held equal. The rates of growth accelerated in virtually all developed countries at the same time, which Schofer and Meyer explain by not so much economic reasons as the global spread of the new societal model based on democratization, scientization and national development planning. Patricia Yu and Jennifer Delaney carried out a cross-country analysis of the factors affecting the spread of higher education based on the new data for 1999–2015 [Yu, Delaney 2016] to arrive at conclusions similar to those made by Schofer and Meyer.

The expansion of higher education and associated socioeconomic inequality in Russia have been analyzed by Anna Smolentseva. In her research, she draws from Trow's conception of massification of higher education. Extramural education, or evening classes, has become the driving force for this process in Russia. The proportion of students enrolled in this type of higher education was 42% in the Soviet Union, and now it has increased to 53% [Smolentseva 2017:216]. Another factor that provoked the spread of higher education was the introduction of tuition-based educational services, in particular by public colleges. Tuition fees are paid today by 61% of college students [Ibid.:212]. Smolentseva concludes that expansion of higher education has only partly reduced the inequality in access to it between groups with different socioeconomic backgrounds, as high-end universities attract students from more educated families.

Ilya Prakhov [2015] shows that the Unified State Examination has not ensured equal access to quality higher education. The choice of a selective college (with competitive admission to government-funded places and high quality of teaching) is determined not only by universal state examination (USE) scores but also by the socioeconomic status, the type of secondary school completed, and the amount invested in preparation for the USE. Student populations differ in their social and educational backgrounds across colleges of different selectivity. That is why, despite massification of higher education, access to quality higher education is limited for students from families of low socioeconomic status.

Publications by American and Russian sociologists reveal that the level of social inequality in access to education was rather high in the Soviet Union, contrary to the popular myth [Gerber, Hout 1995; Konstantinovskiy 2012]. According to Theodore P. Gerber [Gerber 2000], social inequality in access to high school increased in the 1990s, while accessibility of higher education remained the same.

Longitudinal data indicate that inequality in access to higher education develops gradually, as students move along their education-

al trajectories, and affects future careers [Konstantinovskiy 2012; Kosyakova et al. 2016]. A panel study of high school graduates in Novosibirsk Oblast (1998–2008) shows that the type of educational institution that respondents graduate from “at the start” has a great impact on subsequent career trajectories [Konstantinovskiy et al. 2011; Cherednichenko 2014]. A great deal of socioeconomic inequality is observed at the stage of transition from middle school, children from more advantaged families being more likely to move to high school than to opt for vocational education.

Studies based on the Trajectories in Education and careers (TrEC) data find that students from more educated and affluent families tend to enter the “academic track” of moving from middle to high school. Both primary and secondary effects of social inequality manifest themselves in this transition. Children from more advantaged families show on average better academic achievements (primary effects); however, among children with similar levels of knowledge and competencies, the chances of getting onto the “academic track” will still be better for children from families with higher socioeconomic status (secondary effects) [Bessudnov, Malik 2016; Kosyakova et al. 2016]. Other factors also contribute to the accumulation of socioeconomic inequality, such as the choice of schools with differing teaching standards and education programs (gymnasium, lyceum, specialized school, or regular school) by representatives of different social strata [Kosyakova et al. 2016].

A number of studies explore trajectories of students outside the conventional “academic track” (from high school to college), who nevertheless engage or plan to engage in higher education. For instance, many middle school graduates first go to vocational schools and then to college. The popularity of this trajectory, as Daniil Aleksandrov and his co-authors believe, is explained by the desire to alleviate risks and get easier access to college without taking the USE exam. This strategy is typical of average performers from regular schools, whose families seek to enhance their social status despite their limited socioeconomic and educational resources [Aleksandrov, Tenisheva, Savelyeva 2015].

Another publication studies young workers aspiring for higher education [Voznesenskaya, Cherednichenko 2012]. Most young workers from low socioeconomic and educational backgrounds keep to “horizontal” trajectories, showing more concern for stability and no motivation to pursue higher education. Using interviews with another group of workers—with college degrees or still enrolled in college—the authors demonstrate that obtaining higher education while working full time has no significant effect on career trajectories if not supported with other resources, yet it becomes a personal and cultural social resource for career advancement with the current employer.

How many people in Russia have college degrees

Most declarations on the universal nature of higher education in Russia draw from the OECD statistics [OECD2012], which claims that 54% of the Russian population aged 25–64 has completed *tertiary education*. The term *tertiary education* is often translated into Russian as “higher education”, which is inaccurate as OECD statistics brings together college-educated people and vocational school graduates. Russia’s higher education is classified as ISCED5A according to the international standards, while vocational education corresponds to ISCED5B. In fact, Russia would not be in the top of this specific ranking of OECD countries if it was not for the wide spread of vocational education. However, bringing together graduates from vocational schools and colleges is incorrect in the light of the Russian education system’s characteristics. The OECD uses national data for its reports and has no independent sources of its own.

So, how many people with university degrees are there in Russia? According to the 2010 census, which is the most comprehensive source of data on the Russian population, 27% of people aged between 25 and 64 hold university degrees, 3% have certificates of incomplete higher education (having dropped out of university), and 36% have diplomas of vocational schools. The proportion of the university-educated population is higher in the age cohort of 25–34-year-olds, comprising 34%. Yet, even this latter rate is far below those reported by the mass media.

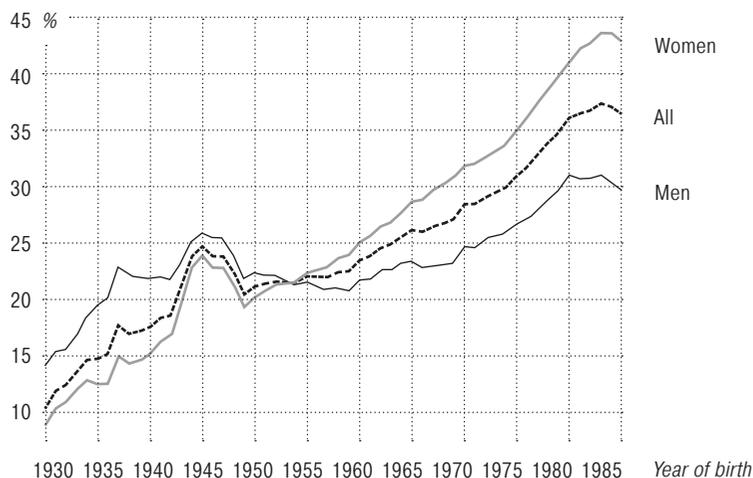
Figure 1 presents the proportions of university-educated men and women in different age cohorts based on the 2010 census. The graph indicates that the percentage of the university-educated population was constantly growing throughout the postwar period. This growth is especially noticeable beginning from the cohort of those born in 1960, who mostly obtained higher education in the late 1970s–early 1980s. Therefore, expansion of higher education started back in the Soviet times and cannot be regarded as an exclusive attribute of the post-Soviet period. Moreover, as shown below, it has been perfectly in line with the global trends⁴.

Another trend that follows from the graph is the increasing gap between the rates of university-educated men and women. Men used to obtain higher education more often than women in the cohort of those born before 1955. However, the situation is reverse in younger cohorts, the gap constantly growing and reaching its peak of 10% in the cohort of the population born in 1980. This trend is not specific of Russia either, as shown below.

Many people look to their immediate experience and social environment instead of statistics when developing their opinions about social problems and facts. The proportions of children enrolling in univer-

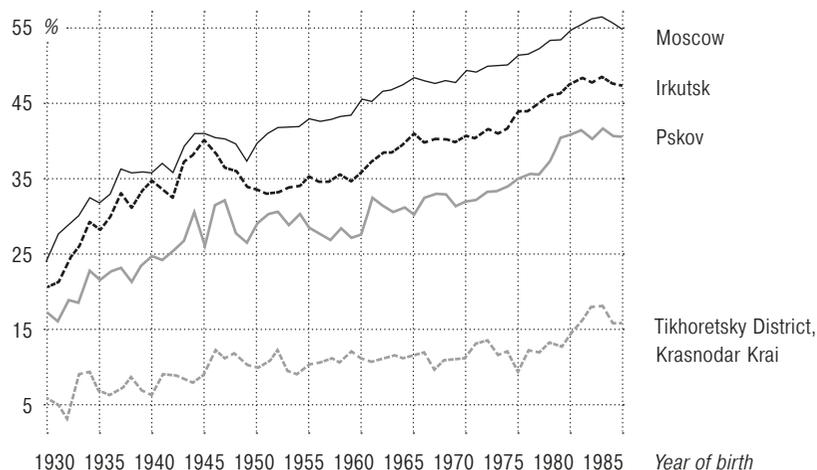
⁴ small decrease in the proportion of university degree holders in the youngest cohorts is explained by the fact that some representatives of those cohorts were still enrolled in college in 2010.

Figure 1. **Proportions of college-educated population in different age cohorts** (*Percentage of university-educated population*).



Source: 2010 Russian census.

Figure 2. **Proportions of college-educated people in the population of four regions of Russia** (*Percentage of university-educated population*).

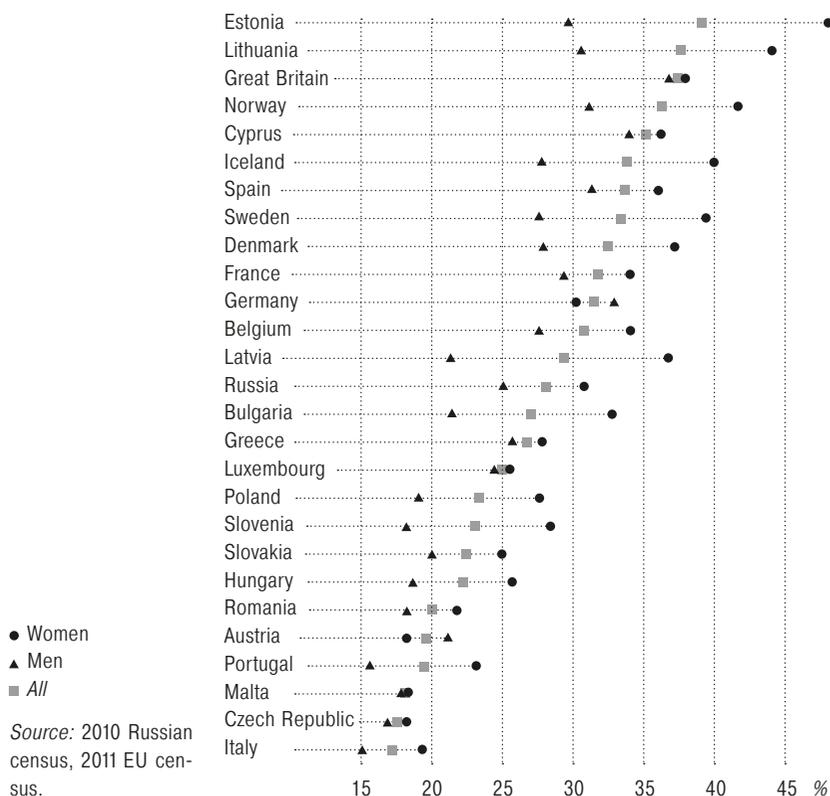


Source: 2010 Russian census.

city are considerably higher in large cities and educated families than Russia's average rates. Figure 2 shows how the proportions of university-educated people in the populations of Moscow, Irkutsk, Pskov and Tikhoretsky District of Krasnodar Krai have changed over time. These regions have been chosen to demonstrate the differences between a megalopolis, a large and small regional capital, and a rural locality.

However, one must be careful in interpreting this graph, as it shows the proportion of university-educated people living in the selected regions as of the 2010 census without any allowance made for

Figure 3. **The percentage of college-educated population among 25–64 year-olds in European countries.**



cross-regional mobility or mortality rates in senior cohorts. People from rural settlements who obtain higher education are likely to stay in the city after completing their education. Still, the graph reveals considerable differences in the percentage of university-educated people across regions. The larger the city, the more educated people make up its population. While the proportion of the university-educated population in young cohorts is over 50% in Moscow, it hardly reaches 20% in the Tikhoretsky District of Krasnodar Krai.

Is it true that Russia is far ahead of most other European countries regarding the rate of participation in higher education? Figure 3 provides data on the proportion of the university-educated population in the cohort of 25–64-year-olds in Russia (based on the 2010 census) as compared to other European countries (based on the 2011 EU census⁵).

As can be seen from the graph, there are wide gaps in university participation rates between the countries. On the whole, the rates

⁵ See <https://ec.europa.eu/CensusHub2/>.

are higher in more economically developed countries (United Kingdom, Scandinavia, Spain, France, Germany), yet there are exceptions to this rule, e. g. the rate is lower in Italy than in any other European country. Estonia and Lithuania show the highest percentage of university-educated people. The same two countries, along with Latvia, demonstrate the widest gender gap, women being much more likely to have university degrees than men. On the whole, the proportion of university-educated women is higher than that of men in all European countries except Germany and Austria.

Russia's university participation rate is lower than most developed countries, being at around the same level as Latvia, Bulgaria and Greece.

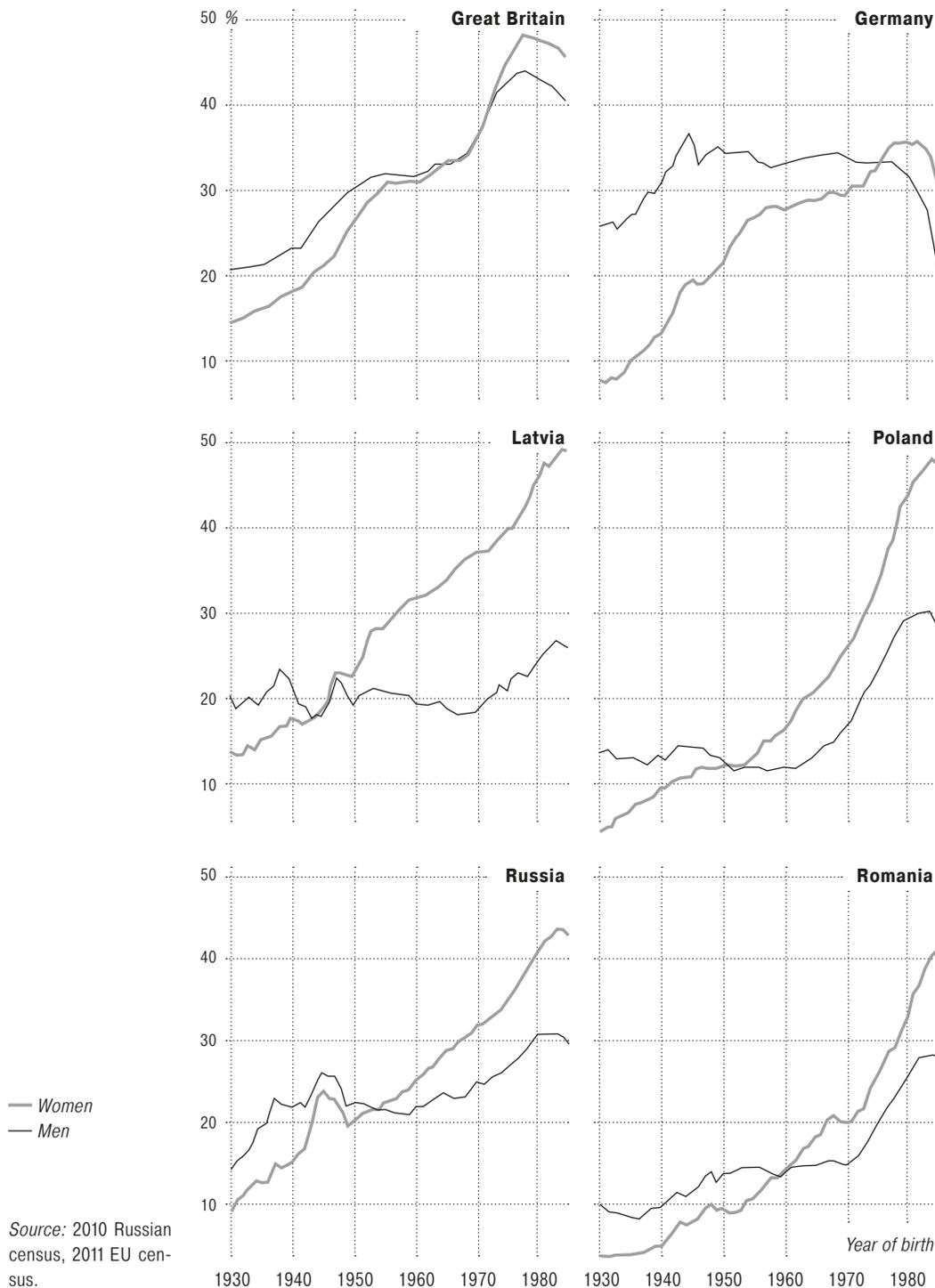
Figure 4 demonstrates the dynamics of university participation rate growth in Russia as compared to five other European countries: Latvia, Romania, Poland, Germany and Great Britain. The dynamic is similar across the four post-socialist countries (Russia, Latvia, Poland and Romania), featuring a sharp increase in the proportion of university-educated population beginning approximately with the cohort of those born in 1950 and an outstripping growth in the percentage of university-educated women. UK's university participation rate is higher than Russia, but its active growth began later, roughly with the cohort of the population born in 1970. This was caused by a steep increase in providers in England's higher education market in the 1990s and by the conversion of former polytechnics into universities. Gender differences in the university participation rate are also lower in the UK than in Russia.

Germany is an exception to the general rule, being a country with a developed system of vocational education. The proportion of university-educated men is noticeably higher in Germany than in other European countries, yet it has not increased in younger cohorts. The percentage of university-educated women increased perceptibly and exceeded that of university-educated men in the youngest cohorts. The decrease in university participation rates among the youngest is explained by "late" graduations: not all the population born in 1980 or younger had completed their education by the 2011 census.

On the whole, this analysis shows that processes in Russian higher education are not unique but quite consistent with the common European and global trends. Russia differs little from Eastern-European countries in the proportion of university-educated population and is still behind most countries of Western Europe. The growing university participation rates in younger cohorts are typical, again, of most countries, just as the higher rates among women as compared to men. Russia is not alone in debating the expansion of higher education. The belief that "too many" young people enroll in universities is also popular in Great Britain⁶.

⁶ Are there too many people going to university? // The Telegraph. June 19,

Figure 4. **Participation rates in higher education across different age cohorts in six European countries** (*Percentage of university-educated population*).



**Participation rates
in higher education
and the economic
structure**

It is not enough to compare proportions of university-educated population across different countries. It is more important to what extent the percentage of university graduates is consistent with a specific country's need for an educated labor force. The economic structures of some countries are dominated by industries that require highly qualified labor, hence university-educated staff. If the British economy feels a greater need for a university-educated labor force than the Russian one, it can be suggested that Russian universities "overproduce" graduates, provided that the proportions of university-educated population are relatively the same in both countries.

A detailed economic analysis is required to test this hypothesis. As the first step in this analysis, the ratio between the rate of the university-educated population and that of managers and professionals is estimated. These two occupational groups (major groups 1 and 2 according to the International Standard Classification of Occupations) are the first to require university qualifications. University degrees were held by 27% of the Russian population aged between 25 and 64 in 2010. According to the Russian Longitudinal Monitoring Survey carried out by National Research University—Higher School of Economics (RLMS—HSE), about 30% of the employed population aged between 30 and 64 worked as managers or professionals in 2010⁷. Therefore, the ratio of the proportion of university-educated population to that of managers and professionals was 0.9. Otherwise speaking, on average 9 out of 10 managers and professionals had university degrees in Russia in 2010.

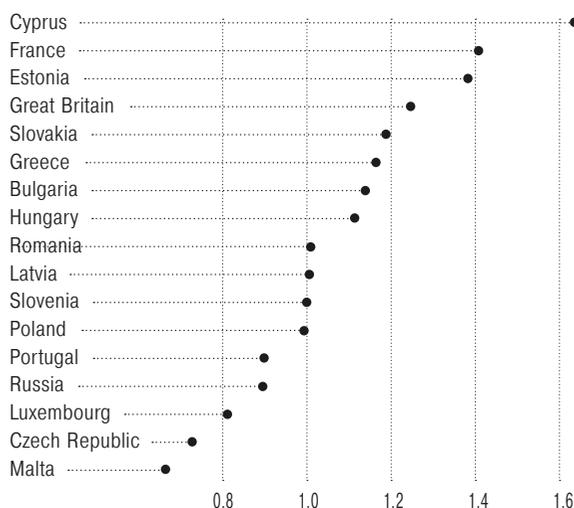
Figure 5 presents the same index for some other European countries. As we can see, Russia lags behind most of them: there are approximately 12 university-educated people per 10 managers and professionals in Great Britain, 14 in France, and about 10 in Latvia and Poland.

These estimates are preliminary and have some limitations, so a full-fledged analysis of the education system conformance to the labor market needs still awaits its researchers. Nonetheless, the analysis performed in this article shows that there is no reason to claim that the percentage of the university-educated population is abnormally high in Russia. In fact, Russia's rate of participation in higher education is similar to that of Eastern-European countries, being lower than most of Western Europe.

2016. <http://www.telegraph.co.uk/education/2016/06/19/are-there-too-many-people-going-to-university/>; Degree degradation: With too many university graduates and not enough jobs, many are finding themselves woefully underemployed // The Independent. August 19, 2015. <http://www.independent.co.uk/voices/editorials/degree-degradation-with-too-many-university-graduates-and-not-enough-jobs-many-are-finding-10461190.html>

⁷ Instead of the ISCO, the related European Socio-economic Classification (ESeC) was used to analyze the Russian data (see [Bessudnov 2016]).

Figure 5. **The ratio of the proportion of college-educated people to that of managers and professionals in employed population** (*% of college-educated people / % of managers and professionals*).



Source: 2010 Russian census, 2011 EU census, RLMS data.

Educational trajectories of secondary graduates based on the panel study Trajectories in Education and Careers

National census data allow for measuring the proportions of people with different levels of education in different generations, yet it is not suitable for a more detailed analysis. Besides, it has been seven years since the last census, so the data available are insufficient to assess the educational trajectories of recent school graduates. The results of the panel study Trajectories in Education and Careers (TrEC) [Bessudnov et al. 2014; Kurakin 2014] are used to perform a more comprehensive analysis of educational trajectories pursued by recent secondary graduates as well as to verify the census data.

The sample for the national panel included eighth-graders who participated in the Trends in Mathematics and Science Study (TIMSS) in 2011. TIMSS-2011 participants, or 4,893 students from 210 schools in 42 regions of Russia, provided the initial sample for the longitudinal study conducted by National Research University Higher School of Economics (NRU HSE) since 2012. In addition to systematic surveys, the same young people took part in the Programme for International Student Assessment (PISA) in 2012 as an additional sample. This way, a unique panel was provided, containing data on the participants from two different international assessment systems.

At the moment of writing this article, data had been collected in five waves of the national panel study in addition to TIMSS and PISA surveys. This analysis will only use the results of the first four waves (2012–2015), whose data collection characteristics will be briefly described below. Data of the fifth wave, carried out in 2016, will be used for future publications. The first wave took place in spring 2012 and

covered TIMSS-2011 participants, who were ninth-graders at that time, and their parents. The second and third waves were held in autumn 2013 and in spring 2014, when the participants were eleventh-graders or students of vocational schools, mostly in their second year. The fourth wave was conducted in autumn 2015, when most respondents were already enrolled in university (second-year students mostly) or vocational schools. Table 1 describes the wave schedule, educational attainment of respondents, and sample retention rates.

Predetermined by the initial sample structure, the methodology of collecting longitudinal data later changed depending on the status and availability of respondents. In the course of TIMSS, whose methodology implies first sampling schools and then classes, participants filled out test and questionnaire forms at the schools that they attended. The PISA and the first wave of the panel study were conducted in the same way a year later. The PISA surveyed 90% of TIMSS participants, and the first wave of panel data involved 69% of the initial sample (for more information on the data collection process and the causes of attrition in the first wave, see [Bessudnov et al. 2014]).

When the second and third waves were carried out two years later, some of the respondents had already left schools and enrolled in institutions of vocational education. To reach out to as many respondents as possible, school data on trajectories of middle school graduates was collected and face-to-face or telephone interviews were used to survey respondents who were not enrolled in TIMSS-sampled schools anymore. The TIMSS sample retention rate was 84% and 87% in these two waves, respectively. Beginning with the second wave, data has been collected by the Public Opinion Foundation.

The fourth wave had to make allowance for the changes in respondents' status that took place during the previous 18 months. All participants were now secondary graduates, many were enrolled in university, and many have moved homes. As the respondents were not all available in the same location, computer assisted web interview (CAWI) became the main survey method. Interviewers contacted the panel participants in advance and sent them a link to the questionnaire. Where necessary, contacts were repeated. Respondents unable or unwilling to fill out the online questionnaire for whatever reason were interviewed on the phone. The overall sample of the fourth wave included 3,618 respondents, or 74% of the initial sample.

In our previous publication [Bessudnov, Malik 2016], we used TrEC data to analyze social and gender inequality in the educational choices of middle school graduates. It was found out that around 57% of middle school graduates moved to high school and 43% went to vocational schools. Students proceeding to high school showed considerably better performance and higher proportions of girls and children from more educated and affluent families. It was also demonstrated that students from more socially advantaged families had much bet-

Table 1. The description of waves of the national panel study Trajectories in Education and Careers.

Wave	Year	Respondents	Educational attainment	N	Initial sample (TIMSS-2011) retention rate
TIMSS	Spring 2011	Respondents (test and questionnaire) Teachers of mathematics and natural sciences, school management	8th grade	4,893	100%
PISA	Spring 2012	Respondents (test and questionnaire) School management	9th grade	4,399	90%
1st wave	Spring 2012	Respondents and their parents (mothers mostly)	9th grade	3,377	69%
2nd wave	Autumn 2013	Respondent questionnaire Collection of school management's data on trajectories after middle school	Last year of high school or 2nd grade of vocational school	4,138	85%
3rd wave	Spring 2014	Respondent questionnaire	Last year of high school or 2nd grade of vocational school	4,239	87%
4th wave	Autumn 2015	Respondent questionnaire	Enrolled in college or vocational school	3,618	74%

Source: TrEC.

ter chances of moving to high school, academic achievement indicators held equal.

The previous publication used TrEC data collected in 2011–2013. In this article, we also add data collected in 2015, when all of the participants of the panel study had already graduated from secondary school and moved to the next stage. This data allows for analyzing the transition from secondary school to university and measuring the proportion of students opting for this educational trajectory.

Table 2 provides information on educational trajectories of the panel study participants in 2010–2015.

The first two columns show the number and the proportion of students choosing different educational trajectories in the total sample including non-respondents. Some of the students could not be interviewed in 2015, which is usual for longitudinal studies. The third column displays the distribution of trajectories for actual respondents only. The fourth column shows the distribution corrected for the weight coefficient reflecting the likelihood of dropout from the survey due to specific participant characteristics. This latter column is the most accurate picture of the distribution of students across educational trajectories. The last two columns describe the relevant percentages of boys and girls in the distribution.

As seen from Table 2, only about 47% of middle school graduates move on to high school and then to university. This data is con-

Table 2. **The distribution of students across educational trajectories (%)**.

Educational trajectory	N	Percentage	Percentage with non-respondents excluded	Weighted percentage	Percentage among boys	Percentage among girls
High school → university	1,890	39	53	47	42	53
Middle school → vocational school	792	16	22	25	29	20
High school → N/A	608	12				
Middle school → vocational school → N/A	567	12				
Middle school → vocational school → not enrolled	303	6	8	10	12	8
High school → vocational school	235	5	7	7	5	9
High school → not enrolled	189	4	5	5	8	3
Middle school → not enrolled → N/A	120	2				
Middle school → vocational school → university	76	2	2	2	1	3
Middle school → not enrolled	39	1	1	2	1	2
Other	74	1	2	2	2	2
Total	4,893	100	100	100	100	100

Source: TrEC

sistent with the proportion of the university-educated population in the youngest cohorts based on the 2010 census, thus proving its reliability. Nearly 40% of the cohort moved to vocational schools after graduation from the ninth grade. In 2015, 25% of them remained in the vocational education system (which corresponds to four-year programs). Ten percent were not doing any studies at the time of the survey in 2015, having probably completed two-year vocational programs. Two percent of the respondents enrolled in university after graduation from vocational schools. This category will expand in the future by including graduates from four-year vocational education programs [Aleksandrov, Tenisheva, Savelyeva 2015]. Data on this category will be available in the TrEC waves to come.

About 7% of the cohort enrolled in vocational schools after graduation from high school. Another 5% were not enrolled anywhere after high school, some of these having entered the labor market and others preparing for university or trade school.

This data thus indicates that Russia has developed an education system where transition after middle school is the main “fork” determining educational trajectories. TrEC data demonstrate that about 80% of those who move on to high school enroll in university after-

wards, as compared to only about 35% of vocational school students [Shugal 2010]⁸.

Analysis of educational trajectories should also involve taking into account that universities and majors within them differ in the quality of teaching and the level of associated social prestige. These differences are known as horizontal stratification in literature [Gerber, Cheung 2008]. TrEC data allow for analyzing horizontal stratification in Russia, but such analysis is beyond the scope of this article and would require a separate study.

Educational trajectories of boys and girls participating in the panel study differ significantly. Only about 42% of boys enrolled in university after high school, as compared to 53% of girls. In addition, boys are more likely to leave school after graduation from the ninth grade, while girls move to the vocational education system after high school more often than boys. Figure 6 illustrates the distribution of boys and girls across the educational trajectories.

Table 3 describes the academic performance of students with different educational trajectories (five groups cumulatively account for 96% of the sample). TIMSS and PISA tests were passed in the 8th and 9th grades (2011–2012). The best performance was shown by students who would move to high school and then to university, followed at a great distance by students who would choose vocational education after high school and those who would not enroll anywhere after school. The worst performance was demonstrated by students who would move from middle to vocational school, especially those who would enroll in two-year vocational education programs.

All high school graduates who enrolled in university had taken the USE exam. The proportion of USE takers is 90–95% among high school graduates who did not enroll in university and only 10–20% among those who left school as middle school graduates. In the latter group, the USE was only taken by students with stronger educational ambitions who probably envisaged going to university. These educational intentions also explain the relatively high USE scores among exam takers in this group (much higher than among high school graduates who did not go to university).

All in all, 70% of girls and 60% of boys in the sample took the USE exam. The mean sample USE scores are 50 points in mathematics and 66 points in Russian. As USE scores were reported by students themselves, the values are somewhat higher than the 2014 official USE results (40 points in mathematics and 63 points in Russian).

Table 4 describes the social characteristics of students in different educational trajectories. Students from families with monthly house-

⁸ One must keep in mind while interpreting this data that not all middle and high school graduates aspire for higher education. Meanwhile, students' vision of the best possible educational trajectory reflects their social background, being itself indicative of social inequality in education.

Figure 6. **The distribution of boys and girls across educational trajectories**
 (only respondents for whom comprehensive data is available, %).

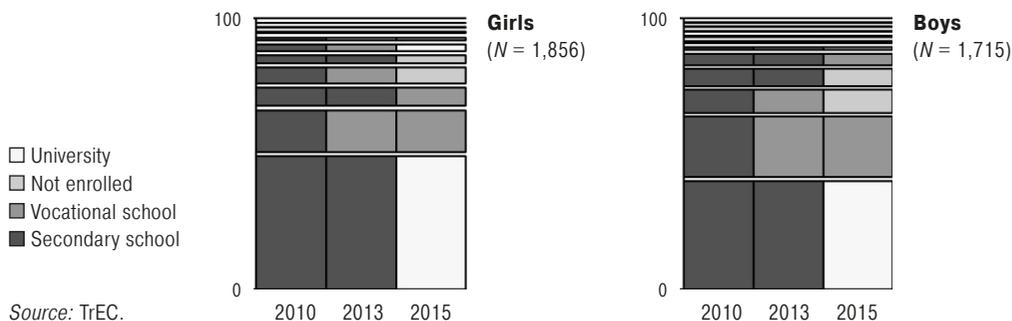


Table 3. **Academic performance of students with different subsequent educational trajectories.**

	Proportion of USE takers (%)	Mean USE score (among exam takers)		TIMSS score		PISA score		
		mathe-matics	Russian	mathe-matics	science	mathe-matics	science	reading
High school → university	100	52	70	573	572	526	521	511
Middle school → vocational school	12	47	55	509	518	453	459	437
Middle school → vocational school → not enrolled	18	48	57	482	492	427	433	407
High school → vocational school	95	38	55	522	526	461	462	448
High school → not enrolled	89	40	54	531	530	488	475	449
Mean sample value	65	50	66	539	543	487	486	470

Source: TrEC. Weighted estimates are presented.

hold incomes of less than 20,000 rubles in 2011 are less likely to go to university. However, the most important factor affecting student trajectories is parental education. Less than 5% of students who moved from middle to vocational school have university-educated parents, as compared to 23% of high school graduates enrolled in universities.

The data in Table 4 may also be presented as follows: 84% of students from university-educated families graduate from high school and enter university, as compared to 32% of children from non-university-educated families, of whom 55% move from middle school to trade schools and vocational colleges. Among gymnasium and lyceums high school graduates, 73% enroll in university, as compared to 38% of graduates from regular schools. University students show

Table 4. **Social characteristics of students in different educational trajectories.**

	Percentage of graduates / students					Girls
	Gymnasiums / lyceums / specialized schools	Families with monthly household income of less than 20,000 rubles, 2010	Both university-educated parents	Both non-university-educated parents	Studying in regions different from where they graduated from secondary school, 2015	
High school → university	54	34	23	29	29	57
Middle school → vocational school	21	57	4	45	14	42
Middle school → vocational school → not enrolled	23	58	1	56		41
High school → vocational school	24	61	4	52	17	65
High school → not enrolled	28	50	10	41		32
Mean sample value	37	46	13	39	23	51

Source: TrEC. Weighted estimates are presented.

greater cross-regional mobility than those not enrolled in higher education: nearly one third of them enroll in universities in a region different from where they graduate from secondary school.

In other words, a high level of social differentiation among students pursuing different educational trajectories is observed. What it means for the Russian education system as a whole is analyzed in the conclusion.

Conclusion

This article was inspired by the desire to overcome the existing stereotypes in the public mind about Russia's phenomenally high participation rate in higher education. A common assertion in mass media and public discussions is that over half the population of Russia has university degrees, whereas the actual proportion of university-educated people varies from one fourth to one third of the population, depending on the age cohort. This article seeks to show that these misperceptions, so widespread in both popular and expert discourse, jeopardize the development of the educational science, public discussion and social policies. In practical terms, overcoming these stereotypes means solving—on the macrolevel—the critical issues around the relation between inequality and education and—on the microlevel—the problems of building educational trajectories that are vital for millions of people.

Education is regarded as the key social institution that contributes to the alleviation or, vice versa, reproduction of socioeconomic

inequality. Inequality accumulation or alleviation together with the fundamental mechanisms of social mobility are the pivotal problems for the economy and social life, shaping the social environment and life prospects of individual people to a large extent. Fair and unambiguous game rules in education and in the labor market, allowing the most talented and hardworking to overcome the inherited social-class limitations, contribute to the legitimacy and effectiveness of major national institutions as well as alleviate social tensions.

One of the key characteristics of the education system in terms of inequality is how rigid and formalized the “tracking” is, i. e. how early the split into the “academic” and “vocational” tracks happens and to what extent they are mutually penetrable (i. e. to what extent transitions between the tracks are possible). Experts classify the Russian education system as one with a moderate “tracking index” [Bol et al. 2014]. As compared to highly-tracked education systems, where future trajectories are institutionally formalized and determined early on in educational careers, in moderately-tracked systems much depends on established practices, i. e. the specific entrenched combinations of institutionally mandated regulations and cultural and economic behavioral patterns in different social groups. Such systems are largely “slack”, meaning that they can both be more meritocratic than strongly-tracked ones and at the same time exacerbate the reproduction of the existing socioeconomic inequality patterns. In other words, it is not formal rules as such but how people actually use them that plays the pivotal role. A question comes to the fore as to which branch points of educational trajectories the events with the longest-playing effects for life, career and inequality reproduction/alleviation happen.

This sophisticated picture is largely distorted and trivialized by the belief that most or even the overwhelming majority of secondary school graduates go to university. This belief implies a low level of inequality differentiation at all education stages: since all or almost all go to university, inequality must develop outside the education system. The reality, however, is different: the 2010 census found the proportion of university-educated people in Russia to be barely reaching 27% in the cohorts of 25–64-year-olds and 34% among the population aged between 25 and 34. The rates have increased somewhat since then but remained comparable. According to TrEC data, only 47% of 2012 middle school graduates enrolled in universities. As we can see, the inequality in the education system is generated in several key points. There are three such points: transition after middle school (the first formal fork in Russian education), transition after high school, and transition after graduation from vocational schools.

Transition after middle school is the most crucial fork for inequality reproduction. About 40% of middle school graduates go to vocational schools; only a small proportion of them will later go to university, and many of them will study extramurally, while working full time. Most high school graduates, conversely, will enroll in university, most

often in full-time programs. Therefore, this earliest fork is the most important one, which partly offsets the compensation capabilities typical of moderately- or low-tracked education systems.

In addition, this very first fork is social-class-tinged. For instance, only 5% of students with both parents university-educated go to vocational schools after graduating from middle school, as compared to over 50% of children from non-university-educated families. Research in this area has shown that the choice of track is influenced by both the primary and secondary effects of inequality according to Raymond Boudon's classification, as well as by informal differences in the choice of curricular tracks throughout primary and middle school [Bessudnov, Malik 2016; Kosyakova et al. 2016]. In such a way, the myth of universal higher education camouflages the real situation with inequality, mechanisms of its reproduction, and social mobility.

Thus, overcoming the myth of universal higher education has important implications, being indispensable for ensuring an adequate understanding of inequality in education. The problem goes beyond scholarly discussion because debates on education that are based on stereotypes instead of research findings abolish expertise as an element of educational policy, primitivizing public discussion and turning it into a contest of propagandist clichés.

Overcoming these misperceptions also reveals another essential aspect to this problem. Russia follows the global trends, with its participation rate in higher education being close to average European indicators and slightly behind most Western countries. Moreover, the fundamental macro trends in Russian education, namely the massification of higher education and the gender gap inversion⁹, are in line with the global trends both chronologically and in their scope. These changes in the structure of Russian education date back to the Soviet era and not the post-Soviet period to which all major socio-economic shifts of the recent decades are often attributed. Contrary to the common beliefs about the isolated nature of Russian experience, the world turns out to be more global, in this regard too, than it is often believed to be, and these universal major trends in different countries date from earlier periods than the advent of the Internet or the fall of the "iron curtain".

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⁹ Men obtained higher education more often than women up until the 1970s, but the relationship became inverse later.

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