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WORKING PAPER 1

Returns to Education in the Russian Federation: Some New Estimates

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Data and Code

Thanks are due to the Higher School of Economics, Moscow for making the Russian Longitudinal Monitoring Study (RLMS) Household data readily available for researchers around the world. The code used for this paper is made freely available for all researchers at <https://bitbucket.org/zagamog/edzruru/src/master/>

This paper presents new estimates of the returns to education in the Russian Federation. Private returns to education are three times greater for higher education compared to vocational education, and the returns to education for females are higher than for males. Returns for females show an inverse U-shaped curve over the past two decades. Female education is a policy priority and there is a need to investigate the labor market relevance of vocational education. Higher education may have reached an expansion limit and it may be necessary to investigate options for increasing the productivity of schooling.

KEY WORDS

Returns to Education, Russian Federation JEL Codes: I26, I28, J16

1 | MOTIVATION

"How Wealthy is Russia?" is a recently published World Bank report that analyzed the human, natural, and produced capital of the Russian Federation (Naikai et al. 2019). Human capital only accounts for 46% of total wealth in Russia, as compared to the OECD average of 70%. The report showed that even as growth rates of per capita wealth were ten times higher in Russia as compared to the OECD, the gap in levels with OECD is still very wide. The per capita human capital wealth level on average for the OECD in 2014 was about USD 500,000 - five times that of Russia's 95,000 (measured in 2014 dollars). In order to catch up with the OECD, the returns to education in Russia will need

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to be increased. This paper presents the first in a series of papers on returns to education that will be instrumental in generating policy recommendations to improve the share of human capital as part of Russia's wealth. This paper examines the trends in returns to education in the Russian Federation using a common methodology used for more than 100 countries (Montenegro and Patrinos 2014; Psacharopoulos and Patrinos 2018).

Number of People in Russia Aged 25-54 by Achieved Level of Education (per 1000 and an absolute number)

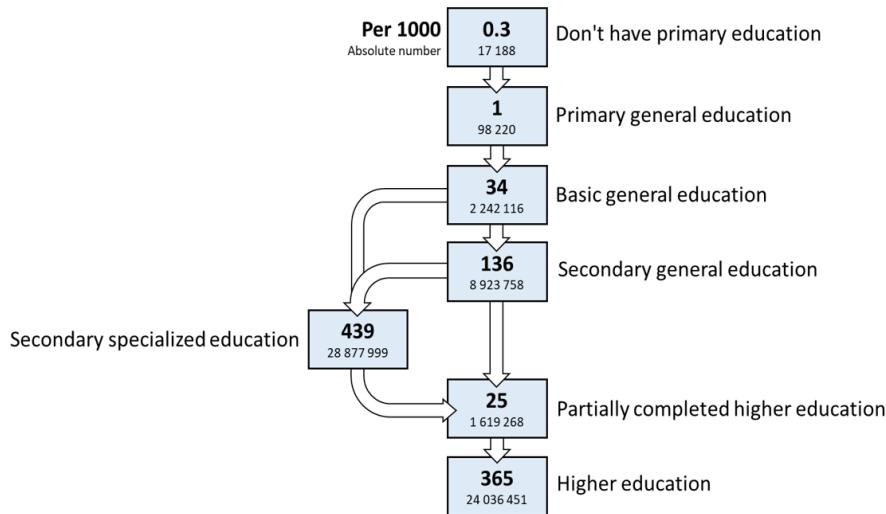


FIGURE 1.1 Labor Force Distribution by Educational Level (Rosstat)

Figure 1.1 indicates the educational attainment of the population segment 25 to 54 years, which is the age group for which Rosstat provides this information. Figure 1.1 shows less than 14% of the labor force with a final attainment of secondary general education (academic High School) - the main choice is between vocational education (nearly 45%) and university education (about 40%). It is a well-known fact that on cognitive attainment at Grade 9, Russian students are already at par with OECD students (PISA scores are designed with an OECD mean of 500); what comes in later education levels and the labor market is the crucial issue for convergence with OECD on human capital wealth levels.

A detailed analysis of the returns to education in the Russian Federation will provide insights into the stylized facts mentioned above. Together with other research being implemented by the World Bank and by other researchers, the purpose of this analysis is to come up with a set of evidence-based policy recommendations to enhance the human capital wealth of the Russian Federation.

In this paper we report on an estimate of the private rate of return to investment in education in the Russian Federation. Human capital, or the stock of skills that is possessed by the labor force, is pivotal in enabling countries and individuals to flourish in a multifaceted, increasingly comprehensive, interrelated, and rapidly changing society (Schultz 1972; Mincer 1974; Heckman, Lochner, and Todd 2003; Becker 2009; Broecke 2015). The returns to investment in education have been a popular empirical analysis in research to study the relationship between schooling and earnings. Private returns can also explain the private demand for education. The literature suggests that each

additional year of schooling produces a private (that is, individual) rate of return to schooling of about 8 to 9 percent a year (Psacharopoulos and Patrinos 2018; Montenegro and Patrinos 2014). Globally, the returns to tertiary education are highest, followed by primary and then secondary schooling; this represents a significant reversal from many studies' prior results. Policy makers can learn much from Mincerian results; for instance, further expansion of university education appears to be very worthwhile for the individual, meaning that governments need to find ways to make financing more readily available, and that high rates of return are found through investment in girls' education.

2 | LITERATURE REVIEW

In a worldwide perspective, the latest findings on returns to education can be condensed to the following (Psacharopoulos and Patrinos 2018): (1) overall, an amplified share of workers with tertiary education at the labor market has not reduced the magnitude of returns on the investment due to "skill-biasedness" of the technological progress boosting the demand for higher skills; (2) low- and middle-income regions are characterized by the largest returns (except for the Middle East and North Africa, with the lowest returns); (3) the private returns to education for women outstrip those for men by roughly two percentage points; (4) private sector employees receive greater returns than those working in the public sector; (5) social returns to education are negatively associated with a country's level of economic development and education level; and (6) on average, there is a growing trend in returns to higher education.

A separate, albeit scarce in terms of quantity, quality, and reliability, corpus of research focused on the Russian/USSR case. In the USSR during the period before education reforms the rates of return to schooling were strikingly low: 2-3% for secondary and 5% for higher education levels (Graeser 1988). Low returns to human capital were in line with a planned economy offering free education, centralized allocation of labor, and the ideology of proletariat superiority; a similar picture was observed in other (at the time) socialist countries (see, for example, Munich, Svejnar, and Terrell 2005).

However, an earlier attempt to establish the contribution of education to productivity took place during Soviet times. Strumilin showed that those who were more educated contributed more. He even calculated earnings benefits, and though his calculations did not discount earnings, the estimates of the returns were high, at about 17 percent in 1919 (Strumilin 1924).

A group of scholars reported that during the transition period from a planned to market economy in Russia rates of returns to schooling rose sharply (Brainerd 1998; Clark 2003; Vernon 2002). The upsurge in wage premiums to education (especially university education) was asserted to be a pivotal factor that exacerbated wage dispersion: salaries of highly skilled and trained workers had gone up in absolute terms and compared to less-educated workers (Fleisher, Sabirianova, and Wang 2005). However, returns to schooling declined for those people who took advantage of higher education expansion in a post-communist Russia (1990-2005) in comparison to youths who obtained university degrees in the preceding periods (Kyui 2016). One researcher exploited data about the average education level at the end of a Soviet period as an instrument and inferred that the growth in the proportion of city dwellers with university degree was associated with a rise in the wages of city residents (Muravyev 2008). Despite enhancements in premiums to tertiary (professional and higher) education in the Russian Federation at the beginning of the 2000s, the labor market was shown to be different from that of developed countries. Comparing Russia with France, the existence of a vertical education-occupation mismatch in Russia was demonstrated (Kyui 2010). A recent paper claims that horizontal education-job mismatch negatively impacts upon the earnings of university graduates in all fields except for the lowest-paid ones (Rudakov et al. 2019). Studies also suggest that education-job mismatch during studentship for individuals obtaining vocational education is "penalizing": combining studies with a job unrelated to a person's

specialty entails a mismatch after his/her graduation (Dudyrev, Romanova, and Travkin 2018).

Another research line ascertained that during the transition returns to education in Russia were not rising and remained among the lowest in the world (Cheidvasser and Benítez-Silva 2007). The contradiction with previous inferences and reasoning was explained by the omitted variable bias: past researchers did not account for regional covariates and rural residence, thus overstating the returns. It was highlighted that the excess of well-educated workers seemed to be the main underpinning factor of wage differentials in Russia after the dissolution of the Soviet Union. Subsequently, Calvo et al. (2015) provide evidence of a reduction in skill premiums in Russia during the 2002 - 2012 period that was claimed to be one of the most relevant underlying forces explaining a deceleration in trends of widening wage inequality (Calvo, Lopez-Calva, and Posadas 2015). Belskaya et al. (2014) evaluated a large-scale college expansion in Russia after the breakdown of the Soviet Union (Belskaya, Sabirianova Peter, and Posso 2014). Among the key conclusions is that as the number of university campuses grew, individuals with low returns to schooling grew as well. But for a marginal person, who switched into a treatment group as a result of new campuses opening, the total gains from attending a college are considerable and positive. Furthermore, the scholars found that students with higher returns are attracted more intensively by new campuses opened in constrained municipalities (small non-capital cities or those lacking higher education institutions before college expansion) in comparison to the unconstrained ones. Like the global patterns, studies in Russia have shown that in the post-Soviet decade, workers hired in firms controlled/owned by private organizations/individuals, retained a marked premium to education in contrast to workers employed in state companies. This is rooted in a greater flexibility of private firms, enabling them to overcome restrictions caused by the rigidity of state wages, hence leading to higher returns to schooling (Clark 2003). Borisov 2007 was among the first who employed cohort analysis, using Mincerian wage equation for the Russian data, and found evidence favoring the existence of a powerful vintage effect (especially for men) in the Russian labor market during the transition period: consecutive cohorts were paid more than the previous ones, keeping educational achievements constant; this phenomenon was entrenched in the specificity of a Soviet system, encouraging the pursuit of communist interests through extensive propaganda. A source of heterogeneity in rates of returns to education in Russia hails from gender differences, just like the patterns observed globally: women received higher returns to higher education than men (e.g., Cheidvasser and Benítez-Silva 2007; Luk'yanova 2010). By the end of the first decade of the 21st century, some scholars detected positive changes concerning tertiary education in Russia (and other BRIC countries): payoff rates to university completion have generally magnified relative to the rates in lower levels of education and were higher than returns to secondary schooling (Carnoy et al. 2012). This runs counter to the logic of capital theory, implying a decline in the rank order of returns with education level, which should hold with a country's economic advancement. Private rate of returns, even accounting for tuition cost, in Russia are especially high in business/economics as a field of study (Carnoy et al. 2012). Additionally, rates of returns to vocational education were found to be lower than payoffs to tertiary education (Borisov 2007). In a recent paper, Gimpelson 2019 argues that the labor market in Russia might be at risk of over-education, which leads to a reduction in educational premiums.

3 | DATA

In this paper we use the Russian Longitudinal Monitoring Survey (RLMS) - the only representative Russian survey with a sizable panel component allowing for dynamic analysis (Kozyreva, Kosolapov, and Popkin 2016). The data are notable for their reliability, diversity, and applicability to a variety of research questions. The RLMS embraces information on people's income and expenditure structure, their material well-being, educational and occupational behavior, health state and nutrition, migration, etc. RLMS sampling procedures have been thoroughly and extensively described

elsewhere (Kozyreva, Kosolapov, and Popkin 2016). The present research uses all 23 waves (1994 - 2018) that are available as of May 17, 2020. Two years (1997 and 1999) are missing in the data because data was not collected in those years due to funding problems. The sub-sample selected for empirical investigation in this paper consists of working individuals aged 25-64 who are out of school and have positive labor market experience and income.

Table 3.1 shows descriptive statistics for the key variables under focus and sample sizes by years. The average years of experience is relatively stable over time, years of education slightly go up with higher education level becoming increasingly popular in Russia just as the proportion with vocational education declines.

TABLE 3.1 Descriptive Statistics, RLMS

Year	N	Wage		Experience		Education years		Education		
		Mean	SD	Mean	SD	Mean	SD	Secondary	Vocational	Higher
1994	3044	272761.9	347856.1	21.4	9.6	12.7	2.3	22.3	50.4	27.3
1995	2694	557844.7	621599.5	21.7	9.6	12.7	2.2	22.3	47.8	29.8
1996	2282	817936.7	1004035.7	21.6	9.6	12.8	2.2	19.7	48.6	31.7
1998	3102	906.3	950.7	22.3	9.6	12.7	2.2	19.8	52.0	28.2
2000	3215	1821.3	2570.5	22.3	10.0	12.7	2.2	20.3	51.3	28.4
2001	3605	2681.0	2849.6	22.0	9.8	12.8	2.2	19.8	49.3	30.9
2002	3803	3612.8	4316.0	22.0	9.9	12.8	2.1	19.3	49.9	30.8
2003	3858	4378.6	4014.0	22.2	10.1	12.8	2.2	19.1	49.4	31.5
2004	3968	5379.0	4918.5	22.0	10.2	12.8	2.2	18.4	50.3	31.2
2005	3913	6637.9	5716.1	22.1	10.4	12.8	2.2	18.4	49.6	32.0
2006	4804	8089.9	6563.9	22.2	10.4	12.8	2.2	18.0	50.9	31.1
2007	4726	9662.5	7124.7	22.5	10.6	12.8	2.2	18.5	50.2	31.3
2008	4827	12826.3	10784.5	22.6	10.8	12.9	2.3	17.9	47.8	34.3
2009	4804	13363.1	10411.4	22.5	11.0	12.9	2.3	16.6	47.9	35.5
2010	7326	14769.9	12587.1	22.6	11.1	13.0	2.3	16.9	48.1	34.9
2011	7167	16226.8	12855.5	22.5	11.1	13.0	2.3	18.0	46.9	35.1
2012	7428	18880.7	15119.0	22.5	11.2	13.0	2.4	18.2	45.9	35.9
2013	7327	20601.4	16411.5	22.5	11.2	13.1	2.3	17.0	46.7	36.3
2014	6148	22772.6	17288.4	22.3	11.1	13.1	2.3	16.5	45.8	37.7
2015	6231	23570.7	16996.4	22.2	11.2	13.2	2.3	15.2	44.4	40.4
2016	6297	24951.1	18640.7	22.3	11.1	13.3	2.3	14.7	43.6	41.8
2017	6359	26254.1	19555.4	22.4	11.0	13.3	2.3	14.0	45.0	40.9
2018	6121	28081.0	19705.8	22.5	10.8	13.3	2.3	13.8	45.0	41.2

4 | METHODOLOGY

The Mincer equation –arguably the most widely used in empirical work –can be used to explain a host of economic, and even non-economic, phenomena. One such application involves explaining (and estimating) employment earnings as a function of schooling and labor market experience. The Mincer equation provides estimates of the average monetary returns of one additional year of education. This information is important for policy makers who must decide on education spending, prioritization of schooling levels, and education financing programs such as student loans (Patrinos 2016). In that respect, the Mincer equation is the most used econometric framework for estimating the return to investment in education.

The empirical analysis in this paper presents results for the general working population of the Russian Federation aged 25-64. We use a basic Mincerian specification shown in equation (1):

$$\text{Log}(\text{Wage}) = b_0 + b_1 \cdot \text{Educ} + b_2 \cdot \text{Exp} + b_3 \cdot \text{Exp}^2 + \epsilon \quad (1)$$

where $\text{Log}(\text{Wage})$ is a logarithm of monthly wage, Educ stands for the years of education or highest attained level of education, Exp and Exp^2 reflect the years of working experience and its quadratic term respectively, b_0 is an intercept, $b_1 \dots b_n$ are the respective slope estimates, ϵ refers to a normally distributed error term.

Dependent variable

For the dependent variable, we used the logarithm of an average monthly wage within the past year on a person's primary job (variable J13.2 in the RLMS dataset). If a person had an additional job, the maximum wage value among the two (variables J13.2 and J40) was selected for the analysis. In the waves from 1994 to 1996, the question mentioned above was absent; for those waves, we exploited a variable about the average amount of money earned by a respondent within the past 30 days (variable J10) as a reasonable approximation.

Independent variables

The present research uses both metric (measured in years) and categorical education variables. The metric version was created by assigning the average expected number of years corresponding to each attained education level. For the categorical version (EDUC), we distinguished three categories: (1) secondary, (2) vocational, and (3) higher. Incomplete levels were incorporated into the respective upper categories (e.g., incomplete higher - into higher). Vocational education here includes the International Standard Classification of Education (ISCED) levels for vocational education: 35, 45 and 55¹. We are interested in exploring returns to education in general, and vocational and higher education. Estimations of premiums to primary and secondary schooling levels are technically not possible since the number of adults without primary education, and the number of adults with only primary schooling, is minuscule in the general population. The experience variable was calculated as a difference between current age and years of education minus 6 (the typical school starting age). Regression (1) was estimated separately for each year for the entire sample and separately for males and females. The Appendix presents the results for each year.

We are particularly interested in the returns to specific levels of education, estimated through a series of dummy variables. Using Secondary Education completed as the base or omitted dummy for purposes of interpretation, we use dummy variables for Vocational Education and Higher Education. The specification is presented in equation (2):

¹ The ISCED classification as it is applied to the Russian Federation is graphically explained in the OECD online publication accessible at <https://gpseducation.oecd.org/CountryProfile?primaryCountry=RUS>

$$\text{Log}(Wage) = a_0 + a_1 \cdot DVoc + a_2 \cdot DHigher + a_3 \cdot Exp + a_4 \cdot Exp^2 + a_5 \cdot Gender + \epsilon \quad (2)$$

5 | RESULTS

Results of equation (1) are shown in Figure 5.1 with an adjoining graph showing the increase in the mean years of education over the period 1994 to 2018. Returns by each year in the Russian Federation need to be considered very carefully because of the high educational attainment of the population. There are hardly any individuals in the sample who have less than a High School education (precisely 35 out of 1000 as shown in Figure 1.1, and only a handful of individuals who finished their education at the High School level. Consequently the mean years of education is more than 13 years.

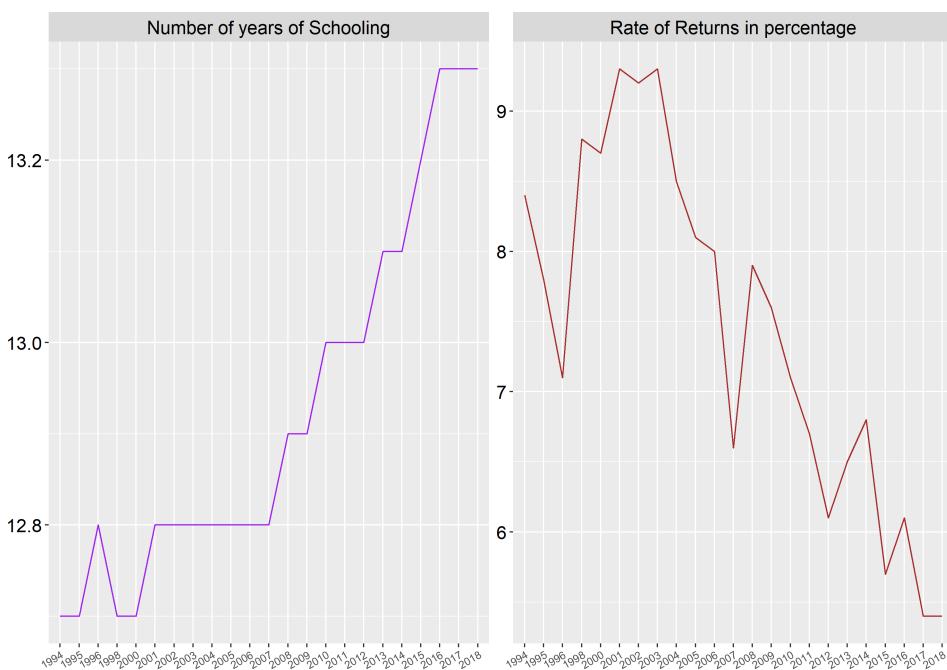


FIGURE 5.1 Labor Force Distribution by Educational Level (Rosstat)

Figure 5.2 demonstrates earnings ratio by educational level (secondary education is equal to 100%) for 1998, 2006, and 2018. The graph depicts a pronounced gap in the wages of people with secondary or vocational education compared to those with university level especially in earlier years in Russia.

Figure 5.3 displays age-earning profiles in Russia by education level. There is a clear concave pattern for higher level, whereas for secondary and vocational levels, the association between wages and age is almost flat or descending. While the gaps are declining between higher and secondary, they are increasing between higher and vocational.

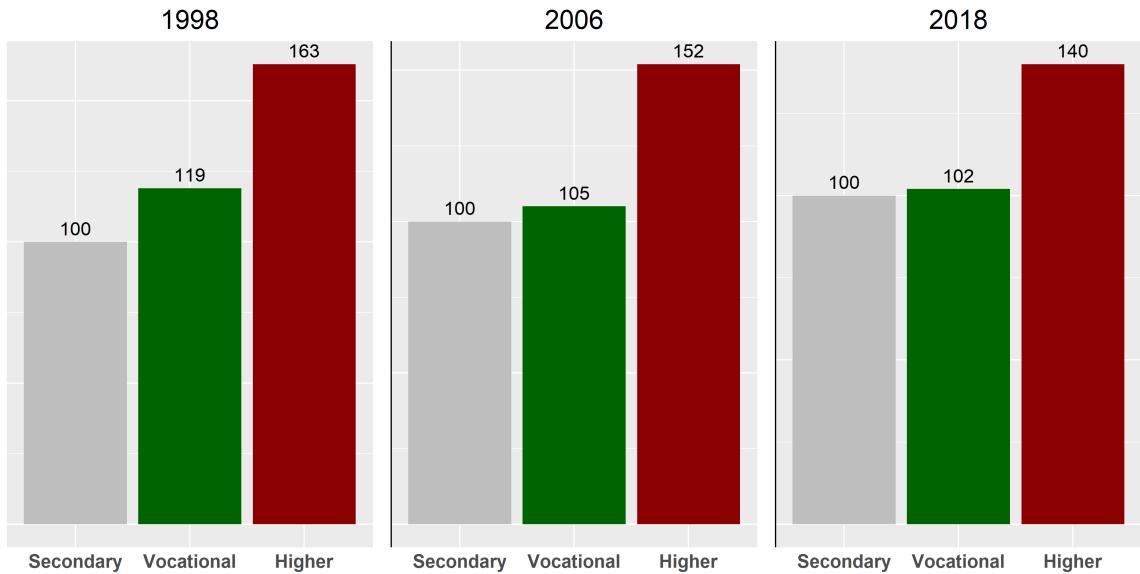


FIGURE 5.2 Earnings Ratio by Educational Level (Secondary Education = 100%)

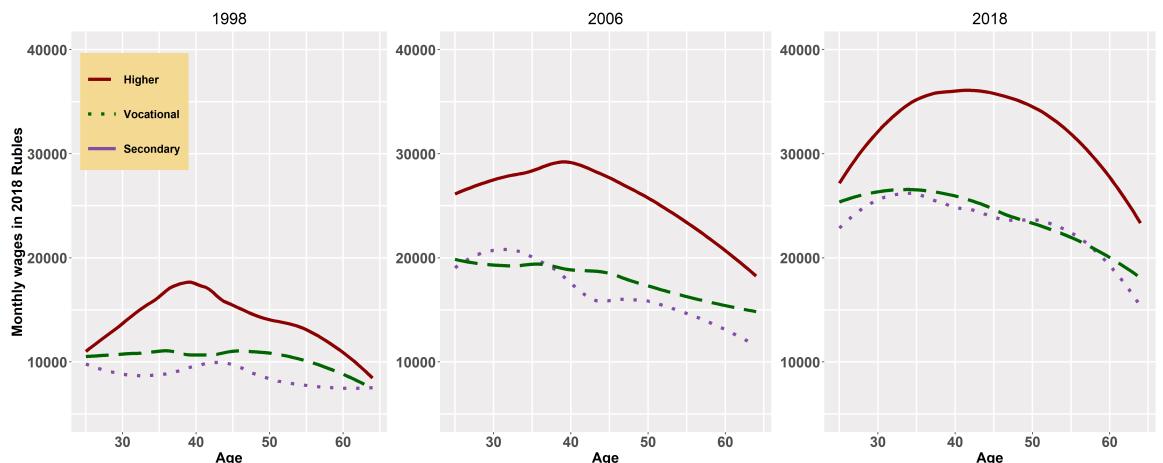
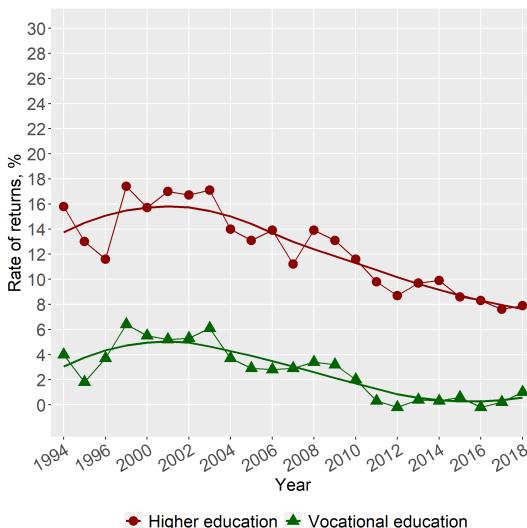


FIGURE 5.3 Age-earning Profiles by Level of Education

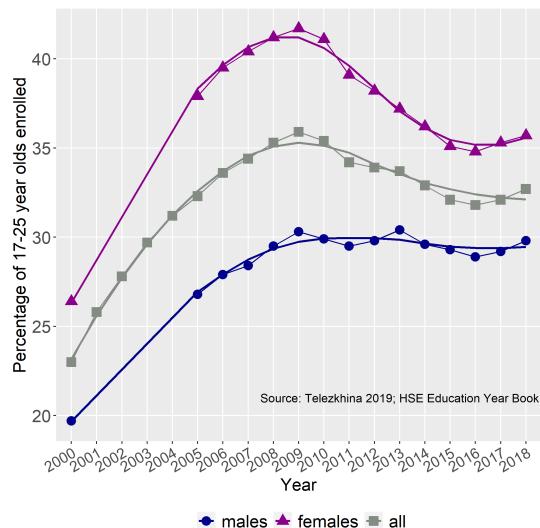
Figure 5.5 summarizes the results, showing rates of overall and gender-wise returns to education in Russia for the period 1994-2018: the percentage increment in a person's earnings due to one additional year of schooling. Overall, one can notice a moderate curved growth in returns to education in Russia, achieving its peak in the early 2000s (returns of 9.8%), which is followed by a downward pattern (returns of 5.6% by 2018). The values of returns to schooling in recent years in Russia seem to lag far behind the global average of 9.5% (Psacharopoulos and Patrinos 2018). Education payoffs for women are higher than those of men, but the difference appears to have narrowed in recent years.

Figure 5.4, panel (a) displays rates of returns to Higher and Vocational education (as compared to Secondary education) in Russia for the period 1994-2018. The results suggest that on average wage premiums to university education in Russia are roughly 3-5 times greater than to vocational schooling. The observed trend for premiums to both Vocational and Higher education levels is similar to the trend for education in general with the following peaks: 18% per year for Higher education and 6% per year for Vocational education compared to the average earnings of workers with a Secondary education. The interesting pattern to note from panel 5.4a is the apparent co-movement of vocational education and higher education - the higher education smoothing curve turns a bit more sharply than the one for vocational education, but their movement is matching, even at second-order levels of smoothness. Further, even though higher education premium remains much above the premium for vocational education, there is a perceptible narrowing of the difference in recent years. Panel 5.4b, which is drawn from Telezhkina, 2019. July 8-12, shows the interesting pattern of higher education enrollment rates for the population of 17-25 year olds . Panel 5.4b shows the downturn in returns reflected in enrollments, with the peak in enrollments coming about 10 years later. The latest estimate of the returns to higher education in the Russian Federation is about 8 percent, which is just below the EU average of about 10 percent and the global average of 15 percent (Psacharopoulos and Patrinos 2018), and declining, in line with the expansion that took place up to 2009.

FIGURE 5.4 Rates of Returns to Higher and Vocational Education in Russia, RLMS 1994-2018



(a) Rates of Return



(b) Enrollment in Higher Education

Source: Telezhkina 2019; HSE Education Year Book

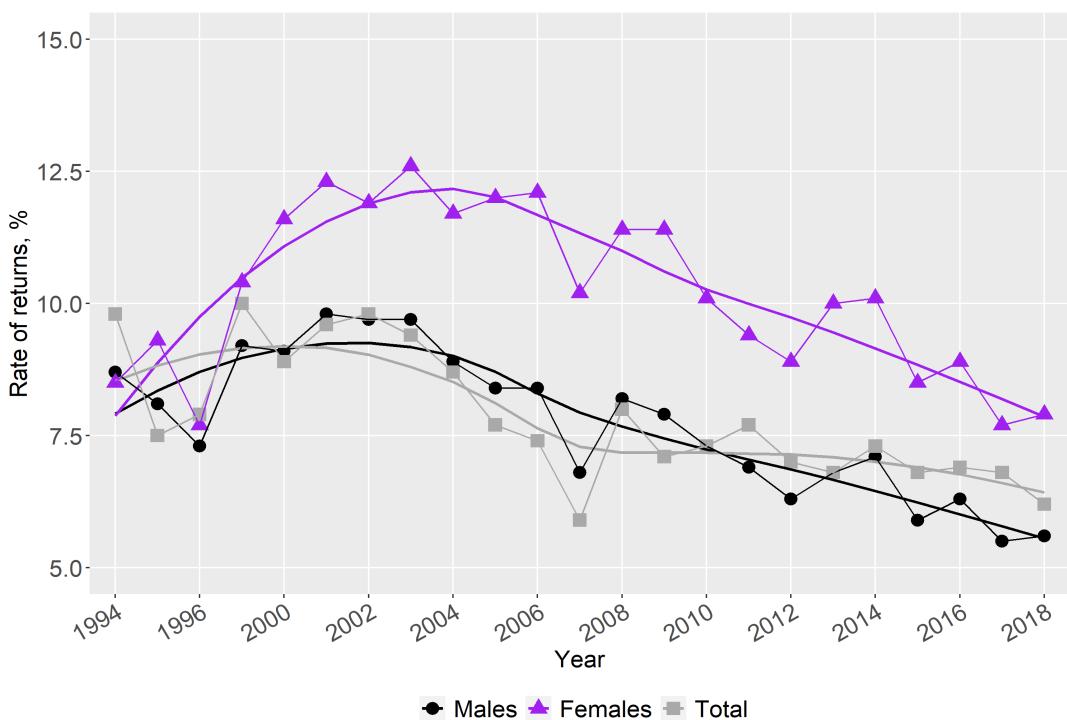


FIGURE 5.5 Rates of Returns to Education in Russia, RLMS 1994-2018

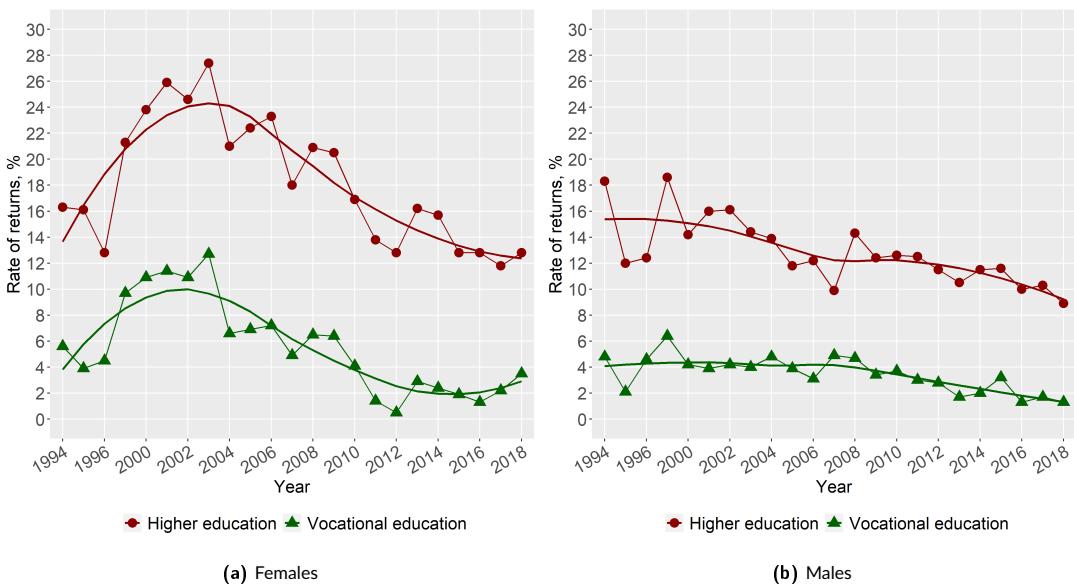


FIGURE 5.6 Rates of Returns to Higher and Vocational Education in Russia, RLMS 1994-2018

When estimated separately by gender, we find trend variation by gender. The results from estimation of earnings functions show that annual returns to Higher education for males varied from 9% to 15%, whereas women's returns are described by an inversely U-shaped pattern, reaching their maximum of 28% in 2003. Within roughly the last 5 years, wage premiums to higher education for women have stabilized at around 12%, a couple of percentage points ahead of men. Gender wise enrollment rates in higher education (not shown) ten years later appears to match the differences in rates of return, strengthening the hypothesis that market rates of return to education in Russia do indeed influence individual continuing school decisions.

A similar comparative picture is observed with respect to vocational education, albeit with a different kind of variation by gender (see Figure 5.6): returns for males are almost flat within the time period while returns for females shows a concave pattern. The overall outcome concerning payoffs to schooling isolated by gender has been confirmed in a similar fashion by past studies (e.g., Cheidvasser and Benítez-Silva 2007).

6 | CONCLUSIONS

Russia is a highly educated country, and the level schooling continues to increase. More than one-third of the labor force possesses a post-secondary qualification. Our analysis confirms previous studies showing a growth in the overall returns to schooling during the post-transition period (Brainerd 1998; Clark 2003; Vernon 2002). There was an increase in the returns to an additional year of schooling in the 1990s. The returns peaked in the early 2000s (at almost 10 percent), followed by a downward pattern (returns of 5.6 percent by 2018). The global average is about 8-9 percent (Psacharopoulos and Patrinos 2018). The extent to which the declines are due to potential "over-education" is worth investigating (Gimpelson 2019).

Education payoffs for women are higher than those of men, but the difference appears to have narrowed in recent years. We show that the returns to education for females is higher than for males. This is consistent with global findings (Psacharopoulos and Patrinos 2018) and previous studies of the Russian labor market (Cheidvasser and Benítez-Silva 2007; Luk'yanova 2010). When estimated separately by gender, we find trend variation. The results from estimation of earnings functions show that annual returns to higher education for males varied from 9 to 15 percent, whereas women's returns are described by an inverse U-shaped pattern, reaching their maximum of 28 percent in 2003. Within roughly the last five years, wage premiums to higher education for women have stabilized at around 12 percent, a couple of percentage points ahead of men. Gender-wise enrollment rates in higher education ten years later appears to match the differences in rates of return, strengthening the hypothesis that market rates of return to education in Russia do indeed influence positively the demand for schooling. Just in the past two years, the enrollment decline appears to be slowly reversing, but this phenomenon needs to be watched more closely to determine if it is merely a fluctuation or a new trend.

We show that private returns to education are three times greater for higher education compared to vocational education. On average, wage premiums to university education in Russia are roughly 3-5 times greater than to vocational schooling. This is consistent with findings from global studies and from previous research on the Russian labor market (Borisov 2007; Carnoy et al. 2012). Higher education enrollment rates increased substantially after the break-up of the Soviet Union (Belskaya, Sabirianova Peter, and Posso 2014). Enrollments peaked in 2009. Subsequent returns to higher education started to fall relative to secondary education. The latest estimate of the returns to higher education in the Russian Federation is about 8 percent, which is just below the EU average of about 10 percent and the global average of 15 percent (Psacharopoulos and Patrinos 2018). But the wage profiles for those with secondary and vocational education is almost flat or descending, while the gaps between higher education and

vocational education are increasing, in favor of higher education.

Female education is a policy priority. It promotes earnings growth and will help reduce gender gaps in the labor market. There is a need to investigate the labor market relevance of vocational education given the low and declining returns. Higher education may have reached an expansion limit and it may be necessary to investigate options for increasing the productivity of schooling.

Future research should look at the variations in returns across regions. Also, it would be useful to estimate social returns to education in order to derive more robust policy recommendations. Finally, causal estimates of the returns to schooling should be estimated.

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TABLE 6.1 Results of Mincer Analysis, RLMS 1994

	Total	Males	Females	Total	Males	Females
	(1)	(2)	(3)	(4)	(5)	(6)
Constant	10.704*** (10.435, 10.972)	10.974*** (10.578, 11.369)	10.319*** (9.979, 10.659)	11.569*** (11.385, 11.753)	11.947*** (11.673, 12.222)	11.132*** (10.901, 11.362)
Education, years	0.084*** (0.069, 0.098)	0.094*** (0.072, 0.115)	0.082*** (0.063, 0.101)			
Vocational education				0.114*** (0.029, 0.200)	0.135*** (0.011, 0.260)	0.156*** (0.046, 0.266)
Higher education				0.489*** (0.392, 0.586)	0.549*** (0.407, 0.691)	0.501*** (0.378, 0.625)
Experience	0.030*** (0.015, 0.046)	0.023* (-0.0002, 0.046)	0.043*** (0.024, 0.062)	0.032*** (0.017, 0.048)	0.024** (0.0005, 0.047)	0.045*** (0.0026, 0.065)
Experience squared	-0.001*** (-0.001, -0.0003)	-0.001** (-0.001, -0.0001)	-0.001*** (-0.001, -0.0004)	-0.001*** (-0.001, -0.0003)	-0.001** (-0.001, -0.0001)	-0.001*** (-0.001, -0.0005)
Observations	3,044	1,397	1,647	3,044	1,397	1,647
R ²	0.042	0.055	0.050	0.041	0.052	0.049
Adjusted R ²	0.041	0.053	0.048	0.039	0.049	0.047
Residual Std. Error	0.935	0.952	0.854	0.936	0.954	0.854
F Statistic	44.464***	27.011***	28.581***	32.271***	19.011***	21.378***
Note:						* p<0.1; ** p<0.05; *** p<0.01

TABLE 6.2 Results of Mincer Analysis, RLMS 1995

	Total	Males	Females	Total	Males	Females
	(1)	(2)	(3)	(4)	(5)	(6)
Constant	11.526*** (11.244, 11.808)	12.079 *** (11.674, 12.484)	10.920*** (10.548, 11.291)	12.362*** (12.172, 12.551)	12.844*** (12.566, 13.121)	11.835*** (11.587, 12.082)
Education, years	0.078*** (0.062, 0.094)	0.073*** (0.050, 0.096)	0.089*** (0.068, 0.109)			
Vocational education				0.052 (-0.038, 0.142)	0.062 (-0.067, 0.190)	0.111* (-0.009, 0.230)
Higher education				0.418*** (0.319, 0.518)	0.393*** (0.251, 0.534)	0.498*** (0.366, 0.631)
Experience	0.030*** (0.014, 0.045)	0.010 (-0.013, 0.033)	0.053*** (0.032, 0.073)	0.032*** (0.016, 0.048)	0.012 (-0.011, 0.035)	0.055*** (0.034, 0.075)
Experience squared	-0.001** (-0.001, -0.003)	-0.0003 (-0.001, 0.0002)	-0.001*** (-0.001, -0.001)	-0.001** (-0.001, -0.0004)	-0.0004 (-0.001, 0.0001)	-0.001*** (-0.002, -0.001)
Observations	2,694	1,238	1,456	2,694	1,238	1,456
R ²	0.038	0.036	0.057	0.039	0.036	0.058
Adjusted R ²	0.037	0.034	0.055	0.037	0.033	0.055
Residual Std. Error	0.919	0.920	0.866	0.919	0.920	0.866
F Statistic	35.479***	15.338***	29.289***	27.160***	11.401***	22.178***
Note:						* p<0.1; ** p<0.05; *** p<0.01

TABLE 6.3 Results of Mincer Analysis, RLMS 1996

	Total	Males	Females	Total	Males	Females
	(1)	(2)	(3)	(4)	(5)	(6)
Constant	12.268*** (11.947, 12.590)	12.539*** (12.066, 13.013)	11.814*** (11.401, 12.227)	12.991*** (12.775, 13.206)	13.306*** (12.987, 13.625)	12.568*** (12.292, 12.843)
Education, years	0.071*** (0.052, 0.089)	0.076*** (0.049, 0.103)	0.074*** (0.051, 0.098)			
Vocational education				0.104* (-0.002, 0.210)	0.130 (-0.026, 0.286)	0.126* (-0.010, 0.261)
Higher education				0.380*** (0.265, 0.496)	0.403*** (0.232, 0.574)	0.412*** (0.265, 0.560)
Experience	0.003 (-0.015, 0.020)	-0.001 (-0.027, 0.025)	0.018 (-0.005, 0.040)	0.005 (-0.013, 0.022)	0.001 (-0.025, 0.027)	0.019* (-0.003, 0.042)
Experience squared	-0.0001 (-0.001, 0.0002)	-0.0001 (-0.001, 0.0004)	-0.0004 (-0.001, 0.0001)	-0.0002 (-0.001, 0.0002)	-0.0002 (-0.001, 0.0004)	-0.0004* (-0.001, 0.0001)
Observations	2,282	1,034	1,248	2,282	1,034	1,248
R ²	0.029	0.037	0.033	0.026	0.032	0.031
Adjusted R ²	0.027	0.035	0.031	0.024	0.028	0.028
Residual Std. Error	0.958	0.974	0.886	0.959	0.977	0.887
F Statistic	22.443***	13.324***	14.098***	15.319***	8.574***	9.880***
Note:						*p<0.1; **p<0.05; *** p<0.01

TABLE 6.4 Results of Mincer Analysis, RLMS 1998

	Total	Males	Females	Total	Males	Females
	(1)	(2)	(3)	(4)	(5)	(6)
Constant	5.118*** (4.885, 5.350)	5.425*** (5.090, 5.760)	4.564*** (4.267, 4.861)	5.963*** (5.805, 6.120)	6.338*** (6.106, 6.571)	5.502*** (5.303, 5.700)
Education, years	0.088*** (0.075, 0.101)	0.095*** (0.076, 0.114)	0.099*** (0.083, 0.116)			
Vocational education				0.177*** (0.102, 0.252)	0.175*** (0.070, 0.280)	0.257*** (0.158, 0.355)
Higher education				0.528*** (0.444, 0.613)	0.556*** (0.435, 0.677)	0.615*** (0.506, 0.725)
Experience	0.024*** (0.012, 0.037)	0.013 (-0.005, 0.032)	0.041*** (0.025, 0.057)	0.028*** (0.015, 0.040)	0.018* (-0.001, 0.037)	0.043*** (0.027, 0.059)
Experience squared	-0.001*** (-0.001, -0.003)	-0.0004* (-0.001, 0.0003)	-0.001*** (-0.001, -0.001)	-0.001*** (-0.001, -0.003)	-0.0005** (-0.001, -0.0001)	-0.001*** (-0.001, -0.001)
Observations	3,102	1,434	1,668	3,102	1,434	1,668
R ²	0.057	0.069	0.085	0.058	0.067	0.085
Adjusted R ²	0.056	0.067	0.083	0.057	0.064	0.083
Residual Std. Error	0.800	0.803	0.730	0.800	0.804	0.730
F Statistic	62.558***	35.348***	51.380***	47.536***	25.536***	38.668***
Note:						* p<0.1; ** p<0.05; *** p<0.01

TABLE 6.5 Results of Mincer Analysis, RLMS 2000

	Total	Males	Females	Total	Males	Females
	(1)	(2)	(3)	(4)	(5)	(6)
Constant	5.834*** (5.591, 6.077)	6.311*** (5.966, 6.655)	5.023*** (4.710, 5.336)	6.700*** (6.543, 6.857)	7.183*** (6.961, 7.405)	6.072*** (5.869, 6.276)
Education, years	0.087*** (0.072, 0.101)	0.086*** (0.065, 0.106)	0.110*** (0.092, 0.128)			
Vocational education				0.153 *** (0.073, 0.233)	0.118 ** (0.008, 0.228)	0.283*** (0.178, 0.388)
Higher education				0.488 *** (0.398, 0.577)	0.450 *** (0.323, 0.578)	0.668*** (0.553, 0.784)
Experience	0.019*** (0.006, 0.032)	0.006 (-0.012, 0.025)	0.041*** (0.024, 0.057)	0.021*** (0.008, 0.034)	0.009 (-0.009, 0.028)	0.042*** (0.025, 0.058)
Experience squared	-0.0004*** (-0.001, -0.0001)	-0.0002 (-0.001, 0.0001)	-0.001*** (-0.001, -0.0004)	-0.0005*** (-0.001, -0.0002)	-0.0003* (-0.001, 0.0001)	-0.001*** (-0.001, -0.0005)
Observations	3,215	1,477	1,738	3,215	1,477	1,738
R ²	0.047	0.053	0.084	0.044	0.047	0.082
Adjusted R ²	0.046	0.051	0.082	0.043	0.044	0.080
Residual Std. Error	0.867	0.856	0.796	0.869	0.859	0.797
F Statistic	52.584***	27.384***	53.004***	36.873***	36.961***	38.813***
Note:						* p<0.1; ** p<0.05; *** p<0.01

TABLE 6.6 Results of Mincer Analysis, RLMS 2001

	Total	Males	Females	Total	Males	Females
	(1)	(2)	(3)	(4)	(5)	(6)
Constant	6.343*** (6.120, 6.566)	6.648*** (6.329, 6.968)	5.647*** (5.355, 5.939)	7.287*** (7.143, 7.430)	7.592*** (7.389, 7.795)	6.758*** (6.569, 6.947)
Education, years	0.093*** (0.080, 0.106)	0.092*** (0.073, 0.111)	0.116*** (0.099, 0.132)			
Vocational education				0.144*** (0.070, 0.218)	0.111** (0.008, 0.213)	0.293** (0.193, 0.393)
Higher education				0.519*** (0.438, 0.600)	0.498*** (0.380, 0.612)	0.711*** (0.603, 0.819)
Experience	0.001 (-0.011, 0.013)	0.001 (-0.016, 0.018)	0.013 (-0.003, 0.029)	0.003 (-0.009, 0.015)	0.004 (-0.014, 0.021)	0.013 (-0.003, 0.029)
Experience squared	-0.0001 (-0.0003, 0.0002)	-0.0001 (-0.0005, 0.0002)	-0.0002 (-0.001, 0.0001)	-0.0001 (-0.0004, 0.0001)	-0.0002 (-0.001, 0.0002)	-0.0002 (-0.001, 0.0001)
Observations	3,605	1,673	1,932	3,605	1,673	1,932
R ²	0.057	0.060	0.090	0.056	0.057	0.092
Adjusted R ²	0.056	0.058	0.088	0.054	0.055	0.090
Residual Std. Error	0.844	0.851	0.774	0.844	0.852	0.773
F Statistic	72.009***	35.323***	63.474***	52.935***	25.340***	48.998***
Note:						* p<0.1; ** p<0.05; *** p<0.01

TABLE 6.7 Results of Mincer Analysis, RLMS 2002

	Total	Males	Females	Total	Males	Females
	(1)	(2)	(3)	(4)	(5)	(6)
Constant	6.547*** (6.346, 6.748)	6.852*** (6.567, 7.137)	5.884*** (5.620, 6.147)	7.469*** (7.340, 7.598)	7.795*** (7.614, 7.976)	6.957*** (6.785, 7.129)
Education, years	0.092*** (0.080, 0.104)	0.093*** (0.076, 0.111)	0.113*** (0.098, 0.128)			
Vocational education				0.147*** (0.080, 0.214)	0.120** (0.028, 0.211)	0.283*** (0.192, 0.374)
Higher education				0.511 *** (0.437, 0.584)	0.498*** (0.394, 0.602)	0.686*** (0.588, 0.784)
Experience	0.015*** (0.005, 0.026)	0.012 (-0.003, 0.028)	0.028*** (0.014, 0.042)	0.018*** (0.007, 0.029)	0.016** (0.001, 0.032)	0.029*** (0.014, 0.043)
Experience squared	-0.00003*** (-0.001, -0.0001)	-0.0004** (-0.001, -0.0001)	-0.0005*** (-0.001, -0.0002)	-0.0004*** (-0.001, -0.0002)	-0.0005*** (-0.001, -0.0001)	-0.0005*** (-0.001, -0.0002)
Observations	3,803	1,748	2,055	3,803	1,748	2,055
R ²	0.062	0.072	0.098	0.060	0.068	0.099
Adjusted R ²	0.061	0.071	0.097	0.059	0.066	0.097
Residual Std. Error	0.777	0.770	0.722	0.778	0.771	0.722
F Statistic	84.039***	45.377***	74.224***	60.863***	31.968***	56.066***
Note:						* p<0.1; ** p<0.05; *** p<0.01

TABLE 6.8 Results of Mincer Analysis, RLMS 2003

	Total	Males	Females	Total	Males	Females
	(1)	(2)	(3)	(4)	(5)	(6)
Constant	6.779*** (6.578, 6.979)	7.204*** (6.922, 7.486)	6.054*** (5.793, 6.315)	7.695*** (7.567, 7.824)	8.127*** (7.945, 8.308)	7.167*** (7.001, 7.333)
Education, years	0.093*** (0.081, 0.104)	0.089*** (0.073, 0.106)	0.119*** (0.104, 0.134)			
Vocational education				0.169*** (0.102, 0.237)	0.114** (0.023, 0.204)	0.323*** (0.232, 0.414)
Higher education				0.520*** (0.447, 0.594)	0.456*** (0.353, 0.558)	0.740*** (0.642, 0.838)
Experience	0.016*** (0.005, 0.026)	0.009 (-0.007, 0.024)	0.025*** (0.011, 0.038)	0.018*** (0.007, 0.029)	0.011 (-0.005, 0.027)	0.025*** (0.011, 0.039)
Experience squared	-0.0004*** (-0.001, -0.0002)	-0.0004** (-0.001, -0.0002)	-0.0005*** (-0.001, -0.0002)	-0.0004*** (-0.001, -0.0002)	-0.0004** (-0.001, -0.0001)	-0.0005*** (-0.001, -0.0002)
Observations	3,858	1,765	2,093	3,858	1,765	2,093
R ²	0.068	0.078	0.107	0.065	0.069	0.110
Adjusted R ²	0.067	0.077	0.106	0.064	0.067	0.108
Residual Std. Error	0.782	0.753	0.732	0.783	0.757	0.731
F Statistic	93.289***	49.918***	83.800***	66.602***	32.690***	64.384***
Note:					* p<0.1; ** p<0.05; *** p<0.01	

TABLE 6.9 Results of Mincer Analysis, RLMS 2004

	Total	Males	Females	Total	Males	Females
	(1)	(2)	(3)	(4)	(5)	(6)
Constant	7.181*** (6.990, 7.371)	7.559*** (7.293, 7.825)	6.437*** (6.191, 6.683)	8.053*** (7.931, 8.174)	8.404*** (8.233, 8.574)	7.553*** (7.397, 7.710)
Education, years	0.085*** (0.074, 0.096)	0.084*** (0.068, 0.099)	0.111*** (0.097, 0.125)			
Vocational education				0.105*** (0.041, 0.170)	0.135*** (0.050, 0.221)	0.180*** (0.093, 0.267)
Higher education				0.445*** (0.374, 0.516)	0.443*** (0.345, 0.540)	0.610*** (0.516, 0.704)
Experience	0.011** (0.0003, 0.021)	0.005 (-0.009, 0.020)	0.022*** (0.009, 0.035)	0.013** (0.003, 0.023)	0.007 (-0.007, 0.022)	0.024*** (0.011, 0.038)
Experience squared	-0.0003*** (-0.001, -0.0001)	-0.0003* (-0.001, 0.0000)	-0.0005*** (-0.001, -0.0002)	-0.0004*** (-0.001, -0.0002)	-0.0004** (-0.001, -0.0005)	-0.001*** (-0.001, -0.0002)
Observations	3,968	1,824	2,144	3,968	1,824	2,144
R ²	0.068	0.084	0.106	0.063	0.075	0.101
Adjusted R ²	0.067	0.083	0.105	0.062	0.073	0.099
Residual Std. Error	0.748	0.720	0.690	0.750	0.724	0.693
F Statistic	96.234***	55.701 ***	84.918 ***	66.116***	36.626***	59.781 ***
Note:						* p<0.1; ** p<0.05; *** p<0.01

TABLE 6.10 Results of Mincer Analysis, RLMS 2005

	Total	Males	Females	Total	Males	Females
	(1)	(2)	(3)	(4)	(5)	(6)
Constant	7.541*** (7.352, 7.731)	7.969*** (7.703, 8.235)	6.729*** (6.485, 6.972)	8.374*** (8.255, 8.494)	8.722*** (8.555, 8.890)	7.868*** (7.715, 8.021)
Education, years	0.081*** (0.069, 0.092)	0.074*** (0.059, 0.090)	0.113*** (0.099, 0.127)			
Vocational education				0.083** (0.019, 0.147)	0.110** (0.026, 0.195)	0.189*** (0.101, 0.277)
Higher education				0.421 *** (0.351, 0.492)	0.388 *** (0.291, 0.484)	0.640 *** (0.546, 0.734)
Experience	0.001 (-0.008, 0.011)	-0.004 (-0.018, 0.010)	0.011* (-0.001, 0.024)	0.004 (-0.006, 0.014)	-0.002 (-0.016, 0.013)	0.013** (0.0004, 0.025)
Experience squared	-0.0001 (-0.0004, 0.0001)	-0.0001 (-0.0004, 0.0002)	-0.0003* (-0.001, 0.0001)	-0.0002* (-0.0004, 0.0001)	-0.0001 (-0.0004, 0.0002)	-0.0003** (-0.001, -0.0001)
Observations	3,913	1,801	2,112	3,913	1,801	2,112
R ²	0.065	0.069	0.116	0.062	0.061	0.113
Adjusted R ²	0.064	0.067	0.114	0.061	0.059	0.111
Residual Std. Error	0.744	0.716	0.685	0.745	0.719	0.686
F Statistic	89.991***	44.143***	91.939***	64.154***	29.157***	67.046***
Note:						* p<0.1; ** p<0.05; *** p<0.01

TABLE 6.11 Results of Mincer Analysis, RLMS 2006

	Total	Males	Females	Total	Males	Females
	(1)	(2)	(3)	(4)	(5)	(6)
Constant	7.764*** (7.601, 7.926)	8.149*** (7.917, 8.381)	7.011*** (6.804, 7.218)	8.596*** (8.492, 8.700)	8.878*** (8.729, 9.026)	8.173*** (8.039, 8.306)
Education, years	0.080*** (0.071, 0.090)	0.072*** (0.058, 0.085)	0.114*** (0.102, 0.126)			
Vocational education				0.081 *** (0.026, 0.137)	0.090 ** (0.016, 0.164)	0.196 *** (0.119, 0.274)
Higher education				0.443*** (0.381, 0.504)	0.397*** (0.312, 0.482)	0.658 *** (0.575, 0.741)
Experience	0.003 (-0.005, 0.012)	0.003 (-0.010, 0.016)	0.010* (-0.001, 0.021)	0.005 (-0.003, 0.014)	0.005 (-0.008, 0.017)	0.010* (-0.001, 0.021)
Experience squared	-0.0002** (-0.0004, -0.0004)	-0.0002* (-0.001, 0.0002)	-0.0003*** (-0.001, -0.0001)	-0.0003*** (-0.005, -0.0001)	-0.0003** (-0.001, -0.0002)	-0.0003** (-0.001, -0.0001)
Observations	4,804	2,172	2,632	4,804	2,172	2,632
R ²	0.078	0.074	0.140	0.078	0.072	0.134
Adjusted R ²	0.077	0.073	0.139	0.077	0.070	0.132
Residual Std. Error	0.715	0.688	0.664	0.715	0.689	0.666
F Statistic	135.305 ***	58.011 ***	142.254 ***	101.846 ***	41.810 ***	101.410 ***
Note:						* p<0.1; ** p<0.05; *** p<0.01

TABLE 6.12 Results of Mincer Analysis, RLMS 2007

	Total	Males	Females	Total	Males	Females	Total	Males	Females
	(1)	(2)	(3)	(4)	(5)	(6)			
Constant	8.165*** (8.009, 8.320)	8.530*** (8.312, 8.747)	7.461*** (7.258, 7.663)	8.840 *** (8.742, 8.939)	9.099 *** (8.961, 9.237)	8.461 *** (8.333, 8.588)			
Education, years	0.066*** (0.057, 0.075)	0.058*** (0.045, 0.070)	0.097*** (0.085, 0.108)						
Vocational education				0.083 *** (0.030, 0.135)	0.136 *** (0.068, 0.204)	0.138 *** (0.064, 0.214)			
Higher education				0.370 *** (0.312, 0.427)	0.334 *** (0.256, 0.413)	0.543 *** (0.465, 0.622)			
Experience	0.004 (-0.004, 0.013)	0.003 (-0.009, 0.014)	0.011 ** (0.001, 0.022)	0.005 (-0.003, 0.014)	0.002 (-0.010, 0.014)	0.012 ** (0.002, 0.023)			
Experience squared	-0.0003*** (-0.004, -0.001)	-0.0003** (-0.005, -0.0001)	-0.0003 *** (-0.001, -0.0001)	-0.0003 *** (-0.005, -0.001)	-0.0002 * (-0.0005, 0.0001)	-0.0004 *** (-0.001, -0.0001)			
Observations	4,726	2,153	2,573	4,726	2,153	2,573			
R ²	0.070	0.070	0.121	0.070	0.066	0.119			
Adjusted R ²	0.069	0.069	0.120	0.069	0.064	0.118			
Residual Std. Error	0.670	0.634	0.633	0.670	0.635	0.634			
F Statistic	118.364 ***	54.316 ***	117.362 ***	88.551 ***	38.060 ***	86.643 ***			
Note:							* p<0.1; ** p<0.05; *** p<0.01		

TABLE 6.13 Results of Mincer Analysis, RLMS 2008

	Total	Males	Females	Total	Males	Females
	(1)	(2)	(3)	(4)	(5)	(6)
Constant	8.134*** (7.969, 8.299)	8.412*** (8.178, 8.646)	7.473*** (7.260, 7.686)	8.918*** (8.814, 9.022)	9.146*** (9.000, 9.292)	8.549*** (8.414, 8.684)
Education, years	0.079*** (0.069, 0.088)	0.077*** (0.063, 0.090)	0.108*** (0.096, 0.120)			
Vocational education				0.097*** (0.041, 0.153)	0.133*** (0.060, 0.206)	0.178*** (0.099, 0.257)
Higher education				0.443*** (0.382, 0.504)	0.453*** (0.370, 0.537)	0.608*** (0.524, 0.692)
Experience	0.016*** (0.007, 0.024)	0.018*** (0.006, 0.031)	0.018*** (0.008, 0.029)	0.018*** (0.010, 0.027)	0.021*** (0.008, 0.033)	0.020*** (0.009, 0.031)
Experience squared	-0.0005*** (-0.001, -0.0003)	-0.001*** (-0.001, -0.0003)	-0.0005*** (-0.001, -0.0002)	-0.001*** (-0.001, -0.0004)	-0.001*** (-0.001, -0.0004)	-0.001*** (-0.001, -0.0003)
Observations	4,827	2,170	2,657	4,827	2,170	2,657
R ²	0.083	0.096	0.126	0.083	0.097	0.119
Adjusted R ²	0.083	0.095	0.125	0.082	0.095	0.117
Residual Std. Error	0.714	0.673	0.678	0.714	0.673	0.681
F Statistic	145.798***	76.757***	128.012***	109.483***	58.016***	89.328***
Note:						* p<0.1; ** p<0.05; *** p<0.01

TABLE 6.14 Results of Mincer Analysis, RLMS 2009

	Total	Males	Females	Total	Males	Females
	(1)	(2)	(3)	(4)	(5)	(6)
Constant	8.171*** (8.013, 8.329)	8.539*** (8.320, 8.757)	7.416*** (7.208, 7.624)	8.928*** (8.829, 9.028)	9.208*** (9.071, 9.345)	8.510*** (8.379, 8.641)
Education, years	0.076*** (0.067, 0.085)	0.069*** (0.056, 0.082)	0.108*** (0.097, 0.120)			
Vocational education				0.092*** (0.037, 0.147)	0.097*** (0.026, 0.168)	0.176*** (0.099, 0.253)
Higher education				0.422*** (0.363, 0.482)	0.403*** (0.323, 0.483)	0.599*** (0.517, 0.680)
Experience	0.020*** (0.012, 0.028)	0.018*** (0.007, 0.030)	0.028*** (0.018, 0.038)	0.022*** (0.014, 0.030)	0.021*** (0.009, 0.032)	0.029*** (0.019, 0.040)
Experience squared	-0.001*** (-0.001, -0.0004)	-0.001*** (-0.001, -0.0003)	-0.001*** (-0.001, -0.0004)	-0.001*** (-0.001, -0.0004)	-0.001*** (-0.001, -0.0004)	-0.001*** (-0.001, -0.0004)
Observations	4,804	2,146	2,658	4,804	2,146	2,658
R ²	0.079	0.088	0.129	0.078	0.089	0.119
Adjusted R ²	0.078	0.087	0.128	0.078	0.087	0.117
Residual Std. Error	0.681	0.633	0.651	0.681	0.633	0.655
F Statistic	136.792***	69.007***	131.128***	101.881***	52.357***	89.175***
Note:						* p<0.1; ** p<0.05; *** p<0.01

TABLE 6.15 Results of Mincer Analysis, RLMS 2010

	Total	Males	Females	Total	Males	Females
	(1)	(2)	(3)	(4)	(5)	(6)
Constant	8.405*** (8.280, 8.530)	8.622*** (8.444, 8.800)	7.791*** (7.628, 7.955)	9.149*** (9.072, 9.227)	9.327*** (9.216, 9.438)	8.811*** (8.710, 8.912)
Education, years	0.071*** (0.064, 0.078)	0.070*** (0.060, 0.080)	0.096*** (0.087, 0.105)			
Vocational education				0.058*** (0.015, 0.102)	0.106*** (0.048, 0.164)	0.116*** (0.055, 0.177)
Higher education				0.382*** (0.335, 0.429)	0.407*** (0.342, 0.472)	0.517*** (0.453, 0.582)
Experience	0.012*** (0.006, 0.019)	0.017*** (0.008, 0.026)	0.016*** (0.008, 0.024)	0.014*** (0.007, 0.020)	0.018*** (0.009, 0.028)	0.016*** (0.008, 0.024)
Experience squared	-0.0004*** (-0.001, -0.0003)	-0.001*** (-0.001, -0.0004)	-0.0004*** (-0.001, -0.0002)	-0.0004*** (-0.001, -0.0003)	-0.001*** (-0.001, -0.0004)	-0.0004*** (-0.001, -0.0002)
Observations	7,326	3,319	4,007	7,326	3,319	4,007
R ²	0.077	0.094	0.114	0.077	0.093	0.108
Adjusted R ²	0.076	0.094	0.113	0.076	0.092	0.107
Residual Std. Error	0.672	0.650	0.630	0.672	0.650	0.632
F Statistic	202.833***	115.111***	171.338***	152.272***	84.770***	120.673***
Note:						* p<0.1; ** p<0.05; *** p<0.01

TABLE 6.16 Results of Mincer Analysis, RLMS 2011

	Total	Males	Females	Total	Males	Females
	(1)	(2)	(3)	(4)	(5)	(6)
Constant	8.575*** (8,451, 8,698)	8.683*** (8,517, 8,850)	7.932*** (7,818, 8,145)	9.311*** (9,235, 9,386)	9.455*** (9,354, 9,557)	8.973*** (8,872, 9,074)
Education, years	0.067*** (0,060, 0,074)	0.074*** (0,065, 0,084)	0.090*** (0,081, 0,099)			
Vocational education				0.010 (-0,032, 0,052)	0.087*** (0,034, 0,139)	0.042 (-0,018, 0,102)
Higher education				0.330 *** (0,285, 0,375)	0.404*** (0,345, 0,464)	0.440*** (0,376, 0,503)
Experience	0.013*** (0,007, 0,020)	0.020*** (0,012, 0,029)	0.016*** (0,009, 0,024)	0.015*** (0,009, 0,021)	0.021*** (0,012, 0,030)	0.018*** (0,010, 0,026)
Experience squared	-0.0005*** (-0,001, -0,0003)	-0.001*** (-0,001, -0,0005)	-0.0004*** (-0,001, -0,0003)	-0.0005*** (-0,001, -0,0004)	-0.001*** (-0,001, -0,0005)	-0.0005*** (-0,001, -0,0003)
Observations	7,167	3,271	3,896	7,167	3,271	3,896
R ²	0.088	0.125	0.114	0.087	0.120	0.108
Adjusted R ²	0.087	0.125	0.113	0.086	0.119	0.107
Residual Std. Error	0.649	0.596	0.619	0.649	0.598	0.621
F Statistic	229.118***	156.109***	167.175***	170.503***	111.194***	118.283***
Note:						* p<0.1; ** p<0.05; *** p<0.01

TABLE 6.17 Results of Mincer Analysis, RLMS 2012

	Total	Males	Females	Total	Males	Females
	(1)	(2)	(3)	(4)	(5)	(6)
Constant	8.787*** (8.665, 8.908)	8.905*** (8.743, 9.067)	8.163*** (8.002, 8.325)	9.458*** (9.383, 9.533)	9.610*** (9.510, 9.710)	9.108*** (9.008, 9.209)
Education, years	0.061*** (0.054, 0.068)	0.068*** (0.059, 0.077)	0.085*** (0.076, 0.094)			
Vocational education				-0.006 (-0.048, 0.036)	0.081** (0.030, 0.133)	0.016 (-0.044, 0.076)
Higher education				0.300*** (0.255, 0.345)	0.378*** (0.320, 0.436)	0.412*** (0.349, 0.475)
Experience	0.017*** (0.011, 0.023)	0.027*** (0.019, 0.036)	0.018*** (0.011, 0.026)	0.018*** (0.012, 0.024)	0.027*** (0.019, 0.035)	0.020*** (0.012, 0.028)
Experience squared	-0.001*** (-0.001, -0.004)	-0.001*** (-0.001, -0.001)	-0.0005*** (-0.001, -0.0003)	-0.001*** (-0.001, -0.0005)	-0.001*** (-0.001, -0.001)	-0.0005*** (-0.001, -0.0003)
Observations	7,428	3,367	4,061	7,428	3,367	4,061
R ²	0.088	0.153	0.104	0.088	0.149	0.100
Adjusted R ²	0.087	0.152	0.103	0.088	0.148	0.099
Residual Std. Error	0.6666	0.598	0.640	0.666	0.599	0.642
F Statistic	237.681***	202.747***	156.563***	179.607***	146.920***	112.228***
Note:						* p<0.1; ** p<0.05; *** p<0.01

TABLE 6.18 Results of Mincer Analysis, RLMS 2013

	Total	Males	Females	Total	Males	Females
	(1)	(2)	(3)	(4)	(5)	(6)
Constant	8.793*** (8.669, 8.916)	9.037*** (8.868, 9.206)	8.082*** (7.919, 8.245)	9.502*** (9.425, 9.578)	9.721*** (9.618, 9.825)	9.095*** (8.992, 9.197)
Education, years	0.065*** (0.058, 0.072)	0.065*** (0.056, 0.075)	0.095*** (0.086, 0.104)			
Vocational education				0.011 (-0.031, 0.054)	0.049* (-0.004, 0.102)	0.083*** (0.021, 0.145)
Higher education				0.327*** (0.281, 0.373)	0.351*** (0.290, 0.412)	0.500*** (0.435, 0.564)
Experience	0.019*** (0.013, 0.025)	0.022*** (0.013, 0.030)	0.023*** (0.016, 0.031)	0.020*** (0.014, 0.026)	0.023*** (0.015, 0.032)	0.024*** (0.016, 0.032)
Experience squared	-0.001*** (-0.001, -0.005)	-0.001*** (-0.001, -0.001)	-0.001*** (-0.001, -0.0004)	-0.001*** (-0.001, -0.0005)	-0.001*** (-0.001, -0.0001)	-0.001*** (-0.001, -0.0004)
Observations	7,327	3,361	3,966	7,327	3,361	3,966
R ²	0.092	0.134	0.124	0.093	0.133	0.121
Adjusted R ²	0.092	0.134	0.123	0.093	0.132	0.120
Residual Std. Error	0.656	0.607	0.627	0.656	0.608	0.628
F Statistic	247.871***	173.841***	186.948***	188.225***	128.699***	135.959***
Note:						* p<0.1; ** p<0.05; *** p<0.01

TABLE 6.19 Results of Mincer Analysis, RLMS 2014

	Total	Males	Females	Total	Males	Females
	(1)	(2)	(3)	(4)	(5)	(6)
Constant	8.823*** (8.691, 8.955)	8.998*** (8.811, 9.185)	8.170*** (7.997, 8.342)	9.576*** (9.494, 9.659)	9.738*** (9.622, 9.854)	9.226*** (9.118, 9.335)
Education, years	0.068*** (0.061, 0.076)	0.070*** (0.060, 0.081)	0.097*** (0.087, 0.106)			
Vocational education				0.009 (-0.037, 0.055)	0.058* (-0.001, 0.118)	0.069** (0.003, 0.135)
Higher education				0.334*** (0.285, 0.383)	0.378*** (0.311, 0.445)	0.487*** (0.419, 0.556)
Experience	0.021*** (0.014, 0.027)	0.025*** (0.016, 0.035)	0.024*** (0.016, 0.033)	0.022*** (0.015, 0.028)	0.027*** (0.017, 0.036)	0.024*** (0.016, 0.032)
Experience squared	-0.001*** (-0.001, -0.005)	-0.001*** (-0.001, -0.001)	-0.001*** (-0.001, -0.0004)	-0.001*** (-0.001, -0.0005)	-0.001*** (-0.001, -0.001)	-0.001*** (-0.001, -0.0004)
Observations	6,148	2,795	3,353	6,148	2,795	3,353
R ²	0.094	0.124	0.134	0.094	0.121	0.128
Adjusted R ²	0.094	0.123	0.133	0.093	0.120	0.127
Residual Std. Error	0.640	0.612	0.600	0.640	0.613	0.602
F Statistic	212.520***	131.812***	173.006***	159.197***	96.383***	122.801***
Note:					* p<0.1; ** p<0.05; *** p<0.01	

TABLE 6.20 Results of Mincer Analysis, RLMS 2015

	Total	Males	Females	Total	Males	Females
	(1)	(2)	(3)	(4)	(5)	(6)
Constant	9.043*** (8.913, 9.173)	9.111*** (8.936, 9.287)	8.460*** (8.286, 8.634)	9.632*** (9.571, 9.732)	9.760*** (9.652, 9.869)	9.343*** (9.234, 9.453)
Education, years	0.057*** (0.050, 0.065)	0.066*** (0.056, 0.076)	0.081*** (0.072, 0.091)			
Vocational education				0.017 (-0.030, 0.063)	0.091*** (0.034, 0.147)	0.056 (-0.013, 0.126)
Higher education				0.296*** (0.247, 0.345)	0.381*** (0.318, 0.444)	0.413*** (0.342, 0.484)
Experience	0.018*** (0.012, 0.024)	0.025*** (0.016, 0.033)	0.020*** (0.011, 0.028)	0.019*** (0.013, 0.026)	0.027*** (0.018, 0.035)	0.019*** (0.011, 0.028)
Experience squared	-0.001*** (-0.001, -0.004)	-0.001*** (-0.001, -0.001)	-0.0005*** (-0.001, -0.0003)	-0.001*** (-0.001, -0.0004)	-0.001*** (-0.001, -0.001)	-0.0005*** (-0.001, -0.0003)
Observations	6,231	2,844	3,387	6,231	2,844	3,387
R ²	0.084	0.132	0.104	0.086	0.133	0.102
Adjusted R ²	0.083	0.131	0.103	0.086	0.131	0.100
Residual Std. Error	0.627	0.574	0.604	0.626	0.574	0.604
F Statistic	189.226***	144.439***	130.774***	147.039***	108.570***	95.552***
Note:						* p<0.1; ** p<0.05; *** p<0.01

TABLE 6.21 Results of Mincer Analysis, RLMS 2016

	Total	Males	Females	Total	Males	Females
	(1)	(2)	(3)	(4)	(5)	(6)
Constant	8.974*** (8.840, 9.107)	9.142*** (8.965, 9.319)	8.343*** (8.160, 8.526)	9.655*** (9.572, 9.739)	9.856*** (9.746, 9.966)	9.290*** (9.173, 9.407)
Education, years	0.061*** (0.054, 0.068)	0.067*** (0.057, 0.077)	0.095*** (0.075, 0.096)			
Vocational education				-0.006 (-0.054, 0.043)	0.038 (-0.020, 0.097)	0.039 (-0.034, 0.112)
Higher education				0.286*** (0.236, 0.337)	0.336*** (0.272, 0.400)	0.413*** (0.339, 0.487)
Experience	0.022*** (0.016, 0.029)	0.023*** (0.014, 0.031)	0.028*** (0.019, 0.036)	0.023*** (0.017, 0.030)	0.023*** (0.015, 0.032)	0.028*** (0.019, 0.036)
Experience squared	-0.001*** (-0.001, -0.0005)	-0.001*** (-0.001, -0.0005)	-0.001*** (-0.001, -0.0004)	-0.001*** (-0.001, -0.0005)	-0.001*** (-0.001, -0.0005)	-0.001*** (-0.001, -0.0004)
Observations	6,297	2,905	3,392	6,297	2,905	3,392
R ²	0.074	0.117	0.095	0.074	0.112	0.090
Adjusted R ²	0.074	0.116	0.094	0.074	0.111	0.089
Residual Std. Error	0.644	0.580	0.636	0.644	0.582	0.638
F Statistic	168.712***	128.263***	118.501***	126.208***	91.747***	83.562***
Note:						* p<0.1; ** p<0.05; *** p<0.01

TABLE 6.22 Results of Mincer Analysis, RLMS 2017

	Total	Males	Females	Total	Males	Females
	(1)	(2)	(3)	(4)	(5)	(6)
Constant	9.171*** (9.035, 9.306)	9.227*** (9.054, 9.400)	8.605*** (8.415, 8.795)	9.757*** (9.671, 9.844)	9.924*** (9.815, 10.033)	9.407*** (9.284, 9.530)
Education, years	0.054*** (0.046, 0.061)	0.066*** (0.056, 0.076)	0.074*** (0.064, 0.085)			
Vocational education				0.007 (-0.043, 0.057)	0.051* (-0.006, 0.108)	0.065* (-0.012, 0.142)
Higher education				0.264*** (0.212, 0.317)	0.345*** (0.282, 0.409)	0.388*** (0.309, 0.466)
Experience	0.019*** (0.012, 0.025)	0.021*** (0.013, 0.030)	0.022*** (0.013, 0.031)	0.019*** (0.013, 0.026)	0.022*** (0.013, 0.031)	0.021*** (0.012, 0.030)
Experience squared	-0.001*** (-0.001, -0.0004)	-0.001*** (-0.001, -0.0004)	-0.001*** (-0.001, -0.0003)	-0.001*** (-0.001, -0.0004)	-0.001*** (-0.001, -0.0004)	-0.0005*** (-0.001, -0.0003)
Observations	6,359	2,947	3,412	6,359	2,947	3,412
R ²	0.065	0.117	0.075	0.066	0.113	0.073
Adjusted R ²	0.065	0.116	0.074	0.066	0.112	0.072
Residual Std. Error	0.660	0.569	0.665	0.659	0.570	0.666
F Statistic	147.285***	129.365***	92.396***	112.577***	93.789***	67.363***
Note:						* p<0.1; ** p<0.05; *** p<0.01

TABLE 6.23 Results of Mincer Analysis, RLMS 2018

	Total	Males	Females	Total	Males	Females
	(1)	(2)	(3)	(4)	(5)	(6)
Constant	9.182*** (9.051, 9.314)	9.352*** (9.170, 9.533)	8.611 *** (8.437, 8.786)	9.774*** (9.689, 9.859)	9.999*** (9.883, 10.115)	9.420*** (9.306, 9.534)
Education, years	0.054*** (0.047, 0.062)	0.060*** (0.050, 0.070)	0.076*** (0.067, 0.086)			
Vocational education				0.029 (-0.018, 0.077)	0.038 (-0.022, 0.097)	0.099*** (0.029, 0.169)
Higher education				0.275*** (0.225, 0.325)	0.305*** (0.239, 0.370)	0.413*** (0.342, 0.484)
Experience	0.024*** (0.017, 0.030)	0.023*** (0.014, 0.032)	0.028*** (0.020, 0.036)	0.024*** (0.017, 0.030)	0.024*** (0.015, 0.033)	0.027*** (0.019, 0.035)
Experience squared	-0.001*** (-0.001, -0.0005)	-0.001*** (-0.001, -0.0005)	-0.001*** (-0.001, -0.0004)	-0.001*** (-0.001, -0.0005)	-0.001*** (-0.001, -0.0005)	-0.001*** (-0.001, -0.0004)
Observations	6,121	2,807	3,314	6,121	2,807	3,314
R ²	0.071	0.109	0.092	0.070	0.105	0.087
Adjusted R ²	0.071	0.108	0.091	0.069	0.104	0.086
Residual Std. Error	0.617	0.570	0.597	0.617	0.571	0.598
F Statistic	155.870***	113.720***	111.508***	115.221***	82.245***	78.510***
Note:						* p<0.1; ** p<0.05; *** p<0.01

WORKING PAPER 2

Returns to Education in the Russian Federation: Does depreciation explain some recent trends?

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Data and Code

Thanks are due to the Higher School of Economics, Moscow for making the Russian Longitudinal Monitoring Study (RLMS) Household data readily available for researchers around the world. Thanks are also due to Sylvain Weber for generously sharing the code from his University of Geneva Doctoral Thesis, which we adapted for one of the reported sets of estimations. The code used for this paper is made freely available for all researchers at <https://bitbucket.org/zagamog/edreru/src/master/>

This paper explores the topic of depreciation of human capital as a possible explanation for observed trends in the returns to education in the Russian Federation. Estimates of depreciation are presented for various sample groups. Depreciation first decreased and then increased in the period 1994-2018. University educated workers add human capital even after they stop full-time studies; this happens less with vocational graduates.

KEY WORDS

Returns to Education, Depreciation, Gender segregation, Automation, *JEL Codes:* I26, I28, J16, J29

1 | DEPRECIATION OF HUMAN CAPITAL IN THE RUSSIAN FEDERATION

The first working paper of this series analyzed the trends in the returns to education in the Russian Federation between 1994 and 2018 (**Patrinos_2020**). The analysis showed how returns climbed and then declined, forming a gently curved inverse-U shape. The figure from that working paper is reproduced in Appendix Figure A1. From a policy viewpoint, it is very important to try to understand the reason for this trend as a first step to reverse the trend if possible. One of the candidate explanations is the rate of depreciation of human capital. A short conceptual understanding will help to recognize why depreciation could be a viable candidate explanation.

Age-earnings profiles are almost invariably concave downward shaped curves. Earnings rise after a labor market entrant completes full-time schooling. The profile indicates a peak in earnings, usually a few years before retirement,

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after which there is a steady decline in earnings. The concave shape of the earnings profile is an outcome of two countervailing tendencies - the rise is attributed to continued accumulation of human capital through training or on the job learning and the decline due to depreciation. It is notoriously difficult to extract depreciation rates from observed earning data, which is a probable reason why the academic literature is somewhat sparse, but it is an important policy analytical question and this paper uses different approaches to ensure that findings are robust to methodological assumptions. How has the depreciation rate of human capital changed over time in the Russian Federation? Does the depreciation trend for the Russian Federation over the past twenty five years or so show a U-shape that would mirror and explain the rise and fall in the rates of return? This paper seeks to answer that question.

1.1 | Analytical Treatment of Depreciation

Rosen_1976 and **Mincer_1982** presented early treatments on the depreciation of human capital. However, in terms of a focus on depreciation, a seminal paper of **Neuman_1995** established the basic parameters that have guided the research since that time. The authors introduce the important distinction between two kinds of depreciation or loss of productive potential of human capital. The first one, termed as "obsolescence" or "vintage effect", is due to an overall upgrading of technology or the operation of other market forces that lowers the value of education or training obtained in a previous period. This is also termed as an 'external depreciation', presumably as it is a given for an individual. The second kind of depreciation is attributed to the deterioration of physical and mental abilities of an individual due to the progression of a person's age, or the simple passage of time. This is termed as "internal depreciation". Neuman and Weiss posited that external effects would be more important for higher levels of education, under the assumption that changes in the labor market are transmitted more readily to higher education. They give the example that a recently educated electrical engineer would be learning many new things compared to one who studied the same subject in an earlier time. Neuman and Weiss reasoned that workers with basic education levels may not suffer as much from obsolescence.

Figure 1.1 shows for the Russian Federation the effects described by Neuman and Weiss. There are three panels in the figure, and three lines in each figure. The vertical axis indicates the monthly earnings in constant 2018 rubles, using the Rosstat CPI deflator. The horizontal axis indicates the years of experience. The dotted line shows the earnings for 1998, the dashed line represents 2006 and the solid line the data from 2018. Each of the panels, representing a different level of education, shows an upward drift in the experience-earnings profiles in the period from 1998 to 2018. Only Figure 1.1a shows a clear concave downwards profile for Higher Education; the concave tendency is less pronounced for the other two levels of Vocational education and Secondary education.

Putting the curves together by year (Figure 1.2) suggests that the premium for university education over the other two levels does narrow at higher levels of experience. In the figure, to accommodate the relatively lower wage levels of 1998, the leftmost panel (Figure 1.2a) is slightly compressed compared to the other two panels. The converging tendency between levels of education would suggest that depreciation is indeed higher for university graduates. In the next two subsections, we present a more rigorous quantitative treatment of this issue, using a variant of Neuman-Weiss developed by **Murillo_2006** and an alternative approach developed by **Arrazola_2005**.

1.2 | Differential Depreciation Affecting Education and Training

Murillo_2006 implemented a variation of the Neuman and Weiss model with a focus on empirical implementation to Spain. We follow the Murillo notation in the implementation of the model, which begins with the following earnings

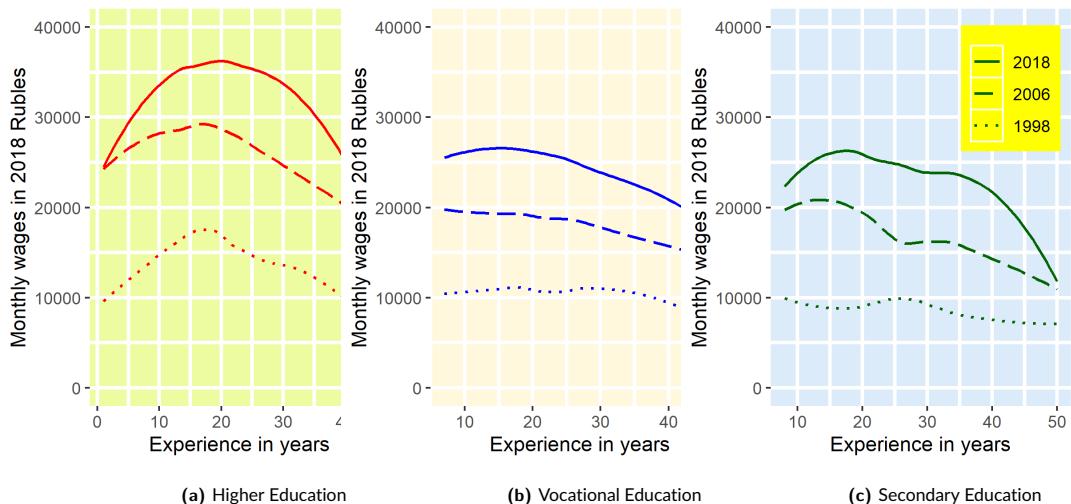


FIGURE 1.1 Neuman-Weiss vintage effects by education level from RLMS Rounds 1998, 2006 and 2018

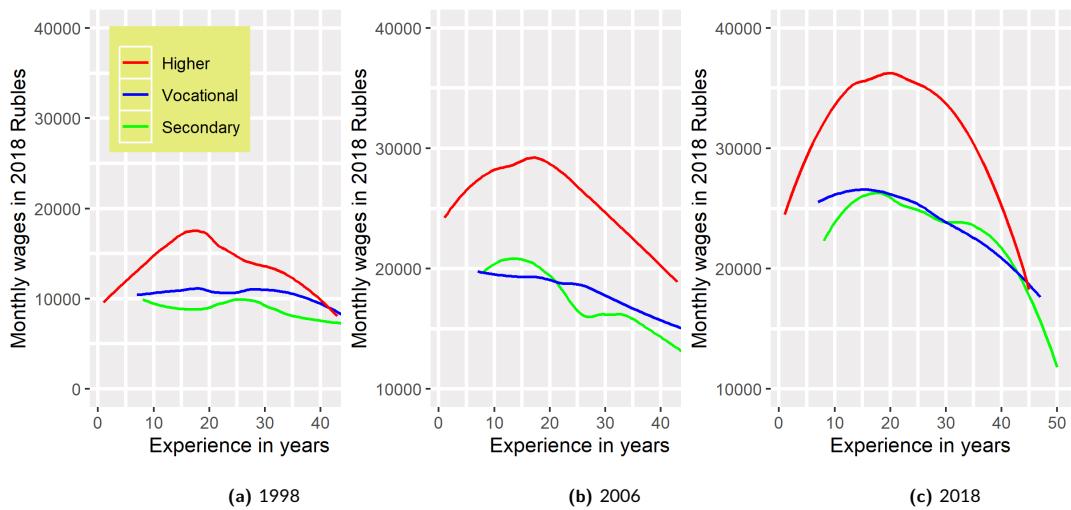


FIGURE 1.2 Neuman-Weiss vintage effects by Year from RLMS Rounds 1998, 2006 and 2018

equation:

$$\log W_T = \alpha + \beta_1 KS_T + \beta_2 KE_T \quad (1)$$

where W represents earnings, KS the stock of human capital derived from schooling of S years, and KE the stock of human capital acquired from on the job training or experience, and T indexes the number of experience years since completing formal education. In this set-up, the parameters β_1 and β_2 are the productivity parameters for the respective parts of the stock of human capital. Both are assumed to suffer from depreciation or the loss of productive value. At this stage, we do not distinguish between the causes (internal or external) of this loss. The path of the stock of human capital due to education is given by

$$KS_T = S + hTS \quad (2)$$

where h is the rate of loss of the stock. The next equation for the loss of stock gained from experience is a bit more complicated. The stock from schooling, S is taken to be fixed at the end of the full-time schooling period and the beginning of the working period. However, experience is being built up every year at the same time as the capital acquired from previous experience depreciates.

$$KE_T = \{1 + T - 1 \cdot \gamma\} + \{1 + T - 2 \cdot \gamma\} + \{1 + T - 3 \cdot \gamma\} + \dots + \{1\} \quad (3)$$

where γ is the rate of loss applied every year. The equation can be simplified and summarized as

$$KE_T = T + \gamma \cdot \{T - 1 + T - 2 + T - 3 + \dots + 1\} = T + \gamma \cdot \frac{T^2}{2} \quad (4)$$

Substituting equations 2 and 4 into equation 1, we get

$$\log W = \alpha + \beta_1 S + \beta_1 h TS + \beta_2 T + \frac{\beta_2 \gamma}{2} T^2 = \alpha + \beta_1 S + \pi_1 TS + \beta_2 T + \pi_2 T^2 \quad (5)$$

where $\pi_1 = \beta_1 h$ and $\pi_2 = \frac{\beta_2 \gamma}{2}$. From 5, the depreciation rate during T years applied to schooling can be computed as $\pi_1 S$ and the depreciation rate applied to experience as $2\pi_2 T$.

1.2.1 | Estimation Results

We analyze separately six years that represent the ends (1994 and 2018), the diffused peak (2003 and 2006), and halfway points to the ends (1998 and 2012) of the inverted-U shape shown in Appendix Figure A1. Table 1.1 shows OLS estimation results of equation 5 run on the whole sample of the RLMS observations. The idea is to examine the role played by changes in depreciation to explain the observed pattern of variation in the rates of return over the time period.

Using the coefficient estimates derived from Table 1.1, we compute the depreciation rate during T years applied to schooling as $\pi_1 S$ and the depreciation rate applied to experience as $2\pi_2 T$, evaluating the expression at the mean level of schooling. Table 1.2 reports the depreciation rate values so calculated with the corresponding sample means. The table shows an interesting U-shaped pattern in the depreciation rate for human capital, attributable mainly to the depreciation rate associated with experience. The depreciation rate associated with education has been declining

steadily and did not pick up again as measured with the given data. The depreciation rate associated with experience declined at first and then picked up again.

Further work is required, including computation of the depreciation rates at levels other than the mean values. At this stage, the findings raise some interesting questions which needs to be addressed by further research. In the period from 1994 to 2006, the depreciation rate appears to be declining, just as the rates of return were on an ascending curve. As both kinds of depreciation (for experience and education) were declining, it is possible that the main cause was in the labor market experience rather than in the education system. Since the peak of earnings premiums in the 2003-2006 period, as returns to education have declined, we see that the depreciation rates associated with experience have started climbing back, but depreciation rates associated with education have declined to null and not reverted. It is tempting to claim that this indicates a qualitative improvement in the skills provided by the education system, but further investigation is warranted before making such a claim. We explore next an alternative computation of the depreciation rate.

TABLE 1.1 Results of Estimating Human Capital Depreciation for the Whole Sample, RLMS

	1994 (1)	1998 (2)	2003 (3)	2006 (4)	2012 (5)	2018 (6)
Constant	10.266*** (0.301)	4.720*** (0.258)	6.762*** (0.221)	7.854*** (0.181)	8.889*** (0.128)	9.205*** (0.158)
Educ, years (S)	0.113*** (0.020)	0.116*** (0.017)	0.094*** (0.015)	0.074*** (0.012)	0.054*** (0.008)	0.053*** (0.010)
Educ X Exper (TS)	-0.001* (0.001)	-0.001* (0.001)	-0.00005 (0.001)	0.0003 (0.0005)	0.0003 (0.0003)	0.0001 (0.0004)
Exper(T)	0.053*** (0.015)	0.044*** (0.013)	0.016 (0.011)	-0.001 (0.009)	0.012* (0.007)	0.023*** (0.008)
Exper squared (T^2)	-0.001*** (0.0002)	-0.001*** (0.0001)	-0.0004*** (0.0001)	-0.0002* (0.0001)	-0.001*** (0.0001)	-0.001*** (0.0001)
Observations	3,037	3,100	3,856	4,800	7,417	6,112
R ²	0.043	0.058	0.068	0.078	0.088	0.071
Adjusted R ²	0.042	0.057	0.067	0.077	0.087	0.071
Residual Std. Error	0.934	0.800	0.782	0.715	0.666	0.617
F Statistic	34.062***	47.678***	69.846***	101.053***	177.952***	117.104***

Note:

*p<0.1; **p<0.05; ***p<0.01

TABLE 1.2 Average Depreciation Rate by Years

Panel A: Whole Sample		1994	1998	2003	2006	2012	2018
1	Experience, mean	21.41	22.32	22.20	22.24	22.52	22.52
2	Education, mean	12.70	12.69	12.79	12.79	12.95	13.27
3	DR Experience, %	1.87	1.55	1.04	0.50	1.37	1.63
4	DR Education, %	2.80	2.71	0.11	0.00	0.00	0.00
5	DR Human Capital, %	4.67	4.26	1.15	0.50	1.37	1.63

Panel B: Female Sample		1994	1998	2003	2006	2012	2018
1	Experience, mean	21.36	22.09	22.34	22.33	22.69	22.67
2	Education, mean	12.76	12.85	12.98	13.05	13.24	13.58
3	DR Experience, %	2.46	2.57	1.62	0.78	1.23	1.52
4	DR Education, %	3.81	5.31	3.97	0.00	0.00	0.00
5	DR Human Capital, %	6.27	7.88	5.59	0.78	1.23	1.52

Panel C: Male Sample		1994	1998	2003	2006	2012	2018
1	Experience, mean	21.47	22.58	22.02	22.14	22.31	22.34
2	Education, mean	12.62	12.50	12.57	12.47	12.61	12.91
3	DR Experience, %	1.83	1.08	0.80	0.67	2.23	1.91
4	DR Education, %	3.96	2.74	0.91	0.00	0.00	0.00
5	DR Human Capital, %	5.78	3.82	1.71	0.67	2.23	1.91

1.3 | Depreciation of Human Capital using Non-Linear Least Squares

Arrazola_2005 developed an alternative approach the issue of human capital depreciation with a first principles approach regarding the formation of human capital, providing an empirical estimation for Spain. A number of other authors have replicated Arrazola's approach. In this paper, we follow the notation adopted by Sylvain Weber, who estimated depreciation rates for Switzerland (Weber_2008 and Weber_2011). Weber starts with the definition of s_t – the time fraction invested into the generation of new human capital by a person at age t . Relying on a human capital theory implication about the decline of s_t over the life cycle, Weber shows that the complete path of s_t is written as follows:

$$s_t = \begin{cases} 0 & \text{if } t < 6 \\ 1 & \text{if } 6 \leq t < S^* \\ \alpha - \frac{\alpha}{T-S^*} \cdot (t - S^*) = \alpha \cdot \left(1 - \frac{X_t}{L}\right) & \text{if } S^* \leq t \leq T \end{cases} \quad (6)$$

where α is a parameter, S^* is the age when schooling life ends and the working one begins, T is the retirement age, $L = T - S^*$ is the total working life length, $X_t = t - S^*$ is experience. Schooling duration is equal to $S^* - 6$.

The model then utilizes the standard human capital theory specification that potential earnings E_t are exponentially related to the human capital stock:

$$E_t = W \cdot \exp(\beta_K K_t + \beta_Z Z_t) \quad (7)$$

where W is a return per period on a unit of earnings capacity, K_t is the stock of human capital at time t , Z_t is a set of observable attributes supposed to influence on earnings, and β_K, β_Z are the parameters of interest. The stock of human capital in period t can be estimated as the sum of the stock from the previous period minus the loss due to depreciation plus the quantity generated during the t_{th} period:

$$K_t = K_{t-1} - \delta \cdot K_{t-1} + \Delta K_t = 1 - \delta \cdot K_{t-1} + \Delta K_t \quad (8)$$

By recursion, an expression for K_t as a function of the human capital stock acquired at the end of formal education K_S is given by:

$$K_t = 1 - \delta^t \cdot K_S + \sum_{j=S^*}^{t-1} 1 - \delta^j \cdot \Delta K_{t-j} \quad (9)$$

Taking the logarithms of the expression 7 and substituting K_t by the equation 9 leads to:

$$\ln E_t = \ln W + \beta_K \cdot \left\{ 1 - \delta^t \cdot K_S + \sum_{j=S^*}^{t-1} 1 - \delta^j \cdot \Delta K_{t-j} \right\} + \beta_Z Z_t \quad (10)$$

Next is the standard human capital relationship between observed and potential earnings. As only a proportion of s_t of the human capital stock is used in the actual production of earnings, observed earnings can be expressed by:

$$\begin{aligned} Y_t &= (1 - s_t) \cdot E_t \\ \ln Y_t &= \ln(1 - s_t) + \ln E_t \end{aligned} \quad (11)$$

Combining 10 and 11 results in:

$$\ln Y_t = \ln W + \beta_K \cdot \left\{ 1 - \delta^t \cdot K_S + \sum_{j=S^*}^{t-1} 1 - \delta^j \cdot \Delta K_{t-j} \right\} + \beta_Z Z_t + \ln(1 - s_t) \quad (12)$$

Finally, as the human capital stock at the end of education is related to the human capital received, there is a direct association between this stock and the schooling duration:

$$K_S = S \quad (13)$$

The production of new human capital K_t depends on the portion of time devoted to this activity:

$$\Delta K_t = s_t = \begin{cases} 0 & \text{if } t < 6 \\ 1 & \text{if } 6 \leq t < S^* \\ \alpha \cdot \left(1 - \frac{X_t}{L}\right) & \text{if } S^* \leq t \leq T \end{cases} \quad (14)$$

Using 8 and 11 to express K_S as a sum of the human capital quantities produced during schooling, the result is:

$$K_S \stackrel{j=0}{=} S^* 1 - \delta^j \cdot \Delta K_{S^*-j} \stackrel{j=6}{=} S^* 1 - \delta^j \quad (15)$$

Substituting 13 and 14 into 12, adding an error term and an individual subscript i provides the equation that can be estimated using non-linear least squares (NLS):

$$\ln Y_{it} = \ln W + \beta_K \cdot \left\{ 1 - \delta^{X_{it}} \cdot S_i + \alpha \cdot \frac{1 - 1 - \delta^{X_{it}}}{\delta} \cdot \left(1 + \frac{1 - \delta}{\delta \cdot L_i} \right) - \frac{\alpha \cdot X_{it}}{\delta \cdot L_i} \right\} + \ln \left\{ 1 - \left(\alpha - \frac{\alpha}{L_i} \cdot X_{it} \right) \right\} + \beta_Z \cdot Z_{it} + u_{it} \quad (16)$$

where t shows a time period, $\ln Y$ is a logarithm of the observed earnings, $\ln W$ is a logarithm of a return per certain period on a unit of earnings capacity, β_K is the effect of the human capital stock on earnings, β_Z is the effect of other covariates in the model on earning, δ is the human capital depreciation rate, X_{it} is the labor market experience, L_i is the total working life length, α is a parameter reflecting the share of time invested in training immediately after leaving school, Z_{it} is a set of observable attributes hypothesized to have an impact on earnings, u_{it} is an error term. In this model, the share of time invested in training after school starts at alpha and declines to zero at the end of the working period.

The parameter alpha is notional, a parameter that helps to explain observed empirical patterns - it should not be considered literally as time devoted in explicit training programs. Post-schooling increments to human capital can also be understood by examining another group of workers that is not included in the model of Equation 16. Mincer_1982 document a most interesting phenomenon with regard to workers who leave and then return to the workforce: "It is rather surprising to find that returnees from the non-market appear to incur greater job investments upon return to the market than do stayers of the same age and education." The authors also refer to a similar phenomenon of re-investment amongst international migrants - they attribute the significant increases in wage earnings in the first years of international migrants to the USA to post school reinvestment. The authors characterize such investment as a re-adaptation or repair of skills. It is straightforward to extend this process of continuous 'repair of skill damage' as being a phenomenon that affects all workers, not just intermittent workers or migrants.

Table 1.3 reports empirical findings for the estimation of the 16 equation using NLS with robust standard errors for the same range of years as presented in the previous section. Unlike that earlier model, the Arrazola model does not allow for a different treatment of depreciation of human capital acquired from schooling or from experience - only a single δ (depreciation rate of the human capital) parameter is estimated. However, the model does allow the identification of an α parameter (related to post-school investment in human capital).

TABLE 1.3 Non-Linear Least Squares estimated for range of years**Panel A: Whole Sample**

Parameter	1994	1998	2003	2006	2012	2018
InW	10.4780	4.8622	6.7305	7.8405	8.4104	8.8524
	(0.1913)	(0.1646)	(0.1409)	(0.0838)	(0.0787)	(0.0885)
bk	0.1453	0.1429	0.1144	0.0723	0.1382	0.1487
	(0.0167)	(0.0144)	(0.0140)	(0.0106)	(0.0087)	(0.0086)
delta	0.0246	0.0208	0.0093	-0.0040	0.0369	0.0459
	(0.0052)	(0.0043)	(0.0050)	(0.0058)	(0.0043)	(0.0051)
alpha	0.4798	0.3860	0.1352	-0.1690	0.4972	0.6686
	(0.0912)	(0.0790)	(0.0911)	(0.0950)	(0.0601)	(0.0533)
Sample size	3037	3100	3856	4800	7417	6112

Panel B: Female Sample

Parameter	1994	1998	2003	2006	2012	2018
InW	10.1580	4.1353	5.7238	6.9251	7.9143	8.4131
	(0.2447)	(0.2124)	(0.1973)	(0.1663)	(0.1136)	(0.1275)
bk	0.1524	0.1818	0.1702	0.1321	0.1329	0.1330
	(0.0196)	(0.0163)	(0.0158)	(0.0149)	(0.0104)	(0.0103)
delta	0.0275	0.0260	0.0156	0.0065	0.0197	0.0249
	(0.0060)	(0.0042)	(0.0038)	(0.0044)	(0.0036)	(0.0036)
alpha	0.5889	0.5408	0.3466	0.0900	0.3354	0.4628
	(0.0974)	(0.0749)	(0.0763)	(0.0862)	(0.0659)	(0.0609)
Sample size	1645	1667	2093	2630	4057	3312

Panel C: Male Sample

Parameter	1994	1998	2003	2006	2012	2018
InW	10.4992	5.1267	7.3195	8.1556	8.2117	8.8384
	(0.2880)	(0.2420)	(0.1530)	(0.1158)	(0.1195)	(0.1213)
bk	0.1697	0.1425	0.0845	0.0725	0.2206	0.1784
	(0.0244)	(0.0215)	(0.0180)	(0.0163)	(0.0111)	(0.0118)
delta	0.0261	0.0168	-0.0020	0.0015	0.0595	0.0511
	(0.0067)	(0.0059)	(0.0082)	(0.0095)	(0.0063)	(0.0069)
alpha	0.4625	0.2669	-0.1351	-0.1196	0.8161	0.7312
	(0.1278)	(0.1162)	(0.1362)	(0.1475)	(0.0484)	(0.0663)
Sample size	1392	1433	1763	2170	3360	2800

The sparklines in Table 1.3 indicates a similar roughly U-shaped pattern for depreciation as reported in Table 2.2, with depreciation of human capital first declining and then increasing again. This supports the narrative that the observed increase and then decrease in returns to education in the Russian Federation may be explained through the effect of depreciation. The exact magnitudes of estimated depreciation in the two tables do not match - while the range of depreciation is similar - between 2% to 5%, the 2018 figures indicate a higher level in Table 2.3.

An intriguing finding concerns the difference in depreciation rates between female and male workers. The conventional human capital logic holds that women typically face longer periods outside of the labor market because of child-bearing and child-rearing responsibilities. Absence from the labor market would lead to higher levels of depre-

ciation amongst women. In the case of the Russian Federation, the estimates of both Table 2.2 and Table 2.3 reflect this pattern in the first half of the period, up until the estimates for 2006. Around the time of the peak in returns, the depreciation rate drops to zero for both men and women, but in the subsequent period, the depreciation rate for men appears to be higher than the rate for women. The fact that both methodologies reflect this pattern indicates a real phenomenon, rather than a statistical artefact, and something to be explored further.

Finally, a word about the α parameter, which is an indicator of post-schooling investment in human capital. This parameter also shows a similar tendency as the depreciation rate, meaning a decline to zero and a subsequent increase. As with depreciation, the first half shows a higher α for female workers until it drops to zero for both males and females at the time of peak returns, and in the subsequent period the α parameter level is higher for males.

Adopting a strategy utilized by (Weber_2008) and modifying the approach to fit the Russian context, Table 1.4 provides four alternative specifications displayed separately by gender. The four models portray the following combinations regarding the α and δ parameters: *Model I* - both α and δ are constant across education levels; *Model II* - α is constant, δ varies; *Model III* - α varies, δ is constant, *Model IV* - both α and δ vary across education levels.

Model I - the base model, has already been presented in Table 1.3 and is shown again as part of Table 1.4 only for easy reference. *Model II*, allows the δ parameter to vary across education levels; *Model III* allows the α parameter to vary across education levels; and finally *Model IV* allows both parameters to vary by education level. The estimates indicate the absence of depreciation effects by educational level. Weber had found for Switzerland that depreciation is higher for vocational education, and provided the explanation that vocational education skills tend to be more specific to jobs and careers. However, this finding is not replicated with the data for the Russian Federation. The statistically significant finding in Table 1.4 concerns the α parameter. Post-schooling investment in human capital for those with vocational education is not different from those with secondary education, but university education brings with it a higher level of the α parameter, for both male and female workers.

2 | FURTHER EXPLORATION OF DEPRECIATION

2.1 | Depreciation and the Gender dimension

The previous section indicated an intriguing finding regarding depreciation and gender, with recent rounds of RLMS data indicating a higher level of depreciation for male workers, a possibly anomalous finding. This sub-section draws upon the literature regarding occupational gender segregation, the tendency for some jobs to be dominated by one gender, a phenomenon that has been studied in detail in labor markets around the world (Preston_1999 and Blau_2013). Empirical application in the Russian Federation has examined trends regarding gender segregation in occupations (Klimova_2009,Klimova_2012,Kosyakova_2015). The bulk of this literature is concerned with the issue of the possible inequities and inefficiencies arising from gender segregation. However, for the purpose of this paper is to exploit the presence in the data of occupational gender segregation to obtain insights into human capital depreciation.

In this section, we extend the Neuman and Weiss model of the previous section to compare the estimated depreciation rates between female- and male-dominated groups in various industries and occupations. The RLMS 2018 database contains information about sector or industry and standardized ISCO-08 classification of jobs. These were used to tag gender-based industrial sectors and occupations. The average female representation by sector was 54%. Using a range of $\pm 10\%$ from the average, a sector was marked as female-dominated if it contained more than 64% of women workers, and male-dominated if it contained less than 44% of women workers. Neutral sectors occupied the middle of the distribution. Figure 2.1 visualizes this procedure; Table 2.1 maps title of sectors with female per-

TABLE 1.4 Empirical Estimates for Females and Males, RLMS 2018

	Females				Males			
	I	II	III	IV	I	II	III	IV
InW	8.413*** (0.127)	8.901*** (0.319)	8.778*** (0.0975)	8.644*** (0.279)	8.838*** (0.121)	8.950*** (0.291)	9.022*** (0.0925)	8.864*** (0.221)
bk	0.133*** (0.0103)	0.111*** (0.0115)	0.125*** (0.0105)	0.129*** (0.0130)	0.178*** (0.0118)	0.177*** (0.0147)	0.183*** (0.0122)	0.179*** (0.0111)
delta	0.0249*** (0.00357)				0.0511*** (0.00692)			
alpha	0.463*** (0.0609)				0.731*** (0.0663)	0.761*** (0.124)		
delta_base	0.0387* (0.0181)			0.0355*** (0.00453)	0.0305* (0.0134)	0.0558** (0.0185)		
delta_voc	-0.00109 (0.00251)			-0.00128 (0.00519)		0.000258 (0.00150)	0.00694 (0.00547)	
delta_uni	-0.00699 (0.00610)			0.00198 (0.00805)		-0.00143 (0.00333)	0.00892 (0.00728)	
alpha_base	0.448*** (0.0728)			0.424* (0.172)		0.698*** (0.0578)		
alpha_voc	0.0124 (0.0442)			-0.0322 (0.128)		0.00828 (0.0381)	0.144 (0.114)	
alpha_uni	0.208*** (0.0533)			0.206 (0.134)		0.157*** (0.0420)	0.307* (0.125)	
N	3312	3312	3312	3312	2800	2800	2800	2800
adj.R ²	0.082	0.085	0.091	0.091	0.096	0.096	0.106	0.107
AIC	6017.6	6006.2	5983.5	5987.1	4842.8	4844.9	4813.7	4814.6
BIC	6042.0	6042.8	6020.2	6035.9	4866.5	4880.5	4849.3	4862.1

Standard errors in parentheses

* p < 0.05, ** p < 0.01, *** p < 0.001

centages in them. To generate gender-related occupations a similar tactic was applied based on the 2-digit ISCO-08 classification (see Figure 2.2 and Table 2.2).

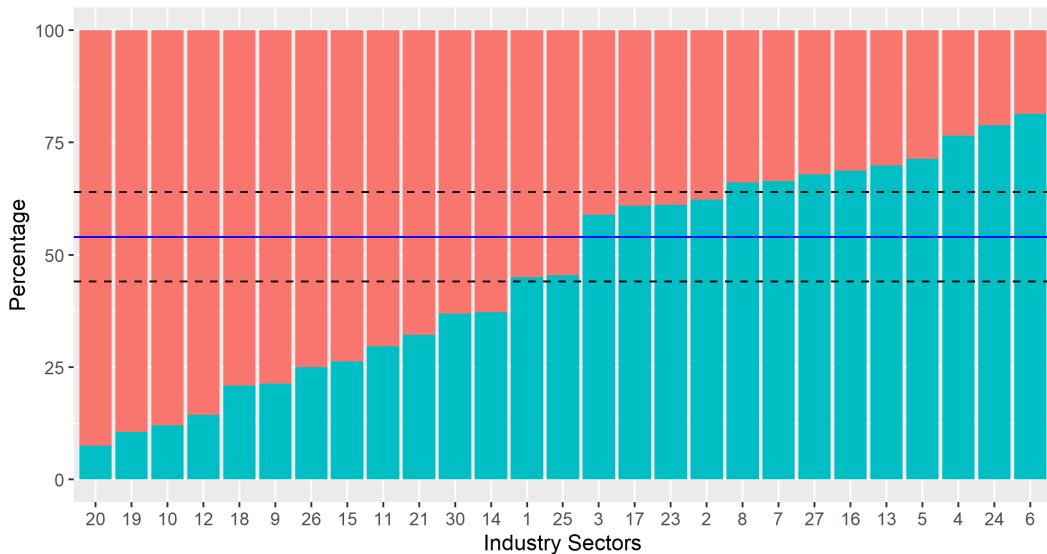


FIGURE 2.1 Distribution of Employment in RLMS 2018 by Industry and Gender

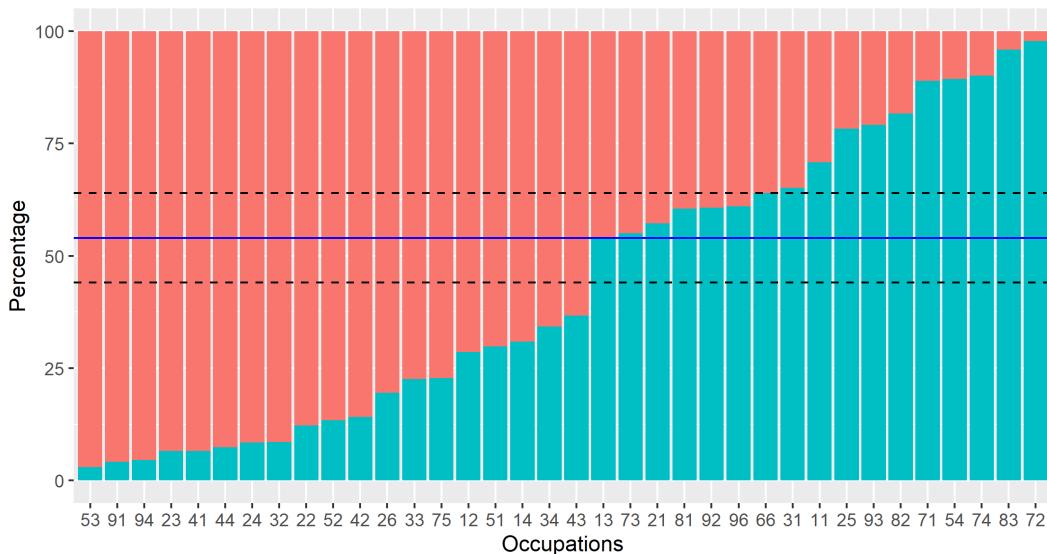


FIGURE 2.2 Distribution of Employment in RLMS 2018 by Occupation and Gender

Adaptation of Neuman and Weiss

TABLE 2.1 Industries by Strength of Female Proportion, RLMS 2018

Category	Sector	N fem	% fem	N total
Female dominated	Social Services	37	92.5%	40
	Other	17	89.5%	19
	Education	609	88.0%	692
	Public Health	412	85.7%	481
	Real Estate Operations	19	79.2%	24
	Government and Public Administration	155	78.7%	197
	General Public Services	15	75.0%	20
	Finance	107	73.8%	145
	Science, Culture	100	70.4%	142
	Jurisprudence	19	67.9%	28
Neutral	Mass Media, Telecommunications	24	63.2%	38
	Trade, Consumer Services	738	62.8%	1175
	Light industry, Food industry	209	55.0%	380
	Sports, Tourism, Entertainment	18	54.5%	33
Male dominated	Military Industrial Complex	67	41.1%	163
	Housing and Community Services	95	39.1%	243
	Chemical Industry	14	38.9%	36
	Civil Machine Construction	51	37.8%	135
	Agriculture	79	33.9%	233
	Transportation, Communication	186	33.6%	553
	Information Technology	9	32.1%	28
	Energy or Power Industry	41	31.3%	131
	Army, Internal Security	90	30.1%	299
	Other Heavy Industry	60	28.7%	209
	Oil and Gas Industry	52	23.5%	221
	Wood, Timber, Forestry	7	21.2%	33
	Construction	73	18.7%	391
	Total	3303	54.3%	6089

TABLE 2.2 Occupations by Strength of Female Proportion, RLMS 2018

Occupation	N fem	% fem	N total
1 Personal Care Workers	97	97.0%	100
2 Cleaners and Helpers	163	95.9%	170
3 Food Preparation Assistants	21	95.5%	22
4 Teaching Professionals	370	93.4%	396
5 General and Keyboard Clerks	71	93.4%	76
6 Other Clerical Support Workers	25	92.6%	27
7 Business and Administration Professionals	97	91.5%	106
8 Health Associate Professionals	192	91.4%	210
9 Health Professionals	79	87.8%	90
10 Sales Workers	350	86.6%	404
11 Customer Services Clerks	67	85.9%	78
12 Legal, Social and Cultural Professionals	169	80.5%	210
13 Business and Administration Associate Professionals	517	77.4%	668
14 Food Processing, Woodworking, Garment and Other Craft and Related Trades Workers	51	77.3%	66
15 Administrative and Commercial Managers	25	71.4%	35
16 Personal Services Workers	172	70.5%	244
17 Hospitality, Retail and Other Services Managers	38	69.1%	55
18 Legal, Social, Cultural and Related Associate Professionals	69	65.7%	105
19 Numerical and Material Recording Clerks	100	63.3%	158
20 Production and Specialized Services Managers	139	46.0%	302
21 Handicraft and Printing Workers	9	45.0%	20
22 Science and Engineering Professionals	101	42.8%	236
23 Stationary Plant and Machine Operators	72	39.6%	182
24 Agricultural, Forestry and Fishery Laborers	11	39.3%	28
25 Refuse Workers and Other Elementary Workers	30	39.0%	77
26 Miscellaneous non-ISCO	9	36.0%	25
27 Science and Engineering Associate Professionals	120	34.9%	344
28 Chief Executives, Senior Officials and Legislators	7	29.2%	24
29 Information and Communications Technology Professionals	15	21.7%	69
30 Laborers in Mining, Construction, Manufacturing and Transport	24	20.9%	115
31 Assemblers	11	18.3%	60
32 Building and Related Trades Workers (excluding Electricians)	23	11.1%	207
33 Protective Services Workers	23	10.7%	215
34 Electrical and Electronic Trades Workers	16	9.9%	162
35 Drivers and Mobile Plant Operators	23	4.1%	558
36 Metal, Machinery and Related Trades Workers	6	2.2%	267

The Neuman and Weiss model provides an estimation of the depreciation rate for human capital, but by itself is unable to identify how much of that depreciation is external or internal. External depreciation is due to obsolescence (as new technologies make skills redundant) and internal depreciation is due to factors related to the individual. Neuman and Weiss had access in their empirical application to data about the technology level of the Israeli firms to which the workers belonged. They were able to show the differential effect on depreciation of workers in 'high-tech firms', thus providing evidence in support of their model. If depreciation is greater for the workers in high technology

industries, the amount by which depreciation is greater for such workers can be attributed to obsolescence, which is what they find. In the present paper, we do not have access to data about the technology level of firms, but we are able to exploit two variations that also help us to understand better the depreciation phenomenon: gender segregation is the first one of these two variations. Examining differences in depreciation rate by the gender segregation classification helps us to identify internal and external depreciation based on a conjecture. The conjecture is that external depreciation would have a greater affect by industry sector, as technological change would propagate more rapidly through a sector rather than through occupations, which are dispersed across sectors.

Table 2.3 depicts average rates of human capital loss due to experience and education by the female- and male-dominated industrial sectors and occupations. Industry or sector related differences does show difference in the depreciation rate, with depreciation rate being higher for male dominated industrial sectors. These are engineering and technology oriented sectors, compared to administration, services, and education which are the female dominated sectors. The depreciation does not appear to vary across occupational groupings - male dominated and female dominated occupation groupings have similar depreciation rates. These findings need to be treated as preliminary findings as they are only point estimates of depreciation, evaluated at mean values.

A second adaptation of the Neuman and Weiss approach is to consider data on occupational routineness. In the next sub-section we follow a research path that was first laid out by [acemoglu2011](#) to understand the impact of automation on the labor market. Following the Neuman and Weiss logic, the prior hypothesis would be that obsolescence will have higher effect on jobs with more routine tasks. To the extent that there is less of a difference in depreciation according to routineness measures, we can infer that there is less effect of obsolescence and more effect of intrinsic depreciation; or that obsolescence of human capital is less related to routineness and threat of automation.

TABLE 2.3 Average Human Capital Depreciation Rates (DR) by Female- and Male-dominated Industries and Occupations, RLMS 2018

Statistic	Ind_F	Ind_M	occfemale	occmale
1 Experience, mean	23.45	22.97	21.67	23.48
2 Education, mean	14.06	13.01	13.67	12.67
3 DR Experience, %	0.89	1.82	1.55	1.40
4 DR Education, %	0.00	0.00	0.00	0.00
5 DR Human Capital, %	0.89	1.82	1.55	1.40

2.2 | Depreciation and Occupational Routineness

In addition to the examination of human capital depreciation rates in gender-dominated industries and occupations, we explore differences in depreciation between groups generated by using an array of routine and non-routine task content metrics for jobs. This is important in light of discussion about computers and robots taking over routine oriented jobs. In this analysis, we rely on a recent literature of job classification based on task intensity measures [Mihaylov_2019](#). These measures are based on the textual analysis of description of jobs in the ISCO 08 classification. Each job lists a detailed set of activities or tasks performed as part of the job, and these activities are rated according to whether they are vulnerable to automation in which case they are classified as Routine (R), otherwise they are Non-Routine (NR). Tasks are also classified depending on their Cognitive (C) or Manual (M) requirements; Cognitive tasks are further classified as mainly Analytic (A) or Interactive (I). The results is a five-fold classification of tasks, which is subsequently used to develop a set of measures depending on the incidence of these tasks in the job description.

For purpose of this analysis, we use two of these measures. Routine Task Intensity measure (RTI) denotes a score difference between the summed routine task indices and the summed non-routine task indices: $RC + RM - NRA + NRI + NRM$ - it is a net measure of job routineness or vulnerability to automation. We also use a gross measure that brings together the non-routine task indices: $NRA + NRI + NRM$. Using the k-means clustering technique for the metrics described, we created two respective categorical variables (drti and dnraim) with categories capturing *high*, *medium*, and *low* manifestations of the features.

Table 2.4 shows the results of comparing depreciation rates between individuals whose jobs invoke routine or non-routine tasks at a high, medium, or low level. The findings suggest that depreciation explained by experience does not differ substantially between people with jobs with varying routine task intensity. The same outcome also applies to workers varying in the degree of non-routine content at their jobs. As with the findings regarding gender, these should be regarded as preliminary findings subject to further analysis. However, it does appear that the automation aspect of technological change may not be affecting the rate of depreciation of skills - both routine and non-routine intensive jobs undergo depreciation, though it is possibly that the underlying causal factors may be different.

TABLE 2.4 Average Human Capital Depreciation Rates (DR) by Routineness Classification, RLMS 2018

Statistic	High	Low	Medium	High	Low	Medium
Net Routine Task Intensity				Gross Non-Routineness Measure		
1 Measure	drti	drti	drti	dnraim	dnraim	dnraim
2 Experience, mean	21.44	22.79	22.76	22.94	22.22	22.05
3 Education, mean	12.86	13.67	12.8	13.66	12.76	13.02
4 DR Experience, %	1.8	1.5	1.64	1.62	1.73	1.48
5 DR Education, %	0	0	0	0	0	0
6 DR Human Capital, %	1.8	1.5	1.64	1.62	1.73	1.48

3 | SUMMARIZED FINDINGS AND POLICY CONCLUSIONS

3.1 | Summarized Findings

This paper has covered substantive technical material. The main finding are summarized in the points below:-

- **Depreciation of 2%** The topic of depreciation of human capital is important from the policy perspective because increasing the human capital can be made both by the creation of human capital as well as reducing the depreciation of human capital to the extent possible. In this paper per first presented an overview of the literature regarding depreciation of human capital and present estimates of depreciation in the Russian Federation. Depreciation appears to be around 2% per year in the most recent finding, with the depreciation mostly attributed to depreciation of human capital acquired with experience (Table1.2).
- **Depreciation declining then increasing** The pattern of the depreciation rate indicates a gentle decline followed by an increase in the period 1994-2018 (Table 1.2 and Table 1.3). This pattern is a reflection of the inverted-U shaped pattern of the rates of return to education. It is possible that depreciation may be an explanation for the observed tendency in the returns to education.
- **University educated individuals make more post-school investment too** In estimating rates of depreciation, we undertake an exploration of a related parameter that represents post-schooling investment in human capital. The

data indicates that post-schooling investment for those with vocational education is indistinguishable from those with only secondary education. However, those with university education appear to be investing more in their working period (Table 1.4).

- **Males may be experiencing higher depreciation than females** The paper explored differences in depreciation rates across industrial and occupation groupings denoted by levels of gender segregation. Depreciation rates appear to be higher in male dominated industrial sectors but gender related occupational groupings do not show this differential. The evidence suggests that external depreciation due to obsolescence may be a dominant component of the depreciation of human capital (Table 2.3).
- **Automation possibilities of jobs may not be related to depreciation** The paper used a relatively recent classification of jobs regarding the potential for automation depending on the routine or non-routine nature of tasks. It was hypothesized that routine intensive jobs which are more likely to be taken over by computers may suffer from a higher depreciation rate, but the data do not reveal differences in depreciation rate by routine task intensity (Table 2.4).

3.2 | Policy Conclusions

These findings and the context of the larger literature on depreciation and the returns to education results in the following policy conclusions:

- **Emphasize lifelong learning to augment human capital wealth** Non-cognitive skills that are formed throughout the lifetime have equally strong effects on productivity ([kautz2014](#)). Research in Norway backs up this claim ([midtsundstad2019](#)). Investment in lifelong learning will be more relevant for the Russian Federation as the average age of retirement moves out ([kilpi2012; paccagnella2016](#)).
- **Renovate curriculum and stress extra-curricular education at all levels to emphasize learning to learn** Enhanced lifelong learning capacity begins at an early age ([kautz2014](#)). Curriculum from early grades to university will benefit from greater emphasis on application of critical thinking and problem solving skills. Extra-curricular education is geared towards non-cognitive skills and the Russian Federation is already a world leader in this area.
- **Support internal migration which brings better efficiency and equity to the labor market** The Russian Federation benefits from substantive internal migration and migration from the former Soviet republics that are now independent ([tarasyev2018](#)). Policies should support this migration by easing restrictions on worker movements ([oshchepkov2015](#)).
- **Investigate more closely the determinants and the impact of depreciation of human capital in the Russian context** There are a number of areas where further inquiry will provide useful insights. In addition to the areas already mentioned above of migration, curriculum and life-long learning programs, the following research areas are promising: (i) How returns to education over the lifetime vary for STEM disciplines ([deming2018](#)); (ii) How digitization of jobs in relation to automation may or may be related to the findings regarding routineness ([evangelista2014; cirillo2019](#)); (iii) How is aging related to changes in productivity and what are effective programs to counter the effect of aging, such as deployment of specific equipment and infrastructure for older people and the formation of mixed-age work teams ([gobel2009; gobel2013](#)).

Appendix

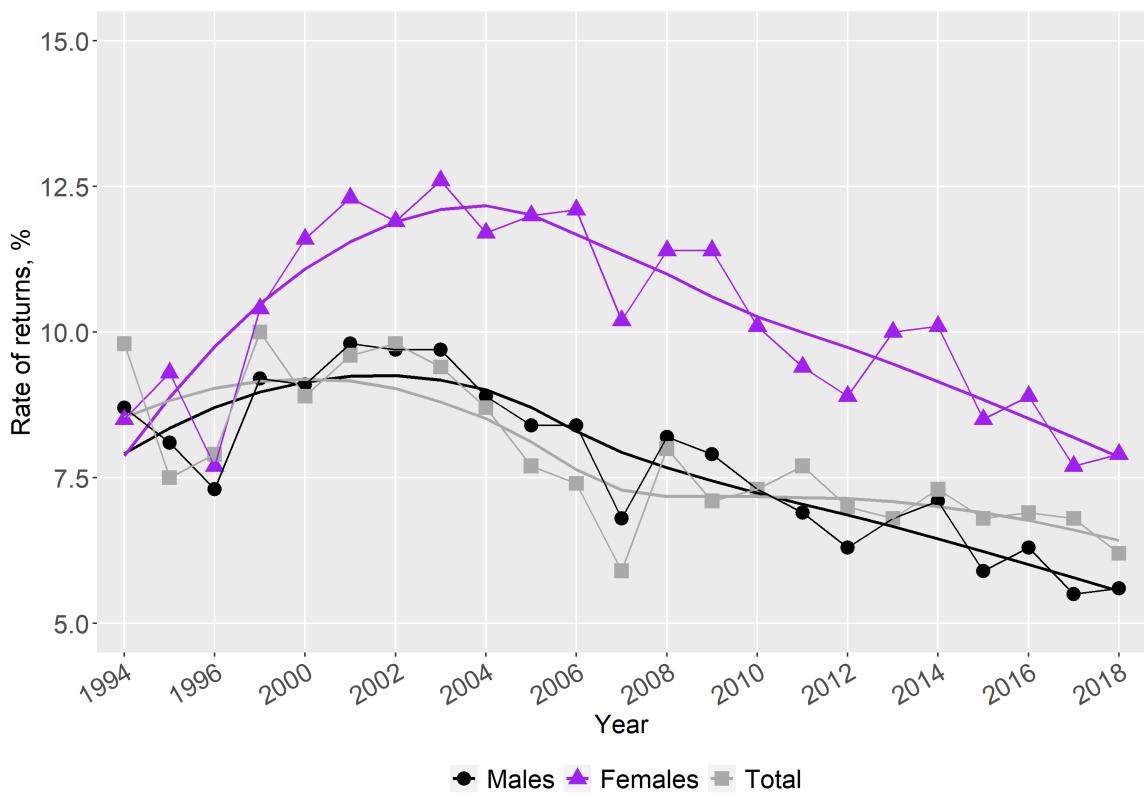


FIGURE A1 Mincerian Rates of Return to Education in Russia 1994 to 2018

WORKING PAPER 3

Returns to Education in the Russian Federation: Variation across regions and implications for policy development in priority regions

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Data and Code

Thanks are due to Rosstat for making the anonymized Statistical Survey of Income and Participation in Social Programs micro-data readily available for researchers around the world. The code used for this paper is made freely available for all researchers at <https://bitbucket.org/zagamog/edreru/src/master/>

This paper is the third in a series of working papers investigating the returns to education in the Russian Federation. This paper uses regionally representative household survey data to determine the rates of return to education in different regions. Returns show a wide dispersion together with the labor market context. The paper's policy recommendations would be particularly helpful to support human capital development of federally targeted economically and socially depressed regions.

KEY WORDS

Returns to Education, Russian Federation, Regional Analysis *JEL*

Codes: I26, I28, J240, R110

1 | ESTIMATING REGIONAL RETURNS TO EDUCATION

1.1 | Motivation for this study

The diversity of economic conditions across Russian regions suggests fruitful policy analytical use of regional level returns to education. Regional economic development in the Russian Federation is a heavily studied topic, with numerous studies focused on macroeconomic issues and investigations regarding convergence of growth trajectories, decomposition of inequality and efficiency of public spending. Examples of these studies are: Lugovoy et al. 2007, Hauner 2008, Gluschenko 2011 and Kufenko 2014. A recent World Bank report described the three main factors that

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explain the wide scale of diversity in Russia's regions, so that some regions have income levels that match Singapore or New Zealand, and others match Bolivia or Honduras: (i) the persistent Soviet legacy; (ii) diverse physical geography; and (iii) dominance of oil and gas in some regions (World Bank 2018). The report analyzed the determinants of the Economic Potential Index (EPI) of Russian regions: urbanization; the presence of high-tech industries; advanced human capital; and connectivity (access to markets). These four factors explain 60% of the variation in EPI. In this study we create a typology of regions using various measures for the quantity and quality of labor demand and supply, including a measure related to the EPI.

For the EPI analysis, the measure of advanced human capital was the regional percentage of population with a higher education degree. While that report examined regional development with an overview of all sectors, and recommended that regional development can be spurred through investment in human capital, this paper seeks to derive deeper insights regarding human capital. It seeks to answer three questions: What is the variation of the returns to education across regions in Russia? What are the regional variables that may be causing the regional variation (as determined through a random effects regression model)? and What are the policy implications of this regional variation?

After concluding this introductory section with a review of available regional estimates of the returns to education in the Russian Federation, we present our own estimates of the regional returns to education. We compute regional returns to education as a combination of a fixed coefficient and random coefficients, using the levels of education. The returns can also be termed as the wage premium to the respective levels of education. The final section of the paper presents the returns to education in context of regional conditions related to the labor market supply and demand. In light of the government strategy to target depressed regions, we suggest that human capital development may benefit from an examination of the differential returns to education by region.

1.2 | Previous estimates of regional returns for Russia

Until quite recently, the only tried and tested set of available survey data that contained adequate information to calculate the rate of returns to education was the Russian Longitudinal Monitoring Survey (RLMS), implemented by the Higher School of Economics (HSE). The RLMS is a nationally representative household survey, but the survey size and design is too small to include regionally representative samples. Cheidvasser and Benítez-Silva 2007 had used the RLMS to derive rates of return at a level that roughly corresponded to Russia's eight federal districts. The authors had examine data from the 1995 to 1998 rounds of the RLMS. In this period of time, of substantive economic and social upheaval following the collapse of the Soviet Union in 1991, the returns of the education were low overall, and they were relatively even lower for metropolitan Moscow and St. Petersburg.

Baeva 2013 examined returns to education for regions in the Siberian Federal district. Using data from the enterprise based Survey of Wages by Occupation by Rosstat for the years 2007, 2009 and 2011, she found that the premium to Higher education was 61% for the Russian Federation and 56% for the Siberian Federal District. At the regional level, the premium ranged from 40% for Krasnoyarsk to 72% for Novosibirsk. The author also presents details about considerable variation in the returns to vocational education and a closer examination of returns for the Irkutsk region. Oshchepkov 2018 also utilized data from the Survey of Wages by Occupation by Rosstat, for the years 2005, 2007, 2009, 2011, 2013 and 2015. Only returns to Higher education are computed in this paper, and a typical specifications results in estimates of a wage premium for Higher education for all of the Russian Federation as 81%. The dispersion indicates a range from 54% return for the Republic of Mordovia to 127% for the Tuva Republic. A very useful practice in this paper is the correct interpretation of coefficients on dummy variables in semi-logarithmic regressions that was recommended by Halvorsen, Palmquist, et al. 1980. The author presents the regional estimates

of returns to education using ordinary least squares (OLS) regression, with a modified Mincerian specification that includes gender, public or private sector and broad classification of industry.

An interesting aspect of Oshchepkov 2018 is the use of data from all five rounds of the occupational wage survey for 79 of the Russian regions, that results in (79 x 6) or 474 coefficient estimates from which wage premium style returns (i.e., not dividing by the years of higher education) can be computed. The author reports a second stage regression, using the computed coefficient estimates as dependent variables and regressing them on a set of region level variables, with a specification that includes fixed effects for each region and each year. If there are unobserved regional or temporal fixed effects that are correlated with the error term in this second stage regression, the specification is said to result in valid estimates of effects of regional characteristics. Treating regression coefficients as dependent variables could be perilous if there is a systematic time-varying relationship between regional returns to education and the regional characteristics. From a policy analytic perspective, it is of particular interest to trace the time- and region-varying effects as policy makers can use such effects to proactively influence the returns to education. In spite of the possible methodological issues, the paper provides an interesting perspective to the topic of returns to education in the Russian Federation. The literature in this field is likely to grow as more regionally representative household or enterprise data sets become available for the Russian Federation.

1.3 | Data

To estimate returns to education in Russian regions, we use the most recent (2018) round of the Statistical Survey of Income and Participation in Social Programs, collected by Rosstat. The primary purpose of the Rosstat survey was to obtain statistical information, reflecting the role of wages, income from self-employment, property income, pensions, and social benefits in ensuring the material well-being of families. The survey contains data on trends in income and poverty variation among households with different socio-economic status. There are also variables on people's participation in social programs, their pension and health insurance, material and social security of low-income families, and the impact of social policy measures on people's well-being. The sample selected for the empirical modeling consists of individuals aged 25-64 who are out of school and have positive labor market experience and income.

1.4 | Methods

The Mincerian equation with an added gender dummy is the main focus in the regional investigation of returns to education in Russia: in this section we look at how these returns vary across regions. Additionally, we explore the determinants of the established variation through a random effects regression analysis. The equations of interest are as follows:

First level:

$$\text{Log}(\text{Wage})_{ij} = b_{0j} + b_{1j} \cdot \text{Educ} + b_{2j} \cdot \text{Exp} + b_{3j} \cdot \text{Exp}^2 + b_{4j} \cdot \text{Gender} + \epsilon_{ij} \quad (1)$$

Second Level:

$$b_{0j} = \gamma_{00} + \gamma_{0n} \cdot Z + u_{00}; \quad b_{1j} = \gamma_{10} + \gamma_{1n} \cdot Z + u_{10}; \quad b_{ij} = \gamma_{i0} \quad \text{for } i \neq 0 \quad (2)$$

where an individual i is nested within a region j , $\text{Log}(\text{Wage})$ is the logarithm of monthly wage, Educ stands for highest attained level of education, Exp and Exp^2 reflect the years of working experience and its quadratic term respectively,

Gender is a dummy variable for gender, Z is an $n \times i$ matrix of regional characteristics, ϵ and u_{00} , u_{10} are the first- and second-level errors respectively.

The random effects models were estimated using restricted maximum likelihood (REML). Individual Wald tests and likelihood ratio tests were exploited to evaluate the significance of fixed and random effects, respectively. Weights were used in the modeling to ensure the representativeness of the sample across Russian regions (the weighting variable was divided by 1000 to allow the convergence of the multilevel models).

1.4.1 | Left Hand Side (LHS) variable

The outcome to be investigated is the logarithm of monthly monetary remuneration before income tax payment at the main place of work.

1.4.2 | Right Hand Side (RHS) variables

Education, experience, and gender are the first-level variables as in an OLS equation. We then computed the intra-class correlation coefficient (ICC) on a base model of the logarithm of earnings to examine the percentage variance of earnings explained due to variation across regions. In the base model with covariates, we find an ICC value of 0.20, which is high enough to justify modeling regional random effects. We then compare the base model with a model including Education as a random regional effect, and used Wald tests, likelihood ratio tests and other information tests (AIC, BIC) to determine which model provides a better fit. These criteria point to the inclusion of Education as a random regional effect in addition to the fixed effect of Education.

Next we tested a set of fixed regional effects. We checked for the influence of regional level *educational quantity* and *educational quality* measures to explain the variation in education payoffs across Russian regions, and also included a set of variables to represent labor market conditions. To measure educational quantity or access, we used the number of students enrolled in vocational education per 10,000 residents (*voc_edc*) and the number of students enrolled in higher education per 10,000 residents (*high_edc*). As a measure of educational quality, standard deviations from the national mean of the Russian school-leaving and university entrance examination, the EGE, were incorporated. We also added variables regarding economic development and the labor market - these are the gross regional product, the level of urbanization, the regional unemployment level, the share of employment in jobs related to natural resources exploitation and the ratio of recent graduates who migrated to other states compared to the graduates who stayed in the same region.

Appendix Figure A1 shows descriptive statistics of the variables used - the univariate distribution of each variable, and their respective bivariate correlations. For improved context, the matrix represented in A1 also includes regional aggregates for the main variables of interest - education (in years) and logarithm of monthly wage. The figure indicates a rich and varied pattern of correlations - some of these are straightforward - such as the relationship between wages and regional product (*grp*). The sparklines and bi-variate scatter plots in A1 also indicate the presence of a number of outliers for almost every variable. In a regional context, random effects regression deals effectively with such a data structure. All region-level variables were normalized with Z-standardization before being plugged into the analysis to obtain meaningfully interpretable moderation effects in cross-level interaction models. For the statistically significant interactions, marginal returns to schooling, conditioned on thresholds of region-level characteristics (-1, 0, 1 standard deviations), were evaluated:

$$\{b_{1j}|Z=1\} = \gamma_{10} + 1 \times \gamma_{1n} \quad \{b_{1j}|Z=0\} = \gamma_{10} \quad \{b_{1j}|Z=-1\} = \gamma_{10} - 1 \times \gamma_{1n} \quad (3)$$

Appendix Table A1 demonstrates descriptive statistics of the key variables of interest by regions.

Appendix Figures A2 to A6 present maps of the basic Mincerian specification for each region, using the same color code so as to depict the transition over the years. The figures show the declining returns over the years.

1.5 | Estimation Results of Regional Analysis

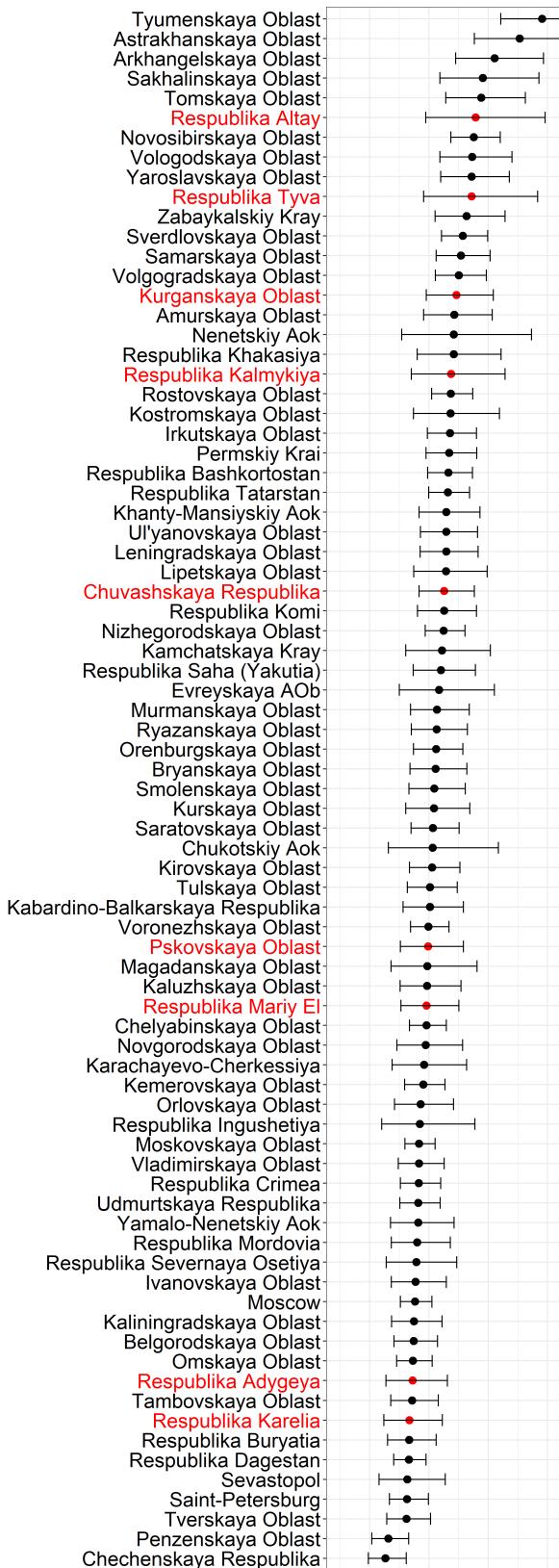
Of the eight variables tested for regional effects, it turned out that six of the eight variables passed the test - the only variables that did not meet the criteria was the migration ratio and the standardized EGE score variable. After adding these six regional fixed effects to the specification, the next step was to check for interactions of the second level variables with education levels. The investigation revealed that with one exception, none of the second-level characteristics have a statistically significant interaction with education as a random effect. The only variable that had an independent random effect at the regional level as well as a statistically significant regional interaction with education was *voc_edc*, the regional coverage of vocational education. Substantively, it was found that growth in the number of students covered by vocational programs leads to higher schooling premiums concerning both vocational and university education. However, the independent second level effect is negative and four time larger in magnitude, so the finding about the interaction effect does not seem to be significant from a policy analytical viewpoint. The results from the random effects regression and the mean values of the random effects are presented in Appendix Table A2.

The addition of the fixed effects for education together with the random effects described in Appendix Table A2 leads to an estimation of the marginal effect for education for each region. We utilize the correction for dummy variables as recommended by Halvorsen, Palmquist, et al. 1980. The results are presented in Figure 1.1. The error bars represent 95% confidence intervals around the estimates.

2 | CATEGORIZATION OF PRIORITY REGIONS

The Presidential Executive Order on National Goals and Strategic Objectives of the Russian Federation (2018-2024) defined in December 2018 a set of 13 National Projects and 9 National Development Goals with a budget of nearly 26 trillion rubles for a six-year period. This substantive amount is the equivalent of 17% of GDP every year. The national goals include cutting poverty by half by 2024, to improve housing conditions for 5 million people annually and to improve life expectancy. Given Russia's size and uneven geographic and economic conditions, the success of the strategic goal depends on the implementation performance at the regional and municipal levels. A sub-national focus will enhance the probability of success of the three pillars of the country's development strategy: growth, the environment and human capital.

The Federal Government identified ten poor regions as strategic priorities in Russia. These are the lowest ranking regions according to indicators of regional income, poverty levels, unemployment rates and investment climate: Adygea, Republic (Maykop), Pskov Oblast, Altai Krai (Barnaul), Kurgan Oblast, Kalmykia, Republic, Chuvashia, Republic, Altai, Republic, Karelia, Republic, Tyva, Republic, and Mary El, Republic. The Federal Government is working on a strategy for inclusive growth and job creation in these regions. As Human Capital is expected to be an important



(a) Higher Education

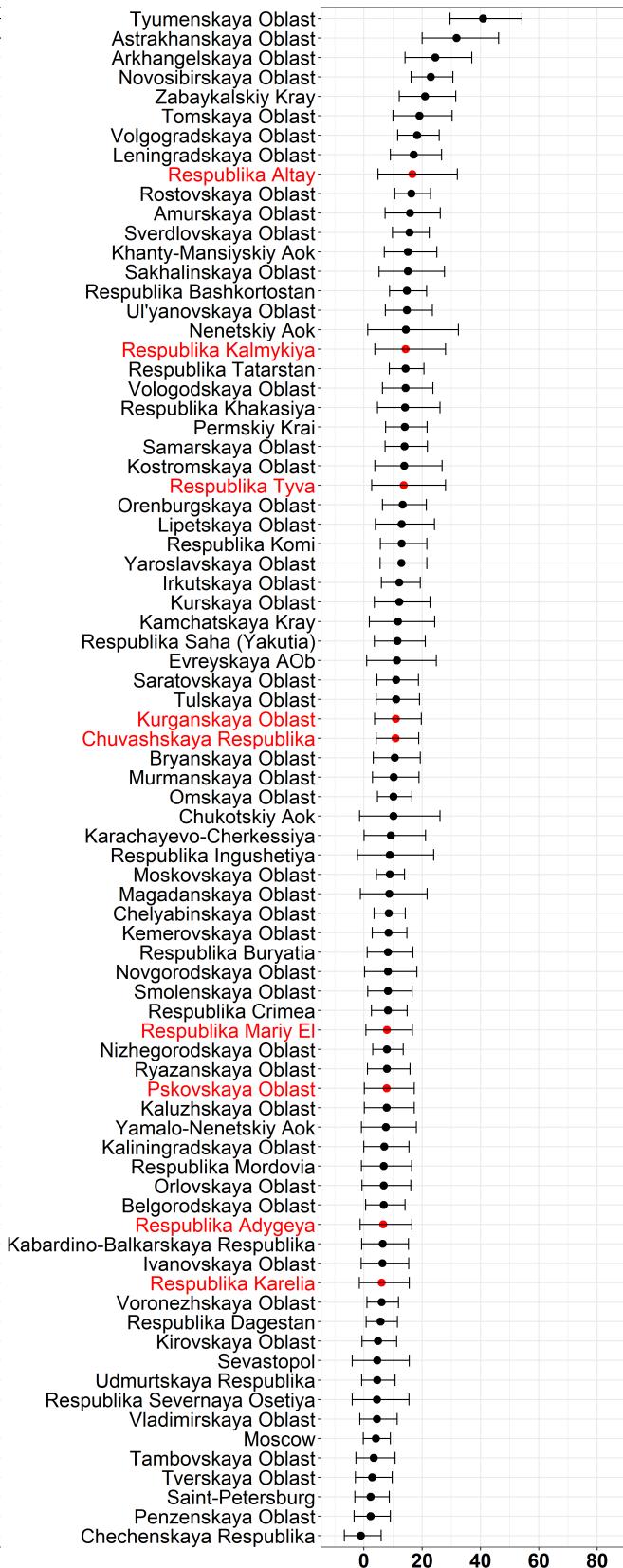


Figure 1.1

(b) Vocational Education

element of the development strategy for these regions, it will be useful to examine the variation in the rates of return to education in these ten regions. Accordingly, in Figure 1.1, the names of nine of the ten regions for which data was available are highlighted in red color. It should be recalled that these returns are not simply the OLS returns, but are calculated after aggregating the fixed and random effects taking account of regional characteristics and hence are expected to be more accurate than OLS results. The 95% confidence intervals are also presented in the figure. The priority regions are dispersed across the distribution of the rates of return to education both for vocational and higher education. Premiums to education range from 10.1 % (Karelia Republic) to 38.2% (Altai Republic) for university level and from 10.4% to 20.6% for vocational level for the same two regions. The returns for vocational and higher education are roughly moving in step, with the exception of higher returns for higher education for Kurgansk Oblast and the Tuva Republic.

2.1 | Quantity and Quality of Skilled Labor Supply

In order to better place policy recommendations for regions in context of their particular situation, we devised an algorithm or heuristic to classify regions according to certain variables of interest. We identified a set of variables that capture the quantity and quality of skilled labor supply and the quantity and quality of skilled labor demand. For skilled labor supply quantity, we utilized the proportion of the labor force with a higher education degree and for skilled labor supply quality we utilized the mean university entrance exam (EGE) score for the region. Both of these are proxy variables for underlying constructs. In order to have a reasonable comparison across dimensions, the variables were standardized. In the case of the EGE score, we standardized the score to 500 for the mean for all of the Russian Federation and 100 standard deviation. For all other variables we use a mean 0 and standard deviation of 1. The plot of regions according to the two dimensions of labor supply quantity and quality is presented in Panel (a) of Figure 2.1. Four regions are outliers and are not seen in the graph - St. Petersburg and Moscow in Quadrant I and Ingushetiya Republic and Karachayev-Cherkessiya in Quadrant IV. The graph also presents the numbers of regions in each of the quadrants. Quadrant membership, or tags from quadrants is the central piece of our classification of regions.

2.2 | Quantity and Quality of Labor Demand

To match the classification of regions by quantity and quality of labor supply, we also carry out a similar classification for labor demand. For the quantity dimension of labor demand, we use the total share of set of specific industries in the regional GRP from Rosstat (latest available figures). We include the industries that are likely to contribute most in terms of labor force demand, excluding the oil and gas industry and excluding the mostly public sector education and health sectors. The objective is to arrive at a qualitative grouping of regions, but future research can also test sensitivity of the classification to alternative choices of sectors. The sectors chosen for this purpose were: agriculture, hunting, forestry, fishery and fish breeding, manufacturing, wholesale, retail trade and repair services, hotels and restaurants, transport and communications. The percentage contribution to GDP for these sectors by region ranged from 35% (Tuva Republic) to 81% (Khanty-Mansisk).

As a measure of quality of labor demand we utilize an indicator of product complexity computed by Lyubimov, Gvozdeva, and Lysyuk 2018. This paper is based on a methodology that was initially proposed and implemented by the economists Ricardo Hausmann and Céesar Hidalgo to capture the productive potential of an economy on the basis of the diversity of its products and exports (Hausmann and Hidalgo 2011; Hausmann et al. 2014). Lyubimov, Gvozdeva, and Lysyuk 2018 develop an "Economic Complexity Index" (ECI) utilizing production as well as export data. It is possible to explain intuitively the conceptualization of the complexity index on the basis of product diversity and the

export basket. When we compare less developed economies with more developed ones, we see that more developed economies are able to manufacture a more diverse range of products because they have stronger production networks. Also, given the competitive international marketplace, the quality of products can be gauged by the prevalence of that product in the mix of traded goods. This method takes care of two problems - if a country has high exports of commodities, example from natural resource extraction, it does not score high on diversity; and if a country does manufacture a diverse range of goods, but these are not internationally competitive, it would also get a low score. Lyubimov, Gvozdeva, and Lysyuk 2018 extend the logic to regional measures of complexity. As human capital quality is closely linked to the complexity of products, the ECI is a very useful variable for purposes of classification of regions.

The position of regions along the two standardized dimensions is shown in Panel (b) of Figure 2.1.

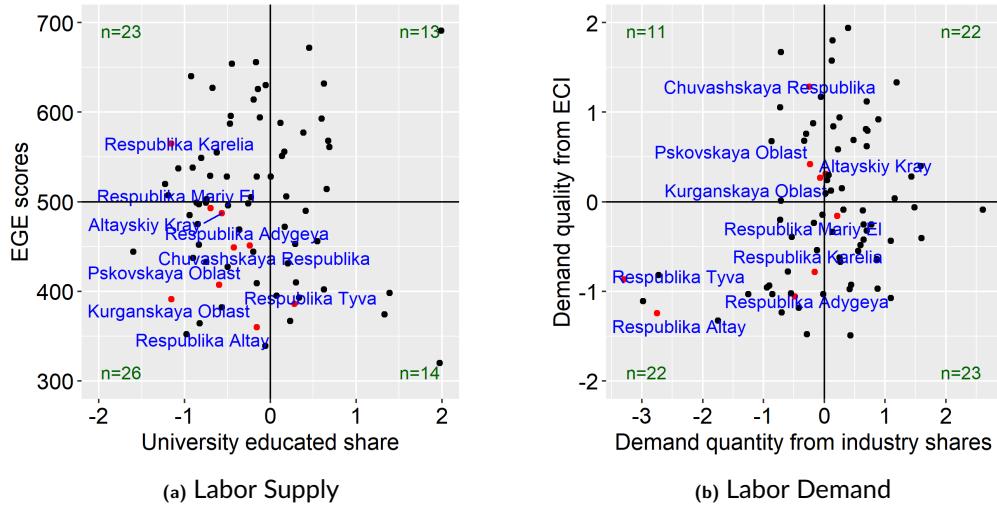


FIGURE 2.1 Ranking of Regions on Quantity and Quality dimensions

2.3 | Bringing Demand and Supply classification together

The purpose of classifying regions according to proximate measures of labor demand and labor supply is to situate the variation in regional returns to education in context. We seek to combine the quadrant classification displayed in Figure 2.1 with the pattern regarding returns to education. In order to do so, we compare a region's position in the demand panel on the left hand side and the supply panel on the right hand side. If a region is better placed on the demand dimension than it is with regard to the supply dimension, we term it as demand dominated; and vice versa. With four quadrants for each of the classifications, there are 4 times 4 or 16 categories that need to be simplified into 2 groups (supply or demand dominated). The decision is straightforward when a region is high on both quality and quantity of demand parameters (Quadrant I in Panel (a)) or low on both quality and quantity of supply parameters (Quadrant IV in Panel (b)). In case of ties, for 28 of the 80 regions with available data, we use the quality dimension to break ties.

We also generate a two-fold classification of the returns to education, using the classification of regions above and below the median for both returns to higher education and returns to vocational education for each region, presented

in Figure A1. When reducing from four dimensions to two, we use the returns to higher education to break ties. The result of this heuristic is a combined table that examines the returns to education in the context of labor supply or demand dominance. The classification is presented in 2.2 for the 80 regions for which data was available, with the priority regions highlighted using red color for the region names. Even though the priority regions are economically disadvantaged, it is very useful to note how they are spread across the four cell of Figure 2.2. Policy analysis to aid development of strategies for the regions will benefit from the kind of analysis presented in this paper and even more fine-tuned analysis in the future for devising policies for specific regions.

High Returns - Demand Dominates		Low Returns - Demand Dominates	
Kurganskaya Oblast	Sakhalinskaya Oblast	Respublika Mari El	
Volgogradskaya Oblast	Lipetskaya Oblast	Ul'yanovskaya Oblast	Penzaeskaya Oblast
Altayskiy Kray	Irkutskaya Oblast	Respublika Tatarstan	Respublika Buryatia
Orenburgskaya Oblast	Respublika Saha (Yakutia)		Vladimirskaya Oblast
Vologodskaya Oblast	Respublika Altay		Nizhegorodskaya Oblast
Chuvashskaya Respublika	Rostovskaya Oblast		Kirovskaya Oblast
Evreyskaya AOB	Primorskiy Kray	Samarskaya Oblast	Tverskaya Oblast
Kostromskaya Oblast	Sverdlovskaya Oblast	Respublika Komi	Saratovskaya Oblast
Permskiy Krai		Ivanovskaya Oblast	Orlovskaya Oblast
Yaroslavskaya Oblast		Chelyabinskaya Oblast	Pskovskaya Oblast
		Bryanskaya Oblast	
		Ryazanskaya Oblast	
		Tambovskaya Oblast	
		Respublika Dagestan	
		Omskaya Oblast	
			Smolenskaya Oblast
High Returns - Supply Dominates		Low Returns - Supply Dominates	
Astrakhanskaya Oblast		Tulskaya Oblast	Krasnoyarskiy Kray
Respublika Tyva	Murmanskaya Oblast	Magadanskaya Oblast	Chechenskaya Respublika
	Tomskaya Oblast		Kaluzhskaya Oblast
Novosibirskaya Oblast	Khanty-Mansiyskiy Aok	Respublika Adygeya	
Zabaykalskiy Kray	Respublika Khakasiya	Kalininogradskaya Oblast	Voronezhskaya Oblast
Tyumenskaya Oblast	Khabarovskiy Kray		Moskovskaya Oblast
Krasnodarskiy Kray	Arkhangelskaya Oblast	Moscow	
	Respublika Bashkortostan	Udmurtskaya Respublika	
Leningradskaya Oblast		Kabardino-Balkarskaya Respublika	Stavropol'skiy Kray
Kamchatskaya Kray	Nenetskiy Aok	Novgorodskaya Oblast	Kemerovskaya Oblast
Amurskaya Oblast	Kurskaya Oblast	Karachayevо-Cherkessiya	
		Respublika Karelia	Respublika Mordovia
		Respublika Ingushetiya	
		Respublika Severnaya Osetiya	Saint-Petersburg
			Belgorodskaya Oblast

Returns to Education

FIGURE 2.2 Variation of Education Returns and Regional Labor Market Context

3 | POLICY RECOMMENDATIONS FOR PRIORITY REGIONS

Returns to education tend to fall with level of economic development when comparing across countries (Psacharopoulos and Patrinos 2018). When examining the case of differential returns within the Russian Federation, we do find that St. Petersburg and Moscow city figure in the ranks of low returns. However, as studied by Lyubimov, Gvozdeva, and Lysyuk 2018, the more well-off regions in the Russian Federation as well as the no so well-off regions are diverse in the make-up of their productive networks. We attempt to exploit this diversity to come up with tailored policy recommendations for regions. These are preliminary and demonstrative recommendations for groups of regions. Further analysis would need to be carried out for a specific region as the grouping used here is quite wide. For sake of brevity the analysis presented here combines the findings regarding returns to higher education and returns to vocational education, but it would be beneficial to separate them for a more granular view.

The Table 3.1 provides an indicative list of policies that would be useful on the basis of an examination of the returns to education and the context of a region. Higher returns in general indicate the scope for greater investment in the supply or quantity of education as more people would be attracted to obtain higher levels of education. Lower returns to education indicate a scope for increased investment in the quality of education provision, and making better industry-education connections in terms of skills provided. When labor supply conditions are relatively good and labor demand conditions are lagging from other regions, it is an indication towards job creation policies, through innovation and entrepreneurship. When labor demand conditions are dominant, it would be an indication for better matching between jobs and skills, innovation to enhance labor productivity and diversify educational offerings. Other things constant, one would expect returns to be high when labor demand conditions are dominant and competition between employers drive up wages. However, as other things change with regional diversity, we find cases where labor supply is dominant at the same time as returns are high. With better availability of data at the regional level in the future, it would be feasible to come up with better targeted policy decision making.

TABLE 3.1 Policies fitting Regional Context

	High Returns to Education	Low Returns to Education
Labor Demand dominates Labor Supply	<ul style="list-style-type: none"> • Improved career guidance for high school graduates • Policies to encourage deeper teacher professional development in general and university education • Investments and policies on the industrial side private sector firm formation; diversification or cluster specialization etc. 	<ul style="list-style-type: none"> • Policies to improve quality of professional colleges, higher investment in World Skills • Deepen supply of extra-curricular activities for better soft-skills • Investments in general education and policies to improve quality of provision of general education so students come out with skills needed by the market
Labor Supply dominates Labor Demand	<ul style="list-style-type: none"> • Policies to develop entrepreneurship and encourage job creation, including innovation policies • Policies to develop problem solving skills and financial literacy, including strengthening extra-curricular education • Investments in university quality, e.g. internationalization of universities 	<ul style="list-style-type: none"> • Policies to integrate industries to become part of global value chains, support specific industry clusters • Policies for dissemination and connectivity of educational systems like university consortiums • Investments in industrial development, identification of economic activities for which region may have comparative advantage

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Appendix

TABLE A1 Descriptive Statistics for Regions in Russia, Rosstat 2018

Regions	Wage			Experience		Education, %			Gender, %	
	N	mean	sd	mean	sd	SE	VE	HE	Males	Females
Altayskiy Kray	4646	22127.6	11952.2	23.6	11.0	17.456	54.50	28.05	48.90	51.10
Amurskaya Oblast	2557	33441.2	17409.0	23.2	11.2	16.347	50.65	33.01	49.59	50.41
Arkhangelskaya Oblast	3183	33438.1	16884.2	22.6	10.6	12.692	54.95	32.36	44.17	55.83
Astrakhanskaya Oblast	2836	26474.1	13737.6	23.0	11.3	13.646	55.08	31.28	50.99	49.01
Belgorodskaya Oblast	3692	26281.0	10811.9	23.8	11.1	12.351	54.47	33.18	49.76	50.24
Bryanskaya Oblast	3087	22482.3	9634.1	23.5	10.9	19.631	50.66	29.71	48.66	51.34
Chechenskaya Respublika	2010	27718.4	11793.2	18.7	10.6	25.721	26.37	47.91	65.37	34.63
Chelyabinskaya Oblast	6717	27990.8	14280.9	23.9	11.2	12.104	54.53	33.36	47.39	52.61
Chukotskiy Aok	1535	65574.1	32370.8	23.6	10.6	13.941	46.06	40.00	43.97	56.03
Chuvashskaya Respublika	3248	21453.7	12602.2	24.3	11.0	19.119	50.80	30.08	50.18	49.82
Evreyskaya AOb	1536	28532.1	17385.1	23.8	11.2	22.005	50.33	27.67	50.00	50.00
Irkutskaya Oblast	4686	29967.6	17443.1	22.3	11.2	17.520	47.06	35.42	47.57	52.43
Ivanovskaya Oblast	2876	24881.8	12496.8	23.3	10.9	20.341	49.90	29.76	47.77	52.23
Kabardino-Balkarskaya Res.	2006	23592.3	10766.2	21.7	11.6	21.137	40.53	38.33	52.04	47.96
Kaliningradskaya Oblast	2838	29749.2	15489.1	23.5	11.4	13.495	52.40	34.11	50.07	49.93
Kaluzhskaya Oblast	3155	29662.1	12879.5	24.1	11.2	13.312	52.11	34.58	47.92	52.08
Kamchatskaya Kray	2203	51160.5	29997.7	23.1	11.2	13.118	42.99	43.89	47.89	52.11
Karachayevo-Cherkessiya	1510	22900.6	12540.8	22.0	11.8	17.152	40.07	42.78	48.01	51.99
Kemerovskaya Oblast	5056	26287.0	13774.4	23.6	11.3	18.137	52.99	28.88	48.04	51.96
Khabarovskiy Kray	3731	42008.8	21837.8	22.3	11.2	11.900	44.33	43.77	46.15	53.85
Khanty-Mansiyskiy Aok	4335	50837.9	22261.7	22.8	10.5	13.564	46.78	39.65	49.60	50.40
Kirovskaya Oblast	3284	22941.0	13674.6	25.1	11.2	20.128	55.33	24.54	47.69	52.31
Kostromskaya Oblast	2518	23993.1	12090.9	23.6	11.1	12.669	61.28	26.05	47.82	52.18
Krasnodarskiy Kray	8730	32563.7	17499.8	23.0	10.9	15.888	48.57	35.54	50.02	49.98
Krasnoyarskiy Kray	5540	33954.6	21199.2	23.0	11.0	21.588	48.05	30.36	49.64	50.36
Kurganskaya Oblast	2468	20896.9	11539.5	24.4	10.7	21.394	52.47	26.13	48.38	51.62
Kurskaya Oblast	2956	23622.6	11475.0	23.9	11.0	14.783	52.17	33.05	50.30	49.70
Leningradskaya Oblast	4506	32124.3	17227.4	24.2	11.5	7.723	54.77	37.51	46.03	53.97
Lipetskaya Oblast	2869	25037.8	10813.5	24.1	11.0	13.106	53.82	33.08	49.60	50.40
Magadanskaya Oblast	1841	51000.8	23729.4	24.1	11.4	18.523	43.02	38.46	43.24	56.76
Moscow	29921	66263.5	26437.9	20.8	10.8	4.953	32.18	62.86	47.06	52.94
Moskovskaya Oblast	13431	46725.1	20563.7	22.6	11.4	10.975	39.13	49.89	47.51	52.49
Murmanskaya Oblast	3078	43992.5	28841.9	23.4	11.2	12.801	50.45	36.74	49.84	50.16
Nenetskiy Aok	1118	54467.3	23147.1	22.6	10.8	17.263	49.73	33.01	39.98	60.02
Nizhegorodskaya Oblast	6139	30912.9	13291.8	23.4	11.2	16.941	49.31	33.75	47.42	52.58
Novgorodskaya Oblast	2673	26856.0	12683.0	24.6	11.2	15.638	55.74	28.62	45.16	54.84
Novosibirskaya Oblast	5374	29229.9	14687.7	23.9	11.6	16.561	49.33	34.11	47.06	52.94
Omskaya Oblast	3978	25337.5	14613.1	23.6	10.9	22.197	51.31	26.50	51.11	48.89
Orenburgskaya Oblast	4190	24207.0	12519.9	23.3	11.0	15.131	53.68	31.19	51.29	48.71
Orlovskaya Oblast	2424	21901.2	10561.0	24.7	11.1	15.017	50.66	34.32	46.99	53.01
Penzenskaya Oblast	3103	23478.4	10982.9	24.2	11.0	20.722	51.40	27.88	51.02	48.98
Permskiy Krai	5290	29176.6	14449.4	23.4	11.0	13.894	58.32	27.79	48.17	51.83
Primorskiy Kray	4104	37839.9	18420.2	23.8	11.3	14.985	52.97	32.04	49.98	50.02
Pskovskaya Oblast	2382	23838.4	12015.3	25.0	11.0	17.632	55.33	27.04	48.11	51.89
Respublika Adygeya	2013	21350.3	10505.9	23.4	11.3	20.666	43.67	35.67	49.53	50.47

TABLE A1 Descriptive Statistics for Regions in Russia, Rosstat 2018

Regions	N	Wage		Experience		Education, %			Gender, %	
		mean	sd	mean	sd	SE	VE	HE	Males	Females
Respublika Altay	1381	20285.3	12029.5	23.0	10.6	23.027	45.26	31.72	43.08	56.92
Respublika Bashkortostan	7126	31100.8	15175.2	23.4	11.0	12.167	56.67	31.17	51.98	48.02
Respublika Buryatia	2469	29536.3	17237.4	22.1	10.6	17.173	45.61	37.22	48.12	51.88
Respublika Dagestan	3388	26377.3	11971.9	23.0	10.7	30.519	30.79	38.70	55.99	44.01
Respublika Ingushetiya	1207	23740.2	10168.5	18.2	9.6	10.025	18.89	71.09	61.14	38.86
Respublika Kalmykiya	1751	18568.8	11749.1	23.6	11.4	15.762	40.89	43.35	46.43	53.57
Respublika Karelia	2164	28510.2	16639.5	23.7	10.8	17.144	55.45	27.40	47.00	53.00
Respublika Khakasiya	2064	27288.1	16613.3	23.3	11.1	22.045	51.11	26.84	50.97	49.03
Respublika Komi	2972	35891.6	21554.4	23.8	11.0	16.689	53.47	29.85	46.67	53.33
Respublika Mariy El	2486	21133.1	11941.6	24.1	11.2	18.785	52.98	28.24	47.87	52.13
Respublika Mordovia	2236	21221.0	10837.3	23.1	11.2	15.519	49.11	35.38	48.35	51.65
Respublika Saha (Yakutia)	3243	45763.1	25001.6	23.2	11.3	18.440	45.76	35.80	46.69	53.31
Respublika Severnaya Osetiya	2114	22993.1	12762.5	21.8	11.3	12.677	40.92	46.40	48.91	51.09
Respublika Tatarstan	7212	30327.9	12928.8	23.5	11.1	18.691	48.64	32.67	51.48	48.52
Respublika Tyva	1704	23421.9	16851.3	21.4	10.0	19.777	44.78	35.45	40.43	59.57
Rostovskaya Oblast	6985	28287.2	12779.9	23.1	11.0	15.476	48.03	36.49	50.68	49.32
Ryazanskaya Oblast	2609	25889.2	11760.9	24.7	11.1	12.457	59.37	28.17	49.18	50.82
Saint-Petersburg	11352	48520.8	23771.0	22.8	11.4	5.259	38.15	56.59	46.04	53.96
Sakhalinskaya Oblast	2258	50325.1	25563.0	23.6	11.2	17.493	48.23	34.28	46.94	53.06
Samarskaya Oblast	6275	32584.4	15015.6	23.8	11.1	11.331	47.87	40.80	47.71	52.29
Saratovskaya Oblast	4572	23698.6	12322.4	23.7	10.8	14.961	50.22	34.82	50.42	49.58
Smolenskaya Oblast	2726	25517.8	12104.9	24.6	11.3	14.380	52.31	33.31	46.04	53.96
Stavropol'skiy Kray	4945	25263.6	12696.7	22.6	11.3	16.946	43.80	39.25	47.48	52.52
Sverdlovskaya Oblast	7712	35983.2	15242.7	23.6	11.3	16.779	54.94	28.28	48.59	51.41
Tambovskaya Oblast	2781	22698.6	10440.1	24.1	11.0	16.397	53.54	30.06	50.67	49.33
Tomskaya Oblast	3074	29580.6	16745.7	22.1	11.1	13.500	47.56	38.94	46.78	53.22
Tulskaya Oblast	3516	27687.4	11814.7	24.3	11.3	17.491	54.69	27.82	48.98	51.02
Tverskaya Oblast	3157	26310.0	15025.1	25.5	11.1	14.824	56.57	28.60	44.73	55.27
Tyumenskaya Oblast	3095	31441.2	17278.6	22.7	11.2	16.123	52.89	30.99	50.05	49.95
Udmurtskaya Respublika	4073	24044.6	11540.9	23.9	11.3	20.108	51.04	28.85	46.99	53.01
Ul'yanovskaya Oblast	3109	23215.3	10596.4	24.8	10.9	19.170	53.84	26.99	50.37	49.63
Vladimirskaya Oblast	3502	25001.4	12605.8	24.5	11.4	19.503	50.77	29.73	46.49	53.51
Volgogradskaya Oblast	4836	24459.0	12915.8	23.2	11.0	15.881	50.91	33.21	49.69	50.31
Vologodskaya Oblast	2965	28248.9	16693.8	23.9	11.2	17.302	57.47	25.23	49.61	50.39
Voronezhskaya Oblast	4348	26261.9	11813.9	23.6	11.5	22.700	43.38	33.92	48.37	51.63
Yamalo-Nenetskiy Aok	3164	69356.7	28075.6	21.0	10.4	10.683	40.27	49.05	48.74	51.26
Yaroslavskaya Oblast	3361	30261.4	14682.8	24.1	11.4	16.215	53.73	30.05	47.01	52.99
Zabaykalskiy Kray	3017	28336.6	16350.4	23.0	10.6	24.561	47.40	28.04	47.07	52.93

TABLE A2

	Null model (1)	Mincerian (2)	Random Slope (3)	Cross-Level Interaction (4)
Constant	10.178*** (0.034)	10.032*** (0.034)	10.056*** (0.036)	10.065*** (0.036)
Vocational		0.283*** (0.009)	0.279*** (0.021)	0.267*** (0.021)
Higher		0.638*** (0.009)	0.641*** (0.025)	0.622*** (0.025)
Coverage VE X Vocational				0.050** (0.025)
Coverage VE X Higher				0.083*** (0.030)
Experience		-0.026*** (0.002)	-0.027*** (0.002)	-0.027*** (0.002)
Experience squared		-0.065*** (0.002)	-0.065*** (0.002)	-0.065*** (0.002)
Females		-0.403*** (0.005)	-0.404*** (0.005)	-0.404*** (0.005)
Coverage VE			-0.101*** (0.039)	-0.142*** (0.043)
Variance of Intercept	0.09	0.08	0.09	0.09
Variance of Vocational			0.02	0.02
Variance of Higher			0.04	0.04
Residual Deviance	0.45	0.35	0.34	0.34
sigma	0.67	0.587	0.584	0.584
deviance	119505.212	106528.235	106137.315	106129.127
df.residual	49184	49179	49173	49171
Observations	49,187	49,187	49,187	49,187
Log Likelihood	-59,755.060	-53,289.500	-53,094.620	-53,096.640
Akaike Inf. Crit.	119,516.100	106,595.000	106,217.200	106,225.300
Bayesian Inf. Crit.	119,542.500	106,665.400	106,340.500	106,366.100

Note:

*p<0.1; **p<0.05; ***p<0.01

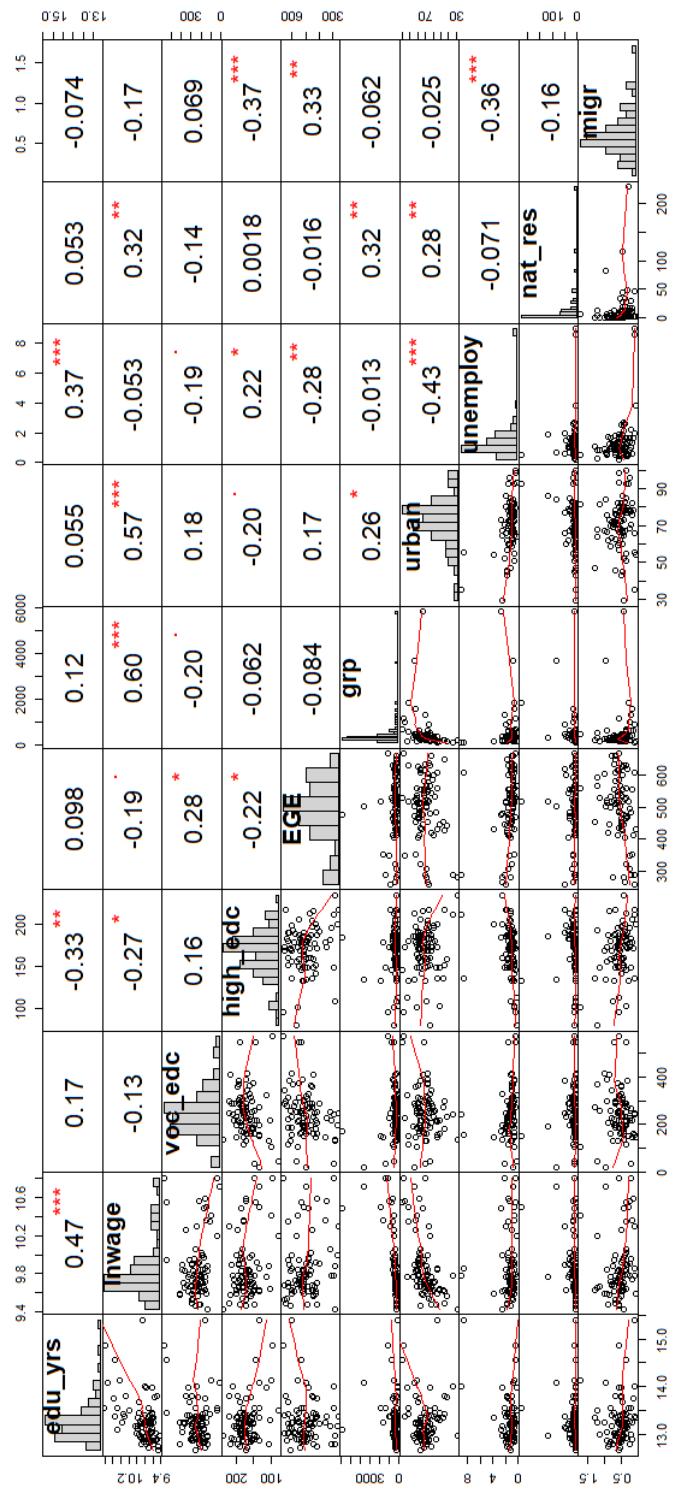


FIGURE A1 Correlations of Regional Level Variables with Wages and Education

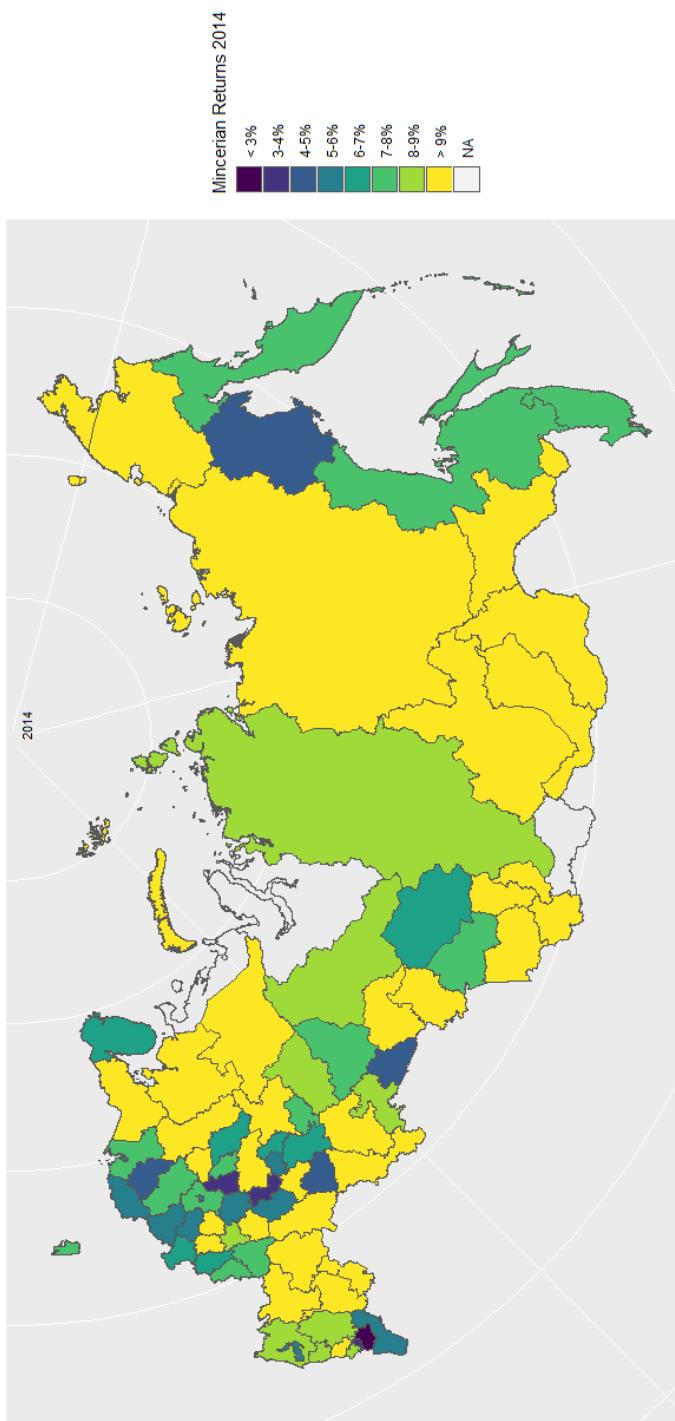


FIGURE A2 Mincerian Returns Basic Specification 2014

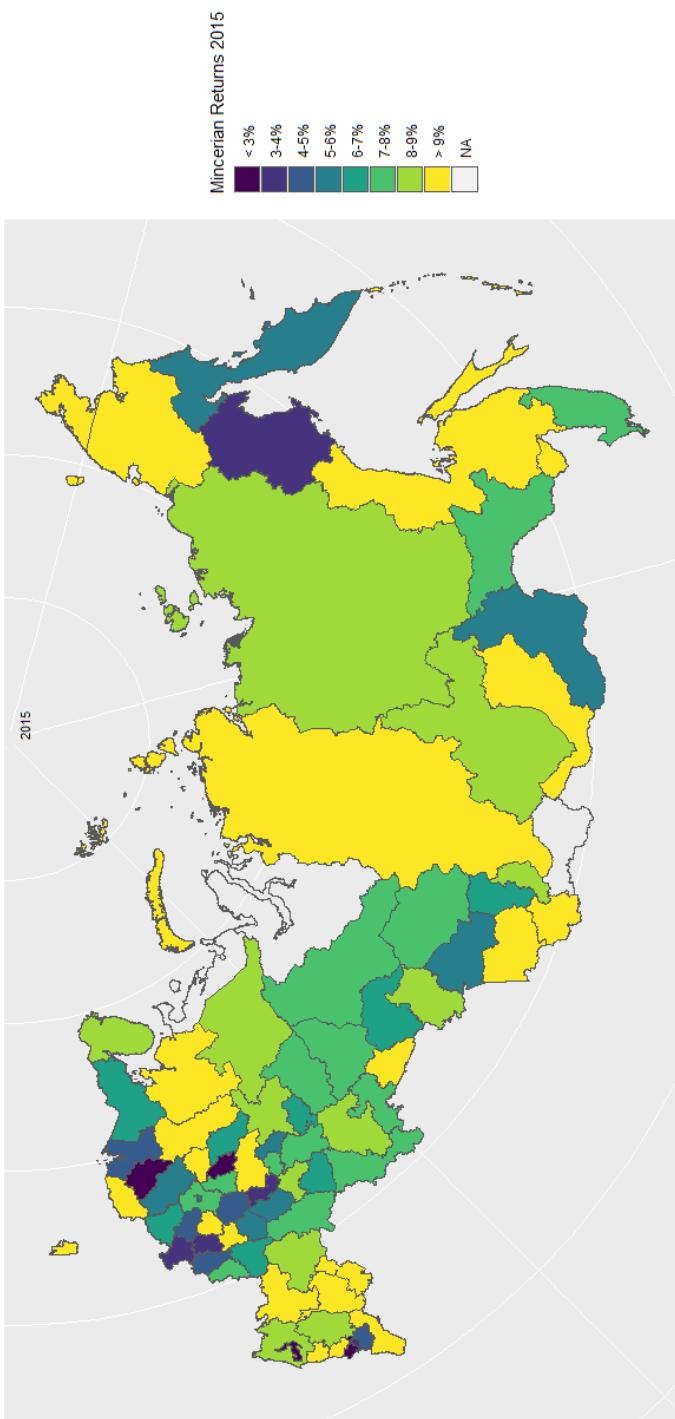


FIGURE A3 Mincerian Returns Basic Specification 2014

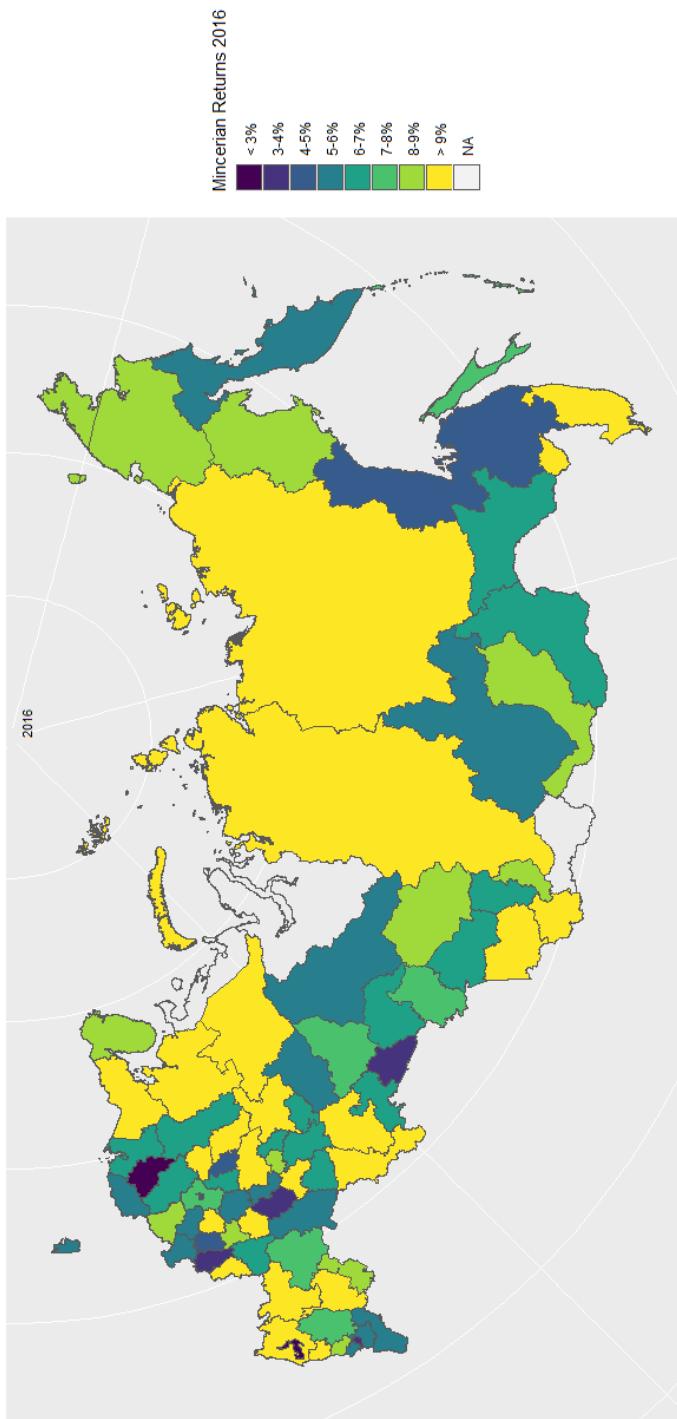


FIGURE A4 Mincerian Returns Basic Specification 2014

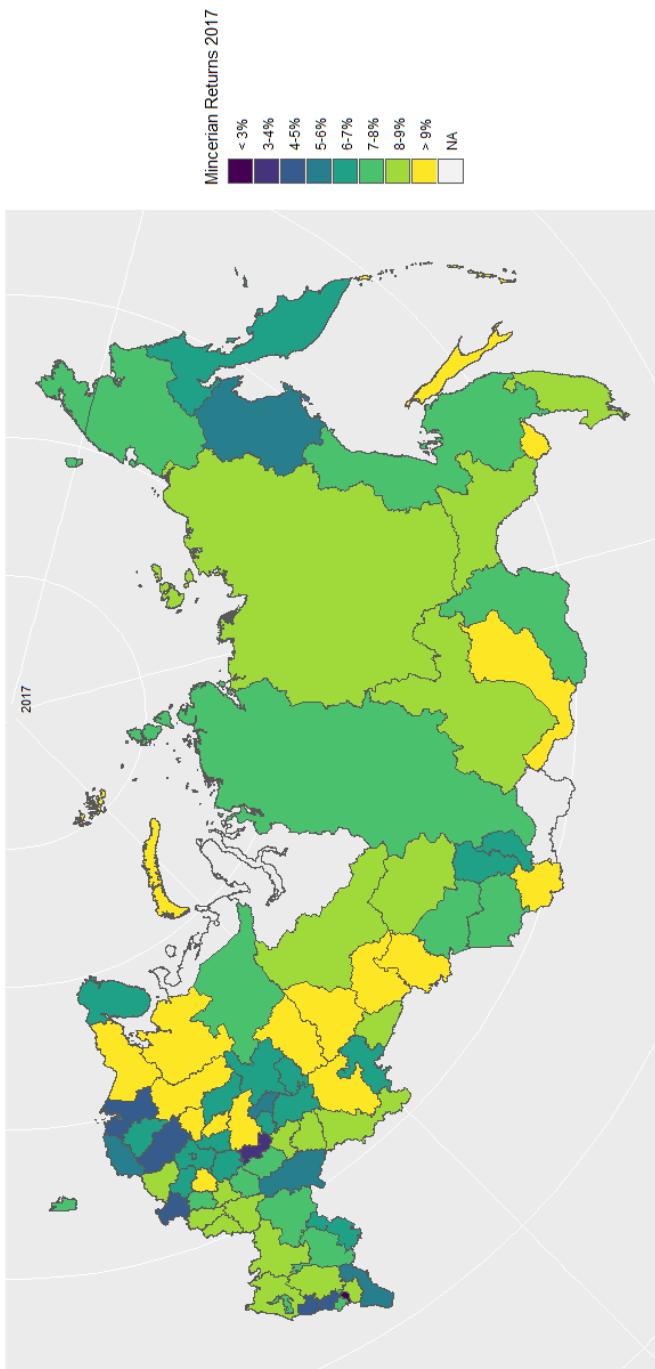


FIGURE A5 Mincerian Returns Basic Specification 2014

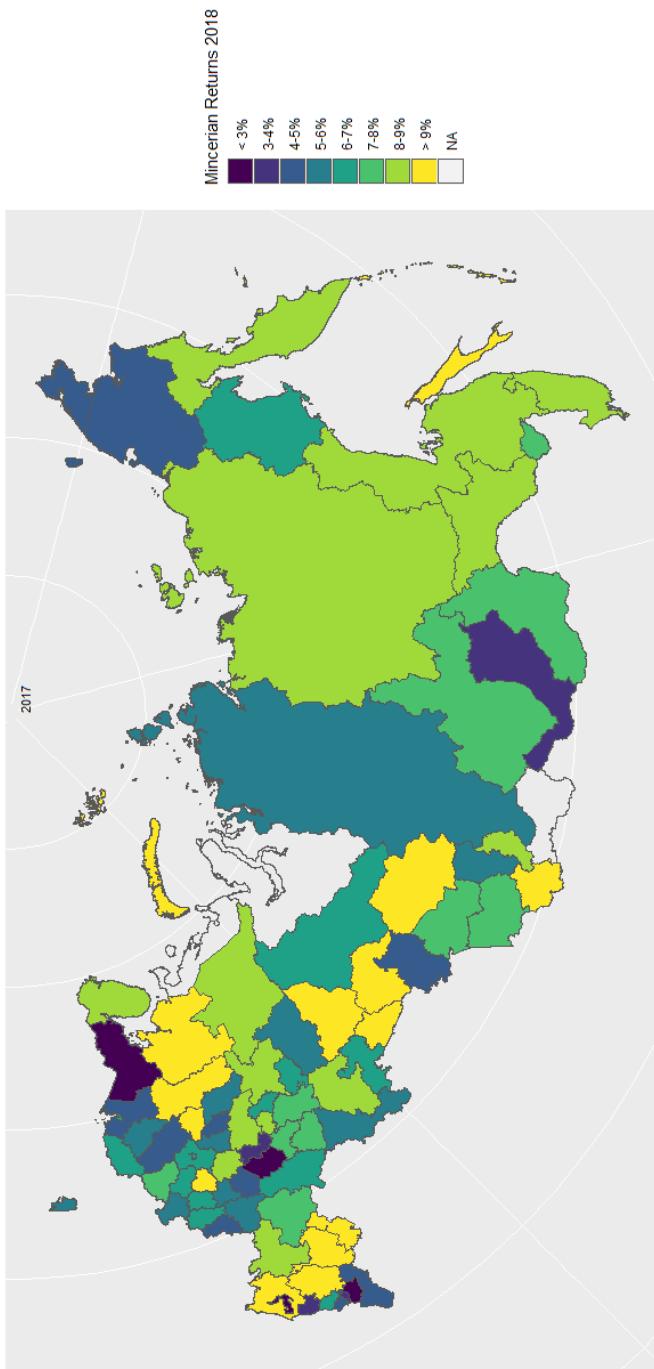


FIGURE A6 Mincerian Returns Basic Specification 2014

WORKING PAPER 4

Returns to Education in the Russian Federation: Towards Evidence Based Decision Making with Social and Private Returns to Education

Ekaterina Melianova* | **Suhas Parandekar*** | **Artëm Volgin***

This paper is the fourth in a series of working papers investigating the returns to education in the Russian Federation. This paper uses institution level information about graduate earnings and estimates of social and private costs to obtain social and private returns to education using an internal rate of return calculation. As data has been collected so far only on earnings trajectories for three years following graduation, these are not lifetime returns, but they are adequate to provide relative estimates. Samara Energy College <https://sam-ek.ru/> with private returns of 35% and social returns of 13%. V. R. Fillipova Buryat State Agricultural Academy in Ulan Ude <http://www.bgsha.ru/> leads the universities list with a private returns of 9% and social return of 7%. Even though the results presented here are of a preliminary nature, the data length and model sophistication can only grow in the future. The resulting information on returns to investment will serve government stakeholders as well as individual students.

KEY WORDS

Returns to Education, Russian Federation, Universities, Colleges

JEL Codes: I23, I26

* Education Global Practice, Europe and Central Asia

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Data and Code

Thanks are due to the Ministry of Education for the graduate.ru website that provides data on graduates earnings available to the public. Thanks are due to the Ministry of Finance for the bus.gov.ru website that provides the data on revenues received by all public institutions including colleges and universities. The code used for this paper is made freely available for all researchers at <https://bitbucket.org/zagamog/edreru/src/master/>

Acknowledgments: Country Director: Renaud Seligman; Regional Director: Fadia Saadah; Practice Manager: Harry Patrinos; Program Leader: Dorota Nowak; Peer Reviewers: Cristian Aedo; Ruslan Yemtsov; Husein Abdul-Hamid; Team members: Polina Zavalina; Zhanna Terlyga. Any errors are a responsibility of the authors.

1 | DATA SOURCES

This paper provides a practical demonstration of the efficacy of open data and the possibility of combining open data from different sources to provide valuable information. The data pertain to the return to investment in a college or university education, one of the most important decisions made by an individual, and collectively of critical importance to Russia's future growth and social prosperity. Two different open data sources are used for this paper. The data are not officially linked and one of the technically challenging but tedious tasks performed by the authors of this paper was the merging of two data sets - one from the Ministry of Education, and the other from the Ministry of Finance. This paper provides a brief overview of the datasets in this section, followed by two sections of substantive results. The next section combines earnings data from Rosstat's Survey of Income and Social Programs with cost data from the Ministry of Finance to provide regional estimates of social and private returns to education. To the best of our knowledge, social returns have not been published before for the Russian Federation. The third section presents data at an institutional level, with returns to education that could guide students making decisions to enroll in a college or university. The information could also serve public officials to benchmark returns as a means to improve systemic efficiency.

1.1 | Graduate.edu.ru from the Ministry of Education

Graduate.edu.ru is the official graduate employment monitoring portal created and maintained by the Ministry of Education of the Russian Federation. The website was launched in 2015 to provide information targeted mainly to prospective graduates about the employment record of graduates from tertiary education institutions - including universities and vocational education colleges. The official record is contained in Minutes No. DL-57, dated December 22, 2014 of the Interdepartmental Commission for Monitoring the Efficiency of Higher Education Educational Organizations. It is a complex organizational feat to carry out accurate and valid data collection of this nature. Figure 1.1 is a translation of an infographic that explains the process of data collection.

Rosobrnadzor (Federal Service for Supervision in Education and Science) registers graduation certificates from issuing institutions. After verification, a request for salary information for the graduates is sent to the PFRF (Pension Fund for the Russian Federation). There is a high degree of compliance from educational institutions and the high fidelity in terms of obtaining information from graduates. For example, for the year 2014, information was provided by 2,841 colleges and 834 universities, which tracks quite well with the 2,909 colleges and 950 universities that existed in 2014 according to Rosstat, including both public and private institutions. The number of graduates in 2014 from Rosstat (just over 1 million from universities; around half a million graduates for vocational education) conforms to the number of Rosobrnadzor records of graduates. Interestingly only a minuscule portion of individuals were not able to be tracked by the PFRF because of filing errors - 0.78 % for colleges and 0.15 % for universities. Further, in relation to the scale and complexity of the task, only a small number of domestic working graduates were not able to be matched with income information from PFRF - 8% for colleges and 5% for universities. In other words, 92% of college graduates and 95% of university graduates had their salary information recorded in graduate.edu.

To get the maximum possible span from the available data, we use the information of graduates in 2013 in each university and college and their corresponding salaries in 2014, 2015 and 2016. Our final set of data consists of 1909 colleges, 423 universities, and 2975 pairs of university-study areas with information about the graduates earning in them. We filtered out universities and colleges with less than 100 and 50 graduates in 2013, respectively. Salaries in 2014 and 2015 were adjusted to the prices of 2016.

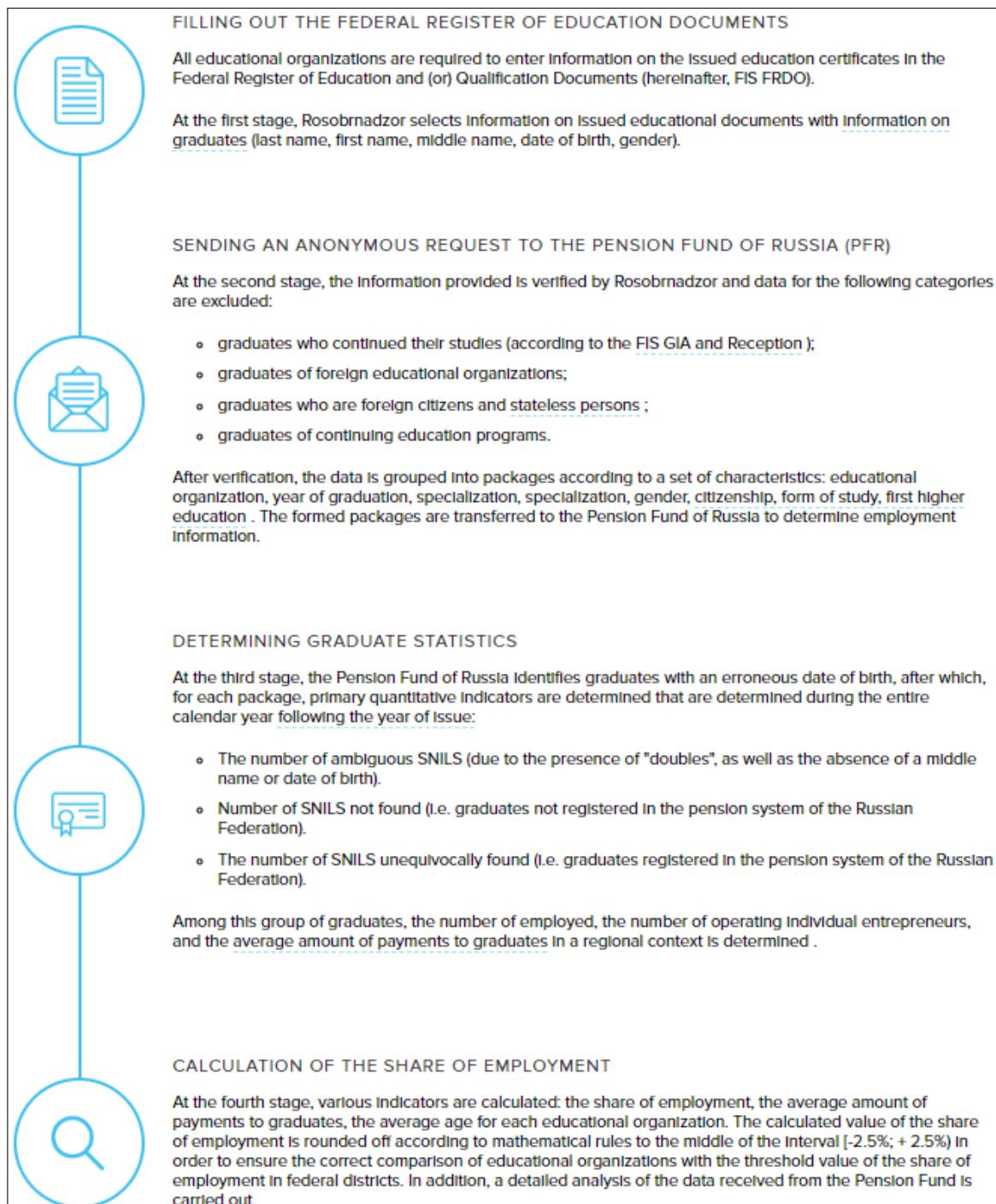


FIGURE 1.1 Four step process of data collection - Infographic from graduate.edu.ru

Table 1.1 provides mean earnings in 2016 rubles, for college and university graduates. These numbers are consistent with the wage earnings information reported in Rosstat's Statistical Survey of Income and Participation in Social Programs. An interesting fact to note from the table is that university graduates just 3 years from graduation earn about 1/3rd more than vocational school graduates; over the lifecycle this difference tends to grow to 50% or 60% more. The purpose of this paper is to compare between private and social costs across regions and institutions. The lower differentials reported in Table 1.1 point to the fact that the returns presented in this paper should not be considered as life-time returns.

TABLE 1.1 Average Earnings reported by graduate.ru

	Mean	Std	Quantile.25.	Quantile.50.	Quantile.75.
College Graduates Avg. Earnings 2014	301,255	81,712	247,093	279,156	328,995
College Graduates Avg. Earnings 2015	281,567	76,821	229,697	261,667	311,208
College Graduates Avg. Earnings 2016	287,918	80,574	233,763	267,480	320,583
University Graduates Avg. Earnings 2014	411,050	152,936	300,829	365,771	481,628
University Graduates Avg. Earnings 2015	419,488	158,256	304,798	368,518	496,961
University Graduates Avg. Earnings 2016	433,387	175,586	305,856	380,304	508,152

1.2 | Bus.gov.ru from the Ministry of Finance

The next data source used in this paper is from bus.gov.ru, the transparency promoting website managed by the Ministry of Finance, with more than 160,000 institutions from many sectors including health and education.

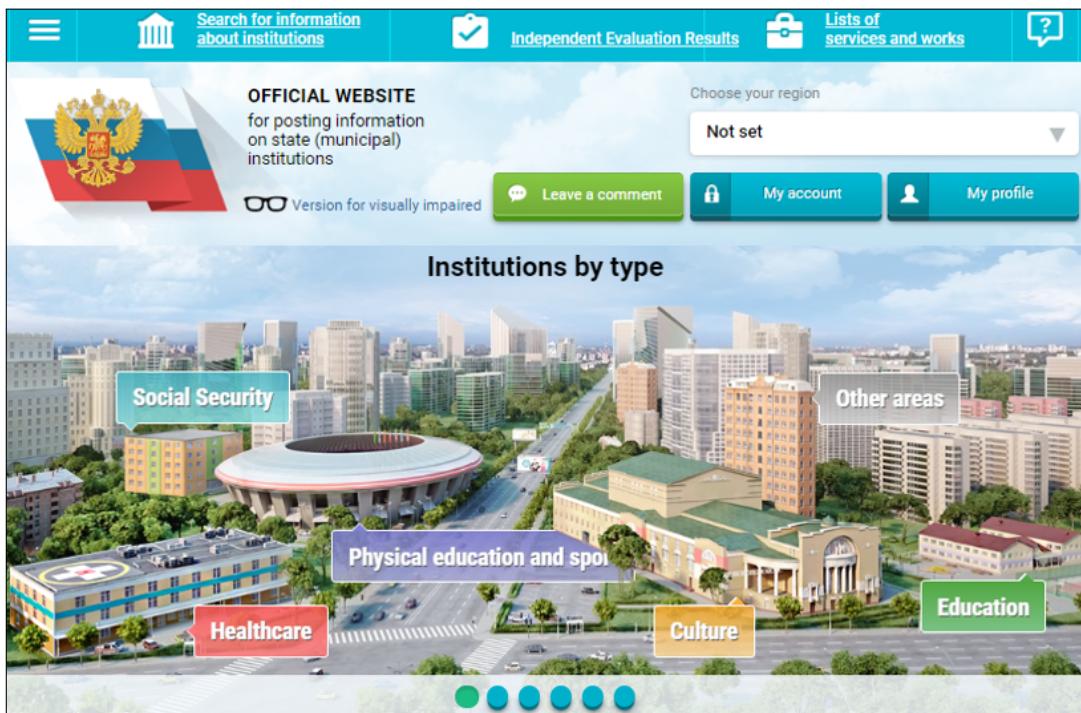


FIGURE 1.2 Website for bus.gov.ru

The bus.gov.ru website is indicated to be the official website of the Russian Federation for provision of information by public institutions, based on Order No. 86n of the Ministry of Finance of the Russian Federation, dated July 21, 2011. The objective as stated on the website is "to increase the openness and accessibility of information about state (municipal) institutions, as well as about their activities and property". As with the elaborate process between Rosobrnadzor and PFRF, the bus.gov.ru website appears to be created with great attention to detail. One of the features that makes the site function effectively is the automation of procedures for posting information. Information with significant level of detail is collected at the website, including service quality ratings, financial information and information about the financial capital where relevant.¹

This paper is based on use of the information pertaining to the annual revenues of colleges and universities. Information is available for the total annual revenue from different sources including government transfers and grants, as well as revenue from service payments made by private individuals. For education institutions (colleges and universities) we assume that the revenues from service payments are tuition fee payments.² Revenue information is used to estimate costs rather than expenditure information because we need to separate between overall costs of an institution, and the portion of costs that are subsidized by the State. Table 1.2 provides a summary of the information from bus.gov.ru used for this paper.

TABLE 1.2 Derivation of College and University costs from bus.gov.ru data

Colleges			
	Mean	Quantile.25.	Quantile.75.
Total Cash Receipts - mean for 2012-2017	106,233,973	47,882,033	109,940,985
Cash Receipts from Paid Services	13,423,225	4,220,980	17,147,603
Cash Receipts from Targeted Subsidies	13,644,089	2,973,843	13,122,018
Cash Receipts from the Budget Investments	380,156	-	-
Cash Receipts from the State (Municipal) Tasks	71,886,730	34,835,450	77,701,603
Social Cost per student for Colleges	206,856	110,175	248,683
Private Cost per student (excludes govt. revenue sources)	24,287	10,204	32,854
Universities			
Total Cash Receipts - mean for 2012-2017	1,557,966,861	488,137,618	1,555,625,338
Cash Receipts from Paid Services	553,941,067	133,154,544	663,924,931
Cash Receipts from Targeted Subsidies	219,389,727	75,000,342	220,372,051
Cash Receipts from the Budget Investments	35,201,477	-	3,125,759
Cash Receipts from the State (Municipal) Tasks	653,606,278	246,276,440	649,967,746
Social Cost per student for Universities	264,869	107,278	308,393
Private Cost per student (excludes govt. revenue sources)	97,452	34,450	112,030

¹ Recently, the World Bank published a report looking at a portion of the data from the website - the independent evaluation ratings on 16 service quality dimensions - to compute efficiency measurements of extra-curricular activities, a big expenditure item for the education sector. See *Russian Federation: Doing Extra-Curricular Education: Blending Traditional and Digital Activities for Equitable Learning* ² This is an approximation in some cases where educational institution charge fees for non-educational services.

2 | REGIONAL PRIVATE AND SOCIAL RETURNS TO EDUCATION FOR THE RUSSIAN FEDERATION

2.1 | Background

Typically, returns to education that are calculated by the classical Mincerian equation are private returns that accrue to individuals (Mincer 1974). This paper presents the 'narrow social returns to education' as defined in Psacharopoulos and Teixeira 2019. The classical computation implicitly includes only the indirect cost of education. This is the opportunity cost to an individual of being in school rather than working in the labor market and earning a wage. Most researchers using the Mincerian formulation do not include the direct costs of education to an individual - tuition fees, textbooks and other associated expenditures. The Mincerian formulation also does not include the public or social costs incurred in the provision of education. The 'full-discounting method' of calculating returns is the name given to the internal rate of return used to discount the future stream of earnings to equal the costs of education (Psacharopoulos 1995). When the costs include only the costs incurred by individuals, these are private returns to education; when the costs also include the public subsidies usually provided for education, they are termed as the social return to education. They are termed as the 'narrow' social returns because they do not include the possible social benefits of education due to externalities such as reduced crime, better financial decisions and effects on the environment and the innovative capabilities of a society, to name a few of the external effects (Wolfe, Haveman, et al. 2002; McMahon 2004; Owens 2004). The utility of computing the narrow social returns of education is to measure the efficiency of public spending. Psacharopoulos and Patrinos 2018 present global estimates of both private and social returns for a comparison between levels of education across countries. In this paper we extend the computation of private and social returns within the Russian Federation.

2.2 | Limitations of the data

The computation of social rates of return involve some simplifications that constitute a limitation of this paper. With a sample size in excess of 50,000 individuals, the Rosstat Statistical Survey of Income and Participation in Social Programs for 2018 (latest year available) provides regionally representative estimates of the age earnings profile for individuals. The cost side of the full discounting method comes from the regional weighted average costs of institutions within a region. This abstracts away from migration of individuals for the purpose of education and obtaining a job. Individuals might move away from a region only for the purpose of studying in another region and then return to the region for work. Typically, this education would take place in Moscow or St. Petersburg, where the costs would be higher than the 'sending' region. However, our method attributes the costs of the sending region as the default cost, thus tending to overestimate the returns to education for Moscow and St. Petersburg. Unobserved abilities or motivation that affects migration decisions would further complicate the scenario. There are a range of other migration effects. Individuals might migrate to study and then settle down in the same region where they study, example in Moscow. In this case, there would be no bias in the regional estimates of returns to education. Individuals might also study in one region and then migrate only for work, and the relative costs of education in the two regions would determine the sign of the bias in the estimation of returns. Future improvements of this paper should incorporate the effects of migration to estimate more accurate returns to education. Another simplification is entailed in the cost calculations used in this paper. There is no ready way to validate the cost figures for colleges and universities as a cost database does not yet exist for the Russian Federation. Instead, we are using revenues of the institutions divided by an approximate measure of the number of students to arrive at an estimate of unit costs.

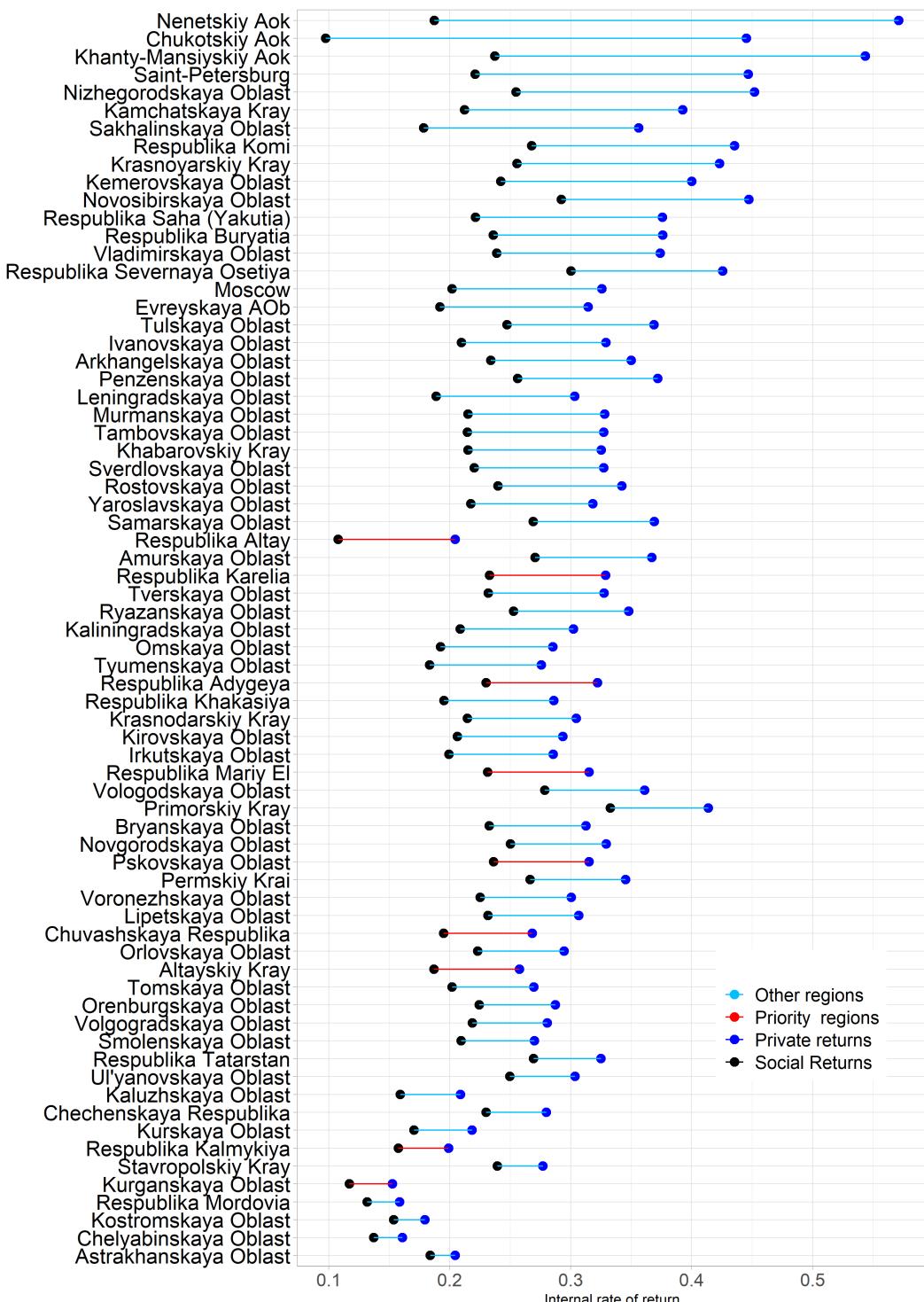


FIGURE 2.1 Social and Private Returns to Education by Region - Vocational Education

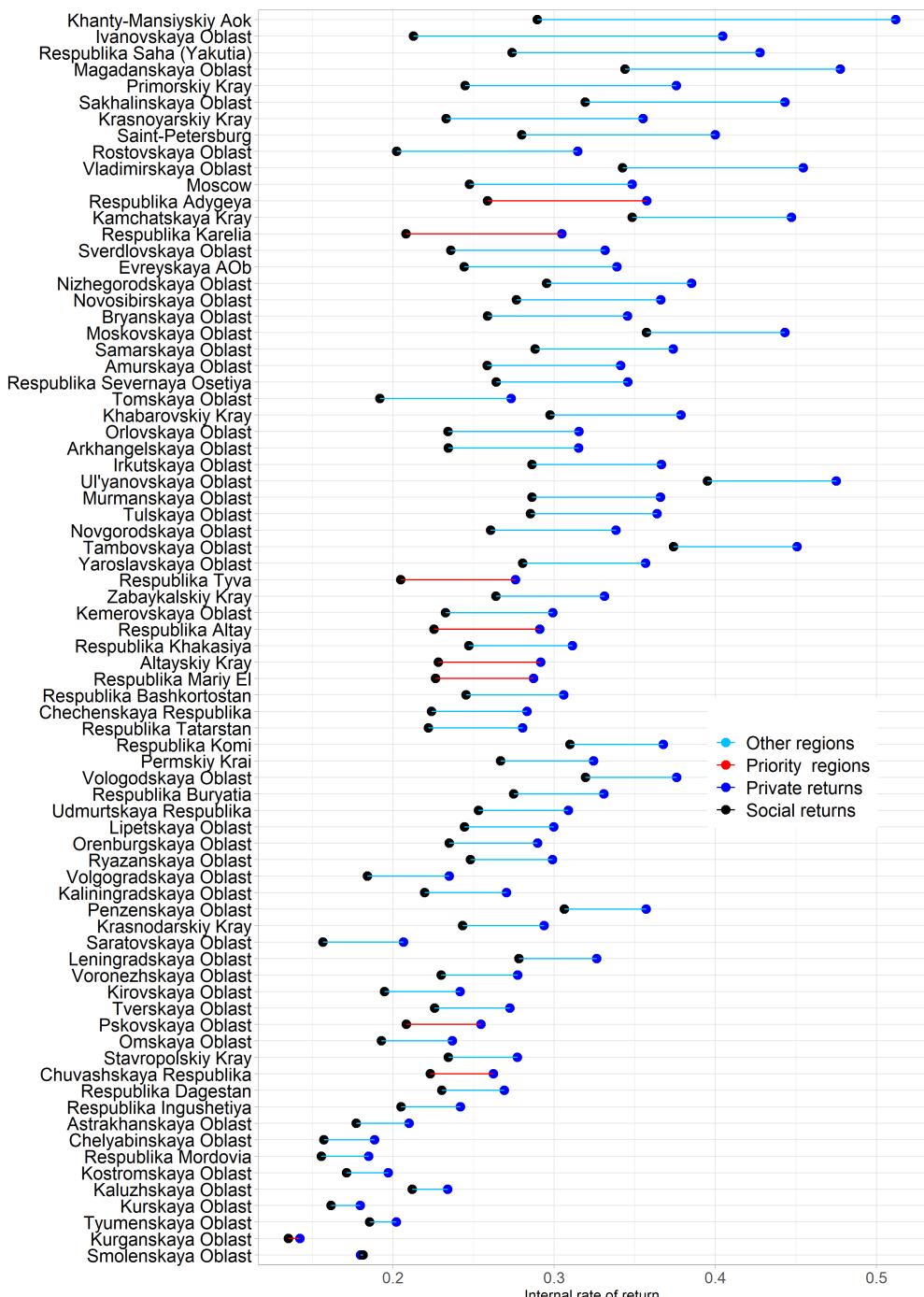


FIGURE 2.2 Social and Private Returns to Education by Region - University Education

Yet another simplification is the merging of ISCED levels 3, 4 and 5 as vocational education which entails combining different number of years after lower secondary education (Grade 9). In spite of these limitations, the returns estimates do present valid relative scenarios as the measurement problems are not specific or selective about regions and the databases are quite large, reducing sampling errors. Figure 2.1 shows the returns to Vocational Education and Figure 2.2 the returns to Higher Education.

2.3 | Estimation Results

Figures 2.1 and 2.2 show the gap between social and private returns to education ranges from a very small gap of 3 or 4 % at the bottom of the graphs to 20 to 30% gap towards the top of the graph. Since the social and private returns differ only on the cost side, the size of the gap is an indication of the extent of subsidization by the government. Subsidization of vocational education could be related to efforts of regional governments to make vocational education more attractive. The graphs also highlight the high priority regions that are slated to receive targeted support from the federal government. Working Paper No. 3 in this series provides more details about the priority regions. None of the priority regions appear amongst the top one-third of high subsidy regions for vocational education, but two of them do appear in Figure 2.2 for university education. It is useful to examine the subsidization of vocational and university education a bit more closely, which is done in Figure 2.3. The Mincerian returns of Working Paper No. 3 are not comparable with the estimates computed here - the costs used here are averages from the years 2013 to 2017. In the Mincerian method, the only costs incorporated are the foregone earnings; the household sampled individuals would have faced a different set of costs in the past. However, Appendix A1 provides the estimates together as the valid comparison within the method is between college and university education - with the full method, the difference narrows down considerably.

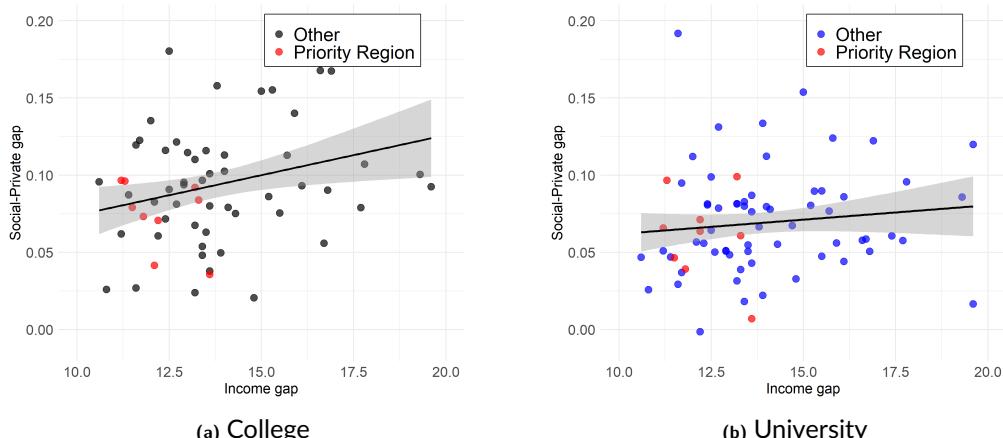


FIGURE 2.3 Social-Private Returns Gap and Regional Individual Income Gap

The magnitude of the gap between social and private returns is lower for the university level (with mean gap of about 7%) compared to the vocational education or college level (with mean gap of about 11%). From a policy viewpoint, this is a correct tendency for at least two reasons - the government does want to encourage greater participation in vocational education and subsidies attract more people by lowering the price; it is also well known that there are more individuals from lower income backgrounds who attend vocational education and subsidizing such

a good is progressive fiscally³ As discussed at length in Working Paper 3 of this series, the federal government is interested in promoting the development of the least developed regions in the country. Human capital is a crucial piece of the puzzle and spending public resources wisely would be better for growth as well as equity.

The International Center for the Study of Institutions and Development (ICSID) database provided by the Higher School of Economics includes data on income distribution within Russian regions <https://iims.hse.ru/en/csid/databases/>. We use a variable termed *reg_minckfd* that measures the ratio of mean income of the top decile of earners to the mean income of the bottom decile of earners. For this variable, Moscow region is an outlier with a value of 26 times income of 10th decile as compared to the first decile and the graph shows regions only for the rest of the range, from 10 times to 20 times on the x-axis. The gap between social and private returns is presented on the y-axis, the point representing each region is only a central tendency. Figure 2.3 indicates a slightly more positive slope for vocational education (in the left panel) as compared to university education. It can also be seen that the red points representing priority regions in both of the panels lie mostly below the black least squares regression line which is shown with a shaded 90% confidence interval.

3 | RETURNS AT INSTITUTIONAL LEVEL FOR VOCATIONAL EDUCATION AND UNIVERSITIES

3.1 | Descriptives

We turn now to the data from graduate.edu.ru on salaries of graduates from colleges and universities. Whether to study in a vocational college or a university, what course of specialization to choose, and which is the optimal institute for an individual are complex decisions. However, it is straightforward to conceptualize the choice as an investment decision. In the present case, even though we only have three years of data regarding graduates, we show that the information can be productively utilized.

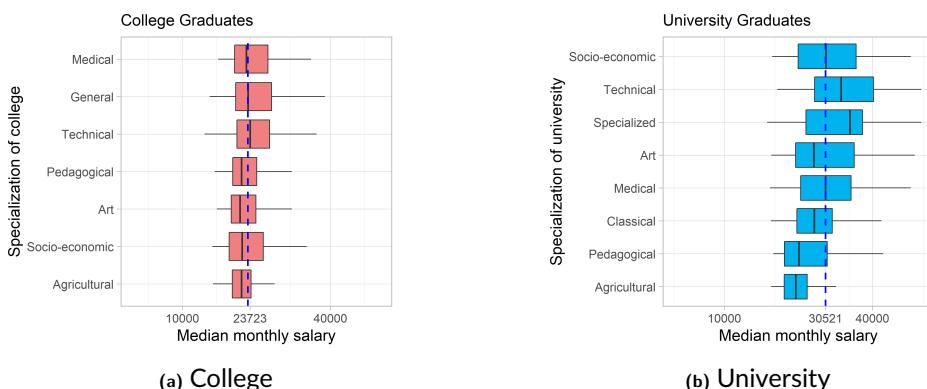


FIGURE 3.1 Monthly Salary in year 2014 of Graduates by Study Specialization

Figure 3.1 provides a summary of the graduate salary information for 2014 (in 2016 rubles) by broad area of specialization, separately for those who attended vocational college or university. These are the categories of colleges or universities only as we do not have information by department or faculty within a college or university. Overall

³ An example of literature examining the choice of vocational education is the recent World Bank report: Education Equity in Russian Federation. The report found that lower income of families of students in Grade 9 more strongly predicts vocational education choice than it does academic performance.

medians are also presented that show a median graduate monthly salary of 23,723 rubles for vocational education and 30,521. The boxplots ends are the 25th percentile and 75th percentile. It is immediately apparent from Figure 3.1 that the dispersion of salaries is lower for vocational education graduates, both across and within specializations. For university graduates on the other hand, even the 75th percentile wage for some specializations, such as agrarian or pedagogical, barely make it to the overall median. Data from graduate.edu is available for 2014 graduates for two more years. Interestingly, patterns of variation can be seen even in this short interval, which generates confidence in using the data to compare across institutions. Appendix Figure A1 shows a plot of real salary increases from 2014 to 2016 for university graduates who graduated in 2014. As might be expected, specialized scientific and technical disciplines garnered the biggest increases. In some cases there were zero increases or even declines, with 'education and pedagogical sciences' one of the notable cases registering a decline. Low starting salaries for pedagogical specializations may persist over an early probation period of two to three years, possibly be made up later in the career. If a longer time period of data had been available from graduate.edu, there might have been some movement in the relative placement of the specializations. However, it seems unlikely that there would have been large scale movements. The information presented in Appendix Figure A1 makes intuitive sense and provides some reassurance that the availability of only three years or earnings data does not make it totally dominated by noise. This also makes sense given the fact that the raw data on which the information is based is almost a census data, with graduate.edu.ru publishing institutional level means based on salaries from over 1 million individual records.

3.2 | Social and Private Returns by Institution

Productive investments, such as education in a college or university, can be evaluated or ranked in terms of optimality by examining the cash flows that result from alternative investment choices. There is a negative cash flow during the period of study - made up of direct costs such as tuition fees, transportation and textbooks, as well as the indirect costs of foregone income. In considering social costs these include the subsidies provided by government so that students pay low or sometimes no tuition. In the Russian Federation, some students are completely subsidized while other students pay partial or full fees. In the computations presented in this paper, we only use institution level means for both private and social costs. Some of the data points appear to be outliers and we 'trim' the bottom and top 1% of observations. We also exclude colleges with less than 50 students and universities with less than 100 students. As stated before, there are a number of simplifications used to compute unit costs per student from the aggregate financial information of a college or university. For foregone earnings we utilize the regional level mean earnings for those who did not go beyond Secondary education.

The negative stream of cash flows at the beginning are evaluated against the positive stream of cash flows when graduates begin to earn in the labor market. Employment is a probabilistic outcome but we do not have information about the specific employment rate for each institute. The classical internal rate of return would be the discount rate applied to the future stream of lifetime earnings to equal the value of the negative stream during the schooling period. The same method can be applied to calculate an internal rate of return with only three years of positive earnings. Even though most rates are negative, the method still yields a relative ranking of colleges and separately, of universities. The main purpose of this analysis is to provide the processed information to the public. The graduate.edu.ru website provides useful information in varied forms about the salaries of graduates. This information would become even more valuable when combined with the cost information to provide an internal rate of return. If updates can be made to the graduate.edu with more recent salary data since 2016, the internal rate of return can be updated. For dedicated evidence based decision making, it is also possible in the future to get more accurate information ion the cost side. For instance, it would be very useful to build on the bus.gov.ru data used here with a primary data collection effort.

At the present time, we are providing the list of colleges and universities with the private and social rates of

return and the underlying data about cost and graduate salaries. Table 3.1 provides a summary list of top and bottom ten. Figure 3.2 provides depiction on a map as a demonstration of a possible user interface of the data, since the data incorporates GPS coordinates. Figure 3.3 indicates social rates of return by type of college and university. Pedagogical and agricultural universities do better on this measure as compared to their performance on salary levels.

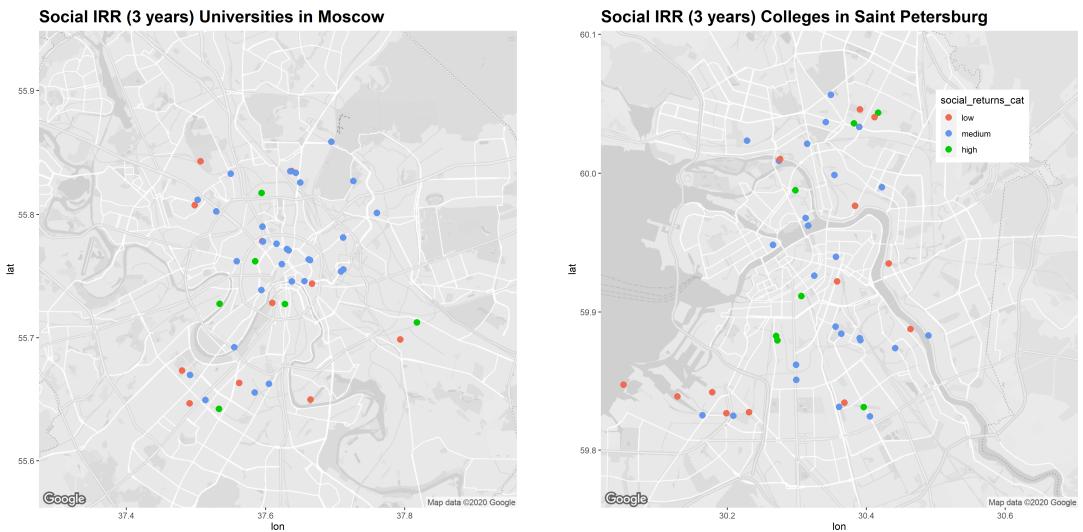


FIGURE 3.2 Social IRR of Universities in Moscow and St. Petersburg

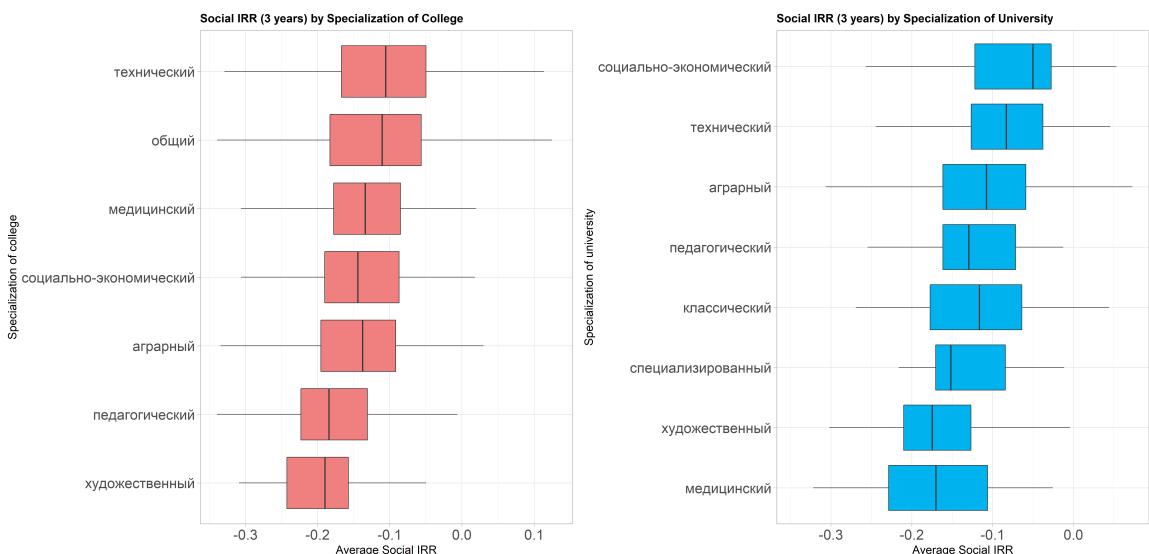


FIGURE 3.3 Salary of Univ Graduates 2014 to 2016

TABLE 3.1 Social and Private Returns by Institution: Top and Bottom 10

Top 10 Colleges				
social	private	Name	Region	Number graduates
0.13	0.35	Samara Power Engineering College	Samarskaya Oblast	140
0.13	0.22	Tomsk Polytechnic Technical School	Tomskaya Oblast	306
0.12	0.24	Novocherkassk Geological Exploration College	Rostovskaya Oblast	244
0.12	0.28	Vilyui Technical School	Resp. Sakha (Yakutia)	156
0.11	0.21	Kiselevsky Mining College	Kemerovskaya Oblast	280
0.11	0.25	Higher Banking School	Saint-Petersburg	229
0.11	0.24	Industrial and Technological College	Saint-Petersburg	305
0.10	0.18	Perm Oil College	Permskiy Krai	171
0.10	0.30	Yakut Road Technical School	Resp. Sakha (Yakutia)	220
0.10	0.19	Sakhalin Indus. & Economic College	Sakhalinskaya Oblast	489
-0.01	0.01	Tomsk Industrial University	Tomsk	6655
Bottom 10 Colleges				
social	private	Name	Region	Number graduates
-0.32	-0.04	Abakan Construction College	Respublika Khakasiya	70
-0.32	-0.24	Ichalkovsky Pedagogical College	Respublika Mordovia	62
-0.32	-0.19	Ozersk Technical College	Chelyabinskaya Oblast	154
-0.32	0.04	Metrostroy College	Saint-Petersburg	55
-0.32	-0.16	Kaluga Technical College	Kaluzhskaya Oblast	154
-0.33	-0.02	Yemelyanov Road Construction Technical School	Krasnoyarskiy Kray	73
-0.33	-0.14	Technology College No. 21	Moscow	216
-0.33	0.12	Sakhalin Technical School of Agricultural Mechanization	Sakhalinskaya Oblast	82
-0.34	0.15	Krasnoselsky College	Saint-Petersburg	74
-0.34	-0.02	Krasnodar Pedagogical College	Krasnodarskiy Kray	148
Top 10 Universities				
social	private	Name	Region	Number graduates
0.07	0.09	Buryat State Agricultural Academy	Respublika Buryatia	415
0.05	0.09	Russian State Univ. of Tourism and Service	Moskovskaya Oblast	3019
0.05	0.07	Tyumen Industrial University	Tyumenskaya Oblast	6655
0.04	0.07	Samara State Univ. of Economics	Samarskaya Oblast	1826
0.04	0.20	North-Eastern State University	Magadanskaya Oblast	573
0.04	0.10	Siberian State Industrial University	Kemerovskaya Oblast	1727
0.04	0.13	Samara State Technical University	Samarskaya Oblast	2879
0.03	0.09	Siberian State Univ. of Geosystems & Technologies	Novosibirskaya Oblast	1768
0.03	0.10	Kamchatka State Technical University	Kamchatskaya Kray	826
0.02	0.15	Arctic State Inst. of Culture and Arts	Resp. Sakha (Yakutia)	366
Bottom 10 Universities				
social	private	Name	Region	Number graduates
-0.29	-0.18	Samara State Medical University	Samarskaya Oblast	1169
-0.30	-0.13	Pirogov Russian National Research Medical University	Moscow	1165
-0.30	-0.22	Astrakhan State Univ. of Arch. & Civil Eng.	Astrakhanskaya Oblast	282
-0.30	-0.10	Stroganov Moscow State Acad. of Art & Industry	Moscow	196
-0.30	-0.17	Siberian State Medical University	Tomskaya Oblast	630
-0.31	-0.16	Bryansk State Agrarian University	Bryanskaya Oblast	408
-0.31	-0.14	National Research Technological University	Moscow	1394
-0.32	-0.18	North-Western State Medical University	Saint-Petersburg	949
-0.34	-0.16	Saratov State Conservatory	Saratovskaya Oblast	116
-0.35	-0.15	Ural State Agrarian University	Sverdlovskaya Oblast	260

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Appendix

TABLE A1 Mincerian, Private and Social Returns by Region

Regions	Mincerian		Private		Social	
	Vocational	University	Vocational	University	Vocational	University
Altayskiy Kray	35.6117	104.28	25.77	29.18	18.713	22.82
Amurskaya Oblast	54.6300	135.14	36.72	34.14	27.068	25.86
Arkhangelskaya Oblast	86.6825	186.32	35.00	31.52	23.407	23.45
Astrakhanskaya Oblast	123.0480	228.68	20.45	21.01	18.403	17.72
Bryanskaya Oblast	31.4061	76.75	31.26	34.57	23.259	25.88
Chechenskaya Respublika	8.5306	15.07	27.98	28.32	23.022	22.41
Chelyabinskaya Oblast	25.8489	82.98	16.11	18.86	13.719	15.72
Chukotskiy Aok	22.4758	55.16	44.52	NA	9.742	NA
Chuvashskaya Respublika	31.5513	102.20	26.83	26.24	19.515	22.32
Evreyskaya AOb	36.1407	109.63	31.46	33.91	19.195	24.42
Irkutskaya Oblast	39.1235	129.45	28.55	36.67	19.941	28.63
Ivanovskaya Oblast	16.0425	56.23	32.93	40.47	20.984	21.28
Kaliningradskaya Oblast	20.3191	57.20	30.24	27.05	20.869	21.97
Kaluzhskaya Oblast	19.2983	62.37	20.89	23.41	15.925	21.20
Kamchatskaya Kray	35.8895	106.29	39.26	44.74	21.232	34.86
Kemerovskaya Oblast	28.0464	76.21	40.00	29.93	24.212	23.27
Khabarovskiy Kray	59.8920	153.14	32.52	37.88	21.508	29.75
Khanty-Mansiyskiy Aok	50.1452	118.32	54.37	51.20	23.741	28.96
Kirovskaya Oblast	9.2090	81.50	29.35	24.18	20.630	19.49
Kostromskaya Oblast	42.6683	107.65	17.96	19.72	15.363	17.14
Krasnodarskiy Kray	9.2547	94.33	30.48	29.40	21.451	24.33
Krasnoyarskiy Kray	28.2208	63.64	42.31	35.53	25.562	23.30
Kurganskaya Oblast	23.6786	119.31	15.28	14.24	11.714	13.53
Kurskaya Oblast	43.1486	93.43	21.86	17.99	17.055	16.17
Leningradskaya Oblast	58.2302	100.19	30.34	32.65	18.887	27.82
Lipetskaya Oblast	41.6088	107.96	30.69	29.98	23.169	24.46
Moscow	9.5503	55.65	32.59	34.86	20.193	24.76
Murmanskaya Oblast	30.5068	107.80	32.83	36.61	21.522	28.64
Nenetskiy Aok	88.3374	175.64	57.12	NA	18.737	NA
Nizhegorodskaya Oblast	18.1549	85.31	45.19	38.53	25.478	29.55
Novgorodskaya Oblast	20.5742	66.75	32.94	33.85	25.034	26.07
Novosibirskaya Oblast	75.2078	137.75	44.75	36.63	29.225	27.67
Omskaya Oblast	36.7901	64.86	28.54	23.70	19.238	19.29
Orenburgskaya Oblast	47.3624	97.24	28.75	28.99	22.446	23.51
Orlovskaya Oblast	16.9054	70.80	29.46	31.55	22.305	23.43
Penzenskaya Oblast	5.4499	19.22	37.20	35.71	25.621	30.65
Permskiy Krai	47.4043	104.89	34.55	32.45	26.654	26.69
Primorskiy Kray	26.8830	104.89	41.39	37.60	33.279	24.48
Pskovskaya Oblast	19.1578	72.85	31.53	25.48	23.623	20.84
Respublika Adygeya	21.1613	40.15	32.22	35.76	23.017	25.87
Respublika Altay	47.3321	202.43	20.45	29.13	10.785	22.56
Respublika Buryatia	32.7424	55.87	37.60	33.10	23.601	27.50
Respublika Kalmykia	53.7437	127.49	19.91	NA	15.754	NA
Respublika Karelia	17.7606	42.27	32.91	30.49	23.299	20.83
Respublika Khakasiya	47.3759	125.62	28.60	31.15	19.527	24.72

TABLE A1 Mincerian, Private and Social Returns by Region

Regions	Mincerian		Private		Social	
	Vocational	University	Vocational	University	Vocational	University
Respublika Komi	42.3682	115.35	43.55	36.78	26.769	31.00
Respublika Mariy El	20.6738	73.38	31.53	28.72	23.151	22.65
Respublika Mordovia	18.6844	51.72	15.87	18.50	13.186	15.58
Respublika Saha (Yakutia)	31.0007	95.71	37.58	42.78	22.142	27.40
Respublika Severnaya Osetiya	-4.6462	38.53	42.56	34.57	30.019	26.41
Respublika Tatarstan	42.6535	100.88	32.50	28.06	26.922	22.20
Rostovskaya Oblast	54.8784	131.19	34.24	31.47	23.995	20.25
Ryazanskaya Oblast	18.9791	90.79	34.81	29.92	25.270	24.81
Saint-Petersburg	0.8399	38.48	44.68	40.00	22.098	28.01
Sakhalinskaya Oblast	33.2860	176.91	35.62	44.33	17.853	31.94
Samarskaya Oblast	40.4262	115.60	36.93	37.40	26.895	28.82
Smolenskaya Oblast	18.5241	85.55	27.01	18.00	20.954	18.15
Stavropol'skiy Kray	16.4360	90.99	27.72	27.73	23.933	23.44
Sverdlovskaya Oblast	47.3084	137.55	32.74	33.17	22.039	23.60
Tambovskaya Oblast	2.5801	42.60	32.74	45.09	21.456	37.41
Tomskaya Oblast	63.9402	175.02	26.96	27.34	20.205	19.20
Tulskaya Oblast	34.3715	80.53	36.90	36.40	24.753	28.54
Tverskaya Oblast	5.0335	46.01	32.76	27.27	23.193	22.60
Tyumenskaya Oblast	142.9216	244.89	27.58	20.22	18.337	18.56
Ul'yanovskaya Oblast	50.6008	97.46	30.36	47.52	24.978	39.53
Vladimirskaya Oblast	8.4301	58.59	37.42	45.47	23.893	34.26
Volgogradskaya Oblast	58.1734	115.78	28.06	23.50	21.873	18.42
Vologodskaya Oblast	42.0563	148.48	36.11	37.62	27.850	31.95
Voronezhskaya Oblast	14.9261	72.07	30.06	27.75	22.511	23.00
Yaroslavskaya Oblast	32.1941	142.41	31.83	35.69	21.751	28.06

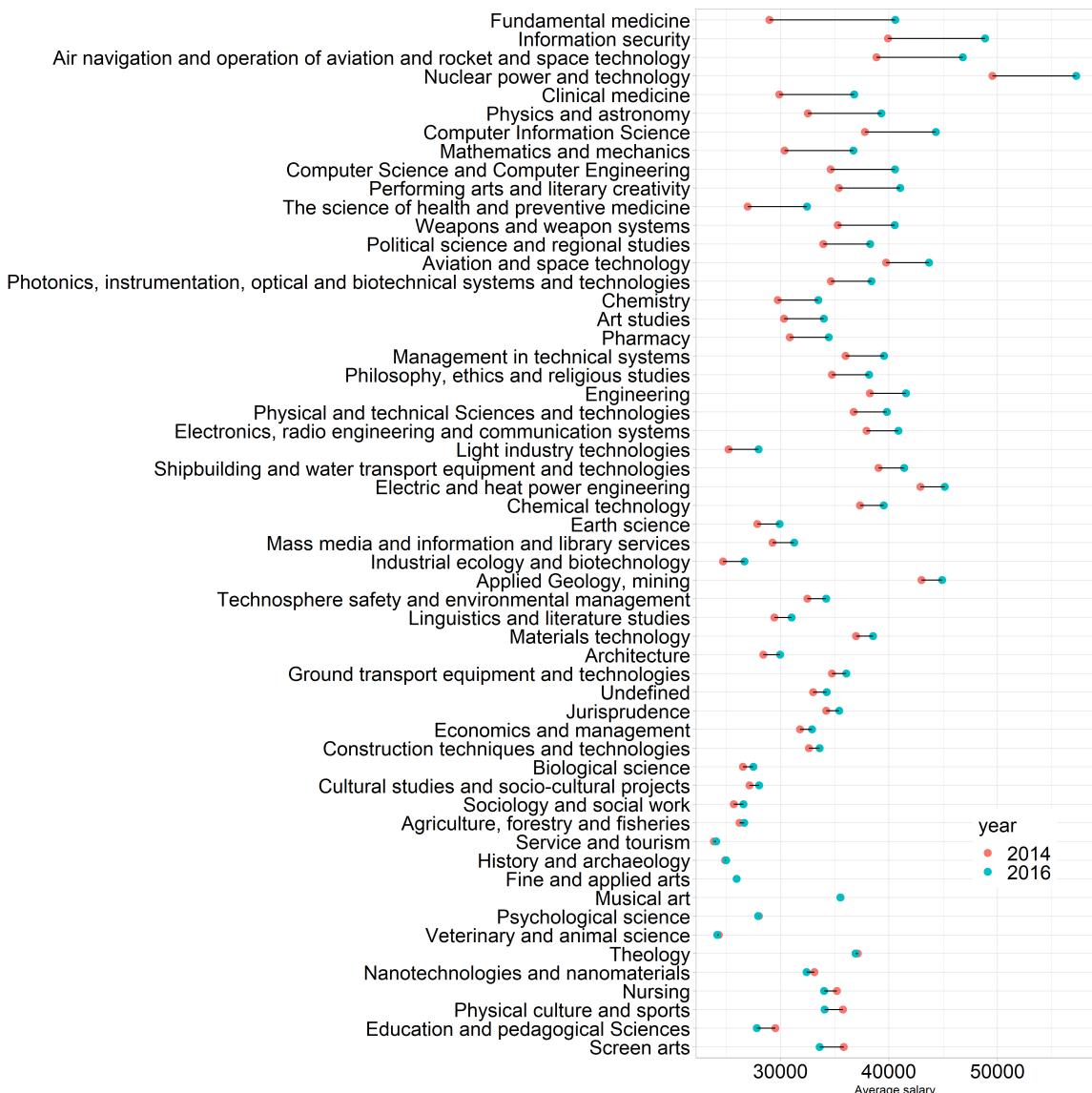


FIGURE A1 Salary of Univ Graduates 2014 to 2016

LIST OF COLLEGES ARRANGED BY REGION AND INSTITUTION NAME

social returns	private returns	Name of College	Region	Total Revenue (in million Rubles)	Total Paid Fees (in million Rubles)	Salary 2014 (in thousands Rubles)	Salary 2015 (in thousands Rubles)	Salary 2016 (in thousands Rubles)
		Барнаульский лицей железнодорожного транспорта	Алтайский край	33.82	4.81	157	262	264
-0.0311	0.0491	Бийский медицинский колледж	Алтайский край	46.97	15.81	156	213	190
-0.1447	-0.0745	Бийский техникум лесного хозяйства	Алтайский край	85.29	11.34	174	244	235
-0.1535	-0.0100	Благовещенский строительный техникум	Алтайский край	48.08	7.86	201	294	288
-0.0028	0.0848	Каменский аграрный техникум	Алтайский край	61.36	6.25	80	279	225
-0.2030	-0.0006	Междунородный колледж сыророделия и профессиональных технологий	Алтайский край	111.87	12.78	312	189	175
-0.1780	-0.0687	Барнаульский лицей железнодорожного транспорта	Алтайский край	100.12	7.95	490	231	211
-0.0785	0.0007	Рубцовский аграрно-промышленный техникум	Алтайский край	63.81	7.20	68	199	167
-0.3019	-0.1049	Славгородский педагогический колледж	Алтайский край	179.16	31.68	366	279	263
-0.1143	0.0230	Амурский аграрный колледж	Амурская область	234.05	50.03	534	243	218
-0.1516	-0.0372	Амурский колледж сервиса и торговли	Амурская область	123.65	32.84	378	368	332
0.0130	0.1125	Амурский колледж строительства и жилищно-коммунального хозяйства	Амурская область	153.35	60.34	312	293	281
-0.1014	-0.0065	Амурский медицинский колледж	Амурская область	132.51	57.27	158	436	402
-0.0608	0.0674	Амурский многофункциональный центр профессиональных квалификаций	Амурская область	152.85	31.94	311	348	248
-0.1059	0.0311	Амурский педагогический колледж	Амурская область	238.03	25.96	266	278	311
-0.1747	0.0446	Амурский технический колледж	Амурская область	87.11	11.61	249	297	283
-0.0512	0.0685	Райчихинский индустриальный техникум	Архангельская область	161.66	9.60	158	276	264
-0.2238	-0.0012	Архангельский аграрный техникум	Архангельская область	43.13	2.79	74	263	258
-0.1680	-0.0131	Архангельский индустриально-педагогический колледж	Архангельская область	48.22	2.16	57	284	301
-0.1902	0.0189	Архангельский колледж культуры и искусства	Архангельская область	159.19	41.66	232	406	370
-0.0883	0.0531	Архангельский медицинский колледж	Архангельская область	128.77	11.50	214	275	239
-0.1828	-0.0309	Архангельский педагогический колледж	Архангельская область	35.54	5.25	67	246	248
-0.1442	-0.0184	Архангельский техникум водных магистралей имени С. Н. Орешкова	Архангельская область	80.15	11.79	271	280	285
-0.0742	0.0118	Архангельский техникум строительства и экономики	Архангельская область	76.45	11.67	286	220	221
-0.1443	-0.0716	Архангельский торгово-экономический колледж	Архангельская область	81.68	17.58	123	314	302
-0.1058	-0.0468	Архангельский финансово-промышленный колледж	Архангельская область	147.25	19.82	161	280	255
-0.2214	-0.0387	Вельский индустриальный техникум	Архангельская область	69.12	7.88	109	280	261
-0.1599	-0.0064	Корякемский индустриальный техникум	Архангельская область	54.26	6.85	99	280	277
-0.1610	-0.0231	Котласский педагогический колледж	Архангельская область	32.68	5.01	101	312	311
-0.0497	0.0447	Мирнинский промышленно-экономический техникум	Архангельская область	81.99	4.09	98	243	203
-0.1353	0.0037	Няндомский железнодорожный колледж	Архангельская область	78.12	7.65	56	216	218
-0.2502	-0.0601	Техникум строительства и городского хозяйства Архангельской области	Архангельская область	39.65	25.77	357	282	243
-0.3139	-0.0896	Шипицынский агропромышленный техникум	Архангельская область	49.78	3.45	155	256	247
-0.1902	-0.1831	Астраханский автомобильно-дорожный колледж	Астраханская область	144.92	14.47	415	302	246
-0.2451	-0.1942	Астраханский агротехнический техникум	Астраханская область	50.05	12.39	367	234	238
-0.2294	-0.1750	Астраханский государственный политехнический колледж	Астраханская область	29.61	2.22	106	214	253
-0.1073	-0.0177	Ахтубинский губернский техникум	Астраханская область	120.48	62.81	503	222	208
-0.2674	-0.2491	Профессиональная образовательная организация «Астраханский базовый медицинский колледж»	Астраханская область	84.83	41.34	195	243	232
-0.1487	-0.0837	Брянский базовый медицинский колледж	Брянская область	12.78	1.50	534	225	219

LIST OF COLLEGES ARRANGED BY REGION AND INSTITUTION NAME

social returns	private returns	Name of College	Region	Total Revenue (in million Rubles)	Total Paid Fees (in million Rubles)	Salary 2014 (in thousands Rubles)	Salary 2015 (in thousands Rubles)	Salary 2016 (in thousands Rubles)
-0.1425	-0.0871	Брянский медико-социальный техникум имени академика Н. М. Амосова	Брянская область	50.92	22.27	171	228	208
-0.1016	-0.0036	Брянский профессионально-педагогический колледж	Брянская область	83.65	8.08	288	245	238
-0.0993	0.0116	Брянский строительный колледж имени профессора Н.Е.Жуковского	Брянская область	101.17	6.95	318	261	239
-0.3148	-0.0351	Брянское государственное училище (колледж) олимпийского резерва	Брянская область	85.21	5.52	58	270	219
-0.1880	-0.0683	Новозыбковский медицинский колледж	Брянская область	28.07	4.04	64	239	191
0.0147	0.0772	Региональный железнодорожный техникум	Брянская область	34.43	2.94	230	323	277
-0.0616	0.0537	Трубчевский политехнический техникум	Брянская область	51.52	3.42	161	282	272
-0.0813	0.0208	Унечский индустриальный техникум имени Героя России А. В. Рассказы	Брянская область	69.80	3.13	236	266	254
-0.0242	0.0444	Фокинский индустриальный техникум	Брянская область	54.80	1.96	313	278	295
-0.0267	0.0854	Владимирский авиамеханический колледж	Владimirская область	123.81	35.76	391	269	236
-0.0220	0.0853	Владимирский базовый медицинский колледж	Владимирская область	91.98	30.10	282	270	251
-0.1763	0.1461	Владимирский областной колледж культуры и искусства	Владимирская область	75.95	6.34	69	292	288
-0.0445	0.0807	Гусевский стекольный колледж	Владимирская область	52.73	13.44	149	248	240
-0.0534	0.1049	Гусь-Хрустальный технологический колледж имени Г. Ф. Чехова	Владимирская область	61.75	7.50	172	229	294
-0.0086	0.1685	Киржачский машиностроительный колледж	Владимирская область	48.43	6.46	121	299	302
-0.1655	0.1294	Ковровский колледж сервиса и технологий	Владимирская область	50.45	2.91	58	236	301
0.0344	0.1896	Ковровский транспортный колледж	Владимирская область	59.03	12.82	157	363	295
0.0245	0.1466	Муромский колледж радиоэлектронного приборостроения	Владимирская область	29.25	6.27	104	303	260
-0.2411	0.1068	Муромцевский лесотехнический техникум	Владимирская область	90.21	3.88	82	313	211
-0.0698	0.0742	Никологорский аграрно-промышленный колледж	Владимирская область	44.03	7.25	126	263	204
0.0322	0.1681	Петушинский промышленно-гуманитарный колледж	Владимирская область	38.80	2.71	156	276	269
-0.2254	-0.0650	Арчединский лесной колледж	Волгоградская область	44.54	4.90	68	229	205
-0.0228	0.0749	Волгоградский индустриальный техникум	Волгоградская область	59.37	7.57	203	278	294
-0.0932	0.0022	Волгоградский колледж управления и новых технологий	Волгоградская область	103.46	30.38	256	301	259
-0.0670	-0.0352	Волгоградский медико-экологический техникум	Волгоградская область	46.65	23.84	271	240	237
-0.1284	-0.0334	Волгоградский медицинский колледж	Волгоградская область	228.79	26.15	753	234	214
-0.1759	-0.0366	Волгоградский педагогический колледж	Волгоградская область	47.41	2.66	99	244	223
-0.0709	0.0167	Волгоградский политехнический колледж имени В. И. Вернадского	Волгоградская область	65.41	12.27	226	277	260
-0.1806	-0.0855	Волгоградский социально-педагогический колледж	Волгоградская область	77.78	26.79	152	259	212
-0.0757	0.0315	Волгоградский строительный техникум	Волгоградская область	87.16	12.11	255	280	272
-0.0866	0.0406	Волгоградский техникум железнодорожного транспорта и коммуникаций	Волгоградская область	53.30	4.99	135	279	276
-0.1432	-0.0275	Волгоградский технический колледж	Волгоградская область	81.85	10.56	202	228	237
-0.1194	-0.0556	Волгоградский технологический колледж	Волгоградская область	149.03	49.71	535	233	223
-0.0580	0.0097	Волгоградский экономико-технический колледж	Волгоградская область	81.96	16.55	374	257	252
-0.0474	0.0181	Волгоградский энергетический колледж	Волгоградская область	81.12	33.42	255	288	310

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social returns	private returns	Name of College	Region	Total Revenue (in million Rubles)	Total Paid Fees (in million Rubles)	Salary 2014 (in thousands Rubles)	Salary 2015 (in thousands Rubles)	Salary 2016 (in thousands Rubles)
-0.1816	-0.0132	Волжский политехнический техникум	Волгоградская область	167.33	22.29	239	255	251
		Дубовский зооветеринарный колледж	Волгоградская область	50.94	10.62	103	221	186
-0.2021	-0.0894	имени Героя Советского Союза А. А. Шарова	Волгоградская область					206
-0.1888	-0.0453	Дубовский педагогический колледж	Волгоградская область	30.53	1.51	65	247	195
-0.2051	-0.0374	Камышинский педагогический колледж	Волгоградская область	45.93	3.47	74	236	235
-0.0943	0.0050	Камышинский технический колледж	Волгоградская область	61.43	5.08	202	273	242
0.0104	0.0593	Котовский промышленно-экономический техникум	Волгоградская область	20.82	8.52	103	328	305
-0.1228	-0.0517	Новоаннинский сельскохозяйственный колледж	Волгоградская область	33.78	4.99	147	210	210
-0.1581	-0.0120	Палласовский сельскохозяйственный техникум	Волгоградская область	42.29	1.73	93	266	216
-0.0207	0.0352	Профессиональное училище № 31	Волгоградская область	17.73	0.85	125	282	269
-0.1378	-0.0257	Профессиональное училище № 6	Волгоградская область	34.10	1.98	94	226	228
		Профessionnalnyy лицей имени Александра Невского	Волгоградская область	26.23	0.28	91	226	205
-0.1267	-0.0231		Волгоградская область					232
-0.0304	0.0251	Себряковский технологический техникум	Волгоградская область	33.64	7.36	198	295	254
		Серафимовичский техникум механизации сельского хозяйства	Волгоградская область	22.20	2.61	104	266	256
-0.0539	0.0212		Волгоградская область					260
-0.1361	-0.0385	Фроловский промышленно-экономический техникум	Волгоградская область	37.12	6.71	103	227	220
-0.0959	0.0181	Великоустюгский автотранспортный техникум	Вологодская область	44.82	3.36	127	279	263
-0.1334	-0.0570	Вологодский областной медицинский колледж	Вологодская область	54.66	22.41	122	269	253
-0.2090	-0.0793	Вологодский педагогический колледж	Вологодская область	42.82	4.22	86	220	203
-0.1155	-0.0019	Вологодский строительный колледж	Вологодская область	96.30	14.88	232	287	229
-0.1434	0.0091	Горячепецкий политехнический техникум	Вологодская область	80.74	5.69	149	254	258
		Череповецкий лесомеханический техникум	Вологодская область					289
-0.0215	0.0383	имени В. П. Чкалова	Вологодская область	70.10	29.37	243	329	309
		Череповецкий медицинский колледж	Вологодская область					326
-0.1429	-0.0724	имени Н. М. Амосова	Вологодская область	54.78	22.26	136	257	232
0.0069	0.0872	Череповецкий металлургический колледж имени академика И. П. Бардина	Вологодская область	137.75	43.11	436	366	346
-0.0751	0.0191	Череповецкий технологический техникум	Вологодская область	65.20	7.10	225	283	272
-0.1387	-0.0366	Череповецкий химико-технологический колледж	Вологодская область	70.78	23.96	132	319	269
-0.1015	0.0405	Борисоглебский дорожный техникум	Воронежская область	66.51	3.44	149	307	271
-0.1187	-0.0431	Борисоглебский сельскохозяйственный техникум	Воронежская область	44.44	4.52	186	235	220
		Борисоглебский техникум промышленных и информационных технологий	Воронежская область	83.56	7.11	265	224	217
-0.1544	-0.0600		Воронежская область					
-0.1340	-0.0808	Бутурлиновский медицинский техникум	Воронежская область	23.95	8.29	97	227	212
		Воронежский авиационный техникум	Воронежская область					210
-0.2362	0.0279	имени В.П.Чкалова	Воронежская область	80.18	2.29	70	283	295
-0.1253	0.0331	Воронежский государственный промышленно-экономический колледж	Воронежская область	53.94	7.52	80	265	263
		Воронежский государственный профессионально-педагогический колледж	Воронежская область	76.97	8.22	94	263	236
-0.2292	-0.0461		Воронежская область					227
-0.1044	0.0371	Воронежский индустриальный колледж	Воронежская область	47.86	1.87	107	276	270
-0.0996	-0.0288	Воронежский политехнический техникум	Воронежская область	43.05	7.36	177	240	236
								246

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social returns	private returns	Name of College	Region	Total Revenue (in million Rubles)	Total Paid Fees (in million Rubles)	Salary 2014 (in thousands Rubles)	Salary 2015 (in thousands Rubles)	Salary 2016 (in thousands Rubles)
-0.0796	0.0110	Воронежский техникум строительных технологий	Воронежская область	99.95	12.89	344	286	258
-0.1152	-0.0853	Воронежский юридический техникум	Воронежская область	50.19	30.80	204	229	215
-0.0805	0.0193	Калачеевский аграрный техникум	Воронежская область	70.38	3.15	246	283	255
-0.1621	-0.0410	Лискинский аграрно-технологический техникум	Воронежская область	48.06	1.58	123	234	213
-0.0022	0.0762	Лискинский промышленно-транспортный техникум имени А. К. Лысенко	Воронежская область	37.45	3.32	175	324	310
-0.1835	-0.0610	Новохопёрский аграрно-экономический техникум	Воронежская область	58.28	10.64	108	236	229
-0.1314	-0.0227	Острогожский многопрофильный техникум	Воронежская область	70.58	7.26	191	257	233
-0.1326	-0.0649	Россошанский колледж мясной и молочной промышленности	Воронежская область	67.77	12.07	281	225	215
-0.1461	-0.0226	Россошанский техникум сельскохозяйственного и строительного транспорта	Воронежская область	39.62	4.62	90	268	259
0.0668	0.1528	Семилукский политехнический колледж	Воронежская область	72.76	6.99	325	387	394
-0.1681	0.0489	Биробиджанский медицинский колледж	Еврейская автономная область	47.77	7.88	54	272	265
-0.0492	0.0711	Ивановский автотранспортный колледж	Ивановская область	66.44	21.26	187	258	229
-0.0744	0.0607	Ивановский железнодорожный колледж	Ивановская область	38.81	14.89	71	275	262
-0.0084	0.1069	Кинешемский медицинский колледж	Ивановская область	37.16	9.29	137	255	239
-0.1158	0.0802	Тейковский индустриальный колледж имени Героя Советского Союза А. П. Булавова	Ивановская область	30.12	1.62	72	195	228
-0.2940	0.0630	Шуйский технологический колледж	Ивановская область	119.34	4.54	94	208	205
-0.0729	0.0558	Южский технологический колледж	Ивановская область	18.89	0.24	85	192	176
0.0142	0.2605	Юрьевецкий агропромышленный колледж	Ивановская область	53.07	1.29	122	341	302
-0.1341	0.0266	Ангарский автотранспортный техникум	Иркутская область	55.56	4.53	105	261	249
-0.1258	-0.0225	Ангарский индустриальный техникум	Иркутская область	64.89	10.06	181	209	212
-0.1936	0.0117	Ангарский педагогический колледж	Иркутская область	94.25	7.25	124	280	251
-0.0712	0.0633	Ангарский политехнический техникум	Иркутская область	51.91	11.56	101	317	315
-0.1664	-0.0205	Балаганский аграрно-технологический техникум	Иркутская область	69.85	10.01	128	250	232
-0.0014	0.1686	Бодайбинский горный техникум	Иркутская область	49.90	9.79	83	440	382
-0.1807	-0.0397	Боханский педагогический колледж имени Д. Банзарова	Иркутская область	34.06	7.04	56	264	225
-0.1138	0.0589	Братский индустриально-металлургический техникум	Иркутская область	78.54	6.74	136	271	282
-0.2176	0.0238	Братский педагогический колледж	Иркутская область	186.35	17.11	181	304	273
-0.2182	0.0288	Братский профессиональный техникум	Иркутская область	133.79	6.30	138	277	248
-0.0554	0.0630	Зиминский железнодорожный техникум	Иркутская область	55.70	3.73	172	278	267
0.0042	0.1118	Иркутский авиационный техникум	Иркутская область	64.98	15.05	178	315	357
-0.2158	-0.0440	Иркутский аграрный техникум	Иркутская область	88.24	9.96	127	221	222
-0.1137	0.0092	Иркутский базовый медицинский колледж	Иркутская область	68.29	18.31	130	306	272
-0.1651	-0.0017	Иркутский гидрометеорологический техникум	Иркутская область	42.80	5.43	70	256	256
-0.1917	0.0219	Иркутский региональный колледж педагогического образования	Иркутская область	266.09	14.98	349	283	250
-0.2501	-0.0973	Иркутский техникум индустрии питания	Иркутская область	43.04	5.95	68	224	186
-0.2518	-0.0382	Иркутский техникум речного и автомобильного транспорта	Иркутская область	47.91	3.98	53	247	217
-0.1381	0.0019	Иркутский техникум транспорта и строительства	Иркутская область	73.85	7.98	156	238	241
-0.1137	-0.0225	Иркутский технологический колледж	Иркутская область	53.75	4.50	207	232	208

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social returns	private returns	Name of College	Region	Total Revenue (in million Rubles)	Total Paid Fees (in million Rubles)	Gradu- ates	Salary 2014 (in thousands Rubles)	Salary 2015 (in thousands Rubles)	Salary 2016 (in thousands Rubles)
-0.2198	0.0402	Киренский профессионально-педагогический колледж	Иркутская область	79.18	5.34	71	281	283	287
0.0177	0.2028	Профessionnalnyy kolledzh g. Zhelenzognorskogo	Иркутская область	58.71	7.64	106	467	419	415
-0.1606	-0.0338	Саянский медицинский колледж	Иркутская область	23.44	3.16	53	246	206	217
-0.1660	-0.0510	Тайшетский медицинский техникум	Иркутская область	21.56	3.46	51	216	209	216
-0.1164	0.0532	Усть-Илимский техникум отраслевых технологий	Иркутская область	42.43	2.79	80	258	323	255
-0.1362	0.0132	Усть-Ордынский аграрный техникум	Иркутская область	51.23	2.44	116	287	202	241
-0.0110	0.0892	Черемховский горнотехнический колледж имени М. И. Щадова	Иркутская область	36.17	5.94	123	312	311	321
-0.1783	-0.0085	Техникум отраслевых технологий в городе Светлый	Калининградская область	101.30	4.57	160	236	212	300
-0.1656	-0.0611	Технологический колледж	Калининградская область	101.06	9.65	278	218	209	215
-0.2385	-0.0741	Технологический колледж	Калининградская область	101.06	9.65	142	218	209	215
-0.1943	-0.0780	Губернаторский аграрный колледж	Калужская область	74.92	6.39	101	388	353	345
-0.1474	0.0944	Калужский государственный машиностроительный колледж	Калужская область	60.30	5.32	59	361	354	375
-0.2165	-0.1350	Калужский кадетский многопрофильный техникум	Калужская область	27.58	0.16	62	329	282	255
-0.2123	-0.1608	Калужский колледж народного хозяйства и природообустройства	Калужская область	49.25	10.15	135	284	276	268
-0.2879	-0.2290	Калужский колледж питания и услуг	Калужская область	59.86	4.90	150	202	202	212
-0.1661	-0.0973	Калужский техникум электронных приборов	Калужская область	41.44	2.35	109	341	317	329
-0.3242	-0.1580	Калужский технический колледж	Калужская область	210.75	12.96	154	306	275	264
-0.2455	-0.1690	Кондровский гуманитарно-технический колледж	Калужская область	42.11	0.61	94	265	251	248
-0.1964	-0.1334	Перемышльский техникум эксплуатации транспорта	Калужская область	29.47	2.45	78	274	303	298
-0.2228	-0.1584	Сосенский политехнический техникум	Калужская область	26.47	1.63	69	278	261	263
-0.2286	0.0488	Камчатский индустриальный техникум	Камчатский край	106.94	8.57	67	387	328	397
-0.2244	0.0136	Камчатский колледж технологии и сервиса	Камчатский край	120.65	2.92	111	310	281	306
-0.1024	0.1682	Камчатский медицинский колледж	Камчатский край	147.57	20.98	104	606	517	517
-0.2589	0.1686	Камчатский педагогический колледж	Камчатский край	166.18	9.49	55	579	525	492
0.0543	0.2179	Камчатский политехнический техникум	Камчатский край	187.33	34.24	299	575	583	555
-0.1049	0.1674	Камчатский промышленный техникум	Камчатский край	146.82	9.95	122	498	453	510
0.0398	0.2194	Анжеро-Судженский горный техникум	Кемеровская область	57.13	6.62	139	353	337	380
-0.2062	0.0284	Анжеро-Судженский политехнический колледж	Кемеровская область	97.60	9.48	121	229	211	233
0.0117	0.1280	Беловский политехнический техникум	Кемеровская область	80.98	22.22	240	295	309	305
-0.1944	0.0862	Кемеровский аграрный техникум имени Г. П. Левина	Кемеровская область	264.17	10.53	309	258	239	237
-0.1254	0.1064	Кемеровский горнотехнический техникум	Кемеровская область	127.55	22.91	151	335	304	292
-0.2435	0.0142	Кемеровский коммунально-строительный техникум имени В. И. Заузелкова	Кемеровская область	89.76	11.31	81	236	222	251
-0.2000	0.0166	Кемеровский педагогический колледж	Кемеровская область	107.09	20.58	119	279	240	229
-0.1114	0.0676	Кемеровский профессионально-технический техникум	Кемеровская область	106.17	13.34	211	254	236	243
0.1138	0.2122	Киселевский горный техникум	Кемеровская область	55.75	8.74	280	314	352	360
-0.1493	0.1058	Кузбасских техникум архитектуры, геодезии и строительства	Кемеровская область	181.36	12.95	240	285	249	266
-0.0978	0.1707	Кузнецкий индустриальный техникум	Кемеровская область	168.67	10.63	226	318	294	331
-0.0387	0.1465	Кузнецкий металлургический техникум	Кемеровская область	99.18	15.24	194	305	311	317
0.0788	0.2671	Ленинск-Кузнецкий горнотехнический техникум	Кемеровская область	109.25	13.11	260	390	396	421
-0.2546	0.0278	Мариинский педагогический колледж имени императрицы Марии Александровны	Кемеровская область	52.02	2.89	52	227	218	201

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-0.0622	0.0859	Мариинский политехнический техникум	Кемеровская область	99.94	5.09	310	245	229	238
0.0780	0.2192	Междуреченский горностроительный техникум	Кемеровская область	92.09	16.84	283	376	344	361
0.0741	0.1870	Новокузнецкий горнотранспортный колледж	Кемеровская область	65.18	19.09	209	358	339	358
-0.0579	0.0665	Новокузнецкий педагогический колледж	Кемеровская область	60.86	9.63	198	261	231	219
-0.0911	0.1131	Новокузнецкий строительный техникум	Кемеровская область	158.65	16.50	289	290	268	262
0.0799	0.2246	Осинниковский политехнический техникум	Кемеровская область	68.22	3.00	260	350	324	334
-0.2692	-0.0177	Прокопьевский аграрный колледж	Кемеровская область	87.59	13.25	74	240	231	211
0.0186	0.1702	Прокопьевский горнотехнический техникум имени В. П. Романова	Кемеровская область	122.83	25.22	303	332	329	338
-0.0216	0.0811	Прокопьевский промышленно-экономический техникум	Кемеровская область	63.18	2.84	311	218	236	241
-0.1774	0.1245	Прокопьевский техникум физической культуры	Кемеровская область	59.57	3.72	61	300	282	268
-0.1544	0.1351	Прокопьевский электромашиностроительный техникум	Кемеровская область	65.82	2.03	80	283	268	275
-0.0795	0.1477	Профессиональный колледж г. Новокузнецка	Кемеровская область	147.45	4.34	287	334	236	258
-0.0688	0.1192	Сибирский политехнический техникум	Кемеровская область	126.43	14.80	252	278	272	290
-0.2212	0.1228	Таштагольский техникум горных технологий	Кемеровская область	84.61	3.91	68	285	280	278
-0.0768	0.0032	Вятский железнодорожный техникум	Кировская область	51.94	11.06	181	277	266	266
-0.0808	0.0659	Зуевский механико-технологический техникум	Кировская область	36.59	5.02	71	352	320	307
-0.1135	0.0104	Кировский авиационный техникум	Кировская область	64.65	9.01	143	273	267	289
-0.1445	-0.0552	Кировский лесопромышленный колледж	Кировская область	79.02	18.56	208	226	231	242
-0.0969	-0.0159	Кировский медицинский колледж	Кировская область	103.42	22.34	349	276	249	242
-0.0338	0.0752	Кировский механико-технологический техникум	Кировская область	33.98	5.05	97	343	309	332
-0.2272	-0.0924	Кировский педагогический колледж	Кировская область	29.47	1.18	61	203	186	181
-0.0676	0.0192	Кировский сельскохозяйственный техникум имени дважды Героя Социалистического Труда А. Д. Червякова	Кировская область	82.92	15.92	283	325	257	260
-0.1195	-0.0504	Нолинский техникум механизации сельского хозяйства	Кировская область	58.28	16.35	199	237	218	249
-0.2015	-0.0633	Омутнинский колледж педагогики, экономики и права	Кировская область	47.34	5.95	83	225	220	223
-0.0467	0.0444	Савальский политехнический техникум	Кировская область	43.23	2.76	171	304	268	289
-0.2418	-0.1168	Слободской колледж педагогики и социальных отношений	Кировская область	39.51	4.41	76	193	172	185
-0.1348	0.0391	Сосновский судостроительный техникум	Кировская область	39.27	2.73	64	295	296	287
-0.2367	-0.0868	Суводский лесхоз-техникум	Кировская область	57.91	8.61	82	219	209	216
-0.3162	-0.0738	Яранский аграрный техникум	Кировская область	72.34	6.53	51	243	208	239
-0.2126	-0.1755	Буйский техникум градостроительства и предпринимательства Костромской области	Костромская область	28.79	3.79	126	263	247	249
-0.2487	-0.2102	Волгореченский промышленный техникум Костромской области	Костромская область	17.96	2.28	71	224	198	239
-0.2640	-0.2323	Костромской автотранспортный колледж	Костромская область	42.83	11.00	170	209	200	215
-0.2795	-0.2270	Костромской областной медицинский колледж имени Героя Советского Союза С. А. Богомолова	Костромская область	65.39	17.18	143	240	199	228
-0.2177	-0.1380	Костромской энергетический техникум имени Ф. В. Чижова	Костромская область	61.83	12.20	102	316	288	317

LIST OF COLLEGES ARRANGED BY REGION AND INSTITUTION NAME									
social returns	private returns	Name of College	Region	Total Revenue (in million Rubles)	Total Paid Fees (in million Rubles)	Graduates	Salary 2014 (in thousands Rubles)	Salary 2015 (in thousands Rubles)	Salary 2016 (in thousands Rubles)
-0.2769	-0.2091	Шарьинский аграрный техникум Костромской области	Костромская область	41.75	1.52	98	222	220	219
-0.2623	-0.1956	Шарьинский политехнический техникум Костромской области	Костромская область	68.46	6.09	151	211	226	260
-0.1518	-0.0494	Анапский колледж сферы услуг	Краснодарский край	87.11	14.90	220	237	228	229
-0.1103	-0.0104	Анапский сельскохозяйственный техникум	Краснодарский край	137.84	27.43	360	270	254	267
-0.1562	-0.0616	Апшеронский лесхоз-техникум	Краснодарский край	130.50	17.61	390	232	218	201
-0.1746	-0.0378	Апшеронский техникум автомобильного транспорта и сервиса	Краснодарский край	77.00	4.91	163	258	204	226
-0.1954	-0.0844	Армавирский аграрно-технологический техникум	Краснодарский край	118.23	25.03	239	247	204	202
-0.1071	0.0171	Армавирский машиностроительный техникум	Краснодарский край	125.19	5.27	346	318	239	237
-0.1969	-0.1091	Армавирский медицинский колледж Минздрава Краснодарского края	Краснодарский край	68.12	20.62	149	218	201	205
-0.0821	-0.0415	Армавирский юридический техникум	Краснодарский край	77.26	26.30	465	234	247	221
-0.1302	-0.0439	Брюховецкий аграрный колледж	Краснодарский край	187.11	67.62	406	284	250	260
-0.2637	-0.0903	Брюховецкий многопрофильный техникум	Краснодарский край	78.45	7.65	96	187	218	210
-0.1256	-0.0084	Венцы-Заря сельскохозяйственный техникум	Краснодарский край	56.46	2.77	156	259	240	241
-0.2388	-0.0406	Вознесенский техникум пищевых производств	Краснодарский край	64.38	3.35	78	244	213	235
-0.2068	-0.0404	Динской механико-технологический техникум	Краснодарский край	97.96	5.00	159	239	231	213
-0.2263	-0.1123	Ейский медицинский колледж Минздрава Краснодарского края	Краснодарский край	63.47	16.21	107	238	201	190
-0.2225	-0.0554	Ейский полипрофильный колледж	Краснодарский край	166.89	14.98	237	227	217	233
-0.1893	-0.0327	Колледж Ейский	Краснодарский край	140.10	30.75	174	308	256	268
-0.1558	-0.0598	Кореновский автомеханический техникум	Краснодарский край	73.30	19.21	167	246	232	233
-0.1186	-0.0589	Краснодарский архитектурно-строительный техникум	Краснодарский край	125.67	53.89	378	260	238	239
-0.1926	-0.0928	Краснодарский гуманитарно-технологический колледж	Краснодарский край	159.15	45.34	307	224	219	220
-0.1051	-0.0133	Краснодарский информационно-технологический техникум	Краснодарский край	81.09	13.66	250	264	246	254
-0.0891	-0.0007	Краснодарский колледж электронного приборостроения	Краснодарский край	155.55	58.12	328	297	298	320
-0.1043	-0.0143	Краснодарский краевой базовый медицинский колледж Минздрава Краснодарского края	Краснодарский край	148.80	48.93	349	317	263	264
-0.1892	-0.0434	Краснодарский краевой колледж культуры	Краснодарский край	56.14	2.06	114	247	214	205
-0.0559	0.0576	Краснодарский машиностроительный колледж	Краснодарский край	170.94	34.74	401	315	317	347
-0.0157	0.0879	Краснодарский монтажный техникум	Краснодарский край	210.29	42.38	594	348	364	332
-0.3395	-0.0158	Краснодарский педагогический колледж	Краснодарский край	264.55	6.83	148	285	240	227
-0.1827	-0.0634	Краснодарский политехнический техникум	Краснодарский край	160.19	23.80	342	247	216	205
-0.0965	0.0157	Краснодарский технический колледж	Краснодарский край	163.09	28.02	401	303	270	276
-0.1308	-0.0429	Краснодарский торгово-экономический колледж	Краснодарский край	227.11	31.74	749	239	221	228
-0.1959	-0.1322	Кропоткинский медицинский колледж Минздрава Краснодарского края	Краснодарский край	47.71	14.80	158	212	172	167
-0.1600	-0.0303	Крымский индустриально-строительный техникум	Краснодарский край	96.53	15.17	183	262	223	265

LIST OF COLLEGES ARRANGED BY REGION AND INSTITUTION NAME									
social returns	private returns	Name of College	Region	Total Revenue (in million Rubles)	Total Paid Fees (in million Rubles)	Graduates	Salary 2014 (in thousands Rubles)	Salary 2015 (in thousands Rubles)	Salary 2016 (in thousands Rubles)
-0.0866	-0.0047	Крымский технический колледж	Краснодарский край	84.15	12.39	314	260	255	254
-0.2208	-0.0872	Курганинский аграрно-технологический техникум	Краснодарский край	108.04	10.46	206	213	198	192
		Кущевский медицинский колледж Минздрава							
-0.1883	-0.0728	Краснодарского края	Краснодарский край	31.32	3.77	72	230	200	203
-0.1772	-0.0510	Лабинский аграрный техникум	Краснодарский край	209.14	31.06	408	238	223	237
		Лабинский медицинский колледж Минздрава							
-0.1739	-0.1078	Краснодарского края	Краснодарский край	48.47	15.35	152	207	191	200
		Ленинградский социально-педагогический							
-0.2009	-0.0865	колледж	Краснодарский край	161.67	41.33	280	242	230	208
		Новокубанский аграрно-политехнический							
-0.1695	-0.0704	техникум	Краснодарский край	54.79	13.24	124	244	226	213
		Новороссийский колледж радиоэлектронного							
-0.1462	0.0175	приборостроения	Краснодарский край	113.53	11.17	185	285	280	279
		Новороссийский колледж строительства							
-0.0257	0.0195	и экономики	Краснодарский край	217.46	91.50	1038	294	281	303
		Новороссийский медицинский колледж							
-0.1101	-0.0753	Минздрава Краснодарского края	Краснодарский край	61.33	36.25	234	267	221	224
		Новороссийский профессиональный техникум							
-0.0268	0.0418	Новороссийский социально-педагогический	Краснодарский край	69.06	1.03	410	299	273	267
		Новороссийский социально-педагогический							
-0.1144	-0.0111	колледж	Краснодарский край	114.76	9.59	358	272	244	227
		Пашковский сельскохозяйственный колледж							
-0.1259	-0.0279	Профессиональное училище № 65	Краснодарский край	138.85	39.58	309	280	269	250
		Славянский сельскохозяйственный техникум							
-0.1748	-0.0432	Сочинский колледж поликультурного	Краснодарский край	120.04	16.25	230	242	234	235
		образования							
-0.3088	0.0882	Сочинский медицинский колледж Минздрава	Краснодарский край	161.41	2.40	70	337	311	351
		Краснодарского края							
-0.1126	-0.0339	Сочинский профессиональный техникум	Краснодарский край	40.30	12.03	119	291	237	232
		Сочинский торгово-технологический техникум							
-0.1284	-0.0119	86.62	Краснодарский край	112.51	15.42	177	294	242	244
		Туапсинский социально-педагогический колледж							
-0.1778	-0.0145	Дивногорский медицинский техникум	Краснодарский край	117.86	5.16	207	258	243	232
		Щербиновский индустриальный техникум							
-0.2231	-0.0003	Ачинский колледж транспорта и сельского	Краснодарский край	64.30	0.89	75	257	248	246
		хозяйства							
-0.2395	-0.0105	Дивногорский медицинский техникум	Красноярский край	127.30	24.06	111	265	249	245
		Емельяновский дорожно-строительный техникум							
-0.3260	-0.0248	Енисейский многопрофильный техникум	Красноярский край	126.10	15.07	73	259	239	220
		Игарский многопрофильный техникум							
-0.0832	0.2015	Красноярский технологический техникум	Красноярский край	48.21	2.74	60	376	325	356
		пищевой промышленности							
-0.0387	0.3157	Шадринский медицинский колледж	Курганская область	53.13	1.35	57	466	439	428
		Дмитриевский сельскохозяйственный техникум							
-0.1130	0.0140	в городе Дмитриев	Курская область	83.77	6.78	271	228	202	186
		Железногорский горно-металлургический							
-0.1409	0.0021	колледж	Курская область	36.53	7.05	61	331	277	253
		Калиновский сельскохозяйственный техникум							
-0.2763	-0.1588	Курский базовый медицинский колледж	Курская область	86.95	1.58	133	235	224	220
		Курский монтажный техникум							
-0.1579	-0.1047	Курский педагогический колледж	Курская область	112.22	31.38	327	285	291	298
		Курский техникум связи							
-0.2517	-0.1489	Курский электромеханический техникум	Курская область	32.28	0.24	61	250	222	227
		Курский техникум связ							
-0.2379	-0.1795	Курский монтажный техникум	Курская область	126.60	24.40	351	238	216	210
		Курский педагогический колледж							
-0.1841	-0.1280	Курский медицинский колледж	Курская область	154.47	19.13	532	267	252	252
		Курский техникум связи							
-0.3116	-0.1815	Курский техникум связи	Курская область	77.24	2.93	97	233	211	195
		Курский электромеханический техникум							
-0.2311	-0.1637	Курский техникум связи	Курская область	35.28	1.82	102	240	187	240
		Курский техникум связи							
-0.2024	-0.1511	Курский техникум связи	Курская область	114.31	9.60	450	250	228	226

LIST OF COLLEGES ARRANGED BY REGION AND INSTITUTION NAME

social returns	private returns	Name of College	Region	Total Revenue (in million Rubles)	Total Paid Fees (in million Rubles)	Gradu- ates	Salary 2014 (in thousands Rubles)	Salary 2015 (in thousands Rubles)	Salary 2016 (in thousands Rubles)
-0.1645	-0.0904	Свободинский аграрно-технический техникум имени К. К. Рокоссовского	Курская область	63.84	3.89	176	272	259	326
-0.1879	0.0259	Беседский сельскохозяйственный техникум	Ленинградская область	79.26	1.37	80	372	321	350
-0.2500	-0.0666	Борский агропромышленный техникум	Ленинградская область	88.33	17.34	61	312	339	350
-0.1660	-0.0211	Волховский колледж транспортного строительства	Ленинградская область	83.13	15.38	98	326	353	358
-0.1245	0.0071	Волховский политехнический техникум	Ленинградская область	48.92	5.44	82	340	359	339
-0.1284	0.0246	Всеволожский агропромышленный техникум	Ленинградская область	106.94	15.87	138	384	395	366
-0.1659	-0.0225	Выборгский техникум агропромышленного и лесного комплекса	Ленинградская область	57.81	5.45	80	262	300	386
-0.2098	-0.0610	Кингисеппский колледж технологий и сервиса	Ленинградская область	122.21	16.07	149	301	288	287
-0.1151	0.0360	Киришский политехнический техникум	Ленинградская область	89.56	10.63	126	390	365	395
-0.2018	-0.0317	Кировский политехнический техникум	Ленинградская область	112.07	16.93	108	331	313	359
-0.1974	-0.0156	Лисинский лесной колледж	Ленинградская область	120.79	18.18	109	367	339	359
-0.3091	-0.0128	Мичуринский аграрный техникум	Ленинградская область	137.51	4.95	72	403	288	290
-0.1861	-0.0558	Приозерский политехнический колледж	Ленинградская область	61.24	8.71	84	258	244	378
-0.0856	0.0277	Сосновоборский политехнический колледж	Ленинградская область	80.38	20.15	132	425	386	384
-0.1335	-0.0057	Техникум водного транспорта	Ленинградская область	79.53	3.37	155	336	307	312
-0.1779	-0.0319	Тихвинский медицинский колледж	Ленинградская область	83.72	7.77	121	334	301	286
-0.1886	-0.0115	Тосненский политехнический техникум	Ленинградская область	48.08	1.67	60	347	297	300
-0.2008	-0.0671	Грязинский технический колледж	Липецкая область	37.99	3.37	75	219	208	211
-0.1942	-0.0461	Лебедянский педагогический колледж	Липецкая область	46.92	2.62	88	231	220	218
		Липецкий колледж транспорта и дорожного хозяйства	Липецкая область	92.05	7.35	222	248	244	248
-0.0743	-0.0016	Липецкий машиностроительный колледж	Липецкая область	77.64	21.11	273	285	257	272
-0.0668	0.0392	Липецкий metallurgical колледж	Липецкая область	92.74	23.26	217	330	312	309
0.0148	0.0821	Липецкий политехнический техникум	Липецкая область	62.51	11.66	311	344	320	320
-0.0917	0.0419	Тербунский сельскохозяйственный лицей	Липецкая область	34.86	2.36	84	304	285	279
-0.1839	-0.0172	Западный комплекс непрерывного образования	Москва	368.34	19.13	370	398	390	408
		Колледж автоматизации и информационных технологий № 20	Москва	361.21	33.39	280	400	394	426
-0.2114	-0.0278	Колледж автомобильного транспорта № 9	Москва	465.93	35.07	480	433	403	424
-0.1671	-0.0055	Колледж архитектуры и строительства № 7	Москва	446.71	80.61	612	369	362	374
-0.1706	-0.0622	Колледж градостроительства, транспорта и технологий № 41	Москва	458.69	47.86	352	373	353	356
		Колледж декоративно-прикладного искусства имени Карла Фаберже	Москва	286.47	44.36	237	349	338	351
-0.1364	0.0334	Колледж железнодорожного и городского транспорта	Москва	479.37	41.45	480	507	453	467
		Колледж индустрии гостеприимства и менеджмента № 23	Москва	386.36	30.60	267	374	362	358
-0.1843	-0.0671	Колледж легкой промышленности № 5	Москва	112.12	4.92	182	396	316	297
-0.3031	-0.0677	Колледж малого бизнеса № 4	Москва	289.68	17.12	153	397	352	326
-0.0465	0.1236	Колледж малого бизнеса № 48	Москва	207.30	14.38	395	389	351	359
-0.0790	0.1478	Колледж МИД России	Москва	146.05	0.07	128	586	625	621
		Колледж по подготовке социальных работников Департамента труда и социальной защиты населения города Москвы	Москва	195.13	6.70	94	377	369	367
-0.3034	-0.0454	Колледж полиции	Москва	213.44	39.68	110	405	343	385
-0.2897	-0.1032	Колледж предпринимательства № 11	Москва	448.34	58.04	472	392	380	460

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Колледж современных технологий имени Героя Советского Союза М. Ф. Панова								
-0.2760	-0.0798	Советского Союза М. Ф. Панова	Москва	492.41	49.47	309	368	345
-0.2031	-0.0957	Колледж сферы услуг № 10	Москва	296.00	34.74	445	334	311
-0.1396	-0.0387	Колледж сферы услуг № 3	Москва	220.29	16.97	415	381	364
-0.1902	-0.0494	Колледж сферы услуг № 32	Москва	229.54	23.40	250	364	323
Медицинский колледж № 5 Департамента здравоохранения г. Москвы								
-0.2139	0.0052	Медицинский колледж № 6 Департамента здравоохранения г. Москвы	Москва	175.26	25.15	95	541	469
-0.2795	-0.0536	Медицинский колледж № 7 Департамента здравоохранения г. Москвы	Москва	208.80	34.84	87	486	447
-0.1883	0.0345	Медицинский колледж № 8 Департамента здравоохранения г. Москвы	Москва	183.83	20.08	111	541	484
-0.3065	-0.0123	Московский автомобильно-дорожный колледж имени А. А. Николаева	Москва	373.82	38.27	117	514	486
Московский государственный колледж электромеханики и информационных технологий								
-0.0852	0.0739	Московский колледж архитектуры	Москва	227.92	6.70	294	539	479
-0.2693	-0.0237	и градостроительства	Москва	382.25	24.80	192	402	425
-0.0831	0.0831	Московский колледж бизнес-технологий	Москва	194.42	24.75	194	548	565
Московский образовательный комплекс								
-0.1713	-0.0386	имени Виктора Талалихина	Москва	351.92	29.97	454	393	370
-0.2569	-0.0523	Московский технологический колледж	Москва	240.69	30.50	131	358	407
-0.1301	-0.0417	Образовательный комплекс «Юго-Запад»	Москва	350.48	47.17	709	386	361
-0.0696	0.0473	Педагогический колледж № 10	Москва	90.64	18.00	127	533	510
-0.1185	0.0266	Педагогический колледж № 15	Москва	228.92	51.55	213	545	512
-0.1362	0.0666	Педагогический колледж № 18 Митино	Москва	191.61	16.87	155	591	516
-0.2356	-0.0772	Пищевой колледж № 33	Москва	235.19	20.45	220	363	329
-0.0940	0.1259	Политехнический колледж № 31	Москва	292.04	23.75	363	395	365
-0.2199	-0.0512	Политехнический Колледж № 50	Москва	212.95	24.97	172	383	363
Политехнический колледж № 8 имени дважды Героя Советского Союза И. Ф. Павлова								
-0.2018	-0.0560	Политехнический колледж имени Н. Н. Годовикова	Москва	446.98	65.79	425	380	373
-0.2626	-0.0234	Политехнический колледж имени П. А. Овчинникова	Москва	373.99	23.45	201	427	395
-0.1775	-0.0474	Политехнический техникум № 2	Москва	195.74	12.31	268	383	357
-0.1819	0.0088	Профессиональное образовательное учреждение	Москва	305.99	7.04	275	416	414
-0.2746	-0.0912	«Воробьевы горы»	Москва	301.80	78.62	126	465	447
-0.2835	-0.0838	Строительный техникум № 30	Москва	294.95	35.83	167	378	344
-0.3062	-0.0551	Техникум малого бизнеса № 67	Москва	101.55	15.84	56	307	285
Технический пожарно-спасательный колледж № 57 имени Героя Российской Федерации								
-0.2750	-0.0733	Б. М. Максимчука	Москва	440.17	49.78	257	384	362
-0.2569	-0.0902	Технологический Колледж № 14	Москва	428.15	56.43	319	336	351
-0.3291	-0.1406	Технологический колледж № 21	Москва	382.51	44.58	216	303	286
-0.2298	-0.0793	Технологический колледж № 24	Москва	292.58	35.00	273	354	343
-0.1982	-0.0524	Технологический колледж № 34	Москва	287.94	30.53	301	381	345
-0.0016	0.0715	Финансовый колледж № 35	Москва	97.07	30.41	211	579	546
-0.1771	-0.0713	Экономико-технологический колледж № 22	Москва	221.07	17.83	372	341	339
-0.2120	-0.0927	Юридический колледж	Москва	169.45	35.54	179	348	329
Апатитский политехнический колледж								
-0.0999	0.0870	имени Голованова Георгия Александровича	Мурманская область	154.48	7.63	247	319	327
-0.1323	0.0479	Кандалакшский индустриальный колледж	Мурманская область	115.45	6.95	175	256	299
-0.1530	0.1102	Ковдорский политехнический колледж	Мурманская область	70.85	8.65	54	416	352
-0.1097	0.1059	Кольский медицинский колледж	Мурманская область	84.85	4.73	116	400	330
-0.1187	0.0467	Кольский транспортный колледж	Мурманская область	74.56	8.03	117	265	314
-0.0079	0.1990	Мончегорский политехнический колледж	Мурманская область	170.66	12.95	255	430	447
-0.0603	0.1157	Мурманский индустриальный колледж	Мурманская область	197.31	15.32	339	366	326
-0.1031	0.0291	Мурманский колледж экономики и информационных технологий	Мурманская область	95.86	10.21	208	271	275

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-0.0276	0.1409	Мурманский медицинский колледж	Мурманская область	51.24	10.75	77	486	412	396
-0.1199	0.0973	Мурманский педагогический колледж	Мурманская область	129.18	13.79	153	410	346	334
		Мурманский строительный колледж							
-0.2162	-0.0094	имени Н. Е. Момота	Мурманская область	187.36	24.01	186	295	272	278
-0.2357	-0.0163	Мурманский технологический колледж сервиса	Мурманская область	98.86	13.31	84	288	280	288
-0.1543	0.0625	Печенгский политехнический техникум	Мурманская область	63.62	9.01	60	311	359	404
-0.1484	0.0911	Северный колледж физической культуры и спорта	Мурманская область	67.40	6.46	67	386	347	351
-0.1330	0.0852	Северный национальный колледж	Мурманская область	59.61	1.49	80	341	295	333
		Ненецкий							
-0.0799	0.3102	Ненецкий аграрно-экономический техникум	автономный округ	100.65	15.51	80	492	439	370
-0.1400	0.3371	Ненецкое профессиональное училище	Ненецкий автономный округ	145.29	14.40	90	513	398	388
-0.1130	0.1027	Борский Губернский колледж	Нижегородская область	114.85	9.96	209	262	228	246
-0.1474	0.0916	Выксунский индустриальный техникум	Нижегородская область	58.64	1.77	100	232	218	226
-0.0342	0.1815	Выксунский metallurgical колледж	Нижегородская область	112.45	7.83	236	295	300	287
-0.1758	-0.0092	Городецкий Губернский колледж	Нижегородская область	223.85	56.49	351	236	211	198
-0.2041	0.1062	Дзержинский педагогический колледж	Нижегородская область	110.15	3.78	120	253	234	233
-0.1297	0.0729	Дзержинский техникум бизнеса и технологий	Нижегородская область	71.22	2.91	151	222	211	211
-0.0264	0.1614	Дзержинский технический колледж	Нижегородская область	102.72	6.55	260	281	254	293
		Дзержинский химический техникум							
-0.0498	0.1574	имени Красной Армии	Нижегородская область	79.29	5.81	169	275	275	283
-0.3107	-0.0751	Краснобаковский лесной колледж	Нижегородская область	121.41	27.18	78	228	216	230
		Кстовский нефтяной техникум имени Бориса							
-0.0376	0.1823	Ивановича Корнилова	Нижегородская область	123.19	17.75	209	319	321	332
		Лукояновский педагогический колледж							
-0.2372	0.0950	имени А. М. Горького	Нижегородская область	90.02	2.52	83	226	235	240
-0.0579	0.1270	Навашинский политехнический техникум	Нижегородская область	55.13	4.45	132	252	254	263
		Нижегородский авиационный технический							
-0.0809	0.1669	колледж	Нижегородская область	91.61	3.86	158	273	278	288
-0.0717	0.1153	Нижегородский автомеханический техникум	Нижегородская область	68.12	14.14	119	302	267	291
0.0635	0.2244	Нижегородский автотранспортный техникум	Нижегородская область	139.81	18.46	429	354	317	322
-0.0262	0.1099	Нижегородский Губернский колледж	Нижегородская область	161.15	18.60	556	251	237	243
-0.1409	0.0880	Нижегородский индустриальный колледж	Нижегородская область	183.18	22.41	265	255	242	259
-0.2959	0.0819	Нижегородский областной колледж культуры	Нижегородская область	99.15	1.33	76	250	219	185
		Нижегородский политехнический колледж							
-0.1198	0.1166	имени Героя Советского Союза Руднева А.П.	Нижегородская область	83.81	3.73	146	247	243	244
		Нижегородский промышленно-технологический							
-0.1344	0.0829	техникум	Нижегородская область	103.10	7.16	188	244	218	223
-0.0597	0.1993	Нижегородский радиотехнический колледж	Нижегородская область	155.60	10.37	242	291	318	340
-0.1442	0.0784	Нижегородский строительный техникум	Нижегородская область	128.95	12.04	209	238	228	235
		Нижегородский техникум городского хозяйства							
-0.2283	0.0431	и предпринимательства	Нижегородская область	59.39	1.14	77	202	190	195
		Нижегородский техникум транспортного							
-0.0477	0.1771	обслуживания и сервиса	Нижегородская область	56.97	2.14	118	282	275	293

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-0.1886	0.1272	Нижегородское индустриальное училище	Нижегородская область	63.27	0.59	73	249	233	249
-0.2052	0.0755	Павловский техникум народных художественных промыслов России	Нижегородская область	50.68	1.66	64	243	194	218
-0.0827	0.1076	Перевозский строительный колледж	Нижегородская область	285.05	30.48	617	266	244	237
-0.0271	0.1802	Саровский политехнический техникум имени дважды Героя Социалистического Труда Бориса Глебовича Музрукова	Нижегородская область	54.74	7.81	101	299	317	344
-0.2217	-0.0103	Сеченовский агротехнический техникум	Нижегородская область	48.71	3.79	80	205	163	166
-0.2608	0.0131	Чкаловский техникум транспорта и информационных технологий	Нижегородская область	75.85	5.73	77	203	192	205
-0.1513	0.0967	Шатковский агротехнический техникум	Нижегородская область	46.29	2.61	66	208	225	289
-0.0774	0.0738	Боровичский автомобильно-дорожный колледж	Новгородская область	42.55	3.74	103	283	252	276
-0.1798	-0.0239	Боровичский педагогический колледж	Новгородская область	43.91	4.41	86	216	194	213
-0.0680	0.0091	Боровичский техникум строительной индустрии и экономики	Новгородская область	36.20	9.11	147	222	244	233
-0.1314	0.0381	Дорожно-транспортный техникум»	Новгородская область	36.65	6.97	57	290	265	274
-0.0430	0.0812	Маловишерский техникум	Новгородская область	31.36	6.56	79	285	292	312
-0.1228	0.0258	Новгородский агротехнический техникум»	Новгородская область	125.31	22.76	242	270	247	253
0.0634	0.1368	Новгородский строительный колледж	Новгородская область	55.35	14.98	270	333	326	332
0.0149	0.1042	Новгородский химико-индустриальный техникум	Новгородская область	54.48	13.93	207	314	313	295
-0.1267	-0.0001	Старорусский агротехнический колледж	Новгородская область	68.54	8.48	182	238	208	220
0.0473	0.1241	Чудовский техникум	Новосибирская область	16.29	1.09	103	313	285	294
-0.0797	0.1885	Барабинский медицинский колледж	Новосибирская область	38.38	0.69	71	252	250	266
-0.0465	0.1065	Бердский медицинский колледж	Новосибирская область	36.05	10.42	82	295	240	236
0.0030	0.2038	Бердский электромеханический колледж	Новосибирская область	52.22	3.74	140	276	267	284
-0.0475	0.2003	Болотниковский педагогический колледж	Новосибирская область	56.51	4.00	110	261	337	234
-0.1027	0.1573	Карасукский педагогический колледж	Новосибирская область	54.89	3.58	96	280	239	223
0.0931	0.2728	Карасукский политехнический лицей	Новосибирская область	29.35	2.73	98	335	328	309
-0.1456	0.0808	Кочковский межрайонный аграрный лицей	Новосибирская область	47.92	7.67	74	259	225	206
-0.0301	0.2168	Куйбышевский медицинский техникум	Новосибирская область	33.96	1.05	75	301	260	261
-0.1600	0.1325	Куйбышевский педагогический колледж	Новосибирская область	61.21	5.10	79	276	245	214
-0.0471	0.1491	Куйбышевский политехнический колледж	Новосибирская область	88.68	4.09	243	240	226	236
-0.0809	0.1680	Купинский медицинский техникум	Новосибирская область	27.34	0.85	55	254	242	238
-0.1083	0.2166	Новосибирский авиастроительный лицей	Новосибирская область	81.95	4.91	103	315	284	285
-0.1136	0.2420	Новосибирский авиационный технический колледж	Новосибирская область	95.80	4.09	110	331	286	304
-0.0664	0.0672	Новосибирский автотранспортный колледж	Новосибирская область	80.32	30.22	160	264	246	262
-0.0162	0.1418	Новосибирский колледж печати и информационных технологий	Новосибирская область	64.90	11.53	189	258	259	235
0.0851	0.3218	Новосибирский колледж транспортных технологий имени Н. А. Лунина	Новосибирская область	109.70	5.93	280	389	332	346

LIST OF COLLEGES ARRANGED BY REGION AND INSTITUTION NAME

social returns	private returns	Name of College	Region	Total Revenue (in million Rubles)	Total Paid Fees (in million Rubles)	Salary 2014 (in thousands Rubles)	Salary 2015 (in thousands Rubles)	Salary 2016 (in thousands Rubles)
-0.1434	0.1508	Новосибирский машиностроительный колледж	Новосибирская область	68.68	4.79	90	260	244
0.0198	0.1661	Новосибирский медицинский колледж	Новосибирская область	166.09	45.08	456	311	273
-0.1632	0.1229	Новосибирский областной колледж культуры и искусств	Новосибирская область	87.39	1.14	134	218	211
-0.0063	0.1674	Новосибирский педагогический колледж № 1 имени А. С. Макаренко	Новосибирская область	46.21	5.17	140	281	243
-0.0029	0.1127	Новосибирский промышленно-энергетический колледж	Новосибирская область	62.14	17.54	225	274	223
-0.0731	0.1959	Новосибирский промышленный колледж	Новосибирская область	61.30	4.69	101	298	260
-0.1010	0.1015	Новосибирский профессионально-педагогический колледж	Новосибирская область	68.84	7.67	148	235	212
-0.0086	0.2139	Новосибирский радиотехнический колледж	Новосибирская область	42.85	4.98	90	302	288
-0.0203	0.1715	Новосибирский строительно-монтажный колледж	Новосибирская область	165.30	27.84	380	299	269
0.0381	0.2431	Новосибирский технический колледж имени А.И.Покрышкина	Новосибирская область	93.61	11.26	236	336	302
-0.0189	0.1573	Новосибирский технологический колледж	Новосибирская область	38.82	1.28	130	252	223
-0.1221	0.1001	Новосибирский химико-технологический колледж имени Д. И. Менделеева	Новосибирская область	65.86	13.91	90	272	269
-0.0372	0.1303	Новосибирский центр профессионального обучения в сфере транспорта	Новосибирская область	29.71	4.29	85	260	238
-0.0465	0.2388	Новосибирский электротехнический колледж	Новосибирская область	61.38	0.72	112	285	288
-0.1003	0.2326	Новосибирское училище (колледж) олимпийского резерва	Новосибирская область	79.95	5.97	92	316	324
-0.1269	0.0614	Новосибирский педагогический колледж	Новосибирская область	38.50	6.46	77	227	203
-0.1201	-0.0207	Тогучинский лесхоз-техникум	Новосибирская область	43.73	19.78	99	208	209
-0.0458	0.1197	Черепановский политехнический колледж	Новосибирская область	30.78	1.81	103	234	205
-0.0999	0.1758	Чулымский межрайонный аграрный лицей	Новосибирская область	34.91	1.50	58	271	236
-0.1873	-0.0387	Исилькульский профессионально-педагогический колледж	Омская область	85.04	4.58	162	240	226
-0.1586	-0.0952	Медицинский колледж Омской области	Омская область	118.25	43.17	362	224	208
-0.1818	0.0058	Муромцевское училище № 47	Омская область	58.47	3.13	81	250	253
0.0037	0.1166	Омский автотранспортный колледж	Омская область	165.19	51.95	340	438	396
-0.1311	0.0093	Омский аграрно-технологический колледж	Омская область	156.46	10.10	335	269	256
-0.2217	0.0043	Омский колледж отраслевых технологий строительства и транспорта	Омская область	124.60	4.73	137	285	245
-0.1474	0.0358	Омский колледж профессиональных технологий	Омская область	159.51	7.50	252	290	298
-0.0654	0.0716	Омский колледж транспортного строительства	Омская область	122.05	17.33	250	314	324
-0.2814	-0.0569	Омский областной колледж культуры и искусства	Омская область	132.32	8.09	126	246	223
-0.1607	-0.0279	Омский педагогический колледж № 1	Омская область	99.40	8.66	212	255	228
-0.0403	0.0454	Омский промышленно-экономический колледж	Омская область	162.40	23.75	610	305	290
-0.1303	0.0374	Омский строительный колледж	Омская область	91.76	6.68	155	287	293
-0.1393	-0.0276	Омский техникум водного транспорта	Омская область	38.24	0.82	110	199	238
-0.3088	0.0124	Омский техникум строительства и лесного хозяйства	Омская область	150.86	2.39	90	268	257
-0.2490	-0.0732	Саргатский индустриально-педагогический колледж	Омская область	56.67	1.79	85	233	195
-0.2316	-0.0916	Седельниковский агропромышленный техникум	Омская область	29.49	1.38	55	171	194
-0.1849	-0.0882	Торгово-экономический колледж имени Г. Д. Зуйковой	Омская область	92.30	16.56	233	214	187
-0.1200	0.0057	Тюкалинский профессиональный колледж	Омская область	74.94	7.22	175	264	258

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social returns	private returns	Name of College	Region	Total Revenue (in million Rubles)	Total Paid Fees (in million Rubles)	Salary 2014 (in thousands Rubles)	Salary 2015 (in thousands Rubles)	Salary 2016 (in thousands Rubles)
-0.1893	-0.0136	Усть — Заостровский сельскохозяйственный техникум	Омская область	56.79	1.69	91	252	233
-0.0750	0.0262	Аграрный техникум пос. Молодежный Тоцкого района	Оренбургская область	78.39	14.51	255	261	245
-0.1107	-0.0246	Бузулукский медицинский колледж	Оренбургская область	38.82	10.54	124	236	213
-0.1742	-0.0564	Гайский медицинский колледж	Оренбургская область	25.14	4.09	52	229	223
-0.0456	0.0581	Медногорский индустриальный колледж г. Медногорска Оренбургской области	Оренбургская область	70.80	7.03	264	262	251
-0.0594	0.0191	Медногорский медицинский колледж	Оренбургская область	19.37	1.87	84	267	262
-0.0454	0.0750	Нефтегазоразведочный техникум г. Оренбурга	Оренбургская область	83.69	12.28	248	305	278
-0.0142	0.0630	Новотроицкий строительный техникум	Оренбургская область	68.19	10.20	347	282	256
-0.0735	0.0193	Оренбургский автотранспортный колледж	Оренбургская область	173.32	44.23	547	264	243
-0.0896	0.0164	Оренбургский аграрный колледж с. Подгородняя Покровка	Оренбургская область	151.98	32.92	427	254	242
0.0775	0.1743	Орский индустриальный колледж г. Орска Оренбургской области	Оренбургская область	94.92	9.28	442	354	351
-0.0228	0.0513	Орский нефтяной техникум имени Героя Советского Союза В. А. Сорокина	Оренбургская область	57.41	17.82	225	272	276
-0.1911	-0.0238	Педагогический колледж г. Бузулука	Оренбургская область	39.00	4.31	66	230	208
-0.2275	-0.0564	Соль-Илецкий индустриально-технологический техникум г. Соль-Илецка Оренбургской области	Оренбургская область	79.33	12.05	115	238	205
0.0663	0.1536	Орловский техникум путей сообщения имени В. А. Лапочкина	Орловская область	54.64	5.09	302	313	313
-0.1282	0.0587	Орловский технический колледж	Орловская область	63.65	6.76	111	283	249
-0.0198	0.0778	Покровский техникум	Орловская область	17.67	0.86	84	258	254
-0.1105	0.0247	Кузнецкий многопрофильный колледж	Пензенская область	142.24	8.97	446	197	199
-0.0935	0.0371	Мокшанский агротехнологический колледж	Пензенская область	69.99	11.88	196	235	215
-0.0492	0.0887	Нижнеломовский многопрофильный техникум	Пензенская область	84.31	6.52	277	254	232
-0.0380	0.0781	Пензенский базовый медицинский колледж	Пензенская область	64.75	19.74	168	275	277
-0.2345	0.0797	Пензенский колледж искусств	Пензенская область	91.07	5.63	75	255	234
-0.0854	0.0537	Пензенский лесной колледж	Пензенская область	41.62	4.68	121	230	225
-0.0166	0.0555	Пензенский многопрофильный колледж	Пензенская область	354.57	38.69	2412	228	208
-0.1051	-0.0046	Пензенский областной медицинский колледж	Пензенская область	83.17	22.44	261	222	196
-0.0636	0.0453	Сердобский многопрофильный техникум	Пензенская область	55.54	2.65	249	222	208
0.0195	0.1733	Спасский колледж профессиональных технологий и бизнеса	Пензенская область	54.06	3.96	173	325	297
-0.0349	0.0410	Березниковский политехнический техникум	Пермский край	93.13	30.51	288	313	311
-0.0417	0.0552	Березниковский строительный техникум	Пермский край	98.16	19.08	292	320	300
-0.2035	-0.0655	Березниковское медицинское училище (техникум)	Пермский край	34.46	5.13	60	260	220
-0.1087	-0.0376	Добрянский гуманитарно-технологический техникум имени П. И. Сюзева	Пермский край	41.11	6.12	175	238	224
-0.0350	0.0346	Зюйкайский аграрный техникум	Пермский край	41.21	4.89	206	294	272
-0.1569	-0.0250	Кудымкарский педагогический колледж	Пермский край	29.61	2.03	67	260	236
-0.0895	0.0108	Кудымкарское медицинское училище	Пермский край	25.91	2.96	83	305	258
-0.0656	0.0101	Кунгурский автотранспортный колледж	Пермский край	47.65	4.82	213	267	251
-0.1060	0.0080	Нытвенский многопрофильный техникум	Пермский край	33.79	3.23	89	247	263

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		Пермский авиационный техникум						
-0.0763	0.0411	имени А. Д. Швецова	Пермский край	96.28	22.83	199	328	311
-0.0888	0.0481	Пермский базовый медицинский колледж	Пермский край	107.94	15.10	226	345	294
		Пермский государственный профессионально-педагогический колледж	Пермский край	74.48	9.36	131	261	241
-0.1805	-0.0366	Педагогический колледж	Пермский край	107.50	19.09	366	223	226
-0.1284	-0.0480	Пермский колледж транспорта и сервиса	Пермский край	62.71	2.63	101	247	234
-0.2129	-0.0432	Пермский краевой колледж «Оникс»	Пермский край	43.49	11.71	123	290	270
-0.0875	-0.0011	Пермский машиностроительный колледж	Пермский край	64.19	31.14	171	502	487
0.1045	0.1766	Пермский нефтяной колледж	Пермский край	46.16	9.00	147	267	238
-0.1119	-0.0258	Пермский педагогический колледж № 1	Пермский край					
		Пермский политехнический колледж имени Н.Г. Славянова	Пермский край	158.10	20.16	177	309	299
		Пермский радиотехнический колледж	Пермский край	52.33	8.11	106	312	302
-0.0906	0.0434	имени А. С. Попова	Пермский край	96.85	38.23	261	275	261
-0.0980	-0.0277	Пермский строительный колледж	Пермский край					
-0.0917	-0.0123	Пермский торгово-технологический колледж	Пермский край	53.48	13.69	154	212	184
-0.0408	0.0593	Соликамский автомобильно-дорожный колледж	Пермский край	42.74	5.31	139	320	293
-0.0590	0.0529	Соликамский горно-химический техникум	Пермский край	49.62	9.42	122	321	301
		Соликамский социально-педагогический колледж						
-0.1817	-0.0774	имени А. П. Раменского	Пермский край	35.58	7.92	77	237	218
-0.0633	0.0136	Соликамский технологический колледж	Пермский край	48.44	9.51	184	281	261
-0.1982	-0.0901	Чайковский индустриальный колледж	Пермский край	124.97	11.02	324	213	185
-0.1777	-0.0698	Чайковский медицинский колледж	Пермский край	41.01	7.62	92	244	204
-0.1129	-0.0529	Чусовской индустриальный техникум	Пермский край	72.12	13.07	355	237	212
-0.1114	-0.0157	Артемовский колледж сервиса и дизайна	Приморский край	21.59	2.92	81	219	200
-0.1154	0.0156	Дедовичский многопрофильный техникум	Псковская область	25.09	2.64	67	223	218
-0.0371	0.0905	Дновский железнодорожный техникум	Псковская область	21.87	2.49	66	275	276
-0.1227	0.0063	Псковский агротехнический колледж	Псковская область	96.58	27.32	180	269	245
-0.0576	0.0479	Псковское медицинское училище	Псковская область	33.02	8.26	97	282	265
-0.0583	0.0691	Дондуковский сельскохозяйственный техникум	Республика Адыгея	25.02	4.00	78	221	247
		Красногвардейский аграрно-промышленный техникум	Республика Адыгея	63.77	6.06	190	195	169
-0.1412	-0.0063							
-0.1240	0.0262	Майкопский индустриальный техникум	Республика Адыгея	53.31	2.09	159	207	189
		Горно-Алтайский государственный политехнический колледж имени М.З.Гнездилова	Республика Алтай	108.53	18.97	269	210	194
-0.1879	-0.0854	Байкальский базовый медицинский колледж	Республика Бурятия	72.56	26.76	199	296	267
-0.0554	0.0364	Минздрава Республики Бурятия						
-0.1102	0.1138	Бурятский лесопромышленный колледж	Республика Бурятия	149.57	7.44	237	306	273
-0.2629	0.0433	Бурятский республиканский индустриальный техникум	Республика Бурятия	172.03	19.72	104	297	283
		Бурятский республиканский многопрофильный техникум инновационных технологий	Республика Бурятия	101.27	16.21	293	300	306
-0.0101	0.1184	Бурятский республиканский педагогический колледж	Республика Бурятия	108.03	25.11	216	249	220
-0.1455	-0.0119	Бурятский республиканский техникум	Республика Бурятия	66.16	9.27	56	318	329
		Бурятский республиканский техникум пищевой перерабатывающей промышленности	Республика Бурятия	74.79	3.43	109	274	204
-0.1874	0.0366	Бурятский республиканский техникум строительных и промышленных технологий	Республика Бурятия	111.22	4.11	207	245	197
-0.0290	0.1344	Гусиноозерский энергетический техникум	Республика Бурятия	61.17	7.84	136	312	322
0.0096	0.0960	Закаменский агропромышленный техникум	Республика Бурятия	31.63	2.44	165	242	258
		Колледж традиционных искусств народов Забайкалья	Республика Бурятия	42.13	0.49	106	219	194
-0.1638	-0.0075							
-0.0828	0.1159	Политехнический техникум республики Бурятия	Республика Бурятия	84.44	12.72	129	307	361

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social returns	private returns	Name of College	Region	Total Revenue (in million Rubles)	Total Paid Fees (in million Rubles)	Gradu- ates	Salary 2014 (in thousands Rubles)	Salary 2015 (in thousands Rubles)	Salary 2016 (in thousands Rubles)
-0.1142	-0.0011	Республиканский базовый медицинский колледж имени Э. Р. Раднаева	Республика Бурятия	103.59	42.32	168	302	268	277
0.0537	0.2434	Улан-Удэнский инженерно-педагогический колледж	Республика Бурятия	101.68	11.89	217	445	397	404
-0.1192	-0.0274	Элистинский политехнический колледж	Республика Калмыкия	78.82	6.50	231	276	260	289
-0.0388	0.1348	Индустриальный колледж	Республика Карелия	60.97	5.28	144	273	287	306
-0.1849	-0.0128	Колледж технологии и предпринимательства	Республика Карелия	104.71	17.27	170	207	199	224
-0.0610	0.0923	Кондопожский техникум	Республика Карелия	34.83	4.04	90	270	243	266
0.0648	0.1951	Петрозаводский автотранспортный техникум	Республика Карелия	98.76	19.67	310	358	334	360
-0.1246	0.0487	Петрозаводский базовый медицинский колледж	Республика Карелия	90.89	25.58	119	309	282	295
-0.0002	0.1558	Петрозаводский лесотехнический техникум	Республика Карелия	54.37	8.57	137	328	299	322
-0.2244	-0.0357	Петрозаводский педагогический колледж	Республика Карелия	76.73	18.53	82	251	216	232
-0.0041	0.1434	Петрозаводский строительный техникум	Республика Карелия	69.33	6.58	215	326	266	272
-0.0743	0.0222	Петрозаводский техникум городского хозяйства	Республика Карелия	52.07	18.32	144	255	227	244
-0.1762	0.0282	Северный колледж	Республика Карелия	82.46	14.32	99	220	247	294
-0.1289	0.0111	Сортавальский колледж	Республика Карелия	85.97	24.36	155	256	236	242
-0.0374	0.0572	Техникум дорожного строительства	Республика Карелия	49.37	12.87	182	268	217	251
-0.1177	0.1300	Воркутинский политехнический техникум	Республика Коми	238.24	7.47	297	321	334	352
-0.1570	0.0257	Коми республиканский агропромышленный техникум	Республика Коми	202.97	16.87	323	267	255	258
-0.2058	0.0622	Коми республиканский колледж культуры имени В. Т. Чисталева	Республика Коми	53.35	1.77	54	298	285	257
-0.0127	0.1254	Микунъский железнодорожный техникум	Республика Коми	35.77	1.95	102	335	312	336
-0.0583	0.1402	Печорский промышленно-экономический техникум	Республика Коми	191.89	21.87	297	383	354	365
-0.1751	0.0193	Сосногорский технологический техникум	Республика Коми	92.84	4.44	143	253	248	243
-0.2160	-0.0394	Сыктывкарский автомеханический техникум	Республика Коми	173.17	34.48	199	263	250	235
-0.1544	0.0875	Сыктывкарский гуманитарно-педагогический колледж имени И. А. Куратова	Республика Коми	190.98	17.96	208	356	311	303
-0.1396	0.0073	Сыктывкарский индустриальный колледж	Республика Коми	84.79	9.95	168	247	236	263
-0.2012	-0.0281	Сыктывкарский колледж сервиса и связи	Республика Коми	148.25	16.66	224	247	215	222
-0.1196	0.0550	Сыктывкарский лесопромышленный техникум	Республика Коми	93.63	10.23	155	276	287	304
-0.1247	0.0654	Сыктывкарский медицинский колледж имени И. П. Морозова	Республика Коми	126.60	24.25	159	369	312	310
-0.1691	-0.0016	Сыктывкарский политехнический техникум	Республика Коми	173.65	17.32	295	257	231	237
-0.0871	0.0118	Сыктывкарский торгово-экономический колледж	Республика Коми	60.77	10.95	190	261	241	252
-0.1162	0.1105	Сыктывкарский целлюлозно-бумажный техникум	Республика Коми	67.48	6.87	81	351	318	367
0.0183	0.2530	Усинский политехнический техникум	Республика Коми	104.34	15.88	130	533	507	515
-0.1180	0.1141	Ухтинский медицинский колледж	Республика Коми	59.87	5.47	74	373	338	312
-0.0396	0.0530	Йошкар-Олинский строительный техникум	Республика Марий Эл	59.41	18.80	216	247	230	222
-0.0411	0.1037	Марийский радиомеханический техникум	Республика Марий Эл	101.30	23.06	244	257	292	268
-0.0686	0.1458	Транспортно-энергетический техникум	Республика Марий Эл	41.41	2.74	83	287	260	272
-0.2223	-0.1943	Алексеевский индустриальный техникум	Республика Мордовия	16.42	0.54	93	292	274	255
-0.2683	-0.2267	Зубово-Полянский педагогический колледж	Республика Мордовия	30.17	5.04	87	255	242	248

LIST OF COLLEGES ARRANGED BY REGION AND INSTITUTION NAME

social returns	private returns	Name of College	Region	Total Revenue (in million Rubles)	Total Paid Fees (in million Rubles)	Salary 2014 (in thousands Rubles)	Salary 2015 (in thousands Rubles)	Salary 2016 (in thousands Rubles)
-0.3216	-0.2432	Ичалковский педагогический колледж	Республика Мордовия	40.38	2.70	62	246	236
-0.2530	-0.2144	Ковылкинский аграрно-строительный колледж	Республика Мордовия	62.86	9.40	205	254	256
-0.2141	-0.1957	Краснослободский медицинский колледж	Республика Мордовия	14.74	3.23	102	284	273
-0.2736	-0.2244	Рузаевский железнодорожно-промышленный техникум имени А. П. Байкузова	Республика Мордовия	36.50	2.29	102	265	250
-0.2477	-0.2250	Саранский медицинский колледж	Республика Мордовия	24.72	8.23	109	256	247
-0.2569	-0.2250	Саранский электромеханический колледж	Республика Мордовия	43.55	5.72	178	238	257
-0.2024	-0.1744	Темниковский медицинский колледж	Республика Мордовия	14.00	2.38	69	327	306
-0.2420	-0.1999	Темниковский сельскохозяйственный колледж	Республика Мордовия	57.80	6.08	186	267	281
-0.2075	-0.1656	Торбеевский колледж мясной и молочной промышленности	Республика Мордовия	48.27	3.44	170	300	298
-0.0280	0.2941	Алданский медицинский колледж	Республика Саха (Якутия)	82.13	3.92	93	514	433
0.0102	0.2069	Верхневилюйский техникум	Республика Саха (Якутия)	52.31	2.60	114	345	420
-0.2158	0.1881	Вилюйский педагогический колледж имени Н. Г. Чернышевского	Республика Саха (Якутия)	159.60	10.13	86	438	365
0.1155	0.2838	Вилюйский техникум	Республика Саха (Якутия)	52.92	2.30	156	425	426
-0.1736	0.1070	Жатайский техникум	Республика Саха (Якутия)	104.46	10.91	93	308	355
-0.0151	0.2774	Ленский технологический техникум	Республика Саха (Якутия)	55.20	6.24	61	549	433
-0.2097	0.1523	Намский педагогический колледж имени И. Е. Винокурова	Республика Саха (Якутия)	156.11	10.69	101	386	352
-0.1052	0.2129	Намский техникум	Республика Саха (Якутия)	76.87	4.21	74	342	484
0.0278	0.2535	Нюрбинский техникум	Республика Саха (Якутия)	45.35	2.12	88	447	402
-0.1100	0.1539	Покровский колледж	Республика Саха (Якутия)	49.52	3.09	59	322	311
-0.0883	0.0999	Профессиональный лицей № 15	Республика Саха (Якутия)	42.92	1.36	71	342	286
-0.1034	0.1243	Профессиональный лицей № 18	Республика Саха (Якутия)	46.43	0.98	60	325	364
0.0192	0.1527	Профессиональный лицей № 4	Республика Саха (Якутия)	45.39	1.67	128	374	368
-0.0596	0.1472	Профессиональный лицей № 4	Республика Саха (Якутия)	45.39	1.67	69	374	368
-0.0772	0.2273	Сунтарский технологический колледж	Республика Саха (Якутия)	86.76	6.71	88	419	420
-0.0602	0.0916	Усть-Алданский техникум	Республика Саха (Якутия)	39.54	4.61	94	261	301
-0.1495	0.2148	Чурапчинский колледж	Республика Саха (Якутия)	69.77	2.28	56	400	372
-0.0842	0.1799	Южно – Якутский технологический колледж	Республика Саха (Якутия)	191.21	26.43	197	401	400
0.1006	0.2975	Якутский автодорожный техникум	Республика Саха (Якутия)	102.65	12.14	220	517	426
-0.0657	0.2714	Якутский индустриально-педагогический колледж	Республика Саха (Якутия)	164.41	17.44	138	555	455
-0.1503	0.3424	Якутский колледж культуры и искусств	Республика Саха (Якутия)	117.34	2.63	68	625	474
-0.0025	0.2225	Якутский колледж связи и энергетики имени П. И. Дудкина	Республика Саха (Якутия)	127.58	25.23	161	468	441
0.0809	0.3201	Якутский коммунально – строительный техникум	Республика Саха (Якутия)	68.72	3.85	124	463	500
-0.2268	0.1541	Якутский педагогический колледж имени С. Ф. Гоголева	Республика Саха (Якутия)	193.28	24.75	83	493	449

LIST OF COLLEGES ARRANGED BY REGION AND INSTITUTION NAME

social returns	private returns	Name of College	Region	Total Revenue (in million Rubles)	Total Paid Fees (in million Rubles)	Gradu- ates	Salary 2014 (in thousands Rubles)	Salary 2015 (in thousands Rubles)	Salary 2016 (in thousands Rubles)
-0.0055	0.2166	Якутский промышленный техникум	Республика Саха (Якутия)	130.18	6.18	243	391	377	349
0.0300	0.1763	Якутский сельскохозяйственный техникум	Республика Саха (Якутия)	158.23	25.13	415	369	349	353
-0.0396	0.1474	Якутский технологический техникум сервиса	Республика Саха (Якутия)	106.58	18.67	179	376	331	352
-0.0209	0.1367	Моздокский аграрно-промышленный техникум	Республика Северная Осетия — Алания	75.50	8.85	212	273	259	283
-0.0624	0.0998	Эльхотовский многопрофильный колледж	Республика Северная Осетия — Алания	22.24	2.51	60	302	184	245
-0.0731	-0.0232	Аксубаевский техникум универсальных технологий	Республика Татарстан	40.05	0.98	310	241	222	230
-0.1393	-0.0789	Альметьевский медицинский колледж	Республика Татарстан	53.83	24.38	147	270	217	225
0.0272	0.0885	Альметьевский политехнический техникум	Республика Татарстан	156.97	72.95	492	365	383	401
-0.2367	-0.0633	Арский педагогический колледж имени Габдуллы Тукая	Республика Татарстан	60.17	6.51	80	260	219	201
0.0074	0.0461	Бугульминский аграрный колледж	Республика Татарстан	59.52	9.37	552	290	286	292
-0.1476	-0.0328	Бугульминский педагогический колледж	Республика Татарстан	32.54	1.06	93	253	216	212
-0.0678	0.0385	Бугульминский профессионально-педагогический колледж	Республика Татарстан	52.42	12.32	127	337	297	302
-0.0339	0.0254	Бугульминский строительно-технический колледж	Республика Татарстан	45.23	2.94	284	259	258	293
-0.0844	-0.0219	Дрожжановский техникум отраслевых технологий	Республика Татарстан	28.64	6.21	130	253	235	250
-0.1141	-0.0143	Елабужский политехнический колледж	Республика Татарстан	48.16	11.49	115	269	255	281
-0.1193	-0.0536	Елабужское медицинское училище (техникум)	Республика Татарстан	21.77	6.93	75	253	229	225
-0.1338	-0.0498	Зеленодольское медицинское училище	Республика Татарстан	27.64	10.97	57	301	247	255
-0.0331	0.0567	Казанский авиационно-технический колледж имени П. В. Дементьева	Республика Татарстан	61.28	3.52	249	297	281	314
-0.0538	0.0074	Казанский автотранспортный техникум имени А. П. Обыденнова	Республика Татарстан	54.50	18.35	212	285	284	277
-0.1385	-0.0497	Казанский колледж коммунального хозяйства и строительства	Республика Татарстан	61.65	8.49	201	239	217	216
-0.0549	-0.0396	Казанский машиностроительный техникум	Республика Татарстан	30.58	17.53	336	242	233	228
-0.1179	-0.0445	Казанский медицинский колледж	Республика Татарстан	175.16	76.89	396	302	257	258
-0.0771	0.0354	Казанский механико-технологический техникум пищевой промышленности	Республика Татарстан	28.23	0.84	89	282	277	273
0.0246	0.0617	Казанский нефтехимический колледж имени В. П. Лушникова	Республика Татарстан	18.70	3.45	177	298	293	320
-0.1048	-0.0126	Казанский педагогический колледж	Республика Татарстан	60.77	12.93	175	289	242	253
-0.0475	-0.0033	Казанский техникум информационных технологий и связи	Республика Татарстан	78.75	35.17	355	278	271	283
-0.0496	0.0249	Казанский техникум народных и художественных промышслов	Республика Татарстан	22.48	0.85	109	250	215	344
-0.1042	-0.0688	Казанский торгово-экономический техникум	Республика Татарстан	47.37	19.86	277	230	209	217
-0.0543	0.0011	Казанский энергетический колледж	Республика Татарстан	59.66	32.20	160	356	287	302
-0.0346	0.0085	Камский государственный автомеханический техникум	Республика Татарстан	95.00	31.87	569	281	264	271
-0.1084	0.0064	Камский строительный колледж имени Е.Н.Батенчука	Республика Татарстан	99.58	16.99	233	293	256	280
-0.1565	-0.0763	Колледж малого бизнеса и предпринимательства	Республика Татарстан	49.59	3.90	196	220	195	186

LIST OF COLLEGES ARRANGED BY REGION AND INSTITUTION NAME									
social returns	private returns	Name of College	Region	Total Revenue (in million Rubles)	Total Paid Fees (in million Rubles)	Graduates	Salary 2014 (in thousands Rubles)	Salary 2015 (in thousands Rubles)	Salary 2016 (in thousands Rubles)
-0.1054	-0.0259	Лаишевский технико-экономический техникум	Республика Татарстан	39.63	4.70	155	233	238	241
0.0608	0.1302	Лениногорский нефтяной техникум	Республика Татарстан	95.89	44.62	267	419	435	462
-0.2476	-0.1075	Лубянский лесотехнический колледж	Республика Татарстан	75.92	17.51	94	223	210	225
-0.0358	0.0356	Мензелинский сельскохозяйственный техникум	Республика Татарстан	34.51	2.12	178	259	293	285
-0.0741	-0.0180	Набережночелнинский медицинский колледж	Республика Татарстан	68.88	33.57	208	317	282	256
-0.1502	-0.0320	Набережночелнинский педагогический колледж	Республика Татарстан	60.03	3.85	160	278	210	208
-0.0247	0.0584	Нижнекамский агропромышленный колледж	Республика Татарстан	73.36	13.66	274	328	299	308
-0.0828	-0.0181	Нижнекамский индустриальный техникум	Республика Татарстан	43.74	7.73	204	250	240	247
-0.1592	-0.0793	Нижнекамский медицинский колледж	Республика Татарстан	50.14	18.04	117	259	223	220
0.0451	0.0830	Нижнекамский нефтехимический колледж	Республика Татарстан	46.17	15.98	339	327	332	342
-0.1841	-0.0834	Нижнекамский педагогический колледж	Республика Татарстан	40.30	7.79	96	232	196	207
-0.0968	-0.0020	имени Е. Н. Королёва	Республика Татарстан	48.61	15.77	107	312	281	290
0.0092	0.0647	Нижнекамский технологический колледж	Республика Татарстан	52.47	4.52	364	302	293	315
-0.1137	-0.0377	Рыбно-Слободской агротехнический техникум	Республика Татарстан	27.32	5.64	97	250	216	246
-0.1241	0.0252	Тетюшский государственный колледж гражданской защиты	Республика Татарстан	30.84	1.42	66	306	268	245
-0.1108	0.0065	Тетюшский сельскохозяйственный техникум	Республика Татарстан	49.74	4.33	133	271	280	236
0.0340	0.0832	Техникум нефтехимии и нефтепереработки	Республика Татарстан	60.92	20.04	336	319	335	366
-0.0603	0.0078	Технический колледж имени В. Д. Поташова	Республика Татарстан	49.89	10.05	218	281	256	268
-0.1855	-0.0819	Чистопольский политехнический колледж	Республика Татарстан	37.75	2.29	107	195	190	204
-0.3184	-0.0393	Абаканский строительный техникум	Республика Хакасия	102.51	2.50	70	231	246	229
-0.0332	0.0421	Саяногорский политехнический техникум	Республика Хакасия	67.52	13.49	265	325	283	310
-0.1057	-0.0345	Хакасский политехнический колледж	Республика Хакасия	124.22	38.76	383	261	247	267
0.0033	0.1187	Черногорский горно-строительный техникум	Республика Хакасия	99.33	17.32	254	386	364	413
-0.0872	0.0055	Черногорский механико-технологический техникум	Республика Хакасия	54.00	5.12	186	231	355	215
-0.1126	0.0217	Азовский гуманитарно-технический колледж	Ростовская область	82.67	4.24	236	246	203	231
-0.1937	-0.0221	Азовский казачий кадетский аграрно-технический техникум	Ростовская область	46.91	4.62	78	208	192	234
-0.2111	-0.0409	Аксайское профессиональное училище № 56	Ростовская область	46.29	2.69	87	226	169	180
-0.0546	0.0433	Белокалитвинский гуманитрано-индустриальный техникум	Ростовская область	44.46	6.09	172	253	251	238
-0.1480	-0.0299	Волгодонский техникум информационных технологий, бизнеса и дизайна имени В. В. Самарского	Ростовская область	75.31	5.78	228	202	195	192
-0.0468	0.0837	Волгодонский техникум энергетики и транспорта	Ростовская область	31.75	1.84	100	279	255	277
-0.0511	0.0324	Волгодонское строительное профессиональное училище № 69	Ростовская область	24.19	0.58	131	232	215	239
-0.2342	-0.0468	Гуковский строительный техникум	Ростовская область	59.53	12.31	62	234	233	240
-0.1573	0.0176	Донецкое многопрофильное профессиональное училище № 50	Ростовская область	45.93	3.95	85	261	220	220

LIST OF COLLEGES ARRANGED BY REGION AND INSTITUTION NAME									
social returns	private returns	Name of College	Region	Total Revenue (in million Rubles)	Total Paid Fees (in million Rubles)	Graduates	Salary 2014 (in thousands Rubles)	Salary 2015 (in thousands Rubles)	Salary 2016 (in thousands Rubles)
-0.0382	0.0640	Донецкое профессиональное училище № 49	Ростовская область	26.30	1.68	109	255	243	267
0.0567	0.1272	Донской банковский колледж	Ростовская область	31.74	7.97	169	333	317	300
-0.1320	0.0366	Донской строительный колледж	Ростовская область	104.72	10.75	203	278	230	239
-0.2721	-0.0382	Каменский педагогический колледж в городе Каменск-Шахтинский	Ростовская область	143.93	6.54	162	211	188	189
0.0744	0.1847	Каменский химико-механический техникум	Ростовская область	40.51	7.15	167	563	236	247
-0.0392	0.0809	Каргинский аграрно-технологический техникум	Ростовская область	41.30	3.87	137	292	242	283
-0.2959	-0.0344	Константиновский педагогический колледж	Ростовская область	95.57	2.60	94	217	187	179
-0.0824	0.0116	Константиновский технологический техникум	Ростовская область	42.23	7.94	151	245	215	235
-0.0988	0.0255	Красносулинский колледж промышленных технологий	Ростовская область	63.74	3.43	200	236	214	237
-0.0317	0.1311	Митякинский техникум агротехнологий и питания	Ростовская область	29.52	1.60	73	320	279	331
0.1248	0.2392	Новочеркасский геологоразведочный колледж	Ростовская область	65.41	11.56	244	465	379	412
		Новочеркасский колледж промышленных							
-0.0933	0.0185	технологий и управления	Ростовская область	217.81	29.20	692	249	223	227
-0.1818	0.0812	Новочеркасский машиностроительный колледж	Ростовская область	79.39	2.90	89	268	274	283
-0.1636	-0.0425	Новочеркасский медицинский колледж	Ростовская область	46.12	11.12	97	230	211	203
		Новочеркасский промышленно-гуманитарный							
-0.1260	0.0154	колледж	Ростовская область	88.24	6.36	225	242	213	223
		Новошахтинский автотранспортный техникум							
-0.0630	0.0197	имени Героя Советского Союза Вернигоренко И.Г.	Ростовская область	34.03	3.96	161	220	235	228
-0.1339	0.0688	Октябрьский аграрно-технологический техникум	Ростовская область	78.20	7.29	117	257	296	280
		Орловское многопрофильное профессиональное							
-0.1673	-0.0432	училище № 98	Ростовская область	26.69	2.89	69	194	178	206
		Профессиональное училище № 64							
-0.0463	0.0778	имени Л. Б. Ермина в г. Зверево	Ростовская область	23.06	0.80	79	242	286	261
-0.1307	0.0186	Пухляковский агропромышленный техникум	Ростовская область	38.74	5.94	77	253	223	260
-0.0852	0.0018	Ростовский базовый медицинский колледж	Ростовская область	142.04	32.09	525	245	225	214
-0.3067	0.0298	Ростовский колледж искусств	Ростовская область	126.03	4.99	78	260	232	254
-0.1062	0.0222	Ростовский колледж культуры	Ростовская область	59.77	0.55	195	235	219	209
-0.0745	-0.0132	Ростовский торгово-экономический колледж	Ростовская область	58.57	19.39	270	234	213	217
-0.0860	0.0418	Ростовский-на-Дону автодорожный колледж	Ростовская область	105.04	22.28	245	290	245	267
-0.0708	0.0035	Ростовский-на-Дону автотранспортный колледж	Ростовская область	60.63	15.74	256	238	227	223
		Ростовский-на-Дону гидрометеорологический							
-0.1901	-0.0454	техникум	Ростовская область	27.72	1.90	62	192	177	196
		Ростовский-на-Дону колледж радиоэлектроники,							
-0.0930	0.0400	информационных и промышленных технологий	Ростовская область	97.80	21.69	208	286	248	280
		Ростовский-на-Дону колледж связи							
-0.0561	0.0015	и информатики	Ростовская область	131.82	62.39	475	249	252	253
-0.0923	0.0252	Ростовский-на-Дону строительный колледж	Ростовская область	96.95	28.37	207	281	266	268
		Ростовское-на-Дону строительное							
-0.0718	0.0191	профессиональное училище № 20	Ростовская область	31.28	3.15	137	242	219	218
-0.0561	0.0182	Сальское профессиональное училище № 75	Ростовская область	37.11	2.54	180	244	315	238

LIST OF COLLEGES ARRANGED BY REGION AND INSTITUTION NAME

social returns	private returns	Name of College	Region	Total Revenue (in million Rubles)	Total Paid Fees (in million Rubles)	Gradu ates	Salary 2014 (in thousands Rubles)	Salary 2015 (in thousands Rubles)	Salary 2016 (in thousands Rubles)
0.0933	0.2033	Таганрогский металлургический техникум	Ростовская область	34.65	1.24	162	382	358	346
-0.0939	0.0387	Тарасовский многопрофильный техникум	Ростовская область	44.96	7.52	109	274	249	247
		Шахтинский медицинский колледж							
-0.2027	-0.0280	имени Г. В. Кузнецовой	Ростовская область	53.94	5.02	93	231	209	179
-0.1394	0.0356	Шахтинский политехнический колледж	Ростовская область	39.48	0.93	82	240	215	245
		Шахтинский региональный колледж топлива и энергетики имени ак. Степанова П.И.	Ростовская область	222.69	27.86	369	283	250	265
-0.1335	0.0476								
-0.1319	0.0303	Шахтинское профессиональное училище № 74	Ростовская область	31.14	0.41	76	259	222	200
-0.2074	0.0037	Кадомский технологический техникум	Рязанская область	52.75	4.10	59	291	260	268
-0.0474	0.0188	Касимовский нефтегазовый колледж	Рязанская область	41.32	9.10	181	271	274	291
-0.1190	-0.0111	Клепиковский технологический техникум	Рязанская область	44.94	4.99	121	241	236	278
-0.0828	-0.0207	Кораблинский агротехнологический техникум	Рязанская область	32.05	1.76	185	236	224	244
-0.1026	0.0013	Новомичуринский многоотраслевой техникум	Рязанская область	38.87	5.78	107	266	264	267
		Рижский дорожный техникум имени героя Советского Союза А.М.Серебрякова	Рязанская область	38.43	5.11	143	293	258	263
-0.0699	0.0163								
-0.1226	-0.0094	Рижский технологический техникум	Рязанская область	53.68	4.76	148	284	234	234
		Рязанский автотранспортный техникум имени С.А.Жигало	Рязанская область	37.72	4.19	162	280	249	282
-0.0562	0.0553	Рязанский железнодорожный колледж	Рязанская область	60.30	3.44	186	281	304	308
		Рязанский колледж имени Героя Советского Союза Н.Н.Комарова	Рязанская область	56.14	1.24	74	263	262	258
-0.1574	-0.0392	Рязанский колледж культуры	Рязанская область	25.48	0.87	68	230	215	223
-0.0898	0.0486	Рязанский колледж электроники	Рязанская область	94.45	9.84	197	290	276	349
-0.0257	0.0225	Рязанский медицинский колледж	Рязанская область	111.21	45.20	519	318	281	285
-0.1306	-0.0582	Рязанский многопрофильный колледж	Рязанская область	76.70	5.03	359	239	196	198
-0.1967	-0.0319	Рязанский педагогический колледж	Рязанская область	83.47	5.53	136	251	243	215
-0.1379	0.0099	Рязанский строительный колледж	Рязанская область	75.02	4.28	153	280	252	260
-0.1331	-0.0559	Рязанский технологический колледж	Рязанская область	120.39	27.73	386	216	226	240
-0.1117	-0.0110	Скопинский электротехнический колледж	Рязанская область	86.66	6.20	282	263	242	233
-0.0818	0.0221	Шацкий агротехнологический техникум	Рязанская область	56.63	7.66	164	283	274	283
-0.0689	0.1225	Алексеевское профессиональное училище	Самарская область	28.06	0.47	73	267	240	219
-0.1101	0.0678	Безенчукский аграрный техникум	Самарская область	64.25	4.33	152	218	213	226
-0.0409	0.1132	Жигулевский государственный колледж	Самарская область	54.32	3.64	169	253	230	252
		Кинель-Черкасский сельскохозяйственный колледж технического и художественного образования г. Тольятти	Самарская область	54.15	3.11	189	344	373	319
-0.0913	0.0678								
-0.1112	0.0829	Нефтегорский государственный техникум	Самарская область	29.39	0.49	69	217	223	217
		Новокуйбышевский гуманитарно-технологический колледж	Самарская область	74.26	12.93	186	239	247	240
-0.0008	0.1333	Новокуйбышевский нефтехимический техникум	Самарская область	54.84	7.84	185	269	267	270
		Обшаровский государственный техникум имени В.И.Суркова	Самарская область	30.49	1.66	168	261	219	238
0.0125	0.1146								
0.0960	0.2387	Отрадненский нефтяной техникум	Самарская область	72.96	24.41	167	428	397	422
-0.0442	0.0756	Поволжский государственный колледж	Самарская область	187.42	63.09	440	263	258	296
		Поволжский строительно-энергетический колледж имени П. Мачнева	Самарская область	177.74	15.15	396	269	276	262
-0.1507	0.0654	Самарский государственный колледж	Самарская область	100.74	12.91	152	248	231	241
-0.0208	0.1653	Самарский машиностроительный колледж	Самарская область	86.77	9.05	205	298	286	293
		Самарский медицинский колледж имени Н.Ляпиной	Самарская область	141.88	47.00	618	264	232	222
-0.0107	0.0707								
-0.0381	0.1198	Самарский Металлургический колледж	Самарская область	91.13	7.21	275	268	244	238
		Самарский социально-педагогический колледж	Самарская область	87.84	6.83	246	268	247	233

LIST OF COLLEGES ARRANGED BY REGION AND INSTITUTION NAME

social returns	private returns	Name of College	Region	Total Revenue (in Rubles)	Total Paid Fees (in million Rubles)	Salary 2014 (in thousands Rubles)	Salary 2015 (in thousands Rubles)	Salary 2016 (in thousands Rubles)
Самарский техникум авиационного и промышленного машиностроения								
-0.0641	0.2060	имени Д. И. Козлова	Самарская область	87.80	3.33	140	329	296
-0.0556	0.0631	Самарский техникум промышленных технологий	Самарская область	62.26	18.01	168	246	251
0.1301	0.3521	Самарский энергетический колледж	Самарская область	77.49	15.86	140	539	485
Сызранский техникум металлообрабатывающих и сервисных технологий								
-0.0962	0.0177	Тольяттинский индустриально-педагогический колледж	Самарская область	48.34	0.99	148	260	267
-0.0625	0.0828	Тольяттинский социально-педагогический колледж	Самарская область	55.63	7.04	163	239	235
-0.0213	0.1607	Тольяттинский машиностроительный колледж	Самарская область	162.60	27.37	338	320	259
-0.0760	0.0271	Тольяттинский политехнический колледж	Самарская область	100.01	32.71	292	239	214
0.0181	0.1057	Тольяттинский химико-технологический техникум	Самарская область	51.90	11.34	265	267	244
0.0623	0.2132	Усольский сельскохозяйственный техникум	Самарская область	27.37	4.51	83	344	328
0.0159	0.1450	Чапаевский химико-технологический техникум	Самарская область	29.61	4.98	103	290	276
-0.1101	0.0797	Чапаевский химико-технологический техникум	Самарская область	49.43	7.60	91	255	263
-0.0079	0.1309	Чапаевский химико-технологический техникум	Самарская область	36.29	2.85	129	253	246
-0.0783	0.1570	Автодорожный колледж	Санкт-Петербург	201.25	10.51	323	322	320
-0.1455	0.1454	Автомеханический лицей	Санкт-Петербург	137.50	7.62	148	340	281
Автотранспортный и электромеханический колледж								
-0.0761	0.1748	Академия индустрии красоты «Локон»	Санкт-Петербург	444.03	67.42	500	391	370
-0.2940	0.0636	Высшая банковская школа	Санкт-Петербург	271.32	2.02	188	246	212
0.1131	0.2483	Индустриально-судостроительный лицей	Санкт-Петербург	63.66	6.86	229	410	397
-0.2154	0.2097	Колледж «Звездный»	Санкт-Петербург	247.27	4.76	150	379	328
-0.2853	0.0985	Колледж императорской Александровский лицей	Санкт-Петербург	155.89	2.44	102	300	259
-0.0938	0.1504	Колледж «Красносельский»	Санкт-Петербург	144.24	6.50	217	313	303
-0.3391	0.1498	Колледж «ПетроСтройСервис»	Санкт-Петербург	183.18	0.75	74	297	317
-0.2777	0.0399	Колледж водных ресурсов	Санкт-Петербург	184.24	11.08	135	265	239
-0.2627	0.0841	Колледж метрополитена	Санкт-Петербург	106.64	6.83	68	298	279
0.0283	0.2757	Колледж метростроя	Санкт-Петербург	80.39	3.06	140	405	406
-0.3236	0.0371	Колледж отраслевых технологий	Санкт-Петербург	121.82	11.15	55	304	287
-0.2275	0.2160	Колледж Петербургской моды	Санкт-Петербург	187.81	1.80	111	385	336
-0.1594	0.1419	Колледж туризма и гостиничного сервиса	Санкт-Петербург	222.99	3.93	255	334	273
-0.1502	0.0500	Колледж электроники и приборостроения	Санкт-Петербург	340.35	53.06	470	268	265
-0.1683	0.1674	Ленинградский областной колледж культуры	Санкт-Петербург	72.44	5.02	56	331	362
-0.1238	0.1669	Медицинский техникум № 9	Санкт-Петербург	136.30	13.04	132	361	329
-0.0163	0.2846	Морской технический колледж	Санкт-Петербург	77.89	5.55	95	486	426
-0.1581	0.0417	Невский колледж имени А. Г. Неболсина	Санкт-Петербург	308.69	80.11	307	334	297
-0.0731	0.1866	Педагогический колледж № 1 имени Н. А. Некрасова Санкт-Петербурга.	Санкт-Петербург	145.09	5.91	208	343	316
-0.1283	0.1850	Педагогический колледж № 4 Санкт-Петербурга	Санкт-Петербург	191.18	14.30	178	373	352
-0.1006	0.2111	Педагогический колледж № 8 Санкт-Петербурга	Санкт-Петербург	159.51	9.06	164	382	351
-0.1780	0.2081	Петродворцовый колледж	Санкт-Петербург	297.59	5.40	227	378	328
-0.2796	0.1459	Реставрационно-художественный колледж	Санкт-Петербург	100.85	2.59	51	313	302
Пожарно-спасательный колледж «Санкт-Петербургский центр подготовки спасателей»								
-0.1286	0.1750	Радиотехнический колледж	Санкт-Петербург	160.03	14.08	147	363	338
-0.0934	0.1526	Промышленно-технологический колледж	Санкт-Петербург	199.79	35.91	206	389	367
0.1077	0.2387	Реставрационно-художественный колледж	Санкт-Петербург	71.75	1.32	305	367	384
-0.0792	0.2310	Радиотехнический колледж	Санкт-Петербург	71.75	1.32	86	367	384
-0.1506	0.2026	Санкт-Петербургский колледж традиционной культуры	Санкт-Петербург	128.89	1.07	122	379	304
-0.1174	0.1224	Садово-архитектурный колледж	Санкт-Петербург	186.55	0.80	306	281	263
-0.2866	0.0501	Санкт-Петербургский колледж традиционной культуры	Санкт-Петербург	396.28	34.34	228	286	278
-0.2886	0.0507	Санкт-Петербургский колледж традиционной культуры	Санкт-Петербург	115.25	1.16	87	241	207

LIST OF COLLEGES ARRANGED BY REGION AND INSTITUTION NAME

social returns	private returns	Name of College	Region	Total Revenue (in million Rubles)	Total Paid Fees (in million Rubles)	Gradu- ates	Salary 2014 (in thousands Rubles)	Salary 2015 (in thousands Rubles)	Salary 2016 (in thousands Rubles)
-0.0529	0.3024	Санкт-Петербургский акушерский колледж	Санкт-Петербург	118.57	5.72	113	476	449	458
		Санкт-Петербургский медико-технический							
0.0068	0.1462	колледж ФМБА России	Санкт-Петербург	105.41	38.09	182	419	376	385
0.0599	0.2738	Санкт-Петербургский медицинский колледж № 1	Санкт-Петербург	128.03	13.19	249	450	418	432
-0.2217	0.1004	Санкт-Петербургский медицинский колледж № 2	Санкт-Петербург	161.48	13.90	118	323	305	296
-0.1624	0.0552	Санкт-Петербургский медицинский колледж № 3	Санкт-Петербург	150.44	27.99	168	313	286	274
		Санкт-Петербургский медицинский колледж							
-0.1714	0.2490	имени В. М. Бехтерева	Санкт-Петербург	172.72	12.87	92	470	461	466
-0.1385	0.2388	Санкт-Петербургский медицинский техникум № 2	Санкт-Петербург	165.58	5.54	132	404	384	386
-0.1464	0.2031	Санкт-Петербургский политехнический колледж	Санкт-Петербург	194.40	8.72	166	385	351	356
		Санкт-Петербургский техникум библиотечных							
-0.1883	0.1851	и информационных технологий	Санкт-Петербург	62.96	0.19	52	340	313	309
-0.1779	0.1032	Санкт-Петербургский технический колледж	Санкт-Петербург	149.93	16.01	137	330	285	316
-0.1747	0.1469	Техникум «Автосервис»	Санкт-Петербург	147.85	6.67	132	317	297	337
-0.1250	0.1628	Техникум «Приморский»	Санкт-Петербург	95.29	5.96	105	337	330	329
0.0163	0.3245	Фельдшерский техникум	Санкт-Петербург	134.38	6.80	170	483	465	488
		Художественно-профессиональный лицей Санкт-							
-0.3057	0.0447	Петербурга имени Карла Фаберже	Санкт-Петербург	78.02	0.88	56	254	211	209
-0.0804	0.1550	Экономический колледж	Санкт-Петербург	101.96	0.82	180	318	288	286
		Электромеханический техникум							
		железнодорожного транспорта							
-0.0561	0.2455	имени А. С. Суханова	Санкт-Петербург	139.44	2.26	179	378	384	379
0.0408	0.2517	Сахалинский горный техникум	Сахалинская область	107.23	5.59	173	516	522	520
-0.2344	0.2051	Сахалинский колледж искусств	Сахалинская область	149.94	6.24	59	547	490	466
-0.2541	0.1082	Сахалинский политехнический центр № 1	Сахалинская область	120.02	6.80	62	502	338	328
-0.1419	0.1354	Сахалинский политехнический центр № 2	Сахалинская область	145.13	12.46	117	422	445	402
-0.2089	0.0565	Сахалинский политехнический центр № 3	Сахалинская область	81.46	5.87	67	367	342	289
-0.1560	0.1084	Сахалинский политехнический центр № 4	Сахалинская область	90.08	0.33	97	364	316	329
-0.1275	0.1596	Сахалинский политехнический центр № 5	Сахалинская область	114.35	3.11	105	416	416	399
0.0987	0.1912	Сахалинский промышленно-экономический							
		техникум	Сахалинская область	170.09	53.87	489	511	470	488
-0.2160	0.0916	Сахалинский строительный техникум	Сахалинская область	127.93	4.20	91	359	349	340
		Сахалинский техникум механизации сельского							
-0.3347	0.1207	хозяйства	Сахалинская область	295.52	14.12	82	484	401	422
		Сахалинский техникум отраслевых технологий							
-0.2132	0.0718	и сервиса	Сахалинская область	102.94	5.69	74	324	336	375
-0.2236	0.0223	Сахалинский техникум сервиса	Сахалинская область	205.00	12.92	179	295	296	300
-0.1141	0.0774	Алапаевский индустриальный техникум	Свердловская область	57.18	4.94	92	338	291	281
-0.1416	0.0446	Баранчинский электромеханический техникум	Свердловская область	66.15	2.55	115	285	251	260
-0.1074	0.0923	Белоярский многопрофильный техникум	Свердловская область	60.90	6.66	90	373	306	293
-0.1306	0.0122	Берёзовский техникум «Профи»	Свердловская область	68.86	10.08	136	268	252	259
-0.1058	0.1034	Богдановичский политехникум	Свердловская область	106.40	7.25	157	332	319	319
-0.2181	-0.0005	Верхнепышминский механико-технологический	Свердловская область	138.30	11.70	151	237	246	270
		техникум «Юность»							
-0.0773	0.0740	Верхнесалдинский авиаметаллургический	Свердловская область	50.25	5.94	105	309	296	303

LIST OF COLLEGES ARRANGED BY REGION AND INSTITUTION NAME

social returns	private returns	Name of College	Region	Total Revenue (in million Rubles)	Total Paid Fees (in million Rubles)	Gradu- ates	Salary 2014 (in thousands Rubles)	Salary 2015 (in thousands Rubles)	Salary 2016 (in thousands Rubles)
-0.1879	0.0105	Верхнетуринский механический техникум	Свердловская область	86.19	12.81	97	264	288	283
-0.1331	0.0334	Высокогорский многопрофильный техникум	Свердловская область	99.29	5.95	191	274	245	262
-0.0075	0.1000	Екатеринбургский колледж транспортного строительства	Свердловская область	157.12	62.51	298	407	392	379
-0.0649	0.0724	Екатеринбургский монтажный колледж	Свердловская область	85.18	22.11	153	363	316	332
-0.0719	0.0558	Екатеринбургский политехникум	Свердловская область	89.06	10.24	235	298	281	268
-0.1411	-0.0152	Екатеринбургский промышленно-технологический техникум имени В.М.Курочкина	Свердловская область	72.31	13.15	156	257	246	225
-0.1895	-0.0655	Екатеринбургский техникум отраслевых технологий и сервиса	Свердловская область	52.06	2.90	129	180	178	211
-0.1818	-0.0123	Екатеринбургский техникум химического машиностроения	Свердловская область	72.63	6.59	119	237	233	235
-0.0998	-0.0108	Екатеринбургский торгово — экономический техникум	Свердловская область	109.04	38.00	269	286	247	259
-0.0622	0.0195	Екатеринбургский экономико-технологический колледж	Свердловская область	197.01	63.38	606	290	266	271
-0.0908	0.1259	Екатеринбургский энергетический техникум	Свердловская область	95.89	16.80	106	413	381	396
-0.1208	0.0601	Ирбитский аграрный техникум	Свердловская область	37.29	2.96	63	297	271	295
-0.1920	0.0090	Ирбитский гуманитарный колледж	Свердловская область	46.57	5.83	56	280	270	252
-0.0659	0.1092	Исовский геологоразведочный техникум	Свердловская область	82.69	8.94	148	338	326	343
-0.1758	-0.0089	Каменск-Уральский педагогический колледж	Свердловская область	47.14	5.81	75	256	242	237
-0.0677	0.0743	Каменск-Уральский политехнический колледж	Свердловская область	70.34	10.13	152	305	304	314
-0.0903	0.1254	Каменск-Уральский радиотехнический техникум	Свердловская область	62.49	5.15	88	359	346	341
-0.1175	-0.0314	Каменск-Уральский техникум торговли и сервиса	Свердловская область	69.13	6.83	279	222	216	201
-0.2745	0.0332	Камышловский педагогический колледж	Свердловская область	99.69	8.29	60	315	288	296
-0.1484	0.0010	Карпинский машиностроительный техникум	Свердловская область	54.60	1.56	127	263	214	214
-0.0718	-0.0003	Краснотуринский индустриальный колледж	Свердловская область	70.49	30.18	195	288	262	282
-0.1381	0.0168	Краснотуринский политехникум	Свердловская область	66.00	9.05	115	254	247	294
-0.0699	0.1115	Красноуральский многопрофильный техникум	Свердловская область	40.98	4.99	63	241	407	408
-0.1526	0.0276	Красноуфимский аграрный колледж	Свердловская область	108.42	7.47	183	278	255	245
-0.0254	0.1101	Нижнетагильский горно-металлургический колледж имени Е. А. и М. Е. Черепановых	Свердловская область	166.46	18.46	437	348	318	314
-0.1185	0.0384	Нижнетагильский государственный профессиональный колледж имени Никиты Акинфевича Демидова	Свердловская область	140.65	10.26	287	265	259	274
-0.1087	0.0430	Нижнетагильский педагогический колледж № 1	Свердловская область	66.27	10.25	125	305	290	264
-0.1337	0.0683	Нижнетагильский педагогический колледж № 2	Свердловская область	47.77	6.30	62	333	321	293
-0.0147	0.1167	Нижнетагильский строительный техникум	Свердловская область	80.92	14.98	199	400	325	313
-0.1439	-0.0621	Нижнетагильский техникум информационных технологий, сервиса и предпринимательства «Самородок»	Свердловская область	54.00	6.75	196	228	204	208
-0.0761	0.0832	Нижнетагильский техникум металлообрабатывающих производств и сервиса	Свердловская область	108.51	4.90	251	335	276	269

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social returns	private returns	Name of College	Region	Total Revenue (in million Rubles)	Total Paid Fees (in million Rubles)	Gradu- ates	Salary 2014 (in thousands Rubles)	Salary 2015 (in thousands Rubles)	Salary 2016 (in thousands Rubles)
-0.1001	-0.0407	Нижнетагильский торгово — экономический колледж	Свердловская область	123.02	44.80	485	241	214	225
-0.1574	-0.0355	Областной техникум дизайна и сервиса	Свердловская область	59.22	5.67	152	231	202	208
-0.1167	0.0167	Первоуральский металлургический колледж	Свердловская область	129.91	31.26	232	290	277	286
-0.0492	0.1001	Полипрофильный техникум имени О. В. Терёшкина	Свердловская область	41.13	5.60	86	324	308	359
-0.1932	-0.0179	Ревдинский многопрофильный техникум	Свердловская область	64.67	11.54	80	255	257	266
-0.1264	0.0377	Режевской политехникум	Свердловская область	124.83	6.21	251	269	252	263
-0.1884	0.0067	Свердловский колледж искусств и культуры	Свердловская область	100.74	16.43	113	276	287	276
-0.1987	0.0931	Свердловский областной музыкально-эстетический педагогический колледж	Свердловская область	114.27	5.98	96	337	307	320
-0.1458	0.0243	Свердловский областной педагогический колледж	Свердловская область	118.61	26.03	152	314	302	295
-0.2318	-0.0369	Северный педагогический колледж	Свердловская область	73.77	13.33	73	270	242	256
-0.0982	0.0246	Североуральский политехникум	Свердловская область	73.15	5.55	208	263	249	244
-0.0879	0.0233	Сергинский многопрофильный техникум	Свердловская область	43.69	2.99	141	254	233	260
-0.0167	0.0935	Серовский металлургический техникум	Свердловская область	64.26	8.17	210	321	304	309
-0.1250	0.0448	Серовский политехнический техникум	Свердловская область	147.83	11.48	273	291	259	269
-0.1249	0.0311	Сухоложский многопрофильный техникум	Свердловская область	115.60	12.74	219	268	262	276
-0.1508	-0.0372	Техникум индустрии питания и услуг «Кулинар»	Свердловская область	93.10	16.92	224	238	216	218
-0.1704	0.0340	Уральский горнозаводской колледж имени Демидовых	Свердловская область	104.15	5.52	145	255	253	283
0.0798	0.2143	Уральский железнодорожный техникум	Свердловская область	97.32	20.76	242	484	445	426
-0.2212	-0.0107	Уральский колледж бизнеса, управления и технологий красоты	Свердловская область	87.61	10.79	94	261	271	235
0.0486	0.1179	Уральский колледж строительства, архитектуры и предпринимательства	Свердловская область	161.07	74.88	496	400	379	374
-0.1142	0.0662	Уральский колледж технологий и предпринимательства	Свердловская область	158.93	10.66	283	289	314	261
-0.1256	-0.0021	Уральский политехнический колледж	Свердловская область	187.09	66.88	267	310	304	307
-0.0920	0.0362	Уральский радиотехнический колледж имени А. С. Попова	Свердловская область	157.69	54.49	234	345	331	336
-0.0951	0.0662	Уральский техникум автомобильного транспорта и сервиса	Свердловская область	102.13	12.41	193	321	282	293
-0.1369	-0.0360	Верхнеднепровский технологический техникум	Смоленская область	34.39	5.92	92	258	246	218
-0.0520	0.0015	Вяземский медицинский колледж имени Е. О. Мухина	Смоленская область	24.49	7.55	114	250	251	310
-0.1251	-0.0324	Вяземский политехнический техникум	Смоленская область	62.44	7.58	203	252	228	225
-0.0600	0.0711	Гагаринский многопрофильный колледж	Смоленская область	75.48	0.00	215	317	299	292
-0.1836	-0.0585	Сафоновский индустриально-технологический техникум	Смоленская область	42.51	3.21	97	243	195	209
-0.1463	-0.0162	Смоленская академия профессионального образования	Смоленская область	209.38	28.69	423	253	268	249
-0.1020	-0.0018	Смоленский автотранспортный колледж имени Е. Г. Трубицына	Смоленская область	58.82	15.35	137	288	280	280
-0.1495	-0.0607	Смоленский базовый медицинский колледж	Смоленская область	55.34	12.35	151	235	217	229
-0.1933	-0.0908	Смоленский педагогический колледж	Смоленская область	64.14	13.30	143	226	196	206

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-0.0683	0.0075	Смоленский политехнический техникум	Смоленская область	58.70	11.42	227	269	279	261
-0.2082	-0.0848	Смоленский строительный колледж	Смоленская область	75.47	16.07	124	221	207	237
		Смоленский техникум железнодорожного транспорта, связи и сервиса	Смоленская область	48.04	8.99	229	273	253	251
-0.0652	-0.0009	Ставропольский региональный колледж вычислительной техники и электроники	Ставропольский край	40.05	6.66	182	218	206	226
-0.1386	-0.0798	Ставропольский региональный многопрофильный колледж	Ставропольский край	95.69	33.45	494	254	221	229
-0.1089	-0.0671	Аграрно-промышленный колледж	Тамбовская область	152.73	45.23	374	223	210	215
-0.1116	0.0863	Аграрно-технологический техникум	Тамбовская область	116.68	12.50	236	237	228	223
0.0466	0.2655	Железнодорожный колледж имени В.М.Баранова	Тамбовская область	40.79	4.78	88	381	352	353
-0.0229	0.0879	Жердевский колледж сахарной промышленности	Тамбовская область	41.71	11.01	145	252	229	240
-0.1271	0.0860	Многоотраслевой техникум	Тамбовская область	82.01	11.14	139	264	233	223
-0.0762	0.0967	Многопрофильный колледж имени И.Т.Карасева	Тамбовская область	81.17	6.69	217	235	227	217
-0.2996	-0.0769	Педагогический колледж г. Тамбова	Тамбовская область	76.40	19.70	51	231	237	218
-0.0863	0.1340	Приборостроительный колледж	Тамбовская область	49.04	4.55	93	273	257	244
-0.0390	0.1434	Строительный колледж	Тамбовская область	29.56	2.71	76	266	257	252
0.0150	0.0741	Тамбовский бизнес-колледж	Тамбовская область	37.17	14.40	224	226	229	225
-0.0570	0.1635	Уваровский химико-технологический колледж	Тамбовская область	82.98	3.66	181	281	251	260
-0.0257	0.0933	Бологовский колледж	Тверская область	47.69	6.33	147	297	294	298
-0.0073	0.0643	Вышневолоцкий колледж	Тверская область	67.19	18.37	308	313	262	263
-0.1050	-0.0018	Вышневолоцкий медицинский колледж	Тверская область	19.96	2.79	66	237	225	215
-0.1584	-0.0261	Калашниковский колледж	Тверская область	43.39	8.56	87	235	227	218
-0.1454	-0.0075	Калязинский колледж имени Н. М. Полежаева	Тверская область	40.70	4.14	96	237	215	215
-0.0429	0.0941	Кимрский колледж	Тверская область	35.81	2.25	103	280	304	280
0.0924	0.1871	Кимрский медицинский колледж	Тверская область	21.91	4.95	87	405	374	377
-0.1389	0.0761	Конаковский колледж	Тверская область	53.56	1.05	84	258	276	278
-0.0936	0.0562	Ржевский колледж	Тверская область	109.46	4.22	281	273	250	245
-0.1558	0.0409	Ржевский медицинский колледж	Тверская область	43.98	2.15	71	250	241	263
-0.0841	0.0115	Ржевский технологический колледж	Тверская область	37.10	2.84	151	231	222	226
-0.0007	0.1011	Савеловский колледж	Тверская область	25.49	1.23	111	302	268	296
-0.0127	0.0442	Тверской колледж имени А. Н. Коняева	Тверская область	91.96	32.23	465	281	256	267
		Тверской колледж имени Героя советского союза П. А. Кайкова	Тверская область	85.76	9.16	91	245	215	235
-0.2406	-0.0205								
-0.2473	-0.0518	Тверской колледж культуры имени Н. А. Львова	Тверская область	55.70	6.06	69	213	203	203
-0.1811	-0.0350	Тверской колледж транспорта и сервиса	Тверская область	78.94	10.21	153	217	198	218
-0.0075	0.0986	Тверской машиностроительный колледж	Тверская область	33.19	7.46	103	336	297	306
0.0086	0.0693	Тверской медицинский колледж	Тверская область	95.79	45.81	341	332	301	309
-0.1806	0.0407	Тверской педагогический колледж	Тверская область	55.72	6.51	65	301	267	262
-0.1473	-0.0318	Тверской промышленно-экономический колледж	Тверская область	102.98	21.83	244	235	215	211
-0.0224	0.0601	Тверской технологический колледж	Тверская область	67.26	20.21	237	302	262	297
-0.0458	0.0299	Тверской химико-технологический колледж	Тверская область	43.59	9.96	192	266	247	240
		Торжокский педагогический колледж							
-0.1933	-0.0103	имени Ф. В. Бадюлина	Тверская область	66.97	7.71	101	256	228	209
-0.2207	-0.0071	Торопецкий колледж	Тверская область	66.43	1.87	94	231	212	200
		Губернаторский колледж социально-культурных							
-0.1070	0.0503	технологий и инноваций	Томская область	59.44	11.37	92	332	317	321
-0.1697	0.0243	Северский промышленный колледж	Томская область	82.28	5.37	116	275	277	264
		Стрежевской учебный центр профессиональных							
0.0051	0.1742	квалификаций	Томская область	30.19	2.28	58	380	402	499
-0.0417	0.1027	Томский автомобильно-дорожный техникум	Томская область	80.73	10.27	175	354	338	343

LIST OF COLLEGES ARRANGED BY REGION AND INSTITUTION NAME

social returns	private returns	Name of College	Region	Total Revenue (in million Rubles)	Total Paid Fees (in million Rubles)	Gradu- ates	Salary 2014 (in thousands Rubles)	Salary 2015 (in thousands Rubles)	Salary 2016 (in thousands Rubles)
-0.1267	-0.0484	Томский аграрный колледж	Томская область	108.19	34.51	308	242	254	217
-0.0355	0.0371	Томский базовый медицинский колледж	Томская область	86.65	30.48	287	329	302	282
		Томский государственный педагогический							
-0.1388	-0.0026	колледж	Томская область	69.26	15.09	118	299	267	269
-0.1505	-0.0072	Томский коммунально-строительный техникум	Томская область	93.10	12.48	174	266	258	245
-0.1488	-0.0484	Томский лесотехнический техникум	Томская область	47.40	10.71	116	247	226	224
-0.1773	-0.0624	Томский механико-технологический техникум	Томская область	89.90	22.33	165	228	237	235
0.1293	0.2192	Томский политехнический техникум	Томская область	92.25	28.14	306	481	479	506
		Томский техникум водного транспорта							
0.0127	0.1482	и судоходства	Томская область	48.23	2.45	142	431	330	332
-0.1488	-0.0170	Томский экономико-промышленный колледж	Томская область	140.55	15.71	304	255	232	241
0.0361	0.1768	Алексинский машиностроительный техникум	Тульская область	63.90	2.44	216	380	332	303
0.0375	0.1541	Алексинский химико-технологический техникум	Тульская область	28.60	0.26	120	306	323	330
-0.0561	0.0835	Болоховский машиностроительный техникум	Тульская область	70.24	5.86	196	293	264	267
-0.0691	0.0614	Донской колледж информационных технологий	Тульская область	51.19	3.29	155	260	247	259
-0.1076	0.0390	Донской политехнический колледж	Тульская область	99.39	6.42	250	247	235	241
-0.1484	0.0598	Ефремовский химико-технологический техникум	Тульская область	110.88	2.81	182	250	243	263
-0.1083	0.0927	Новомосковский политехнический колледж	Тульская область	42.34	4.80	65	316	289	298
-0.0709	0.1226	Новомосковский строительный колледж	Тульская область	99.51	10.70	173	344	303	314
-0.0932	0.0501	Новомосковский технологический колледж	Тульская область	42.74	2.70	114	259	247	238
		Сельскохозяйственный колледж «Богородицкий»							
-0.1596	0.0698	имени И. А. Стебута	Тульская область	63.87	7.43	74	293	302	287
		Техникум железнодорожного транспорта							
-0.0929	0.0907	имени Б. Ф. Сафонова	Тульская область	55.87	7.05	92	289	262	358
-0.0887	0.0416	Техникум технологий пищевых производств	Тульская область	66.61	1.92	213	261	224	224
		Тульский государственный коммунально-							
-0.1223	0.0782	строительный техникум	Тульская область	43.37	7.01	59	343	283	295
		Тульский государственный машиностроительный							
-0.1841	0.1206	колледж имени Н. Демидова	Тульская область	138.48	7.20	120	306	323	330
		Тульский государственный технологический							
-0.1788	0.0735	колледж	Тульская область	67.21	3.31	77	266	264	291
		Тульский колледж профессиональных технологий							
-0.0871	0.0815	и сервиса	Тульская область	131.12	20.20	240	313	281	294
0.0023	0.1076	Тульский областной медицинский колледж	Тульская область	153.41	36.87	481	326	304	315
-0.1273	0.0441	Тульский педагогический колледж	Тульская область	66.03	4.84	136	279	247	217
		Тульский сельскохозяйственный колледж							
-0.0684	0.0660	имени И. С. Ефанова	Тульская область	90.32	6.54	267	285	248	244
		Тульский технико-экономический колледж							
-0.0483	0.0860	имени А.Г.Рогова	Тульская область	67.55	4.25	203	275	268	278
-0.0685	0.0862	Тульский экономический колледж	Тульская область	37.08	0.55	101	279	263	257
-0.0985	0.0722	Узловский машиностроительный колледж	Тульская область	35.68	1.17	80	261	266	255
0.0223	0.1788	Щекинский политехнический колледж	Тульская область	48.43	4.60	125	289	506	281
0.0217	0.1755	Ясногорский технологический техникум	Тульская область	36.18	2.07	103	360	340	336
-0.2165	-0.0978	Агротехнологический колледж	Тюменская область	213.02	17.79	289	322	305	316
-0.2937	-0.1526	Голышмановский агропедагогический колледж	Тюменская область	118.25	8.29	116	252	265	268
-0.2617	-0.1803	Заводоуковский агропромышленный техникум	Тюменская область	140.12	12.07	275	234	234	230
-0.2262	-0.1256	Западно-Сибирский государственный колледж	Тюменская область	164.26	15.79	262	292	280	286
-0.2845	-0.1452	Ишимский медицинский колледж	Тюменская область	54.59	2.88	60	313	255	237
-0.2329	-0.1344	Ишимский многопрофильный техникум	Тюменская область	336.24	0.02	636	278	260	257
-0.2256	-0.1057	Тобольский медицинский колледж имени Володи Солдатова	Тюменская область	106.54	21.45	114	373	323	319

LIST OF COLLEGES ARRANGED BY REGION AND INSTITUTION NAME

social returns	private returns	Name of College	Region	Total Revenue (in million Rubles)	Total Paid Fees (in million Rubles)	Gradu ates	Salary 2014 (in thousands Rubles)	Salary 2015 (in thousands Rubles)	Salary 2016 (in thousands Rubles)
-0.2541	-0.1344	Тобольский многопрофильный техникум	Тюменская область	185.10	7.34	253	279	260	273
-0.1973	-0.0946	Тюменский колледж водного транспорта	Тюменская область	163.91	15.44	267	329	300	322
		Тюменский колледж транспортных технологий							
-0.1858	-0.0816	и сервиса	Тюменская область	223.32	21.43	366	348	324	322
-0.2940	-0.1184	Тюменский лесотехнический техникум	Тюменская область	209.93	36.53	119	358	322	367
-0.2580	-0.1041	Тюменский педагогический колледж	Тюменская область	140.63	11.76	134	360	308	282
		Тюменский техникум индустрии питания,							
-0.2535	-0.1683	коммерции и сервиса	Тюменская область	141.34	30.95	214	272	274	245
		Тюменский техникум строительной индустрии							
-0.2283	-0.1019	и городского хозяйства	Тюменская область	228.92	11.69	302	324	292	300
		Ульяновский фармацевтический колледж							
-0.0710	0.0110	Минздрава России	Ульяновская область	107.09	46.99	283	245	249	261
-0.2318	0.0153	Амурский политехнический техникум	Хабаровский край	220.98	9.53	198	285	270	294
-0.1483	0.1011	Вяземский лесхоз-техникум имени Н. В. Усенко	Хабаровский край	65.37	4.26	62	369	330	416
		Дальневосточный техникум геодезии							
-0.0566	0.1373	и картографии	Хабаровский край	54.95	6.04	82	438	383	367
		Комсомольский-на-Амуре авиационно-							
0.0283	0.1254	технический техникум	Хабаровский край	81.56	16.00	262	382	366	396
		Комсомольский-на-Амуре колледж технологий							
-0.1680	-0.0179	и сервиса	Хабаровский край	111.04	9.26	195	262	248	258
		Комсомольский-на-Амуре лесопромышленный							
-0.1361	0.0576	техникум	Хабаровский край	150.27	12.05	199	319	315	342
-0.0987	0.1424	Комсомольский-на-Амуре строительный колледж	Хабаровский край	124.57	14.55	119	456	387	479
		Николаевский-на-Амуре промышленно-							
-0.1470	0.0334	гуманитарный техникум	Хабаровский край	85.57	5.19	131	320	280	284
		Профессиональное образовательное учреждение							
-0.0022	0.1394	№ 16 имени Героя Советского Союза А. С. Панова	Хабаровский край	68.20	1.63	179	400	379	357
		Профессиональное образовательное учреждение							
-0.1717	0.0490	№ 3	Хабаровский край	92.60	2.71	104	263	270	383
-0.1193	0.1004	Солнечный промышленный техникум	Хабаровский край	71.83	9.24	81	502	335	313
-0.0741	0.0469	Хабаровский автодорожный техникум	Хабаровский край	195.99	72.55	267	394	392	402
		Хабаровский государственный медицинский							
-0.1391	0.0440	колледж	Хабаровский край	209.10	22.53	284	332	305	322
-0.1683	0.0230	Хабаровский дорожно-строительный техникум	Хабаровский край	113.41	13.62	133	310	295	322
		Хабаровский колледж отраслевых технологий							
-0.0314	0.0502	и сферы обслуживания	Хабаровский край	123.97	13.75	510	314	297	304
-0.1342	0.0464	Хабаровский машиностроительный техникум	Хабаровский край	72.49	13.37	84	354	357	346
		Хабаровский педагогический колледж							
-0.2054	-0.0290	имени Героя Советского Союза Д. Л. Калараша	Хабаровский край	126.27	25.13	129	299	295	284
		Хабаровский промышленно-экономический							
0.0224	0.0826	техникум	Хабаровский край	136.49	41.63	613	360	348	345
		Хабаровский техникум техносферной							
-0.0656	0.0406	безопасности и промышленных технологий	Хабаровский край	114.22	16.55	316	315	300	302
-0.1194	0.0841	Хабаровский технический колледж	Хабаровский край	120.73	12.78	148	369	363	349
-0.2820	-0.0979	Хабаровский технологический колледж	Хабаровский край	234.08	34.76	219	224	222	230
-0.1049	-0.0538	Хабаровский торгово-экономический техникум	Хабаровский край	82.24	35.39	297	266	242	241
		Ханты-Мансийский автономный округ							
-0.1617	0.2904	Белоярский политехнический колледж	Югра	181.61	9.30	96	420	499	509
		Ханты-Мансийский автономный округ							
-0.1049	0.1949	Когалымский политехнический колледж	Югра	170.76	32.12	121	465	446	496

LIST OF COLLEGES ARRANGED BY REGION AND INSTITUTION NAME								
social returns	private returns	Name of College	Region	Total Revenue (in Rubles)	Total Paid Fees (in million Rubles)	Salary 2014 (in thousands Rubles)	Salary 2015 (in thousands Rubles)	Salary 2016 (in thousands Rubles)
-0.0359	0.3140	Мегионский политехнический колледж	Ханты-Мансийский автономный округ Югра	167.82	8.55	171	454	462
-0.3133	0.1137	Междуреченский агропромышленный колледж	Ханты-Мансийский автономный округ Югра	205.03	9.15	90	295	303
-0.1813	0.2603	Нефтеюганский политехнический колледж	Ханты-Мансийский автономный округ Югра	236.32	6.39	139	375	396
-0.1665	0.1505	Нижневартовский медицинский колледж	Ханты-Мансийский автономный округ Югра	92.29	12.04	72	433	337
-0.1147	0.2416	Нижневартовский политехнический колледж	Ханты-Мансийский автономный округ Югра	285.95	13.17	260	406	379
-0.0786	0.2546	Нижневартовский социально-гуманитарный колледж	Ханты-Мансийский автономный округ Югра	266.11	21.05	257	448	401
-0.2065	0.1795	Нижневартовский строительный колледж	Ханты-Мансийский автономный округ Югра	231.83	10.38	149	315	339
-0.0939	0.2074	Радужинский политехнический колледж	Ханты-Мансийский автономный округ Югра	144.59	2.26	180	323	327
-0.0131	0.2599	Сургутский медицинский колледж	Ханты-Мансийский автономный округ Югра	135.19	26.34	139	549	460
0.0328	0.2042	Сургутский политехнический колледж	Ханты-Мансийский автономный округ Югра	299.97	83.20	505	398	420
-0.1586	0.1969	Урайский политехнический колледж	Ханты-Мансийский автономный округ Югра	210.08	17.76	153	396	369
-0.1195	0.2391	Ханты-Мансийский технолого-педагогический колледж	Ханты-Мансийский автономный округ Югра	556.48	55.97	416	472	419
-0.1181	0.2774	Югорский политехнический колледж	Ханты-Мансийский автономный округ Югра	213.91	12.57	152	420	463
-0.2554	-0.2318	Златоустовский индустриальный колледж имени П.П.Аносова	Челябинская область	110.06	21.02	551	245	231
-0.2801	-0.2453	Златоустовский медицинский техникум	Челябинская область	31.12	10.88	77	252	245
-0.2217	-0.1981	Златоустовский техникум технологий и экономики	Челябинская область	153.50	46.45	696	303	284
-0.2620	-0.2050	Катав-Ивановский индустриальный техникум	Челябинская область	45.23	4.86	97	252	277
-0.2101	-0.1775	Копейский политехнический колледж имени С.В.Хохрякова	Челябинская область	94.54	17.62	363	310	292
-0.2449	-0.2170	Магнитогорский медицинский колледж имени П. Ф. Надеждина	Челябинская область	35.93	15.87	100	293	269
-0.0614	0.0170	Магнитогорский педагогический колледж	Челябинская область	87.54	9.75	167	603	366
								769

LIST OF COLLEGES ARRANGED BY REGION AND INSTITUTION NAME

social returns	private returns	Name of College	Region	Total Revenue (in million Rubles)	Total Paid Fees (in million Rubles)	Gradu- ates	Salary 2014 (in thousands Rubles)	Salary 2015 (in thousands Rubles)	Salary 2016 (in thousands Rubles)
-0.2729	-0.2116	Миасский геологоразведочный колледж	Челябинская область	74.16	2.93	164	291	257	250
-0.2482	-0.2197	Миасский машиностроительный колледж	Челябинская область	86.65	8.61	412	264	247	256
-0.2694	-0.2309	Миасский медицинский колледж	Челябинская область	47.44	15.20	113	273	259	257
-0.3122	-0.2481	Миасский педагогический колледж	Челябинская область	39.12	3.79	73	271	246	201
-0.3231	-0.1910	Озерский технический колледж	Челябинская область	217.48	23.64	154	278	311	325
		Первомайский техникум промышленности строительных материалов	Челябинская область	52.60	3.60	157	261	271	262
-0.3063	-0.2484	Саткинский медицинский техникум	Челябинская область	27.87	2.92	56	248	213	238
-0.2270	-0.1926	Троицкий технологический техникум	Челябинская область	69.27	6.33	282	319	252	285
-0.2642	-0.2115	Челябинский автотранспортный техникум	Челябинская область	96.18	19.52	196	281	259	287
-0.2263	-0.1916	Челябинский медицинский колледж	Челябинская область	72.81	23.75	207	326	296	287
-0.2803	-0.2242	Челябинский педагогический колледж № 2	Челябинская область	44.65	4.85	97	272	251	249
-0.2704	-0.2210	Челябинский профессиональный колледж	Челябинская область	104.16	8.26	273	261	254	253
-0.2570	-0.2346	Челябинский радиотехнический техникум	Челябинская область	34.92	8.11	178	270	237	236
		Челябинский энергетический колледж	Челябинская область						
-0.2147	-0.1705	имени С. М. Кирова	Челябинская область	108.62	27.21	273	342	321	309
-0.2520	-0.2394	Южно-Уральский государственный колледж	Челябинская область	89.15	24.98	767	250	230	238
		Южно-Уральский государственный технический колледж	Челябинская область	208.75	66.84	652	267	249	258
-0.2637	-0.2243	Южно-Уральский многопрофильный колледж	Челябинская область	274.87	65.84	741	266	267	254
-0.1667	-0.1049	Аргунский государственный механико-технологический техникум	Чеченская республика	43.39	3.32	229	189	176	168
-0.0715	-0.0483	Грозненский государственный колледж экономики и информационных технологий	Чеченская республика	69.70	22.67	817	225	213	213
-0.1026	-0.0082	Грозненский педагогический колледж	Чеченская республика	63.60	0.00	251	242	230	236
-0.2012	-0.0689	Грозненский технологический техникум сервиса	Чеченская республика	87.77	0.00	211	208	197	182
-0.0860	0.0047	Гудермесский железнодорожный техникум	Чеченская республика	51.13	0.00	211	234	236	266
-0.1751	-0.1206	Серноводский автодорожный техникум	Чеченская республика	45.62	0.10	298	173	157	165
-0.0779	-0.0501	Серноводский аграрно-технический колледж	Чеченская республика	35.52	0.39	516	205	205	212
-0.1460	-0.0621	Техникум пищевой индустрии, сервиса и управления	Чеченская республика	46.34	0.00	207	252	182	170
-0.1594	-0.0836	Чеченский базовый медицинский колледж	Чеченская республика	135.02	24.62	492	218	199	184
-0.1333	-0.0534	Чеченский колледж экономики и управления	Чеченская республика	81.51	6.68	346	259	191	186
-0.1141	-0.0508	Чеченский технологический техникум	Чеченская республика	81.07	14.40	390	246	209	200
-0.1379	-0.0209	Алатырский технологический колледж	Республика Чувашия	126.48	4.96	346	240	227	242
-0.1971	-0.0484	Канашский педагогический колледж	Республика Чувашия	50.29	6.70	79	235	231	244
-0.0838	0.1055	Канашский строительный техникум	Республика Чувашия	46.31	0.97	90	495	263	230
-0.1259	-0.0412	Новочебоксарский химико-механический техникум	Республика Чувашия	60.47	9.40	201	232	215	247
-0.0791	-0.0020	Цивильский аграрно-технологический техникум	Республика Чувашия	69.64	5.48	321	286	245	221

LIST OF COLLEGES ARRANGED BY REGION AND INSTITUTION NAME

social returns	private returns	Name of College	Region	Total Revenue (in million Rubles)	Total Paid Fees (in million Rubles)	Gradu ates	Salary 2014 (in thousands Rubles)	Salary 2015 (in thousands Rubles)	Salary 2016 (in thousands Rubles)
-0.1700	-0.0884	Чебоксарский медицинский колледж	Чувашская Республика	144.09	50.98	325	250	214	218
-0.1136	-0.0299	Чебоксарский техникум строительства и городского хозяйства	Чувашская Республика	126.25	50.78	264	306	271	275
-0.3145	0.2934	Чукотский многопрофильный колледж	Чукотский автономный округ	395.37	11.68	77	625	607	644
-0.1462	0.1070	Великосельский аграрный колледж	Ярославская область	50.52	1.31	81	279	221	221
-0.0351	0.0571	Переславский техникум сферы услуг	Ярославская область	27.65	3.88	96	296	316	311
-0.1409	0.0739	Рыбинский лесотехнический колледж	Ярославская область	67.32	9.67	99	264	251	248
-0.1184	0.0194	Угличский индустриально-педагогический колледж	Ярославская область	62.32	12.72	153	226	208	204
-0.0760	0.0329	Ярославский градостроительный колледж	Ярославская область	140.88	47.18	362	236	236	244
0.0379	0.1882	Ярославский железнодорожный колледж	Ярославская область	27.81	1.28	101	308	299	280
0.0318	0.1805	Ярославский кадетский колледж	Ярославская область	35.58	1.88	126	286	297	298
-0.1922	-0.0001	Ярославский колледж гостиничного и строительного сервиса	Ярославская область	50.45	10.09	66	219	214	239
-0.0730	0.0716	Ярославский колледж индустрии питания	Ярославская область	50.21	10.03	123	252	238	249
-0.2166	0.1013	Ярославский колледж культуры	Ярославская область	53.35	2.29	52	264	250	236
-0.0899	0.0359	Ярославский колледж управления и профессиональных технологий	Ярославская область	76.74	18.05	204	229	221	225
-0.1904	0.0917	Ярославский педагогический колледж	Ярославская область	77.09	8.39	77	293	264	257
-0.0398	0.1056	Ярославский политехнический колледж № 24	Ярославская область	62.08	7.08	190	263	245	242
0.0345	0.1824	Ярославский промышленно-экономический колледж	Ярославская область	85.76	18.04	230	332	325	330
-0.2417	-0.1385	Ярославский профессиональный колледж № 30	Ярославская область	51.45	11.49	101	191	177	179
-0.0355	0.0467	Ярославский торгово-экономический колледж	Ярославская область	41.19	6.14	233	217	205	202

LIST OF UNIVERSITIES ARRANGED BY REGION AND INSTITUTION NAME									
social returns	private returns	Name of College	Region	Total Revenue (in million Rubles)	Total Paid Fees (in million Rubles)	Gradu- ates	Salary 2014 (in thousands Rubles)	Salary 2015 (in thousands Rubles)	Salary 2016 (in thousands Rubles)
-0.1803	-0.0473	Адыгейский государственный университет	Республика Адыгея	1102.41	296.80	1277	258	267	263
		Майкопский государственный технологический							
-0.0656	0.0144	университет	Республика Адыгея	589.95	186.89	1464	288	288	295
		Башкирский государственный аграрный	Республика						
-0.0807	-0.0562	университет	Башкортостан	821.83	491.99	2814	333	328	341
		Башкирский государственный медицинский	Республика						
-0.1745	-0.1044	университет Минздрава России	Башкортостан	2581.11	1409.32	2094	371	388	413
		Башкирский государственный педагогический	Республика						
-0.1832	-0.1223	университет им. М. Акмуллы	Башкортостан	1265.22	433.95	2424	258	255	269
		Республика							
-0.1665	-0.078	Башкирский государственный университет	Башкортостан	2174.8	713.78	2689	340	318	335
		Уфимская государственная академия искусств	Республика						
-0.213	-0.0841	имени Загира Исмагилова	Башкортостан	158.73	23.56	167	291	288	299
		Уфимский государственный авиационный	Республика						
-0.1148	-0.0417	технический университет	Башкортостан	2420.54	1146.87	2704	403	412	454
		Уфимский государственный нефтяной	Республика						
-0.0104	0.0607	технический университет	Башкортостан	2477.71	1387.08	2387	630	667	716
		Бурятская государственная сельскохозяйственная академия							
0.0728	0.0857	имени В. Р. Филиппова	Республика Бурятия	16.42	2.14	415	361	361	349
		Восточно-Сибирский государственный институт	Республика Бурятия	1031.63	296.91	1800	292	301	307
-0.1414	-0.0314	культуры	Республика Бурятия	342.93	57.97	629	282	257	257
		Восточно-Сибирский государственный							
-0.0288	0.0141	университет технологий и управления	Республика Бурятия	935.95	453.7	3122	325	329	337
		Горно-Алтайский государственный университет	Республика Алтай	617.42	74.56	1162	250	251	250
		Дагестанская государственная медицинская							
-0.22	-0.1685	академия Минздрава России	Республика Дагестан	696.87	378.18	847	234	263	297
		Дагестанский государственный технический							
-0.1008	-0.0689	университет	Республика Дагестан	296.92	83.7	1478	287	301	293
		Дагестанский государственный университет	Республика Дагестан	1440.34	354.03	2199	250	233	228
		Дагестанский государственный университет	Республика Дагестан	460.36	210.63	1911	234	238	235
		Ингушетия							
-0.1654	-0.1122	Ингушетий государственный университет	Республика Ингушетия	632.4	96.9	2077	233	256	238
		Карачаево-Черкесский государственный	Республика Карачаево-						
-0.1961	-0.1358	университет имени У. Д. Алиева	Черкесия	390.68	59.34	1080	229	219	221
		Петрозаводский государственный университет	Республика Карелия	2075.11	675.63	1876	383	404	412
		Коми республиканская академия							
0.0139	0.0316	государственной службы и управления	Республика Коми	114.81	93.81	271	480	443	459
		Сыктывкарский государственный университет							
-0.0638	0.0366	имени Питирима Сорокина	Республика Коми	933.33	233.41	1584	409	386	385
		Ухтинский государственный технический							
0.0091	0.0834	университет	Республика Коми	1185.17	707.76	1077	679	678	702
		Марийский государственный университет	Республика Марий Эл	834.34	245.18	1948	246	262	262
		Поволжский государственный технологический							
-0.0895	0.0238	университет	Республика Марий Эл	1257.48	320.19	2220	280	309	310
		Национальный исследовательский Мордовский							
-0.2693	-0.2314	государственный университет им. Н. П. Огарёва	Республика Мордовия	2854.3	1055.87	4190	303	310	322
		Арктический государственный институт	Республика Саха (Якутия)	221.2	45.22	366	477	516	527
		Северо-Восточный федеральный университет	Республика Саха (Якутия)	6103.6	1009.97	3293	537	537	550

LIST OF UNIVERSITIES ARRANGED BY REGION AND INSTITUTION NAME								
social returns	private returns	Name of College	Region	Total Revenue (in million Rubles)	Total Paid Fees (in million Rubles)	Salary 2014 (in thousands Rubles)	Salary 2015 (in thousands Rubles)	Salary 2016 (in thousands Rubles)
-0.0583	0.1086	Якутская государственная сельскохозяйственная академия	Республика Саха (Якутия)	747.38	155.3	759	473	480
-0.1053	-0.0135	Горский государственный аграрный университет	Республика Северная Осетия — Алания	470.94	125.16	1068	238	273
-0.0533	0.0507	Северо-Кавказский горно-металлургический институт (государственный технологический университет)	Республика Северная Осетия — Алания	676.63	166.09	1414	282	321
-0.2372	-0.0633	Северо-Осетинская государственная медицинская академия Минздрава России	Республика Северная Осетия — Алания	780.43	170.75	612	231	255
-0.0866	-0.0094	Северо-Осетинский государственный университет имени Коста Левановича Хетагурова	Республика Северная Осетия — Алания	709.89	196.47	2017	248	253
-0.1321	-0.1051	Альметьевский государственный институт муниципальной службы	Республика Татарстан	100.07	66.43	224	291	308
-0.2448	-0.1396	Казанская государственная академия ветеринарной медицины имени Н. Э. Баумана	Республика Татарстан	223.68	44.57	264	237	239
-0.203	-0.0797	Казанский (Приволжский) федеральный университет	Республика Татарстан	9759.13	3538.35	5982	417	402
-0.1417	-0.063	Казанский государственный аграрный университет	Республика Татарстан	617.36	135.38	1200	350	290
-0.1297	-0.0685	Казанский государственный архитектурно-строительный университет	Республика Татарстан	738.98	323.94	1175	329	338
-0.1674	-0.1	Казанский государственный институт культуры	Республика Татарстан	268.54	72.4	545	280	269
-0.1671	-0.0859	Казанский государственный медицинский университет Минздрава России	Республика Татарстан	1267.04	542.78	1299	337	360
-0.0788	-0.0259	Казанский государственный энергетический университет	Республика Татарстан	967.27	455.7	1847	398	390
-0.0784	-0.0048	Казанский национальный исследовательский технический университет им. А. Н. Туполева-КАИ	Республика Татарстан	975.14	189.27	2246	362	367
-0.1615	-0.1131	Набережночелнинский государственный педагогический университет	Республика Татарстан	328.98	148.46	674	286	272
-0.1516	0.0123	Поволжская государственная академия физической культуры, спорта и туризма	Республика Татарстан	948.03	385.94	272	909	800
-0.1872	-0.0816	Тувинский государственный университет	Республика Тыва	752.81	157.32	948	295	319
-0.0889	0.0396	Ижевская государственная медицинская академия Минздрава России	Удмуртская Республика	554.36	151.16	725	344	370
-0.0328	0.0224	Ижевская государственная сельскохозяйственная академия	Удмуртская Республика	572.34	184.49	2203	292	294
-0.0715	0.0168	Ижевский государственный технический университет имени М. Т. Калашникова	Удмуртская Республика	1655.02	642.43	2781	324	343
-0.1454	-0.0623	Хакасский государственный университет им. Н. Ф. Катанова	Республика Хакасия	1106.41	286.36	1875	312	312
-0.1381	-0.045	Грозненский государственный нефтяной технический университет имени академика М. Д. Миллионщикова	Чеченская республика	681.87	171.15	1085	340	314
-0.1387	-0.0614	Чеченский государственный педагогический университет	Чеченская республика	480.23	74.48	1148	284	276
-0.1326	-0.0587	Чеченский государственный университет	Чеченская республика	1267.89	87.38	3676	275	263
-0.1529	-0.0976	Чувашская государственная сельскохозяйственная академия	Чувашская Республика	323.47	77.37	892	265	260
-0.1684	-0.1214	Чувашский государственный педагогический университет им. И. Яковleva	Чувашская Республика	548.29	196.82	1436	254	251
-0.1373	-0.0752	Алтайский государственный аграрный университет	Алтайский край	547.41	182.47	1337	251	258
-0.1753	-0.0925	Алтайский государственный институт культуры	Алтайский край	202.25	32.01	472	234	219

LIST OF UNIVERSITIES ARRANGED BY REGION AND INSTITUTION NAME									
social returns	private returns	Name of College	Region	Total Revenue (in million Rubles)	Total Paid Fees (in million Rubles)	Gradu ates	Salary 2014 (in thousands Rubles)	Salary 2015 (in thousands Rubles)	Salary 2016 (in thousands Rubles)
-0.1732	-0.0925	Алтайский государственный медицинский университет Минздрава России	Алтайский край	822.49	412.04	759	298	344	362
-0.1661	-0.0843	Алтайский государственный педагогический университет	Алтайский край	589.43	124.45	1273	241	236	238
-0.1281	-0.0629	Алтайский государственный технический университет им. И. И. Ползунова	Алтайский край	1179.71	475.59	2292	276	281	302
-0.1513	-0.1126	Армавирский государственный педагогический университет	Краснодарский край	405.54	164.92	1242	268	261	256
-0.2007	-0.1157	Государственный морской университет имени адмирала Ф. Ф. Ушакова	Краснодарский край	1340.22	687.76	843	390	396	429
-0.1626	-0.0849	Краснодарский государственный институт культуры	Краснодарский край	473.07	144.98	742	299	314	302
-0.0946	-0.0525	Кубанский государственный аграрный университет	Краснодарский край	1835.11	938.96	4109	349	352	359
-0.1996	-0.1174	Кубанский государственный медицинский университет Минздрава России	Краснодарский край	1740.56	766.72	1602	318	330	342
-0.0414	-0.0028	Кубанский государственный технологический университет	Краснодарский край	1571.21	860.84	3738	415	415	439
-0.1284	-0.0719	Кубанский государственный университет	Краснодарский край	2732.22	1456.28	3628	368	372	380
-0.1632	-0.0865	Кубанский государственный университет физической культуры, спорта и туризма	Краснодарский край	589.39	188.92	914	318	298	303
-0.1219	-0.0506	Сочинский государственный университет	Краснодарский край	663.52	284.09	929	437	358	343
-0.1784	0.0633	Красноярский государственный институт искусств	Красноярский край	189.19	25.28	119	422	389	388
-0.2157	-0.1209	Красноярский государственный медицинский университет имени профессора В. Ф. Войно-Ясенецкого Минздрава России	Красноярский край	1569.91	885.34	705	382	434	461
-0.0227	0.0525	Красноярский государственный педагогический университет им. В. П. Астафьева	Красноярский край	870.53	261.09	2385	349	349	336
-0.1633	-0.0011	Дальневосточный федеральный университет	Приморский край	11312.63	3355.05	7385	414	417	435
-0.2071	0.017	Морской государственный университет имени адмирала Г. И. Невельского	Приморский край	1585.89	334.19	707	423	473	472
-0.0878	0.0108	Приморская государственная сельскохозяйственная академия	Приморский край	466.77	101.81	911	315	317	332
-0.1171	0.0518	Тихоокеанский государственный медицинский университет Минздрава России	Приморский край	1006.6	253.44	771	428	454	489
-0.0773	-0.0489	Невинномысский государственный гуманитарно-технический институт	Ставропольский край	304.47	154.91	1122	339	325	344
-0.1017	-0.0362	Северо-Кавказский федеральный университет	Ставропольский край	3209.15	959.19	6751	351	347	361
-0.1176	-0.0843	Ставропольский государственный аграрный университет	Ставропольский край	992.41	481.73	3091	302	298	298
-0.2033	-0.1314	Ставропольский государственный медицинский университет Минздрава России	Ставропольский край	1012.77	455.72	1090	284	304	317
-0.2155	-0.1314	Ставропольский государственный педагогический институт	Ставропольский край	322.42	51.88	568	239	233	237
-0.0911	-0.0178	Амурский гуманитарно-педагогический государственный университет	Хабаровский край	318.9	100.6	601	388	358	367
-0.0985	0.1059	Дальневосточная государственная академия физической культуры	Хабаровский край	216.97	22.13	164	599	494	546
-0.2416	-0.1509	Дальневосточный государственный медицинский университет Минздрава России	Хабаровский край	989.84	554.14	350	412	497	548
-0.0243	0.0471	Дальневосточный государственный университет путей сообщения	Хабаровский край	2044.79	1067.39	2362	570	577	581

LIST OF UNIVERSITIES ARRANGED BY REGION AND INSTITUTION NAME									
social returns	private returns	Name of College	Region	Total Revenue (in million Rubles)	Total Paid Fees (in million Rubles)	Graduates	Salary 2014 (in thousands Rubles)	Salary 2015 (in thousands Rubles)	Salary 2016 (in thousands Rubles)
		Комсомольский-на-Амуре государственный технический университет	Хабаровский край	827.46	364.86	2125	454	453	464
-0.0075	0.0411	Тихоокеанский государственный университет	Хабаровский край	1740.46	927.6	3164	461	461	463
		Хабаровский государственный институт культуры	Хабаровский край	146.64	21.63	193	401	355	471
		Амурская государственная медицинская академия Минздрава России	Амурская область	633.84	120.32	517	447	476	477
-0.1114	0.0652	Амурский государственный университет	Амурская область	935.96	402.61	1641	379	376	380
		Благовещенский государственный педагогический университет	Амурская область	583.88	151.39	754	341	333	319
		Дальневосточный государственный аграрный университет	Амурская область	701.15	238.66	1915	392	368	385
-0.0255	0.0361	Северный (Арктический) федеральный университет имени М. В. Ломоносова	Архангельская область	3108.15	800.18	3306	410	428	447
		Северный государственный медицинский университет Минздрава России	Архангельская область	897.26	305.73	824	513	514	508
		Астраханский государственный архитектурно-строительный университет	Астраханская область	325.39	68.33	282	304	295	305
		Астраханский государственный медицинский университет Минздрава России	Астраханская область	643.1	235.1	557	274	338	343
		Астраханский государственный технический университет	Астраханская область	766.15	306.39	1599	356	394	401
-0.2802	-0.2182	-0.2122 Астраханский государственный университет	Астраханская область	999.77	457.65	2758	289	289	303
		Брянский государственный аграрный университет	Брянская область	692.63	187.52	408	248	248	257
-0.3067	-0.1618	Брянский государственный инженерно-технологический университет	Брянская область	359.15	127.84	862	281	285	291
		Брянский государственный технический университет	Брянская область	626.94	208.54	1670	350	369	397
		Брянский государственный университет имени академика И. Г. Петровского	Брянская область	656.29	238.74	1736	278	283	269
		Владимирский государственный университет имени Александра Григорьевича и Николая Григорьевича Столетовых	Владimirская область	1928.97	404.2	3870	328	335	346
		Ковровская государственная технологическая академия имени В.А.Дегтярева	Владимирская область	224.66	49.71	462	325	339	340
-0.0379	0.0776	Волгоградская государственная академия физической культуры	Волгоградская область	376.74	91.72	527	270	285	288
		Волгоградский государственный аграрный университет	Волгоградская область	832.33	362.88	1912	287	303	323
-0.111	-0.0596	Волгоградский государственный социально-педагогический университет	Волгоградская область	781.28	221.33	1771	268	267	264
		Волгоградский государственный технический университет	Волгоградская область	1695.29	903.91	2483	365	391	417
-0.0889	-0.0304	Волжский институт экономики, педагогики и права	Волгоградская область	1136.57	440.4	1595	308	337	350
		Вологодская государственная молочнохозяйственная академия имени Н. В. Верещагина	Вологодская область	112.15	66	535	249	261	259
-0.1469	-0.0873	Вологодский государственный университет	Вологодская область	324.14	90.6	760	276	280	295
-0.0891	-0.0384	Череповецкий государственный университет	Вологодская область	955.19	335.14	2533	339	342	350
-0.1144	-0.0459	Воронежский государственный аграрный университет имени императора Петра I	Воронежская область	658.89	223.41	1201	355	338	357
-0.1127	-0.063	Воронежский государственный аграрный университет имени императора Петра I	Воронежская область	1157.04	373.89	3421	292	290	299

LIST OF UNIVERSITIES ARRANGED BY REGION AND INSTITUTION NAME									
social returns	private returns	Name of College	Region	Total Revenue (in million Rubles)	Total Paid Fees (in million Rubles)	Gradu- ates	Salary 2014 (in thousands Rubles)	Salary 2015 (in thousands Rubles)	Salary 2016 (in thousands Rubles)
-0.0113	0.0797	Воронежский государственный институт физической культуры	Воронежская область	140.77	22.11	306	456	500	444
-0.1391	-0.0957	Воронежский государственный лесотехнический университет имени Г. Ф. Морозова	Воронежская область	467.77	208.07	1209	277	273	275
-0.1534	-0.0957	Воронежский государственный медицинский университет имени Н. Н. Бурденко Минздрава России	Воронежская область	1129.02	562.52	1665	303	312	324
-0.1679	-0.1089	Воронежский государственный педагогический университет	Воронежская область	484.78	153.63	1115	261	254	248
-0.1062	-0.0202	Воронежский государственный технический университет	Воронежская область	1538.67	539.29	2110	369	390	406
-0.141	-0.0703	Воронежский государственный университет	Воронежская область	2542.19	1172.2	3165	332	352	375
-0.2367	-0.1281	Воронежский государственный университет инженерных технологий	Воронежская область	734.48	245.77	613	275	307	287
-0.0681	-0.0657	Воронежский институт экономики и социального управления	Воронежская область	52.82	49.67	301	308	319	291
-0.0506	0.1029	Ивановская государственная медицинская академия Минздрава России	Ивановская область	583.82	154.4	736	356	400	416
-0.1004	0.0112	Ивановская государственная сельскохозяйственная академия имени Д. К. Беляева	Ивановская область	229.27	37.19	566	243	232	233
-0.0231	0.0429	Ивановский государственный политехнический университет	Ивановская область	443.78	111.73	1898	249	267	267
-0.0482	0.0444	Ивановский государственный химико-технологический университет	Ивановская область	566.39	193.31	1247	287	295	318
-0.0234	0.0897	Ангарский государственный технический университет	Иркутская область	310.08	60.58	509	438	461	496
-0.0278	0.0781	Братский государственный университет	Иркутская область	647.41	103.96	1242	417	430	448
-0.2163	-0.049	Иркутский государственный аграрный университет имени А. А. Ежевского	Иркутская область	820.92	161.5	596	330	325	334
-0.1061	-0.0393	Иркутский государственный медицинский университет Минздрава России	Иркутская область	1287.22	741.34	1299	419	425	441
-0.0319	0.0049	Иркутский государственный университет	Иркутская область	741.49	405.63	2181	350	373	390
0.0052	0.0766	Иркутский государственный университет путей сообщения	Иркутская область	1575.65	879.61	1867	642	566	575
-0.02	0.0426	Иркутский национальный исследовательский технический университет	Иркутская область	3001.1	1652.44	4287	498	492	508
-0.2081	-0.1035	Балтийский федеральный университет имени Иммануила Канта	Калининградская область	1855.52	535.49	1868	296	306	312
-0.0771	-0.0437	Калининградский государственный технический университет	Калининградская область	675.17	345.44	2044	329	351	363
-0.2298	-0.1989	Калужский государственный университет им. К. Э. Циолковского	Калужская область	488.82	245.42	844	331	315	314
0.0306	0.099	Камчатский государственный технический университет	Камчатский край	533.54	232.66	826	571	682	708
-0.0846	0.046	Камчатский государственный университет имени Витуса Беринга	Камчатский край	363.05	80.92	358	537	521	510
-0.1063	0.0489	Кемеровская государственная медицинская академия Минздрава России	Кемеровская область	603.32	161.08	579	350	399	435
-0.1747	0.0017	Кемеровский государственный институт культуры	Кемеровская область	419.19	64.82	434	301	292	280
-0.0142	0.0547	Кемеровский государственный университет	Кемеровская область	507.3	169.49	1519	335	336	331
0.0412	0.1038	Сибирский государственный индустриальный университет	Кемеровская область	541.8	207.68	1727	394	391	406
-0.1257	-0.1362	Вятская государственная сельскохозяйственная академия	Кировская область	497.02	583.8	1502	291	289	288
-0.0671	-0.0035	Кировская государственная медицинская академия Минздрава России	Кировская область	1274.25	418.3	2752	397	386	405
-0.23	-0.0874	Кировская государственная медицинская академия Минздрава России	Кировская область	641.33	155.42	429	302	348	372

LIST OF UNIVERSITIES ARRANGED BY REGION AND INSTITUTION NAME								
social returns	private returns	Name of College	Region	Total Revenue (in million Rubles)	Total Paid Fees (in million Rubles)	Salary 2014 (in thousands Rubles)	Salary 2015 (in thousands Rubles)	Salary 2016 (in thousands Rubles)
-0.2669	-0.2295	Костромская государственная сельскохозяйственная академия	Костромская область	456.12	113.11	1014	254	255
-0.2306	-0.1827	Костромской государственный университет	Костромская область	646.17	230.89	917	343	322
-0.233	-0.2295	Курганская государственная сельскохозяйственная академия имени Т. С. Мальцева	Курганская область	46.56	16.29	878	302	303
-0.2325	-0.214	Курганский государственный университет	Курганская область	724	253.43	2406	338	338
-0.2202	-0.1973	Шадринский государственный педагогический университет	Курганская область	327.12	85.29	1023	376	363
-0.1595	-0.1464	Курская академия государственной и муниципальной службы	Курская область	87.29	44.54	494	296	315
-0.2172	-0.1824	Курская государственная сельскохозяйственная академия имени И. И. Иванова	Курская область	489.13	166.14	1248	269	264
-0.2651	-0.2245	Курский государственный медицинский университет Минздрава России	Курская область	931.71	619.04	638	323	344
-0.2416	-0.2069	Курский государственный университет	Курская область	775.47	258.84	1953	243	246
-0.1682	-0.1405	Юго-Западный государственный университет	Курская область	1310.81	680.58	3100	335	333
-0.1252	-0.0666	Государственный институт экономики, финансов, права и технологий	Ленинградская область	412.92	128.48	796	368	381
-0.1511	-0.0882	Елецкий государственный университет им. И. А. Бунина	Липецкая область	492.67	81.69	1330	263	279
-0.177	-0.1061	Липецкий государственный педагогический университет имени П. П. Семенова-Тян-Шанского	Липецкая область	439.44	84.06	959	256	259
-0.0967	-0.0272	Липецкий государственный технический университет	Липецкая область	724.14	256.88	1267	373	374
0.0442	0.2008	Северо-Восточный государственный университет	Магаданская область	523.57	90.28	573	758	773
-0.2522	-0.1269	Гжельский государственный университет	Московская область	221.83	94.59	108	356	368
-0.0407	0.0342	Государственный гуманитарно-технологический университет	Московская область	396.51	176.54	649	402	416
-0.0293	0.0579	Государственный социально-гуманитарный университет	Московская область	594.5	195.86	1117	418	420
-0.0042	0.1058	Московский государственный институт культуры	Московская область	836.31	294.14	1083	517	538
0.014	0.0632	Российский государственный аграрный заочный университет	Московская область	427.04	212	1160	435	416
0.0533	0.0898	Российский государственный университет туризма и сервиса	Московская область	1100.39	687.72	3019	501	470
-0.1184	-0.0047	Мурманский арктический государственный университет	Мурманская область	550.7	132.28	631	408	398
-0.0443	0.0536	Мурманский государственный технический университет	Мурманская область	1192.19	388.33	1489	500	527
-0.0607	0.0589	Волжский государственный университет водного транспорта	Нижегородская область	1106.14	398.62	1428	387	377
-0.0527	0.0372	Национальный исследовательский Нижегородский государственный университет им. Н. И. Лобачевского	Нижегородская область	4472.95	1920.19	7283	345	348
-0.2102	-0.1443	Нижегородская государственная медицинская академия Минздрава России	Нижегородская область	1222.93	805.23	733	279	352
-0.2571	0.014	Нижегородский государственный инженерно-экономический университет	Нижегородская область	577.71	62.94	313	309	305
-0.0375	0.0061	Нижегородский государственный лингвистический университет им. Н. А. Добролюбова	Нижегородская область	336.08	220.61	693	323	341
-0.0571	0.0214	Нижегородский государственный педагогический университет имени Козьмы Минина	Нижегородская область	779.75	284.73	1891	310	284

LIST OF UNIVERSITIES ARRANGED BY REGION AND INSTITUTION NAME								
social returns	private returns	Name of College	Region	Total Revenue (in million Rubles)	Total Paid Fees (in million Rubles)	Salary 2014 (in thousands Rubles)	Salary 2015 (in thousands Rubles)	Salary 2016 (in thousands Rubles)
-0.0292	0.0745	Нижегородский государственный технический университет им. Р. Е. Алексеева	Нижегородская область	2139.72	902.58	2933	413	408
-0.1155	-0.0181	Новгородский государственный университет имени Ярослава Мудрого	Новгородская область	1410.12	496.43	1938	338	333
-0.0893	0.0182	Новосибирский государственный аграрный университет	Новосибирская область	1138.33	440.4	1736	304	299
-0.0395	0.0896	Новосибирский государственный архитектурно-строительный университет (Сибстрин)	Новосибирская область	556.05	183.93	808	369	364
-0.0255	0.0846	Новосибирский государственный медицинский университет Минздрава России	Новосибирская область	1121.26	504.53	1394	405	428
-0.0126	0.0536	Новосибирский государственный педагогический университет	Новосибирская область	1226.62	555.36	3511	316	296
-0.0577	0.0602	Новосибирский государственный технический университет	Новосибирская область	2342.33	1060.5	2358	400	421
-0.2504	-0.1048	Новосибирский государственный университет архитектуры, дизайна и искусств	Новосибирская область	257.82	86.79	209	249	225
-0.2152	-0.0706	Новосибирский национальный исследовательский государственный университет	Новосибирская область	3207.67	1430.18	1284	369	444
0.0336	0.0942	Сибирский государственный университет геосистем и технологий	Новосибирская область	652.98	341.88	1768	364	360
0.01	0.158	Сибирский государственный университет путей сообщения	Новосибирская область	1193.12	380.14	1583	509	435
-0.0921	-0.0341	Омский государственный медицинский университет Минздрава России	Омская область	1011.27	538.71	1351	410	428
-0.133	-0.0891	Омский государственный педагогический университет	Омская область	723.64	301.18	1894	294	292
-0.1186	-0.028	Омский государственный технический университет	Омская область	1947.37	862.8	1720	451	459
-0.0914	-0.0443	Омский государственный университет им. Ф. М. Достоевского	Омская область	942.28	485.08	1771	338	383
-0.019	0.0514	Омский государственный университет путей сообщения	Омская область	1229.63	640.12	1497	697	548
-0.0487	0.0277	Сибирская государственная автомобильно-дорожная академия	Омская область	796.5	294.64	1254	465	471
-0.0115	0.1403	Сибирский государственный университет физической культуры и спорта	Омская область	404.39	94.77	358	686	718
-0.1037	-0.0159	Оренбургский государственный медицинский университет Минздрава России	Оренбургская область	667.92	251.11	971	322	350
-0.1288	-0.0541	Оренбургский государственный педагогический университет	Оренбургская область	595.33	177.98	1296	266	284
-0.0325	0.0463	Оренбургский государственный университет	Оренбургская область	958.42	132.76	2898	333	346
-0.114	-0.0048	Орловский государственный аграрный университет	Орловская область	662.76	145.12	1125	305	303
-0.1838	-0.0245	Орловский государственный институт культуры	Орловская область	221.56	10.45	300	249	266
-0.025	0.0114	Орловский государственный институт экономики и торговли	Орловская область	189.56	79.66	903	301	308
-0.1341	-0.0307	Орловский государственный университет имени И. С. Тургенева	Орловская область	1174.55	292.53	1924	256	304
-0.001	0.0126	Пензенская государственная сельскохозяйственная академия	Пензенская область	36.6	18.13	505	266	263
-0.0564	0.0074	Пензенский государственный технологический университет	Пензенская область	527.56	171.93	1676	276	279
-0.0565	0.005	Пензенский государственный университет	Пензенская область	2111.36	951.74	5207	304	305
-0.0712	0.0029	Пензенский государственный университет архитектуры и строительства	Пензенская область	506.03	156.43	1364	282	276

LIST OF UNIVERSITIES ARRANGED BY REGION AND INSTITUTION NAME								
social returns	private returns	Name of College	Region	Total Revenue (in million Rubles)	Total Paid Fees (in million Rubles)	Salary 2014 (in thousands Rubles)	Salary 2015 (in thousands Rubles)	Salary 2016 (in thousands Rubles)
-0.0916	-0.0512	Пермская государственная сельскохозяйственная академия имени академика Д. Н. Прянишникова	Пермский край	747.27	272.94	2510	317	318
-0.1226	-0.055	Пермская государственная фармацевтическая академия Минздрава России	Пермский край	352.93	143.82	540	342	363
-0.145	-0.0912	Пермский государственный гуманитарно-педагогический университет	Пермский край	643.24	243.11	1417	306	288
-0.175	-0.1153	Пермский государственный институт культуры	Пермский край	237.09	86.29	451	271	270
-0.2732	-0.1395	Пермский государственный медицинский университет имени академика Е. А. Вагнера Минздрава России	Пермский край	1115.52	379.7	523	291	363
-0.0566	0.0322	Пермский государственный национальный исследовательский университет	Пермский край	788.15	21.44	1945	388	390
-0.0816	-0.078	Пермский национальный исследовательский политехнический университет	Пермский край	3041.86	2943.16	4187	422	438
-0.0699	0.0586	Великолукская государственная академия физической культуры и спорта	Псковская область	141.73	22.86	232	397	356
-0.1032	-0.0343	Великолукская государственная сельскохозяйственная академия	Псковская область	263.06	61.34	778	266	255
-0.1131	-0.0397	Псковский государственный университет	Псковская область	839.5	296.97	1742	278	282
-0.2584	-0.0454	Донской государственный аграрный университет	Ростовская область	1466.19	132.79	1016	263	269
-0.1654	0.0456	Ростовская государственная консерватория им. С.В.Рахманинова	Ростовская область	183.75	40.62	127	795	276
-0.2245	-0.0974	Ростовский государственный медицинский университет Минздрава России	Ростовская область	2164.91	807.81	1428	304	331
-0.0559	-0.0164	Ростовский государственный экономический университет (РИНХ)	Ростовская область	1355.23	687.08	4438	304	311
-0.1737	-0.0603	Южный федеральный университет	Ростовская область	5943.57	2113.56	5775	313	319
-0.1099	-0.057	Рязанский государственный агротехнологический университет имени П. А. Костычева	Рязанская область	534.78	172.03	1391	313	309
-0.1607	-0.0953	Рязанский государственный медицинский университет имени академика И. П. Павлова Минздрава России	Рязанская область	1028.1	556.75	999	371	382
-0.1308	-0.0433	Рязанский государственный радиотехнический университет	Рязанская область	1163.58	460.7	1234	374	399
-0.116	-0.0862	Рязанский государственный университет имени С. А. Есенина	Рязанская область	673.82	358.42	2127	288	297
-0.007	0.017	Рязанский государственный технический университет сервиса	Самарская область	379.91	244.95	1901	283	286
-0.0075	0.0572	Рязанский государственный университет телекоммуникаций и информатики	Самарская область	552.97	254.9	1373	341	345
-0.1743	-0.0179	Рязанский государственный областной университет (Наяновой)	Самарская область	174.73	49.84	152	317	318
-0.0285	0.0409	Самарская государственная сельскохозяйственная академия	Самарская область	424.29	156.76	1210	317	306
-0.1124	0.0221	Самарский государственный институт культуры	Самарская область	216.77	26.32	405	274	265
-0.2854	-0.1763	Самарский государственный медицинский университет Минздрава России	Самарская область	2808.46	1435.11	1169	304	336
-0.063	0.0128	Самарский государственный социально-педагогический университет	Самарская область	518.1	182.09	1322	291	282
0.0368	0.1251	Самарский государственный технический университет	Самарская область	2635.99	1474.3	2879	588	601
-0.0331	0.1175	Самарский государственный университет путей сообщения	Самарская область	1419.68	381.15	1774	485	413
0.0442	0.068	Самарский государственный экономический университет	Самарская область	772.5	617.78	1826	422	426

LIST OF UNIVERSITIES ARRANGED BY REGION AND INSTITUTION NAME								
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-0.0549	0.1323	Самарский национальный исследовательский университет имени академика С. П. Королева	Самарская область	1842.46	409.95	1748	470	457
-0.0134	0.0621	Тольяттинский государственный университет	Самарская область	1309.92	523.42	3107	344	338
-0.3369	-0.1569	Саратовская государственная консерватория имени Л. В. Собинова	Саратовская область	254.29	16.35	116	314	313
-0.2163	-0.1884	Саратовский государственный аграрный университет имени Н. И. Вавилова	Саратовская область	1541.39	564.06	4731	274	267
-0.1872	-0.149	Саратовский государственный технический университет имени Гагарина Ю.А.	Саратовская область	1375.3	640.62	2404	337	341
-0.2134	-0.1592	Саратовский национальный исследовательский государственный университет имени Н. Г. Чернышевского	Саратовская область	2674.24	652.22	4749	298	305
-0.0778	0.0547	Сахалинский государственный университет	Сахалинская область	1451.12	503.14	1057	590	596
-0.0919	-0.0085	Екатеринбургский государственный театральный институт	Свердловская область	78.41	27.69	122	320	348
-0.0631	-0.0213	Российский государственный профессионально-педагогический университет	Свердловская область	1056.34	575.24	2621	354	338
-0.1303	0.0374	Уральская государственная консерватория имени М. П. Мусоргского	Свердловская область	154.58	34.64	114	420	417
-0.3464	-0.1466	Уральский государственный аграрный университет	Свердловская область	779.6	183.47	260	320	307
-0.1996	-0.1173	Уральский государственный архитектурно-художественный университет	Свердловская область	485.18	222.8	504	303	318
-0.0166	0.0571	Уральский государственный горный университет	Свердловская область	1016.19	520.39	1322	521	525
-0.2754	-0.1068	Уральский государственный лесотехнический университет	Свердловская область	830.04	296.55	247	475	469
-0.0553	0.0214	Уральский государственный медицинский университет Минздрава России	Свердловская область	1348.9	702.62	1492	474	498
-0.0281	0.0107	Уральский государственный педагогический университет	Свердловская область	1054.75	592.56	2865	398	382
-0.025	0.0233	Уральский государственный университет путей сообщения	Свердловская область	1335.33	941.59	1356	628	554
-0.0501	-0.0354	Уральский государственный экономический университет	Свердловская область	1332.31	1115.56	3114	367	370
-0.159	0.0734	Уральский институт Государственной противопожарной службы МЧС России	Свердловская область	835.76	72.34	550	433	440
-0.1245	-0.015	Уральский федеральный университет имени первого Президента России Б. Н. Ельцина	Свердловская область	9071.77	3810.02	7313	436	455
-0.1123	-0.1012	Смоленская государственная сельскохозяйственная академия	Смоленская область	37.24	18.98	377	245	253
-0.158	-0.0783	Смоленский государственный медицинский университет Минздрава России	Смоленская область	695.64	311.23	692	347	369
-0.1774	-0.1141	Смоленский государственный университет	Смоленская область	494.42	155.75	968	259	266
-0.0451	0.0483	Мичуринский государственный аграрный университет	Тамбовская область	538.65	133.52	1416	294	288
-0.0374	0.0292	Тамбовский государственный технический университет	Тамбовская область	957.99	456.37	2227	305	318
-0.0611	0.0049	Тамбовский государственный университет имени Г. Р. Державина	Тамбовская область	1244.93	537.72	3256	271	281
-0.0971	-0.0133	Тверская государственная сельскохозяйственная академия	Тверская область	259.73	66.67	552	310	306
-0.1413	-0.0615	Тверской государственный медицинский университет Минздрава России	Тверская область	1055.68	566.43	928	372	390
-0.0287	0.0232	Тверской государственный технический университет	Тверская область	785.75	346.49	2175	366	361

LIST OF UNIVERSITIES ARRANGED BY REGION AND INSTITUTION NAME

social returns	private returns	Name of College	Region	Total Revenue (in million Rubles)	Total Paid Fees (in million Rubles)	Salary 2014 (in thousands Rubles)	Salary 2015 (in thousands Rubles)	Salary 2016 (in thousands Rubles)
-0.0573	0.0377	Тверской государственный университет	Тверская область	1283.55	478.67	1817	427	420
		Национальный исследовательский Томский						
-0.2054	-0.0788	государственный университет	Томская область	4991.12	1797.93	3177	366	378
		Национальный исследовательский Томский						
-0.1637	-0.0044	политехнический университет	Томская область	7609.33	2675.35	3406	545	570
		Сибирский государственный медицинский						
-0.3032	-0.167	университет Минздрава России	Томская область	2017.65	820.98	630	338	409
		Томский государственный архитектурно-						
-0.0943	-0.0031	строительный университет	Томская область	1087.07	376.43	1485	396	385
		Томский государственный педагогический						
-0.1134	-0.0511	университет	Томская область	721	215.31	1788	297	298
		Томский государственный университет систем						
-0.1149	-0.0229	управления и радиоэлектроники	Томская область	2060.72	1078.78	1363	508	530
		Тульский государственный педагогический						
-0.1236	-0.0329	университет им. Л. Н. Толстого	Тульская область	702.41	262.14	1005	324	331
-0.0586	0.0298	Тульский государственный университет	Тульская область	2104.31	786.19	3331	371	392
		Тюменский государственный институт культуры	Тюменская область	319.49	172.75	483	369	385
		Тюменский государственный медицинский						
-0.0952	-0.044	университет Минздрава России	Тюменская область	972.42	450.87	1252	573	565
-0.0546	-0.0381	Тюменский государственный университет	Тюменская область	3191.47	2376.06	6608	579	578
0.0456	0.0688	Тюменский индустриальный университет	Тюменская область	4183.96	3062.24	6655	892	858
		Ульяновская государственная						
		сельскохозяйственная академия						
-0.032	-0.0043	имени П. А. Столыпина	Ульяновская область	283.6	123.24	1898	263	269
		Ульяновский государственный педагогический						
-0.146	-0.0215	университет имени И. Н. Ульянова	Ульяновская область	595.38	79.58	1039	255	256
		Ульяновский государственный технический						
-0.0187	0.0374	университет	Ульяновская область	559.91	203.37	1917	307	335
		О Ульяновский государственный университет	Ульяновская область	1511.99	793.52	3744	314	320
		Магнитогорский государственный технический						
-0.2448	-0.1769	университет им. Г. И. Носова	Челябинская область	2017.76	625.3	1640	407	421
		Уральский государственный университет						
-0.2164	-0.156	физической культуры	Челябинская область	651.59	231.47	587	430	544
		Челябинский государственный институт						
-0.2573	-0.2308	культуры	Челябинская область	479.03	123.94	1287	305	299
		Южно-Уральский государственный гуманитарно-						
-0.2549	-0.2411	педагогический университет	Челябинская область	863.69	392.87	3327	285	289
		Южно-Уральский государственный						
-0.2335	-0.1815	медицинский университет Минздрава России	Челябинская область	1820.31	826.78	1474	407	454
		Южно-Уральский государственный университет						
-0.2516	-0.2062	(национальный исследовательский университет)	Челябинская область	4360.44	1308.39	5913	337	345
		Забайкальский государственный университет	Забайкальский край	1432.49	428.05	3439	369	378
-0.0473	0.0221	Забайкальский государственный университет	Забайкальский край	1432.49	428.05	3439	369	378
		Читинская государственная медицинская						
-0.1059	-0.0264	академия Минздрава России	Забайкальский край	854.3	450.05	779	432	454
		Рыбинский государственный авиационный						
-0.0387	0.0526	технический университет имени П. А. Соловьева	Ярославская область	437.61	161.66	827	347	355
		Ярославская государственная						
-0.0399	0.0478	сельскохозяйственная академия	Ярославская область	214.19	43.22	621	287	301
		Ярославский государственный медицинский						
-0.0291	0.0821	университет Минздрава России	Ярославская область	646.63	207.4	1050	366	398
		Ярославский государственный педагогический						
-0.0577	0.0233	университет им. К. Д. Ушинского	Ярославская область	672.81	277.6	1321	335	328
		Ярославский государственный технический						
-0.0573	0.0616	университет	Ярославская область	624.65	161.27	1060	342	346

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-0.0434	0.0608	Ярославский государственный университет им. П. Г. Демидова	Ярославская область	869.3	309.76	1382	360	369
-0.1935	-0.0028	Академия Государственной противопожарной службы МЧС России	Москва	1733.41	117.97	856	545	617
-0.0451	0.0384	Всероссийская академия внешней торговли Минэкономразвития России	Москва	1016.59	551.6	487	947	1044
-0.2169	-0.0366	Всероссийский государственный институт кинематографии имени С. А. Герасимова	Москва	979.6	251.77	264	658	695
-0.177	-0.1486	Всероссийский государственный университет юстиции (РПА Минюста России)	Москва	1400.48	1162.78	490	822	694
-0.0843	-0.022	Государственный университет по землеустройству	Москва	758.58	283.35	971	572	595
-0.0102	0.0154	Государственный университет управления	Москва	1706.78	1218.88	2455	713	739
-0.1042	0.0141	Московская академия рынка труда и информационных технологий	Москва	197.47	1.43	224	555	561
-0.2239	-0.1546	Московская государственная академия ветеринарной медицины и биотехнологии – МВА имени К.И.Скрябина	Москва	793.89	335.74	631	376	398
-0.3022	-0.1015	Московская государственная художественно-промышленная академия им. С. Г. Строганова	Москва	737.23	135.74	196	449	683
-0.1241	-0.0001	Московский авиационный институт (национальный исследовательский университет)	Москва	5567.11	2001.14	2505	758	787
-0.1322	-0.0508	Московский автомобильно-дорожный государственный технический университет (МАДИ)	Москва	2574.91	1202.44	1605	653	644
-0.1271	-0.0791	Московский архитектурный институт (государственная академия)	Москва	881.94	540.98	709	583	598
-0.0839	-0.0541	Московский городской педагогический университет	Москва	2680.75	1835.97	3354	602	595
-0.1338	0.0139	Московский городской университет управления Правительства Москвы	Москва	776.93	225.7	324	730	850
-0.2461	-0.1258	Московский государственный академический художественный институт имени В. И. Сурикова при Российской академии художеств	Москва	225.03	70.65	103	499	431
-0.1173	-0.0752	Московский государственный институт международных отношений (университет) МИД России	Москва	3445.35	2630.61	1226	877	940
-0.1226	-0.0129	Московский государственный лингвистический университет	Москва	1682.88	515.22	1101	613	671
-0.1845	-0.1141	Московский государственный медико-стоматологический университет имени А. И. Евдокимова Минздрава России	Москва	3259.15	1521.84	2354	487	492
-0.1282	-0.0347	Московский государственный психолого-педагогический университет	Москва	1386.26	428.26	1150	595	581
-0.2312	-0.091	Московский государственный технический университет гражданской авиации	Москва	2018.92	810.08	469	786	779
-0.1895	-0.1288	Московский государственный технологический университет «СТАНКИН»	Москва	1823.7	1192.77	639	652	709
-0.125	-0.0244	Московский государственный университет геодезии и картографии	Москва	1003.35	324.15	716	619	621
-0.1018	-0.0991	Московский государственный университет технологий и управления имени К. Г. Разумовского (Первый казачий университет)	Москва	2087.46	1955.2	6575	442	438
-0.0107	0.0064	Московский государственный юридический университет имени О. Е. Кутафина (МГЮА)	Москва	1923.24	1649.41	1683	820	866
-0.0681	-0.014	Московский гуманитарно-экономический институт	Москва	528.99	54.02	1343	549	524
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LIST OF UNIVERSITIES ARRANGED BY REGION AND INSTITUTION NAME								
social returns	private returns	Name of College	Region	Total Revenue (in million Rubles)	Total Paid Fees (in million Rubles)	Salary 2014 (in thousands Rubles)	Salary 2015 (in thousands Rubles)	Salary 2016 (in thousands Rubles)
		Московский институт экономики, политики и права	Москва	152.84	59.93	341	659	679
-0.0097	0.0312	Московский политехнический университет	Москва	4240.78	1754.28	6095	467	472
		Московский технический университет связи и информатики	Москва	1465.47	849.16	937	756	736
-0.1326	-0.082	Московский технологический университет	Москва	3741.47	1423.89	1069	679	728
		Московский физико-технический институт (государственный университет)	Москва	5242.4	1557.37	1024	845	1033
		Национальный исследовательский Московский государственный строительный университет	Москва	3937	2153.77	3224	677	664
-0.0898	-0.0311	Национальный исследовательский технологический университет «МИСиС»	Москва	6407.02	1860.2	1394	571	575
		Национальный исследовательский университет «МЭИ»	Москва	4292.69	2263.38	2522	661	691
		Национальный исследовательский университет «Московский институт электронной техники»	Москва	2617.66	1495.41	1198	602	651
-0.1638	-0.0933	Национальный исследовательский ядерный университет «МИФИ»	Москва	7990.19	3123.83	1504	775	886
		Российская государственная академия интеллектуальной собственности	Москва	144.75	115.15	196	704	706
		Российский государственный аграрный университет – МСХА имени К. А. Тимирязева	Москва	3174.53	1139.43	4216	536	535
		Российский государственный геологоразведочный университет имени Серго Орджоникидзе	Москва	627.55	168.27	458	676	674
-0.1051	0.0072	Российский государственный гуманитарный университет	Москва	2775.81	1898.5	6176	521	520
		Российский государственный социальный университет	Москва	3349.46	1423.73	3433	574	580
		Российский государственный университет им. А. Н. Косыгина (Технологии. Дизайн. Искусство)	Москва	1228.71	464.39	1459	503	498
-0.1268	-0.064	Российский государственный университет правосудия	Москва	2172.42	1595.29	527	732	770
		Российский государственный университет физической культуры, спорта, молодежи и туризма	Москва	2759.32	409.78	1140	814	794
		Российский национальный исследовательский медицинский университет имени Н. И. Пирогова	Москва	5036.02	1518.81	1165	477	616
-0.2958	-0.1346	Минздрава России	Москва	2039.33	607.25	665	584	608
		Российский химико-технологический университет имени Д. И. Менделеева	Москва	6704.51	2414.03	5443	775	792
		Российский экономический университет имени Г. В. Плеханова	Москва	1995.21	722.2	1541	505	503
-0.0425	0.0495	Государственный университет морского и речного флота имени адмирала С.О.Макарова	Санкт-Петербург	1639.94	640.78	2226	378	388
-0.0803	0.0637	Ленинградский государственный университет имени А. С. Пушкина	Санкт-Петербург	3249.48	2611.22	1893	599	606
		Петербургский государственный университет путей сообщения Императора Александра I	Санкт-Петербург	677.18	274.46	562	419	413
-0.1216	0.0002	Российский государственный гидрометеорологический университет	Санкт-Петербург	347.68	65.5	241	482	552
		Российский государственный институт сценических искусств	Санкт-Петербург	2670.81	943.9	3389	430	426
-0.0928	0.1222	Российский государственный педагогический университет им. А. И. Герцена	Санкт-Петербург	135				
-0.0499	0.0633							

LIST OF UNIVERSITIES ARRANGED BY REGION AND INSTITUTION NAME								
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-0.1821	-0.0352	Санкт-Петербургская государственная академия ветеринарной медицины	Санкт-Петербург	351.29	95.93	311	320	317
-0.2081	0.1293	Санкт-Петербургская государственная консерватория имени Н. А. Римского-Корсакова	Санкт-Петербург	719.95	115.71	180	762	727
-0.1136	0.0491	Санкт-Петербургская государственная химико-фармацевтическая академия Минздрава России	Санкт-Петербург	677.17	249.87	360	545	569
-0.2402	-0.0527	Санкт-Петербургская государственная художественно-промышленная академия имени А. Л. Штиглица	Санкт-Петербург	431.19	115.41	221	392	325
-0.0742	0.021	Санкт-Петербургский горный университет	Санкт-Петербург	4223.67	2237.83	3419	506	506
-0.0141	0.068	Санкт-Петербургский государственный аграрный университет	Санкт-Петербург	803.34	305.6	1591	407	397
-0.21	-0.0581	Санкт-Петербургский государственный академический институт живописи, скульптуры и архитектуры имени И. Е. Репина при Российской академии художеств	Санкт-Петербург	435.91	163.38	214	364	479
-0.1435	-0.0202	Санкт-Петербургский государственный архитектурно-строительный университет	Санкт-Петербург	2089.14	965.27	1206	482	480
-0.0559	0.0576	Санкт-Петербургский государственный институт кино и телевидения	Санкт-Петербург	900.94	339.3	1050	440	439
-0.0055	0.0612	Санкт-Петербургский государственный институт культуры	Санкт-Петербург	935.23	362.54	2402	355	398
-0.0411	-0.0054	Санкт-Петербургский государственный институт психологии и социальной работы	Санкт-Петербург	150.22	101.52	326	329	352
-0.0522	0.0395	Санкт-Петербургский государственный лесотехнический университет имени С. М. Кирова	Санкт-Петербург	984.79	420.79	1368	405	412
-0.2118	-0.0307	Санкт-Петербургский государственный педиатрический медицинский университет Минздрава России	Санкт-Петербург	2862.81	1026.48	951	530	539
-0.0903	0.0146	Санкт-Петербургский государственный технологический институт (технический университет)	Санкт-Петербург	1135.39	555.87	893	474	477
-0.0277	0.0638	Санкт-Петербургский государственный университет аэрокосмического приборостроения	Санкт-Петербург	1992.73	966.42	2287	464	496
-0.102	-0.0441	Санкт-Петербургский государственный университет промышленных технологий и дизайна	Санкт-Петербург	1445.76	914.32	1680	389	354
-0.0287	0.0759	Санкт-Петербургский государственный университет телекоммуникаций им. проф. М. А. Бонч-Бруевича	Санкт-Петербург	1055.71	455.39	1183	469	495
-0.0896	0.05	Санкт-Петербургский государственный электротехнический университет «ЛЭТИ» им. В. И. Ульянова (Ленина)»	Санкт-Петербург	2378.03	947.33	1574	489	531
-0.1049	0.0507	Санкт-Петербургский национальный исследовательский университет информационных технологий, механики и оптики	Санкт-Петербург	4548.37	1651.21	2724	476	544
-0.0592	0.0629	Санкт-Петербургский политехнический университет Петра Великого	Санкт-Петербург	8184.73	3521.72	6656	516	531
-0.3219	-0.1769	Северо-Западный государственный медицинский университет имени И. И. Мечникова Минздрава России	Санкт-Петербург	4976.04	2229.93	949	484	529
-0.092	0.0485	Приамурский государственный университет имени Шолом-Алейхема	Еврейская автономная область	350.19	75.94	451	380	363
-0.0759	0.0124	Ханты-Мансийский автономный округ Нижневартовский государственный университет Югра		699.53	396.74	558	506	508
								503

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-0.1294	0.1821	Сургутский государственный педагогический университет	Ханты-Мансийский автономный округ Югра	910.19	97.91	446	612	565
-0.0284	-0.0267	Кемеровский государственный сельскохозяйственный институт	Кемеровская область	27.18	21	970	322	338
-0.187	-0.1063	Кемеровский технологический институт пищевой промышленности (университет)	Кемеровская область	791.79	236.9	1152	278	278
-0.0608	-0.0545	Нижегородская государственная сельскохозяйственная академия	Нижегородская область	24.66	7.18	707	294	289
-0.0492	-0.0432	Новосибирский государственный университет экономики и управления «НИНХ»	Новосибирская область	726.38	647.06	2790	367	363
-0.0959	-0.0247	Российский государственный университет нефти и газа (национальный исследовательский университет) имени И. М. Губкина	Москва	4494.97	3095.64	1386	907	984
-0.1251	-0.0812	Удмуртский государственный университет	Удмуртская Республика	1972.2	913.81	4596	303	310
								317