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SPECIALISTS IN MODERN RUSSIA: SOCIO-DEMOGRAPHIC COMPOSITION AND MAIN PROBLEMS[1]

Abstract. The aim of this article is to identify the main trends in the evolution of the socio-demographic composition of such a group as Russia's most highly qualified specialists, and to define the problems that ensue for the development of Russian society overall. The representative version of the 27th wave of the RLMS-HSE serves as the empirical foundation for this study. It is shown in the article that in Russia there are such socio-demographic features inherent to the specialists group as gender asymmetry with increasing feminization, an increasing lean towards relatively young ages (under 40), and its members being concentrated primarily in the capital cities and in regional centers. Other features of this group include – exceptional diversity in terms of its members' qualification level, as well as a drastic disparity in their level of income, especially in the larger cities. These peculiarities are proven to be a product of complexly intertwined inequalities of various types, and of an ever increasing imbalance between the number of people with higher education and the number of job opportunities provided to them by the Russian economy. As a result, though the former value currently exceeds the latter by nearly 50%, over one fifth of workers in those job positions do not have a college degree, while even those who do are generally of a rather low grade in terms of their professional training. You also have a simultaneous rapid increase in the number of unemployed people with higher education. The article concludes that structural imbalances – which manifest in overproduction of college graduates and in an outrageously huge gap between specialists in how much they earn, as well as in their college education specialties not corresponding with available lucrative job opportunities – have led to the modern Russian labor market developing a "skills mismatch" situation, and to deeper differentiation among specialists. The current situation not only directly affects the prospects for successful development of the Russian economy – it also warrants making adjustments to state social policy.

Keywords: professionals; highly qualified specialists; professional structure; professional classes.

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Today Russia is facing a daunting challenge: we must either make a monumental technological breakthrough in a time of economic crisis, making for a new "window of opportunity", or relinquish our independence given the ever increasing technological gap between our nation and other countries of the world. Our country's leadership is trying to figure out how to respond to the challenge. How successful this response turns out to be – that depends, among other things, on where the situation is heading when it comes to such a vital resource as personnel.

One of the professional groups that mean the most for the country's future is the highly qualified specialists group. Internationally they've always been labeled as "professionals", as opposed to "semi-professionals"[2] and other workers whose occupation is not linked to a lengthy (three years or more) period of training – in the latter's case their specialization is usually referred to not as a "profession", but as an "occupation"[3]. In Russia this group is usually referred to as "specialists of highest qualification" as opposed to "specialists of average qualification" and other professional groups. However, despite Russian researchers being truly fascinated with professionals, to this day there is still no unanimity when it comes to who can be

[1] The study was conducted with support from the Russian Science Foundation (Project No. 19-29-07172).

[2] The most popular subgroups of semi-professionals in Russia include sales reps, nurses, production mechanics etc.

[3] Those who partake in non-physical labor and whose specialization is seen as an occupation rather than a profession most often include workers who arrange loading and shipping of goods, postal workers, secretaries, data entry workers etc. Also the category of people with an occupation but with no profession typically includes physical laborers, as well as supporting staff at trade and consumer service enterprises.

attributed to this group. It is up for discussion whether belonging to it necessarily demands that one have a college degree, or whether any tertiary education would suffice; can those jobs be included that used to require a college degree but no longer do, and so on.

This ambiguity is in part due to research goals differing from one field of science to the next when it comes to analyzing this group, and so consequently its very definition is instilled with different content. Moreover, its interpretation can vary even among sociologists. Sociologists specializing in economics, when outlining the group, tend to rely on and take for granted the existing classifications of occupations and professions. Meanwhile experts in the study of social structure, when speaking of professionals, look for a group that assumes median positions (thanks to the prestige of their qualification level and the nature of their work) in various status hierarchies, one that might not be completely inline with the group as defined based on various classifications[4].

It is the latter approach, which is relatively unpopular in Russia, we use in this article. It begins with a short overview of the main traditions in studying professionals as a unique social group. Then we consider whether all professionals who fall under the category based on ISCO-08 criteria can be considered such, in other words can they be considered members of a group that occupies median positions in the qualification and other status hierarchies. The bulk of the article is dedicated to analyzing the specifics of the socio-demographic composition of such a group as Russia's most highly qualified specialists, to identifying the main tendencies in how it's evolving, and to defining the problems that sprout from said tendencies.

Theoretical and methodological premise of analysis

There is plenty of both foreign and Russian literature dedicated to analyzing the specialists group[5], which mostly deals with a few narratives. First of all, we are referring to studies that examine changes in the composition and in the role highly trained professionals play in concepts of a technocratic, postindustrial or informational society [3; 4; 6; 17 et al.]. It was these particular works that changed the way people related to this group, with them gaining the most international acclaim. These types of studies are virtually nonexistent in Russia, though the narrative on the role played by knowledge in a postindustrial economy is incredibly popular.

The second course is represented by studies conducted in the field of sociology of professions, which are equally popular internationally [24, 26 et al.] and in Russia [13; 20 et al.]. Individual professional groups (doctors, engineers and so on) are what they usually subject to research. The epicenter for studying this subject matter is a team led by V. Mansurov, whose studies comprehensively review the specifics of the professional structure of Russian society as a whole and its separate elements [8; 11 et al.].

The third vector involves studying the correlation between workers' education level and what their jobs require of them. Usually such analysis is conducted within the context of analyzing subject matter related to educational policy, labor relations, human resource management etc. Although specialists as a specific professional group are not the main subject in this field (that would be quality of human capital and its connection to certain types of employment), but it does contain a considerable amount of factual material pertaining, among other things, to specialists [10; 14 et al.].

Finally there is a fourth major vector in the analysis of such a group as specialists, and that's studying their overall place in society's stratification structure, and particularly its socio-professional structure. This vector is much more popular in the rest of the world than it is in Russia. The most interesting vectors when it comes to research in this field include viewing knowledge, it being a special form of property, as a class-defining characteristics, which since the 1990's has been something inherent to both Neo-Marxists [27] and Neo-Weberians [21]. Such an approach involves selecting groups that possess features capable of generating a certain profit. Other interesting studies include those based on research by D. Grusky and his colleagues, in which they demonstrated that the differences between subgroups of professionals in developed countries are already deeper than the disparities between classes, suggesting based on the fact to withhold from analyzing large professional classes [22] in favor of analyzing their separate subgroups, which differ in terms of their historic background. A third promising vector is represented by studies that stem from G. Standing's work

[4] By which we mean various international professional status classifications (International Standard Classification of Occupations — ISCO; Standard Industrial Classification of All Economic Activities — ISIC; International Classification of Status in Employment — ICSE et al.), as well as regional and national classifications (Socio-economic Classification for Europe (EsEC); Russia's Classification of Activities (OKZ); National Statistics Socio-Economic Classification (NS-SEC) et al.).

[5] From here on out, when speaking of specialists, we will be referring only to specialists of the highest qualification, this being the Russian terminological counterpart to the term "professionals".

[25], dedicated to issues associated with such a new class as the precariat, belonging to which is turning out to be more important than a college degree or professional status. These studies have also demonstrated the deep internal differentiation among professionals, as well as the fact that in the modern world one needs other assets aside from knowledge in order to achieve stable footing on the labor market. In particular, such assets include an individual's physiological capacity, which to a significant extent is defined by their socio-demographic characteristics (primarily age and gender).

In Russia, out of these fields of research on stratification, the third one is most prevalent, that registers the precarization of a proportion of professionals, with the process spreading all across the board, i.e. over Russia's entire working population [5; 16 et al.]. Speaking of studying other characteristics of specialists within a structural approach context, first of all we need to mention the works of O. Shkaratan and his colleagues, which are dedicated, among other things, to studying the role of the Russian core middle class [7]. V. Anikin [1; 2] examined the criteria of inclusion into professional groups, as well as their place in the socio-professional structure of societies of various types. On multiple occasions the heterogeneity of this group has been subject to study from the perspective of the quality of the main asset its members have at their disposal, namely knowledge and skills [14; 15 et al.]. However the specifics of the socio-demographic composition of Russian professionals, as well as the direction in which they're evolving, have yet to be subject to analysis. And they are quite peculiar, as we will soon demonstrate, presenting not only a serious challenge when it comes to state policy, but also influencing the evolutionary path of Russian society's overall social structure.

Empirical groundwork for research and procedure for recoding ISCO classifier

The empirical groundwork for the study consists of the representative version of the 27th wave of the RLMS–HSE[6], where a survey was conducted between October of 2018 and January 2019. Of the 9857 respondents over the age of 18 included in this survey wave, 5045 were employed. Among them 864 people, or 17.2% of those employed, fell under the "specialist" category, according to the version of the International Standard Classification of Occupations (ISCO)[7] used for this array. However 24.1% of people in this group did not have a college degree, and for 22.8% of people their education spanned a period of less than 15 years (table. 1). Furthermore, this group also included folks with such professional statuses that in Russia do not require higher education at all (judging by the fact that 60-80% of those holding the corresponding job positions didn't even go to college). These include kindergarten teachers, senior nurses, ensigns etc. At the same time other professional classes included such jobs that in Russia require a higher education at the standard level demanded by the corresponding positions. These include marine vessel engineers, dealers and brokers, accountants, tax office employees and so on, of which 60 to 100% from the RLMS-HSE array for 2018 did receive higher education, though it wasn't necessarily implied by the ISCO. Moreover, this was sometimes even the situation with certain jobs in public service and commerce. Those include, for example, tour guides, proofreaders, commodity experts, police officers etc.

Such a situation, though paradoxical it may seem from a stratification approach perspective, is caused by the fact that the labor market and education system in different countries bear their own specific nature. For example, in the Russian Classification of Activities (OKZ) – which, according to the Federal State Statistics Service (FSSS RF), is essentially a version of the ISCO, but adapted for use in Russia – specialists of the highest qualification, based on their level of education, now include all people with any sort of tertiary education, including short (typically two-year) cycles of tertiary education at vocational schools, so not just those who have a bachelor's or master's degree, or internship experience. Meanwhile, from a stratification approach perspective, tertiary education can not always be considered a criterion for those who have it to assume a median position in the qualification status hierarchy, given that it characterizes over half of the

[6] The Russian Longitudinal Monitoring Survey of the economic and health situation in Russia (RLMS-HSE) is conducted by the "Higher School of Economics" National scientific research university and by "Demoscope" LLC in association with the Carolina Population Center at the University of North Carolina and the Institute of Sociology at the FSRSC of the RAN (here is the RLMS-HSE website: URL: http://www.hse.ru/rlms). The 27th wave survey was conducted between October of 2018 and January of 2019.

[7] Selection of professional classes by the ISCO is based on a matrix of features, which, on the one hand, takes into account a *set of activity types*, in which tasks and responsibilities are highly similar, and on the other – *education level*, which provides the capacity to fulfill the tasks and responsibilities inherent to these types of activity. For more information see: ISCO URL: https://www.hse.ru/rlms/rlms/classif/isco and [23]. In total the ISCO recognizes 10 classes, each having its own name and number designation, based on which professionals are designated as class number 2.

country's adult population and therefore cannot be viewed as prestigious. The same can be said of the property status hierarchy, since in Russia the vast majority of the population can only reap additional benefits from possessing higher education [15 et al.]. Also job positions associated with having a college degree tend to be considered more prestigious than those that don't, which is something that also needs to be considered when conducting analysis within the stratification approach.

Table 1

Education profile of respondents from certain professional classes, ISCO-08, RLMS–HSE, 2018, *%*

Educational parameters	1 class (senior and middle management)	2 class (professionals)	3 class (semi-professionals)	4 class (office clerks and customer service personnel)	5 class (workers in the goods and service sector)	*Russia's working population overall*
Degree of highest level of education received						
Higher education and postgraduate studies	66,4	75,9	44,9	31,3	17,5	*34,3*
Vocational training	16,0	17,8	34,7	29,0	27,9	*24,7*
General secondary, primary professional education et al.	17,6	6,3	20,4	39,7	54,6	*41,0*
Span of training						
Over 15 years	67,6	77,2	50,6	37,5	21,9	*10,4*
13-14 years	13,3	13,0	23,5	21,6	23,5	*18,4*
Less than 13 years	19,1	9,8	25,9	40,9	54,6	*71,2*

To better suit our purposes, we corrected the composition of the "specialists" group, and as a result it now includes only those in job positions that generally (in over 60% of cases) involve having a college degree. Meanwhile respondents from the second class who work in positions that in Russia do not demand a college degree, regardless of their actual education level, were included into the semi-professional ranks (ISCO class 3).

The second vital criterion for studying socio-professional structure is one's place in the power status hierarchy, which is closely linked to the specifics of one's job (whether they carry out executive duties or follow orders). Analyzing from this perspective the respondents who were encoded in the 27th RLMS-HSE wave array as specialists showed that 8.1% of them managed a staff of over five people, which means that their labor activity was predominantly associated with executive duties as opposed to following orders, despite them being low-ranking and not senior or middle management. On the other hand, 31.2% of all respondents who were initially identified within the array as managers had five subordinates or less (including 7.4% who had none at all). It seems appropriate to have recoded specialists with more than five subordinates into managers, while managers with higher education and less than five subordinates were recoded into specialists.

After making these corrections, the number of specialists – this being a group that finds itself in an average position in the integral status hierarchy due to their job positions demanding a high level of education but not implying predominant leadership duties – amounted to 1046 people, or 20.7% of all workers, in the unused data set. The correlation between the original professional classes and those generated by the recoding[8] on the RLMS-HSE data set for 2018 is shown in table 2.

[8] To make things more convenient, the designations for some of the professional classes post correction have been cut out based on how much of the used data set they actually constitute.

Table 2

Correlation between professional classes before and after correction of respondents' professional statuses, RLMS–HSE, 2018, *%*[9]

Professional classes before correction	Professional classes after correction								
	1 class (managers of all levels)	2 class (profes-sionals)	3 class (semi-professionals)	4 class (clerks)	5 class (workers in the goods and service sector)	7 class (qualified manual laborers)	8 class (qualified workers who use machinery)	9 class (unqualified workers in all fields)	*On average in the array*
1 class (managers of all levels)	**44,4**	7,1	3,6	3,8	0,7	0	0	0	*6,4*
2 class (professionals)	15,0	**66,6**	11,9	0	0	0	0	0	*17,2*
3 class (semi-professionals)	29,9	26,3	**75,7**	0	0	0	0	0	*20,7*
4 class (office clerks and customer service personnel)	3,2	0	5,1	**96,2**	0	0	0	0	*5,1*
5 class (workers in the goods and service sector)	4,3	0	3,7	0	**99,3**	0	0	0	*18,1*
7 class (qualified manual laborers)	1,7	0	0	0	0	**100,0**	0	0	*12,3*
8 class (qualified workers who use machinery)	1,5	0	0	0	0	0	**100,0**	0	*12,6*
9 class (unqualified workers in all fields)	0	0	0	0	0	0	0	**100,0**	*7,6*
On average in the array	*9,3*	*20,7*	*16,5*	*4,2*	*17,1*	*12,2*	*12,4*	*7,6*	*100,0*

[9] Bold font used to highlight those positions that reflect belonging to one professional class or another in both versions of the classification used. Considering the small number of military servicemen (3 people) and qualified workers in agriculture and forestry (8 people) contained in the array, we decided not to distinguish them as separate groups, instead including those among them who received a higher education into the "specialists" group.

When comparing groups of specialists before and after the corrections, it is clear that there are some serious problems in Russia, associated with an accumulated imbalance between education level and type of activity among workers. For example, after the fact 26.3% of specialists were converted into workers for whom, according to the original ISCO standards, an average level of qualification should've been the norm. However in Russia the demands towards people employed in those respective fields consistently exceed the level of secondary specialized education. On the other hand, before and after corrections a significant portion (albeit reduced by almost 10 percentage points in relative terms) of those holding positions associated with a college degree did not have one, and an almost identical number of people spent less than 15 years receiving their education, and it should be said that both groups are separated by almost 25% in terms of the composition of their members. Meanwhile, according to baseline ISCO logic [23, p. 13], a specialist can only be allowed to not have higher education as an exception – when speaking of specialists in creative trades and of highly qualified and vastly experienced workers with tertiary education. It's highly doubtful that the overall amount of such exceptions can exceed one fifth of all the country's specialists, as is currently the case in Russia.

Specialists: age categories

In order to outline the socio-demographic specifics of specialists as a group, we'll start by looking into a description of their age composition based on data from that version of the ISCO-08 used by the FSSS RF. Most often these are people ages 30-39 (fig. 1), and bear in mind that since 2001 the proportion of this age cohort among specialists has increased from 26.3% (calculated based on [18, table 2.22[10]]) to 31.0% [12, p. 77]. During the same period, the proportion of specialists under the age of 30 has also grown slightly (from 20.5 to 21.8%), that's given an overall decline in the proportion of youth in the workforce during the 2010's due to the "demographic echo" of the 1990's. Meanwhile figure 1 shows us that this isn't the most numerous of the professional groups (with that honor going to the sphere of commerce).

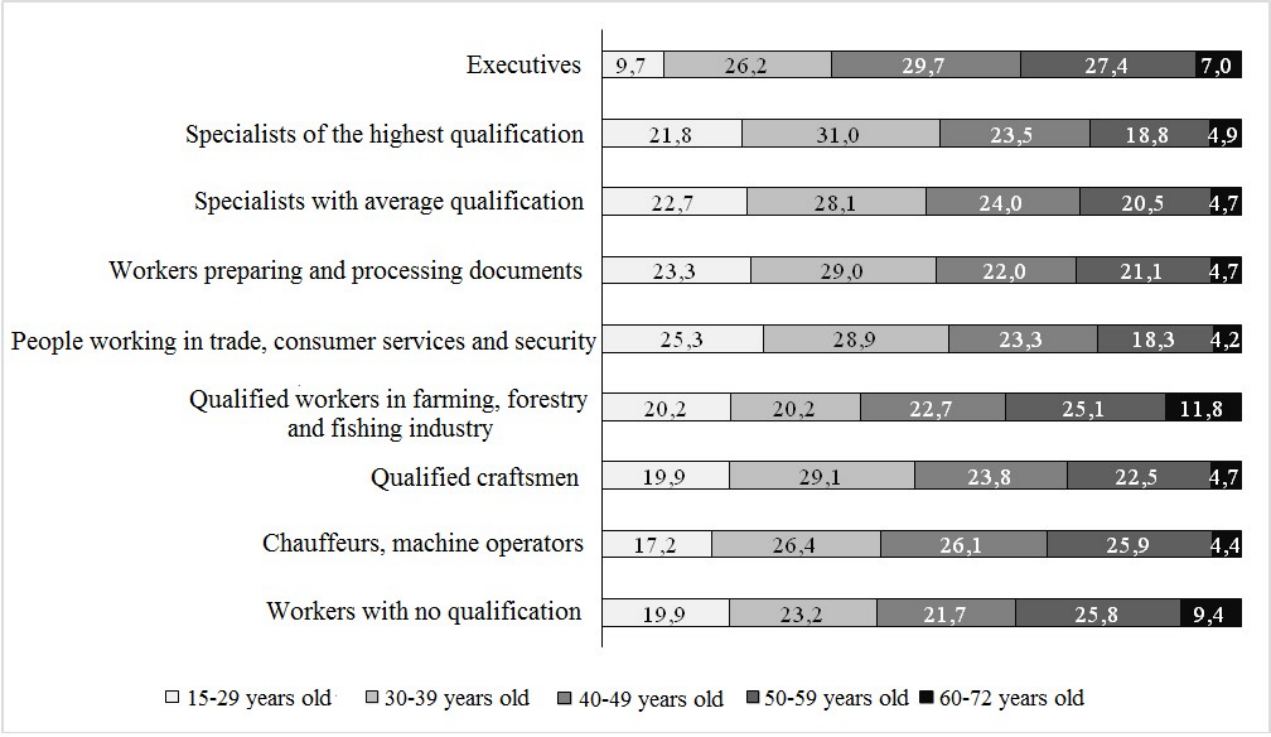

Fig. 1. Age structure of various professional groups in Russia, FSSS RF, 2017, *%*[11]

However, though Russian specialists are quite young for the most part, and growing even younger as a group, we see substantial imbalances in its age structure when comparing different sectors. The gap in average age between specialists from different sectors can reach up to 10 years: for example, in the IT sphere that figure is 33.8 years of age, while in healthcare it is exactly 43 [12, p. 74]. This is in part why in healthcare

[10] Table 2.22's address on the FSSS RF website — URL: https://rosstat.gov.ru/bgd/regl/B02_61/IssWWW.exe/Stg/d010/i010330r.htm (inquiry sent on August 13th 2020).
[11] Data cited from: [12, c. 76-77].

we see the highest proportion (96.9%) of those who find a job in their field of expertise after receiving specialized education. For Russia this is almost a unique situation, considering the fact that almost 30% of college graduates majoring in other fields immediately seek jobs that have nothing to do with their training. The following specialties can be considered sort of record holders: "reproduction and processing of timber resources" (in the year 2017 a mere 51.8% of those who received education in this field found a job in this industry), "farming and fishing industry" (47.8%), "information security" (46.4%), specialties in the field of natural (46.1%) and social (45.3%) sciences, as well as "metallurgy, mechanical engineering and processing of materials" (44.7%) [12, p. 86].

These data already indicate at least two problems inherent to specialists as a group. The first one is substantial and constantly increasing age asymmetry, especially in individual subgroups, the second – it being common for one's job to be disconnected from their training background, with the scale of this problem varying drastically from one educational field to the next. And if the first issue as of today – in certain forms and to a certain degree (since asymmetry can mean a bias in either direction – towards young or old age) – is inherent to most professional classes in Russia, the second one is more specific to professionals as a group, where having the appropriate education is especially critical.

Further analysis of specialists as a group that occupies median positions in the stratification hierarchy (in other words – a group compiled based on correcting the association criteria compared to the initial definition of professional status) allowed for clarifying and expanding on the overall picture, at least to a certain extent. For example, it turned out that since 2001 the proportion of under 40 year old cohorts among specialists (as they are represented in the given context) hasn't changed and still amounts to 46.9%. This speaks to the fact that elder generations are consistently able to hold on to job positions that demand the highest possible qualification, which are also more difficult to attain for the youth. Meanwhile a large proportion of young people with higher education are forced to seek job positions that originally never required a college degree, but are relatively close in their nature and prestige. As a result it becomes normal for these job positions to require higher education, which is something that became apparent while we were conducting the aforementioned specialist group correction process. Moreover, young people with higher education are seeking jobs that never used to require a college degree – 25.9% of young Russians under the age of 30 with higher education reside in professional classes 4-9. The figure for Russians ages 50-59, whose position on the labor market is also unstable, is 32.2%, while for other age cohorts the numbers are much lower (14.8-18.5%)[12].

The data also indicate that specialists' association with any given age cohort considerably affect the probability of them having a college degree as their primary gainful asset[13]. Almost 90% of employed specialists ages 30-39 have been through college, but that figure then creeps down to 68.3% for the 50-59 cohort. These two age cohorts also differ in the proportion of people who have jobs in their respective fields of expertise[14] (35.4% for the former and 30.3% for the latter). This is another testament to the fact that work experience might be of greater importance to the elder generations. Meanwhile the fact that less people from the older cohorts have a college degree at all, let alone one that matches their job profile, speaks to their increased vulnerability on the labor market, given that formally speaking they are the least fit for their job positions. Also both the younger and older generations of specialists for the most part find themselves in positions that pay considerably less compared to what middle aged (30-49 years old) professionals receive. According to RLMS-HSE data, in 2018 the median salary amounted to 22 thousand rubles for specialists under the age of 30, and to 25 thousand for those who are 50-59 years old. Meanwhile for 30-39 year old specialists that value was 30 thousand rubles, for 40-49 year olds – 29.5 thousand.[15]

Since the proportion of people receiving higher education consistently grows from one cohort to the next [12, p. 33; 18, table 2.4[16]], young people after graduating are having an increasingly hard time landing a job

[12] From here on out we will only be citing data that bear statistical significance (a Chi-squared test was used at a 95% significance level).

[13] In our array the median average monthly salary among specialists with higher education amounted to 28 thousand rubles, while for those without higher education it was 20 thousand rubles.

[14] In order to evaluate alignment of training with actual job profile, we analyzed the match between the first three digits from the ISCO-08 code for all specialties received in the course of training and the job profile for a specific respondent. Using 3 code digits instead of 4 allowed accounting for a very large group of overlapping specialties. For example the three digit code 214 includes all groups of architects and engineers, as well as food, beverage and fuel engineers, metallurgy experts, cartographers etc.

[15] Figures after taxes and not including income from side jobs.

[16] Table 2.4's address on the FSSS RF website: URL: https://gks.ru/bgd/regl/B02_61/IssWWW.exe/Stg/d010/i010150r.htm (inquiry sent on January 21st 2020.).

that requires a college degree. When people from this group do find such jobs, they more often settle for relatively low salaries (that said, this is inline with the current worldwide trends). Meanwhile they are more inclined to work jobs that don't necessarily require college education, but also don't involve physical labor, with it gradually becoming the new norm for the most appealing of such jobs to actually start requiring college education. As for the elder generations, who also find themselves in an unstable position on the labor market, they are more often forced to move to job positions that don't typically demand college education, or to accept lower pay than that received by middle aged specialists (this goes against what is normal for this group in the rest of the world). From a stratification approach perspective, this means that age is becoming an increasingly influential factor in the differentiation within the specialists group, in how the value is changing for a number of professional positions in their hierarchy, as well as in making it problematic to define one's social standing based on higher education.

An important thing from an economics perspective is the imbalance between education level and profile on the one hand, and the specifics of one's job on the other. These imbalances are yet another sign of there being a "skills mismatch"[17] in Russia (other names for this phenomenon include "personnel gap", "personnel mismatch"), which is a pretty massive issue. According to certain widespread estimates, almost half of the country's economically active population (approximately 34 million people) falls under this category [9]. It should be said that the problem is not so much incongruence of education level and the training required for a certain job as it is a mismatch of training and the work a person actually performs: around two thirds of Russian specialists are employed in a field that is neither corresponding or adjacent to their specialty, which has turned a lack of such congruence into the new norm.

Further development of this trend spells not only a decline in the value of professionalism – which has traditionally been considered one of the basic merits of a specialist, and which inevitably entails shifts in their group identities – but also impairment of their standing when it comes to negotiating with employers, since in a situation when educational profile and qualification continue to lose their meaning, it becomes increasingly easier to replace staff members. Also the number of young people and members of other professional classes who are prepared (at least based on their formal level of education) to assume these positions is continually growing. All of these factors affect the position of specialists as a group in the system of socio-economic inequalities, undercutting the opportunities they're accustomed to for finding a job that involves some form of privilege (autonomy in their work, social benefits etc.).

Specialists: gender dimension

Specialists' position in the system of socio-economic inequalities also has a gender aspect to it, which is partly linked to gender asymmetry when it comes to college education in Russia. In 2017, 38.8% of women had a college degree, with the value being 49.9% for women of ages 25-29. The same figures for men were a mere 29.9% and 35.9%, respectively [12. p. 36]. Moreover, the gender imbalance among working Russians with college education has been growing considerably during the last few decades, according to FSSS RF data (fig. 2).

[17] "Skills mismatch" is a situation when the labor market is entered by workers possessing skills or knowledge that are incongruent with their line of work. "Skills mismatch" as a new trait inherent to the world's labor market was first mentioned in the early 1990's, with it currently being regarded as one of the main problems with the modern labor market.

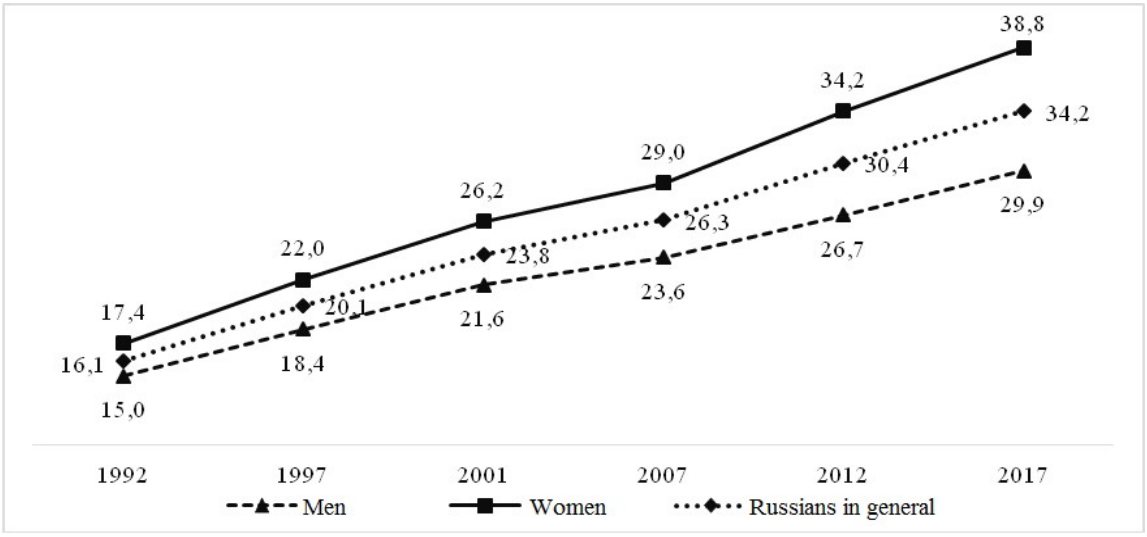

Fig. 2. Dynamics of the proportion of men and women with higher education in the workforce, FSSS RF, 1992-2017, *%*[18]

The gender imbalance was growing especially rapidly during the late 2000's and the early 2010's. In 2007 the number of men with college degrees in relation to women amounted to 0.814, which reached a value of 0.781 in 2012 (fig. 2) (for the 25-29 years old age cohort the number was 0.719). Judging by how the gap is distributed between cohorts, it will only become more severe in the future. This means that the trend towards intensifying competition among women (especially young women) for job positions that demand a college degree will be more noticeable than among men.

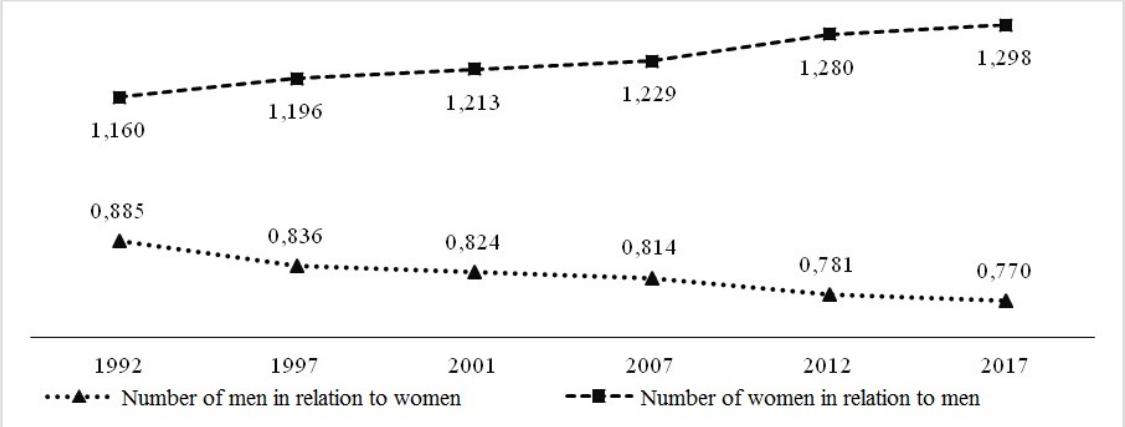

Fig. 3. Dynamics of the ratio between men and women with higher education in the workforce, FSSS RF, 1992-2017, *%*[19]

Given the gender imbalances when it comes to receiving higher education, it's natural that there is a trend towards the feminization of specialists as a group in Russia. For example, in 2002 corresponding job positions were held by 12.9% of men and 21.3% of women (calculated based on: [18, table 2.21[20]]). In 2017 the respective figures were 17.4% and 31.7% (calculated based on: [12, p. 72]). Therefore the discrepancy between men and women holding specialist job positions has grown significantly during the course of those 15 years. And if we were to view specialists as a group that occupies median positions in qualification, property, power and prestige hierarchies, the trend towards its feminization would also be apparent, though to a somewhat lesser extent (the gap between the number of men and women it is comprised of grew by 1.9 percentage points during that period).

[18] Calculated based on: [12, p. 33; 18, table 2.4].
[19] Calculated based on: [12, p. 33; 18, table 2.4].
[20] Table 2.21's address on the FSSS RF website — URL: https://rosstat.gov.ru/bgd/regl/B02_61/IssWWW.exe/Stg/d010/i010320r.htm (inquiry sent on January 21st 2020).

Overall female specialists find themselves in an ever less favorable position on the labor market. For example, they are more often forced to turn to the informal segment of the economy, which provides much less in the way of social security – something that is particularly important for women given their family roles. In 2007 the proportion of women with college education working in unofficial sectors of the economy amounted to 13%, however by 2017 that value increased to 20.5%. The respective figures for men with higher education were 11.4 and 16.3% (calculated based on: [12, p. 93]), meaning that their involvement in unofficial sectors of the economy was increasing at a slower rate compared to women. Moreover, given a rapid growth in the proportion of unemployed Russians with college degrees (from 11.3% in 2007 to 20.6% in 2017), this group is also undergoing feminization: if in 2007 unemployed men with higher education accounted for 9.3% of all unemployed people in the country, then by 2017 that number reached 16.9%, while the respective proportions for women were 13.6% and 24.8% (calculated based on: [12, p. 115]).

One of the main causes of these negative tendencies is a disparity between how many new job positions are created for specialists and how many people are graduating from college. The latter proportion in the workforce in 2017 amounted to 34.2% (and was even as high as 42.4% among 25-29 year olds) [12, p. 33], though in 2001 that value was a mere 23.8% [18, table 2.4]. At the same time the proportion of the job positions meant for specialists was a mere 24.3% in 2017, when in 2001 that figure was 17.1% (calculated based on [18, table 2.21]). In other words, during the last few decades the number of college graduates was growing much more rapidly than the number of job positions for specialists, which naturally led to a rise in unemployment at a rate above the national average among all people with higher education, especially among women, whose position on the labor market is more unstable due to that group's family responsibilities. This also diminished their negotiation power in dealing with employers, and exacerbated gender asymmetry among specialists in terms of their opportunities for securing a job. It's no accident that female specialists, according to RLMS-HSE data for the year 2018, had less job satisfaction compared to men (77.3% compared to 82.4%), plus they weren't as satisfied with work conditions (81.6% as opposed to 77.9%) and payment (42.0% as opposed to 46.1%). Female specialists were more inclined to doubt their prospects for finding a job no worse than their current one if they were to lose the one they had (only 35.4% of women were either confident or somewhat confident that they'd find such a job, when for men that figure was 42.7%). Their salaries would be delayed for longer periods (the median being 4 months compared to 2.5 for men), while the salaries themselves were considerably lower (by median – 24 thousand and 35.7 thousand rubles, respectively). Between 2001 and 2008 the situation for female specialists in many of these aspects deteriorated to a greater extent than it did for men from the same professional group. For example, in 2001 delays in payment were still the same for both men and women.

And so gender asymmetry in specialist employment is growing with time, while female members of this professional group are continuing to lose their footing on the labor market relative to men. This indicates growing influence of the gender factor when it comes to establishing specialists' position in the system of inequalities associated with the labor market.

Specialists: settlement specifics

Another important socio-demographic characteristic of specialists as a social group is their territorial placement. Unfortunately, openly accessible FSSS RF data do not contain any information on the specifics of how specialists are distributed over various settlement types. However, looking at RLMS-HSE data, we see that almost half of all specialists are currently concentrated in the two capital cities and in Russian regional centers. Women have slightly better chances of securing a specialist job position in rural areas, while it's more common to find male specialists in the large cities (table 3). As for people from age groups that find themselves in the shakiest position on the labor market (we're referring to the youth and older age cohorts), they are more broadly represented among specialists in such places where for whatever reason there is a lack of qualified personnel, namely in large cities, with their great demand for workers, and in rural areas, which aren't particularly appealing to highly qualified professionals.

Table 3

Specialists' place of residence, considering their gender composition, RLMS–HSE, 2018, *%*

Settlement type	Groups		
	men	women	*specialists overall*
Moscow, Saint-Petersburg and regional capital cities	56,2	43,8	*46,9*
other cities	27,0	26,7	*26,8*
townships	4,1	6,5	*5,9*
villages	12,7	23,0	*20,4*

Place of residence turns out to be a much more significant differentiating factor for specialists – from the perspective of their training level – than age and gender[21]. For example, given that across Russia a little over three quarters of all specialists have a college degree, the figures vary drastically between different settlement types. In Moscow, Saint-Petersburg and in regional capital cities the proportion of specialists without college education is a mere 16.9%, while in rural areas that number is 38.5%. What makes the situation even more complicated is that rural specialists' education background is more often mismatched with their actual jobs than in the rest of the country. Overall in Russia two thirds (65.8%) of all specialists with higher education held jobs outside of their field of expertise, according to RLMS-HSE data. In the capital cities and regional centers the situation was slightly more favorable (63.2%), while in rural areas education and employment profiles were mismatched in 75.6% of all cases. When accounting for the proportion of people with college degrees, we see that in the capital cities and regional centers 30.6% of all specialists work a job corresponding or adjacent to their specialty, while in villages the number is a mere 15.0%. Meanwhile just around half of all Russian specialists (53.8%) went to college full-time, which is already a rather modest figure. In rural areas that figure drops to 31.0% (for the capital cities and regional centers the number is 62.7%).

If we take into account all of the aforementioned attributes of professional training (having a college degree, it matching one's job profile, education spanning a period of 15 years or more and it being full-time), then the difference in quality between specialists from various settlement types becomes even more apparent (fig. 4).

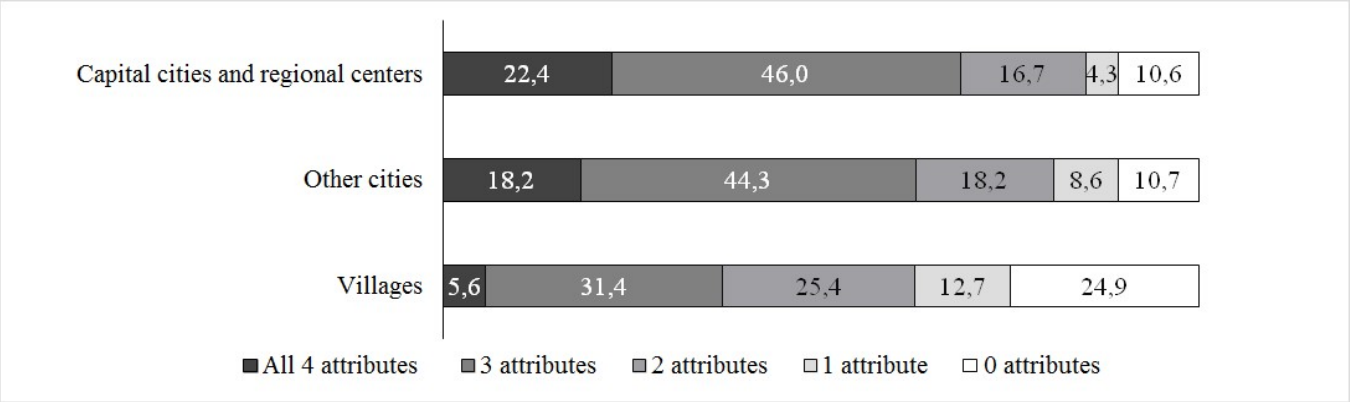

Fig. 4. Possession of attributes of professional training (higher education, its compliance with job profile, education spanning a period of no less than 15 years, its full-time nature) among specialists from different settlement types, RLMS–HSE, 2018, *%*

Partly such a situation is due to differences in level of income, which make employment in rural areas unappealing for members of this group. Where the differences in salaries are especially clear is the upper half of the income distribution (table 4), with the most important of the aforementioned attributes of professional training, in terms of how they affect income, being – education spanning a period of over 15 years (with a 0.202 Spearman coefficient against a 0.208 when all four attributes are present at once) and a college degree (0.190). However the influence of professional training attributes manifests in different ways from one settlement type to the next. In the capital cities and regional centers their integral index does not significantly affect one's chances of receiving a salary that is twice the settlement median, though high values (3-4 points) do considerably increase one's chances of receiving a salary exceeding that level. In rural areas low (0-1 point) values for this index dramatically increase one's chances of receiving a salary less than 0.75 of the settlement median.

Table 4

Salary received by specialists from different settlement types, RLMS–HSE, 2018, *rubles*[22]

Pay received for the last 30 days after all deductions	Capital cities and regional centers	Other cities	Villages
lower threshold of top 5%	180000	80000	45000
upper threshold of third quartile	50000	39000	29000

[21] The Spearman coefficient in our array was 0.047 for age, 0.118 for gender and 0.237 for place of residence (when comparing the connection significance with simultaneous presence of all four characteristics of professional training quality that are described further).

[22] At main place of work for those working several jobs.

upper threshold of second quartile	30000	25000	20000
upper threshold of first quartile	20000	17000	13000
upper threshold of bottom 5%	10000	9400	7750

Therefore if such socio-demographic differences as age and gender primarily influence specialists' competitive capacity on local labor markets (including differences in risks associated with unemployment, working a job mismatched with training or in the unofficial sector, in level of income etc.), then place of residence also bears significance when it comes to the quality of their professional training.

Conclusions

The problem with outlining Russia's most highly qualified specialists group is not as simple as it may seem on the surface. This is due to the fact that, given the excessive number of college graduates in our country, there are changes occurring in what a number of job positions actually demand, with them now implying that a person does have a college degree. On the other hand, certain activities are starting to become popular and routine, which leads to these job positions no longer requiring higher education, resulting in their prestige declining. In the end, the criteria for defining specialists as a particular socio-professional group are starting to depend more on the goals set by whoever is doing the research. When applying a stratification approach to analyzing this group, one that suggests that it occupies median positions in the hierarchy of social statuses, one might consider such a criterion to be holding jobs that usually demand a college degree, but at the same time are not predominantly associated with executive duties. When describing the group in such a manner, it turns out that the tendencies inherent to specialists – highlighted according to ISCO-08 guidelines, from which they derived the FSSS RF OKZ used in Russia – in modern-day Russia are, for the most part, characteristic to specialists as a group that occupies median positions in the status hierarchy, though they are aren't as pronouncedly expressed. This means that its composition is more stable in terms of its socio-demographic characteristics than is the case for the specialist group as defined by Russian statistics.

The main socio-demographic traits of specialists as a group include gender asymmetry, with a growing bias towards feminization, its composition consistently leaning towards relatively young ages (under 40), as well as most members being concentrated in the country's two capital cities and in regional centers. Specialists' socio-demographic characteristics also significantly influence their position in the system of socio-economic inequalities, with this influence pertaining both to the risks and deprivations encountered by members of the group and to their chances and opportunities in life. Those who find themselves in the most favorable position out of all the specialists, in terms of available opportunities, are men ages 30-49 residing in the capital cities and regional centers. Meanwhile young college graduates are having a harder time landing a job that requires higher education, as are generations of people over the age of 50. As a result young specialists are more often forced to settle for lower salaries than what middle aged specialists receive, which is a reflection of their generally unstable footing on the labor market. Generations of people over the age of 50 also find themselves in a vulnerable position, which is made even worse in many cases by their inferior professional training. Increased vulnerability on the labor market is also typical to women, with their proportion growing rapidly among specialists either working in the "shadow" sector or being unemployed while having a college degree. This speaks to an elevated role played by gender as a factor for specialists in the system of inequalities associated with the labor market. As for place of residence, it not only affects the probability for people with higher education from different age and gender subgroups to secure appropriate jobs, but is also a significant differentiating factor when it comes to professional training level.

The level of said training, which is this group's primary gainful asset, has a different effect on the income level of specialists from either large cities or villages. Meanwhile in all age, gender and settlement subgroups, it is normal for education to span a relatively short period of time (for two thirds of people in specialist job positions it was less than 16 years), and for training and actual job profiles to be mismatched. A gradual amplification of this inconsistency, with it turning into the "new normal" on the labor market, undermines specialists' footing in dealing with their employers, while diminishing their opportunities for landing jobs that involve any sort of additional privileges, which is something this group was used to in the past. Meanwhile such characteristics of this group as its non-uniformity in terms of quality of professional training, as well as broad gaps in income, are not firmly linked to gender (with the exception of maximum values of professional training quality) or to belonging to any given age cohort (with the exception of minimum value of quality of professional training). However there is a serious dependence on place of residence, especially for those specialists residing in rural areas.

Shifts in where Russian professionals stand in the system of socio-economic inequalities reflect international trends towards the group's increasing non-uniformity, as well as its partial precarization to the point of its members finding themselves in different classes, and it becoming problematic for a large number of them to consider themselves even lower middle class citizens, which is something that was pointed out by D. Grusky, M. Castells, G. Standing and other western scientists. No less important is the fact that in Russia these alterations are a result of structural imbalances inherent to modern Russian society, and of a complex intertwining of various forms of inequality. A growing imbalance between the number of college graduates and the job positions available for them, as well as colossal gaps in salaries between different settlement types, result in a situation where intense competition unfolds for the right to claim relatively well-paying specialist-type jobs. At the same time low-paying specialist job positions exist, which most college graduates find unappealing, and that results in these jobs being taken by people with very poor qualification or whose professional training can by no means be considered specialist-grade, as well as by members of those socio-demographic groups whose footing on the labor market is the most unsure. As a result, despite there being 1.5 times less specialist job positions currently available in Russia than there are people with higher education, over one fifth of all people holding these jobs do not have a college degree. Meanwhile we are seeing an increase in the proportion of people with college education among the unemployed, and within other professional groups.

All of these processes, if we're to discuss their consequences for the social structure of Russian society, lead to further differentiation within the specialists group, and to the situation for this particular socio-professional group becoming increasingly shakier. Also they not only directly affect the Russian economy's prospects for successfully developing, but they need to be taken into consideration by state social policy. So far it has been glossing over issues such as a large proportion of specialists in Russia being inadequately trained, the situation with female specialists and its specifics, the enormous differences in income between specialists residing in different types of settlements, the difficult situation that specialists over the age of 50 find themselves in, or any of the numerous other problems described in this article. Unless these problems are solved, in the coming years we should be prepared to not only fail to overcome the economic crisis, and especially to ensure a technological breakthrough which Russian leadership speaks of as the key objective for the country's development, but even to maintain socio-political stability.

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