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Russian Migrants to Russia: Choice of Location and Labor Market Outcomes

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Abstract

The move of five million Russian and Russian-speaking people from the former Soviet Union countries to Russia which took place during 1990s has been studied by demographers, sociologists and to a lesser extent by economists. This paper presents a study of the labor market outcomes for the Russian migrants to Russia, using the data from a representative survey of the Russian population in 2004 and 2005. Author focuses on the location choice by Russian immigrants and tests the hypothesis of skill sorting across regions. It is shown that in the regions with low fraction of immigrant population immigrants are doing better in terms of employment opportunities than local population while in the regions with high fraction of immigrants they are doing worse than locals. This result is consistent with the hypothesis that immigrants choose regions where the demand for their skills is high and compete for the jobs with fellow immigrants rather than with locals. Wage premiums for the migrants are found in some occupations but not in others. The results of the analysis indicate that the Russian migration to Russia has played some equilibrating role in the regional labor markets in presence of high barriers for internal labor migration.

Keywords: migration, regional labor markets, wages, employment
JEL Classifications: J61, J31

1. Introduction

The collapse of the Soviet Union in 1991 has given rise to the massive population movements among the newly independent countries of the former Soviet Union. The biggest of these movements was the migration of ethnic Russians and Russian-speaking people from all countries of the former Soviet Union (further fSU) to Russia. According to the Census, in 2002 5.2 million people lived in Russia who resided outside the country in 1989. That is, 3.6 percent of the current population immigrated to Russia since 1989. Almost all of them (3.4 percent of population) immigrated from the former Soviet Union republics. Most of them arrived to Russia in early and mid-1990s, soon after the collapse of the Soviet Union. By the country of origin, majority of the migrants arrived from Kazakhstan (1.4 mln), Ukraine (0.8 mln) and Uzbekistan (0.6 mln.).

While there were substantial movements of people among the republics of Soviet Union before 1991 as well, the reasons for migration and the demographic characteristics of migrants during the post-soviet period were quite different from earlier migrations. The existing literature on migration flows in the former Soviet Union after its collapse has emphasized the socio-political factors of migration. Locher (2002) finds that ethnic sorting is a major determinant of migration among the fSU countries, with the stage of transition and the wealth level of countries playing a minor role. Yerofeeva (1999) shows that the ethnic repatriation was one of the main reasons for migration from northern and eastern Kazakhstan. The reasons for the ethnic repatriation were the political changes in fSU countries that reduced the rights of Russians (and other non-titular nationalities) and made them feel excluded from the society: abolition of dual citizenship, introduction of the titular-nationality language as a national language, closing of some Russian-language schools etc. Importantly, the economic factors have also affected the migration flows to Russia; they became more prominent in the late 1990s. For example, Becker et al. (2005) find that the migration flows between Kazakhstan and Russia during 1990s did respond to the conventional economic indicators.

Given that the decision to leave was in a sense forced upon migrants, they still had a choice of their place of residence in Russia. Russia is big country with more than 80 regions, which vary dramatically in terms of many characteristics, including labor market conditions. Deep structural changes in the economy have created regional labor market distortions in terms of supply and demand for various skills. These distortions are not reduced over time due to the interregional barriers on the movement of labor and capital (see Andrienko and Guriev 2005)[2].

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[2] Internal interregional migration in Russia is indeed quite low. Only around 2% of the population changed their residence within the borders of Russia per year during the 1990s. This figure decreased to 1.4% in 2002, which is quite low compared to the US internal migration rate of 13.7% in March 2002–March 2003

In this paper I emphasize the regional aspect of migration decision and test, albeit indirectly, the hypothesis that the Russian migrants sorted themselves across regions, according to the relative demand for their skills. I use Russian Longitudinal Monitoring Survey data from 2004-2005 to conduct an individual level analysis of the relative labor market position of the Russian migrants compared to the local population within the region[3]. I assume that the decision to migrate was caused mainly by the exogenous factors but the choice of location within Russia was endogenous to the specific skills of the migrant and the demand for these skills on the regional labor markets.

Naturally, choice of location is not completely unconstrained due to the costs of migration related to distance and information[4]. Due to these constraints there is relative crowding of immigrants in the regions of Russia which are closer to the border with fSU countries. Also more immigrants settled in the regions with better housing availability. My analysis shows that in the regions with low fraction of immigrant population immigrants are doing better in terms of employment opportunities than local population while in the regions with high fraction of immigrants they are doing worse than locals. This result is consistent with the hypothesis that immigrants choose regions where the demand for their skills is high and compete for the jobs with fellow immigrants rather than with locals.

Very few studies have touched upon a problem of how the composition of the relative demand and supply for different skills in a certain location of a host country affects the skill mix of migrants, attracted to that location. In a spirit of Roy's model, the relative wages for certain skill groups across regions should affect the choice of the place of residence. Naturally, in the absence of the limitations on the choice of location within the host country and in absence of the non-economic motives for the choice of location (e.g. being close to relatives or co-ethnics), a migrant should choose a location, where he expects to get the highest payoff for his skills. Hence, the migrants should sort themselves across the regions of the host country, according to where their skills and qualifications are most demanded.

Russian migration to Russia provides a good case for testing the hypothesis of skill sorting of migrants across regions for several reasons. First, as several studies of the choice of location by migrants within destination country show, this choice is confounded by the presence of co-ethnics in the localities (see Bartel 1989, Chiswick and Miller 2002, 2004, Chiswick et al. 2002, Piil Damm 2005). Migrants in my study are mostly ethnic Russians; hence ethnic network

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[3] My methodology is similar to the methodology used in a study of the labor market position of internal migrants in Russia by Gerber (1995).

[4] In addition regional authorities may put some administrative constraints on the inflow of migrants. The Soviet system of "propiska" (registration at the place of residence) has survived in some form to this day, in particular in large cities, such as Moscow and Sankt-Petersburg. Obtaining the registration often involves a lot of bureaucratic barriers, while living in a city without it limits the access of a person to some jobs and state-provided benefits.

effects are less important. For the same reason, Russian migrants to Russia are much less likely to be discriminated on the labor market than typical immigrants[5]. Second, there is a self-selection problem: people may self-select into migration based on their unobserved characteristics (ability, motivation, risk aversion) which affect their labor market position in a host country (see Chiswick 1999, Bauer et. al 2002). This is much less of a problem in my study as migration was mainly forced by external political shock, although there is still some scope for selection.

The study has implications for the debate on the effect of immigration on the local labor markets, in particular on wages and employment opportunities for native population. Majority of the existing studies find only minor negative effects of migration on labor market position of locals (see e.g. meta-analysis in Longhi et al. 2005, 2006). My results suggest that immigrants look for the job positions which are not filled by local labor force and compete for these jobs with fellow immigrants rather than with locals.

The study also sheds light on the effect of immigration on the regionally segmented labor markets. Borjas (2001) argues that the migrants are more responsive to the interregional wage differentials than the native workers, who face high fixed costs of migration. Consequently, the migrant inflows play an equilibrating role in the country's labor market, thus, increasing its efficiency. This effect is particularly important for the Russian labor market where interregional barriers to the movement of labor and capital are high and persisting.

The rest of the paper is organized as follows. Next section discusses simple framework for the analysis of the location choice by immigrants. Section 3 provides the socio-economic portrait of Russian migrants based on RLMS data and some evidence on their regional distribution. In section 4, I analyze the labor market outcomes of migrants compared to locals in terms of their employment status and wages. Last section concludes.

2. Choice of location, sorting and economic success of migrants

Not many studies have been devoted to the choice of location by migrants within destination country. In the early study of the migrant location choices in the US, Bartel (1989) shows that the location choice depends on the number of co-ethnics in the destination region; the

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[5] Using data from a small survey of immigrants in early 90ies, Vitkovskaya (1998) finds that the migrants were in a disadvantaged position while searching for a place of residence and for a job, partly due to the limitations imposed by the regional authorities. They often had to take on the jobs of low qualification or change their occupation. However, the local population experienced similar problems at that time: there was a lot of occupation changes and downshifting on a qualification ladder due to the massive structural changes in the economy (see Sabirianova 2002). Besides, by the time of my study, i.e. by 2004, many of the migrants spent several years in Russia and went past the most difficult adaptation phase.

effect varies by the educational level. More recently, Chiswick and Miller (2004) show that US immigrants are highly geographically concentrated in the major "gateway cities", depending on where they have arrived from. Piil Damm (2005) has used the Danish spatial dispersion policy as a natural experiment to show that the location choices are affected by the presence of co-ethnics and other migrants as well as by the economic factors such as the access to jobs, education and housing, the unemployment rate and welfare provision. At the same time, Kaushal (2005) finds little effect of the changes in the welfare benefits policies across the US states on the migrants' choice of location. Scott et al. (2005) focus on the interaction between the regional and individual characteristics in determining the location choices.

Importantly, Russian migrants to Russia differ from the typical international migrants in several respects. First of all, the migrants usually have a different ethnicity and language from native population and often have little knowledge of the local language. Migrants whom I study either are of Russian nationality or use Russian as the native language (speak at home) and have received education in Russian. Secondly, in the studies of the migrants in US or Western European countries it is often emphasized that the education received by the migrant in a home country, is likely to be very different from the educational standards of the host country, making migrants' skills less transferable and assimilation more difficult. In Soviet Union the educational standards were quite uniform across the country, so that a university degree received for example in Alma-Aty (Kazakhstan) is not very different in contents from the degree received in any Russian university. Thirdly, cultural and social differences for Russian migrants are much smaller than for Asian or African migrants to Western countries. Fourthly, the Russian migrants can obtain the official status in a host country more easily than other migrants: Russian migrants from the fSU countries were in principle automatically granted Russian citizenship although in practice they faced many bureaucratic hurdles in obtaining it. Finally, the Russian migrants face much smaller informational barriers in the process of migration as they initially have or can acquire more easily (e.g. through relatives and friends in Russia) the information about their destination. Thus, Russian migrants are much more similar to the local population of Russia than the typical migrants. In this sense movement of Russians to Russia is similar in many respects to the interregional mobility within Russia[6].

Consequently, factors that are likely to affect the choice of location by Russian migrants are mainly economic factors; they include the costs of moving, probability to find work,

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[6] Bauer and Zimmermann (1997) study labor market position of ethnic Germans migrating to West Germany from East Germany and other Eastern European countries. Ethnic German migrants are also similar in many respects to local population of West Germany. However, they moved from countries with formerly planned economies to the country with developed market economy, which makes their skills less transferable and their assimilation more difficult than for Russian migrants to Russia.

expected income, and cost of living in that location. Suppose that migrant chooses the location to maximize the following expected payoff:

$$P = (1-U)*E(Y) - Cm - E(Cl) \qquad (1)$$

Here U is unemployment rate in the location, hence 1-U is a probability to find job in the region. E(Y) is an expected lifetime income in case a person finds a job. Cm is a cost of moving which mainly depends on the distance to the region. E(Cl) is an expected cost of living in the region which may be related to the price level, level of development of the regional infrastructure etc.

Cost of moving apparently plays an important role here as many migrants were likely to be liquidity constrained at the time of migration and credit markets were not developed. Those migrants who could not afford to move long distances to the north or east of Russia had a much more limited choice of regions close to the Russian border with fSU countries. Suppose, there were two groups of migrants: first, migrants who were not liquidity constrained at the time of migration and could choose any region in Russia; and second, migrants who had limited amount of money to finance the move and thus could choose from the subset of Russian regions close enough to their place of residence. As a consequence, we should observe crowding of migrants in the regions that are close to the border with fSU countries. Costs of migration related to the difficulties in acquiring information about the destination should have the same effect. In the end of the next section I will estimate how the closeness to the border as well as other factors related to labor market opportunities and costs of living affect the size of immigrant population in Russian regions.

3. Russian and Russian-speaking migrants to Russia

Proportion of migrants in the population

The data from the 13th round of the Russian Longitudinal Monitoring Survey (RLMS)[7] conducted in 2004 allows us to sketch a socio-economic portrait of Russian migrants. This survey covers about 10 thousand people annually. In 2004 round, the respondents were asked whether they lived in the Russian Federation (further RF) since the birth, moved to RF before 1991, or moved to RF in or after 1991. We are interested in the last group: people, who migrated since 1991. People who moved to Russia before 1991 were likely to move during the Soviet times when the migration was mostly motivated by other reasons than in 1990s. For example,

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[7] See the brief description of this dataset in Appendix 1.

due to the Soviet system of distribution to jobs people from former republics could have been sent to work to some Russian region after completing higher education.

Unfortunately we do not know the exact year of migration for those migrating in 1991 or later but the majority of them should have immigrated in the early and mid-1990s, since that was the most active migration period (peak year was 1994). Note that the sample, which consists of the residents of mostly the same dwelling units in each round, is unlikely to include illegal migrants or temporary (seasonal) labor migrants. Rather, these are mostly the people who permanently settled in Russia during 1990s.

As Table 1 shows, 3.2% of respondents in our sample have moved to Russia in 1991 or after that. Thus, the sample is quite representative of the whole country in terms of the share of Russian migrants in the population. Another 5% of the sample moved to Russia before 1991. These people will be excluded from further analysis.

Importantly, as Table 1 shows, not all of the migrants are of Russian ethnicity but almost 90 percent of them speak Russian at home. Many of them are likely to be members of large non-Russian ethnical groups, traditionally living in Russia (*tatars, bashkirs* etc.). In the following analysis, I will consider all Russian-speaking migrants and not only ethnic Russians as Russian migrants to Russia. Although the majority of migrants were born outside Russia, more than 20 percent of them were born in Russia. Most likely, these people have moved to one of the fSU republics during Soviet time either as children with their parents or as adults to study, work or serve in the army, and moved back to Russia after the collapse of fSU.

Individual characteristics

Let us compare some individual characteristics of the Russian migrants and people who always lived in Russia (see Table 2). There is a slightly higher percent of males among the migrants coming after 1990. They are also on average four years younger than the locals; this difference is statistically significant. At the same time, recent (after 1990) migrants are not significantly different from the locals in their education levels. The statistics on the marital status in Table 2 show that the locals and recent migrants do not differ much in terms of the numbers of single and married people as well as in the number of people having kids.

Further I consider the descriptive statistics on the employment status and occupational structure of migrants as compared to locals. In 2004, the unemployment rate among migrants was 0.9 percentage points higher than among natives[8]. Table 3 also shows self-reported employment status for these two groups of the population. Consistently with the younger average age of the migrants, there are slightly more students and fewer retired people among the migrants

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[8] This unemployment indicator was constructed by RLMS experts using several questions from the survey and based on US Bureau of Labor Statistics definition of unemployment.

than among the locals. The self-reported unemployment rate (those who are not working and looking for a job) is somewhat higher than constructed unemployment rate for both groups. There is higher percentage of migrants than locals who are not working and not looking for a job. A number of entrepreneurs among migrants is two times higher than among the locals. It may be explained by the higher tolerance towards risk among migrants; or, self-employment may be a survival strategy for immigrants who have problems finding a job.

Second panel of Table 3 shows the sectoral structure of employment for the respondents employed at the time of the interview. This structure does not differ dramatically for locals and recent migrants. A somewhat smaller number of migrants is employed in the industry and no migrants are employed by the military-industrial sector or by the financial sector. At the same time, more migrants than locals are employed in construction and in army, police or security services. It may suggest that some migrants are forced into low-skilled occupations within these sectors. However, as the third panel of Table 3 shows, the number of people employed in unskilled occupations among the migrants is actually lower than among the locals. There are slightly more managers, fewer professionals and more skilled workers (in particular service workers and craft workers) among migrants when compared to locals. Thus, the migrants are able to obtain high-skilled jobs in the same degree as locals. The only significant difference in the employment characteristics is that an average tenure of employed migrants (3.6 years) is twice as small as the average tenure of locals. Obviously, migrants could not have held their current jobs prior to 1991.

Choice of location and regional dispersion

Figure 1 shows the distribution of the migrants from fSU across 89 Russian regions based on the data from Census 2002[9]. It shows that the migrants are quite dispersed over the vast Russian territory: almost all regions received some share of migrants, except for the south of Far East and European north. A relatively high number of migrants is observed along the border with the fSU countries. This can be explained not only by the costs of migration but also by higher cross-border commerce opportunities for the migrants (Zaionchkovskaya, 1998). The highest concentration of migrants is observed in particular in Tymen oblast in Western Siberia in spite of its cold climate: apparently, people are attracted by the job opportunities in thriving oil and gas industry of the region. Moscow and Sankt-Petersburg have relatively small number of migrants due to very restrictive migration policies of the local authorities.

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[9] I use the census data and not the RLMS data for constructing the regional numbers of Russian migrants, which I further use in the regression analysis. RLMS sample is nationally but not regionally representative; hence I cannot use it to construct regional-level variables.

Within the regions, the migrants could have settled in urban or rural areas. 76% of the locals in our sample live in urban settlements, while among the migrants this figure is somewhat lower – 71%. The anecdotal evidence and early studies of migration (e.g. Vitkovskaya 1998) suggest that it was more difficult for migrants to settle in urban areas, especially in the big cities due to the still existing system of registration ("propiska"), which was introduced in the Soviet times to limit the migration into big cities. Nevertheless, the majority of migrants in our sample lives in urban areas, although they indeed settle in somewhat smaller cities (median city size for migrants in a sample is 350,000 people versus 500,000 for locals).

Next I estimate the factors that affect the share of migrants in the region, using simple framework presented in the previous section. For this, I need some proxies for the factors entering equation 1 in Section 2. First, expected payoff in equation 1 is affected by the probability to find job and expected income on the job. I include regional unemployment rate in 1994 and real income per capita in 1995 as proxies. I use data from mid-90ies as this was the most active migration period. Besides, economic indicators themselves may be affected by the number of immigrants in the region. Using indicators from early years to explain the share of immigrants in the region in 2002 reduces this problem. In addition I include share of urban population in a region in 1994. Presumably, there are more employment opportunities for migrants in the urban areas.

Migration costs are proxied by the dummy equal to one if a region is on the border with one of the fSU countries. As for the costs of living, one of the major problems for migrants arriving to the region was to find housing. Since we don't have data on regional housing prices in mid-1990ies, I use the amount of residential area per capita in the region in 1994 to proxy for housing costs. I also include two proxies for the non-monetary costs of living in a region: average temperature in January and number of homicides per 1000 people in 1995. The data on all regional variables are taken from the publications of the Russian State Committee on Statistics.

The results of the regression of the share of immigrants in the region in 2002 on above regional variables are presented in Table 4. Four of the included variables have predicted and significant effect. Low unemployment rate and high real income in mid-90ies lead to higher share of immigrants in the region. However, when we exclude Tyumen oblast, which is an outlier in terms of income due to its thriving oil extracting industry, coefficient on real income drops and becomes insignificant (second column of Table 4). Unemployment rate remains highly significant. Greater availability of housing increases number of immigrants attracted to the region. Finally, migration costs obviously play an important role: the share of migrants is significantly higher in the bordering regions.

As this analysis show, the choice of the place of residence by the migrants is affected not only by labor market characteristics but also by the distance to the region and by the level of development of regional infrastructure, in particular, housing. This creates some exogenous variation in the number of immigrants across regions. In the next section I will test how the size of immigrant population in the region affects the labor market position of immigrants relative to local population, in attempt to provide evidence for skill sorting hypothesis.

4. Labor market outcomes for Russian migrants to Russia

Employment opportunities

As we have seen from the previous section, the Russian migrants on average do not differ dramatically from the local population in terms of individual characteristics and human capital endowment. Why would their labor market position in terms of employment and wages be different? On the one hand, if migrants are discriminated in the regional labor markets, we would expect the migrants of the same qualification as the locals to be less likely to have a job and to earn less. However, Russian migrants are much less likely to be discriminated on the labor market due to their similarities with local population, as we discussed in Section 2. On the other hand, if the migrants choose the location, where their skills are most demanded and where this demand is not met by local population, they are likely to be in the advantageous labor market position relative to locals.

Ideally, to test whether migrants sort themselves across the Russian regions according to the relative demand for their skills, I would need the data on the demand and supply of the labor or on wage differentials for quite narrow skill groups or professions for each region. Since such data is not available I can only test this hypothesis indirectly. Suppose, the industry in some regions has a need for workers of certain profession/qualification and there are not enough such workers among the regional labor force. First migrants holding necessary skills who arrive to that region are in a privileged position: they can find a job more easily and may be even earn more, compared to the locals of the same broad skills level but having different profession. However, as more migrants of the same profession arrive, attracted by the high wages, they start competing with each other and their comparative advantage dissolves.

I first test this hypothesis by looking at the employment status of the migrants in comparison with the locals[10]. Table 5 presents the results of a probit model, where the dependent

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[10] All estimations reported in this section are done for the sample of people who are at least 30 years of age at the time of the survey. Younger people were likely to have migrated to Russia when they were still kids; hence the choice of location was decided by their parents. I have also done estimations for the whole sample: the results are still significant but somewhat weaker, as can be expected.

variable is equal to one if a person is an employee and zero for unemployed. I use unemployment variable constructed by RLMS experts based on BLS definition of unemployment. I start with the simplest specification in column 1 which just includes a migrant dummy on the right-hand side. The regression results show that the migrants in a sample are not significantly more likely to be employed than locals. As I add the individual characteristics including education and labor market experience on the right-hand side in column 2, the effect of being a migrant on the employment status remains insignificant in specification 2. Same results hold in column 3 of the Table 5 as I add regional fixed effects.

Finally in column 4 instead of the regional fixed effects, I add the percentage of the fSU migrants in the regional population (from Census 2002 data, shown in the previous section) and interact it with migrant dummy. I also control for the regional unemployment rate in 2003. The coefficient on the migrant dummy becomes positive and significant, while the coefficient on the interaction term is negative and significant. It means that when there are few migrants in the regional population they are less likely to be unemployed than locals. When the number of migrants in a region becomes large, this effect disappears. This finding is consistent with the argument above about the skill sorting of migrants across the regions.

Since the marginal effects in probit model are non-linear, in order to demonstrate the size of the effect I use the model estimated in column 4 of Table 5 to calculate the probabilities to be employed separately for immigrants and locals with sample average individual characteristics for each value of the share of immigrants in the regional population in my sample. The results are presented graphically in Figure 2.

As we can see, the effect is economically significant. In the regions with very low share of migrants the employment probability for the migrant is more than 99 percent while probability to be employed for the local resident of similar age and labor market experience is around 95 percent. Employment probability for migrants declines with the increasing share of migrants in the region but remains above the employment probability for locals until this share reaches about 3.8 percent of regional population. In the regions with the highest share of migrant population predicted unemployment rate for migrants is more than 12 percent, which is three times as much as the unemployment rate of locals with similar human capital characteristics. Note that employment probability for local residents almost does not depend on the size of migrant population in the region.

To further test this finding, I use the question that was asked in the survey: how certain the worker is to find new job no worse than his current job in case he loses it. The answer is between 1 (absolutely uncertain) to 5 (absolutely certain). I use this question as a dependent variable in ordered probit regression. I run the same four specifications as in probit in Table 5.

Results are presented in Table 6. In the first three specifications, the migrants are not significantly different from locals in terms of certainty to find new job. In column 4, I add the percentage of migrants in the local population and interaction term. The results show that the migrants who constitute only a small fraction of regional population are more certain to find new job than local workers. This effect disappears with a growing migrant population. This result is illustrated in Figure 3 where I graph the sum of predicted probabilities of outcomes 4 and 5 (certain or absolutely certain to find new job) for migrants and locals. Migrants in the regions with small immigrant population are much more certain to find new jobs than locals but this difference declines and becomes negative at high values of the size of the regional migrant population.

The results presented in this section clearly show that in the regions that got a small number of Russian migrants, e.g. due to long distance from the border or lack of housing, migrants have better employment opportunities than locals with the same amount of education and experience. In the regions that received large number of immigrants, e.g. close-to-border regions, unemployment rate among migrants on the contrary is much higher than among locals with similar qualifications. Thus, observed interaction among the size of immigrant population in the region and the employment probabilities of migrants relative to locals implies that migrants choose the location where their skills are most demanded and where they would have little competition with locals for jobs. With the arrival of more migrants with similar skills, the competition among the migrants intensifies and their employment probability declines[11].

Alternative explanations

The results obtained above cannot be explained by discrimination of immigrants on the labor market: in this case we would observe lower employment probability for a migrant irrespective of the size of immigrant population in the region. In absence of discrimination, if the migrants compete for the same jobs as locals we should observe same unemployment rates among locals and migrants, irrespective of the size of immigrant population.

Possible alternative explanation for the obtained result is related to the tied movers. When the whole family migrates, as opposed to the single person, they may face harder liquidity constraints and consequently have more limited choice of regions. If the choice of the region is based on the skills of the head of the family the rest working-age members of the family – tied movers – may have problems with finding jobs. Thus, higher concentration of family migrants in the close-to-border regions would produce the above results. However, the data do not support

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[11] In support of this argument, the survey data from Tyuryukanova (2004) show that only 30% of the international labor migrants in Russia feel competition with local workers.

this explanation. I divide regions in my sample in two groups: below median and above median share of immigrant population (3.1%). In the regions with larger immigrant population the share of two-immigrant households (i.e. families where both husband and wife are immigrants) is if anything smaller than in the regions with smaller number of immigrants: 37.5 percent of households are two-immigrant households in the regions above median versus 50 percent in the regions below median.

Another potential explanation is related to the differences in unobserved characteristics of the migrants, such as ability of attitude to risk. Suppose there are two groups of immigrants. First group consists of people who were forced to leave due to changing political situation and who are not different on average from the population in Russia in terms of unobserved characteristics. These people would be more likely to face liquidity or informational constraints and to settle in close-to-border regions. Second group consists of people who have above average abilities and who decide to migrate in order to obtain higher returns on their abilities; they should have fewer limitations in the choice of location. Then in the regions with small migrant population the share of high-ability migrants should be higher and they should have better employment opportunities and higher wage compared to locals, consistently with my results. However, in absence of skill sorting in the choice of location the inflow of migrants from the first group to the region should worsen the employment opportunities of locals; that is, in the regions with large migrant population unemployment rates for migrants and locals should not differ. This is not what the data show, as we have seen in the Table 5 and Figure 2.

Wages

Let us now look at the wages of the migrants in comparison with the locals. I use one of the two measures of earned income available from the survey data: the actual amount of money received for the last month. I divide this variable by the number of hours worked during the last month, in order to obtain the hourly wage during the last month.

Results of the wage regressions are presented in Table 7. As before, I start with the simplest specification that includes just a migrant dummy in the main equation. The coefficient of the migrant dummy in this specification is insignificant. When I add the individual characteristics, job characteristics and sectoral dummies in column 2 and the regional fixed effects in column 3, the coefficient on the migrant dummy drops a little bit and remains insignificant.

In column 4 of Table 7, I add the percentage of migrants among the regional population and an interaction term instead of the regional fixed effects. The coefficients on migrant dummy and interaction term have expected signs (positive for the dummy and negative for the

interaction term) and are significant. Thus, the migrants who were able to obtain jobs receive wage premiums on their specific skills compared to locals but the size of wage premium declines and eventually becomes negative as the size of the immigrant population in the locality grows. This result is illustrated in Figure 4.

Finally, in the attempt to get to the skill sorting hypothesis more directly, I look at the broad skill groups. Suppose that a migrant in a broad skill category (e.g. skilled manual worker) chooses a location, where his narrow skill/profession within this category (e.g. carpenter) is most demanded as there are not enough local carpenters in the region. Then he will probably earn less than local people from a higher skill group (e.g. managers) but he is expected to earn more than the locals from the same broad skill group but having different professions. I test this hypothesis by interacting a migrant dummy in a wage regression with four broad skill categories: manager, professional, skilled and unskilled worker (unskilled local worker is an excluded category).

Results of this wage regression are presented in Table 8; fixed effects for the regions are included. The coefficient for the interaction of migrant dummy and skilled worker dummy in column 1 is positive, significant and quite large in economic terms. That is, the migrant skilled workers in a region on average earn more than the local skilled workers with same amount of education and experience. At the same time, migrant managers receive negative wage differential compared to the local managers. This may indicate e.g. the lack of sector-specific or location-specific knowledge on the part of migrant that may be important for a manager. When we add the sectoral fixed effects in column 2 of Table 8, the coefficients on both interaction terms remain significant. Thus, wage premiums for the migrant workers mainly exist within sectors.

It would be even more insightful to look at the more disaggregated skill groups although it may be asking too much from the available data, since the total number of migrants in the sample is not large. Hence, following results should be taken with caution. I run the same analysis with four broad skill groups above disaggregated into nine occupational groups, which are listed in the third panel of Table 3. The results of the wage regression are presented in Table 9. Occupations within which the migrants receive the wage premium include plant and machine operators and assemblers and the technicians and associate professionals (the latter becomes significant when I add sectoral fixed effects in column 2). Migrants in the groups of managers and professionals receive negative wage premium although the coefficient for the latter group becomes insignificant when we add sector fixed effects.

Taken together, evidence presented in this section indeed suggests that the Russian migrants in their choice of location within Russia responded to the excess demand for their skills

in certain occupations and filled some regional labor market niches that were not filled by local population or by internal migrants.

5. Conclusion

The move of about 5 million Russian and Russian speaking people from the former Soviet Union countries to Russia that took place after the collapse of the Soviet Union was studied by the demographers, sociologists and to a lesser extent by economists. Up to now, there was no rigorous study of the economic position of these people in comparison with the local Russian population, based on the microeconomic data from a representative sample. This paper presents the analysis of the labor market outcomes for Russian migrants to Russia, i.e. people from the former Soviet republics, who have permanently settled in Russia during 1990s, using the data from two rounds of the Russian Longitudinal Monitoring Survey, conducted in 2004 and 2005. As the data show, these people, being on average slightly younger than the local population, hardly differ from locals in terms of education, skill level and occupational structure, employment status and wages. However, the analysis reveals important differences when the regional aspect of migration decision is considered.

The main focus of the study is the location choice by immigrants within host country given the large regional heterogeneity in the structure of the labor demand and in presence of liquidity or information constraints at the time of migration. I test the hypothesis that a migrant chooses the region where the excess demand for his skills (profession) is the highest, that is, where the competition for jobs with local workers is minimal. However, due to the liquidity or information constraints some migrants have more limited choice of regions than others. This leads to the crowding of immigrants in some regions and tighter competition for jobs among immigrants in these regions.

Studying Russian migration to Russia provides a clean test of this hypothesis as the effect is not confounded by the problems of assimilation of migrants who have different ethnicity, language, culture, education and experience from the native population in a host country.

In accordance with my hypothesis, I find that the migrants who reside in regions with small migrant population are more likely to hold a job and are more certain of their employment prospects would they lose their current job compared to the local population of the region. The effect disappears with an increased number of migrants in the local population; that is, intensified competition among migrants wipes away their comparative advantage. As wage regressions show, migrants who were able to obtain jobs in the regions with small immigrant population receive wage premium compared to locals with the same amount of education and

experience; the effect is mostly due to skilled workers group. These results suggest that the migrants bring in skills that are scarce in the regional labor market.

The study has important implications for the effect of immigrant flows on the regional labor markets of a host country. It implies that in the presence of the barriers on the interregional migration in Russia, the inflows of the Russian migrants had some equilibrating effect on the regional labor market. At the same time, the better employment opportunities for migrants in the regions with a low number of migrants and persisting wage premiums for some skill groups of migrants show that there are still the substantial barriers to the migration among the regions, which do not allow the labor markets to come to the equilibrium. This situation preserves large regional disparities and inefficiency of the labor market structure in Russia.

The study also contributes to the migration literature by shedding some light on how the migrants compete with the local population on the labor market and hence how the migration affects host country's labor market; the issue is very actively discussed in the academic literature as well as in the policy debates. The further study of this issue would require the more detailed data on the disaggregated skill groups of migrants and locals on the regional level.

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Figures and Tables

Figure 1. Percent of regional population in 2002 who lived outside Russia (in fSU) in 1989

☐ 0.4 - 1.1	☐ 2.1 - 2.7	☐ 4.0 - 4.5
☐ 1.1 - 1.6	☐ 2.8 - 3.1	☐ 4.6 - 5.8
☐ 1.6 - 2.0	☐ 3.2 - 3.9	■ 5.9 - 9.8

Practical Science
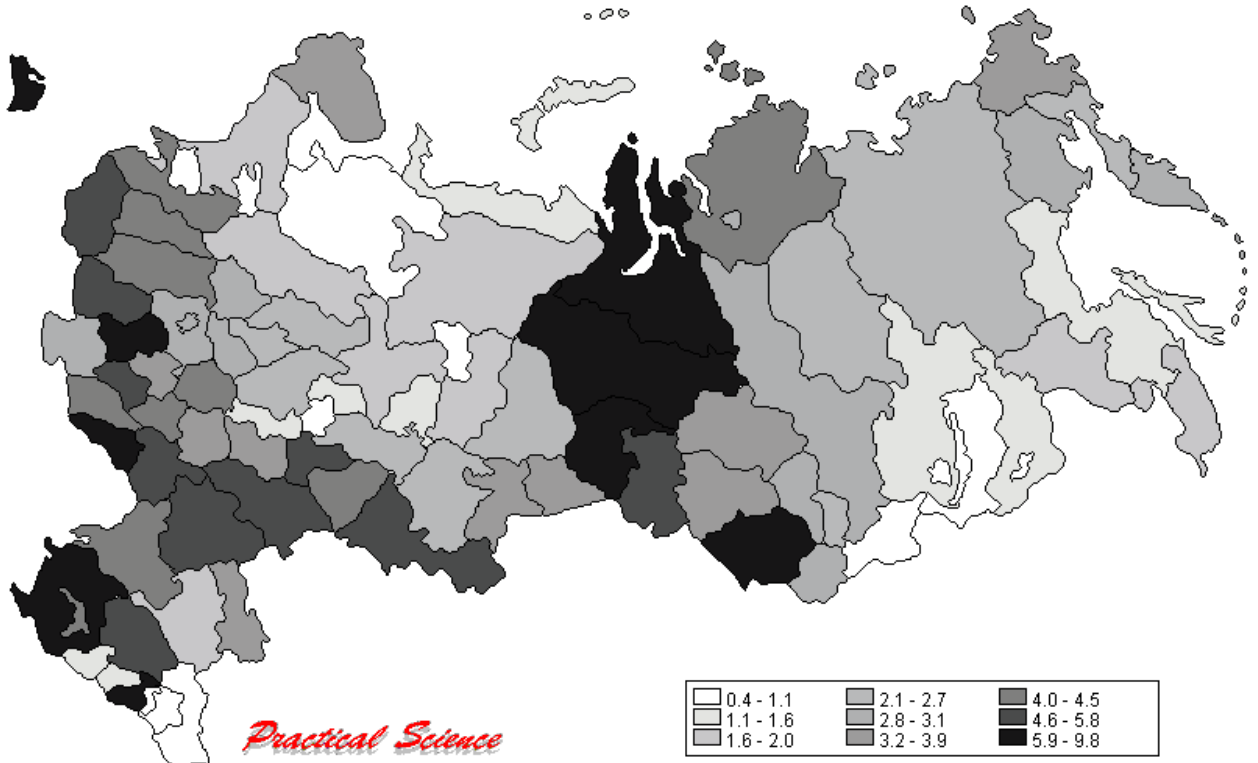
Figure 2. Predicted probabilities to be employed for locals and immigrants
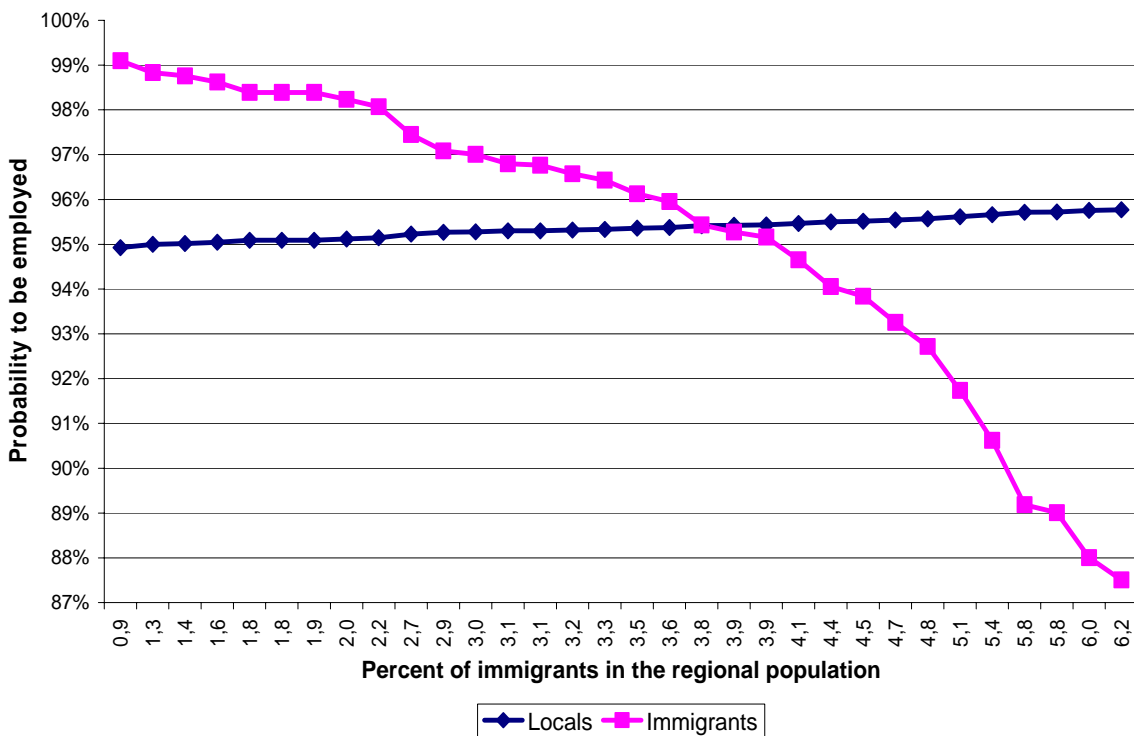
Figure 3. Predicted certainty to find new job for locals and immigrants

Percent of employed who are certain to find new job (y-axis) vs. Percent of immigrants in the regional population (x-axis). Legend: Locals, Immigrants.
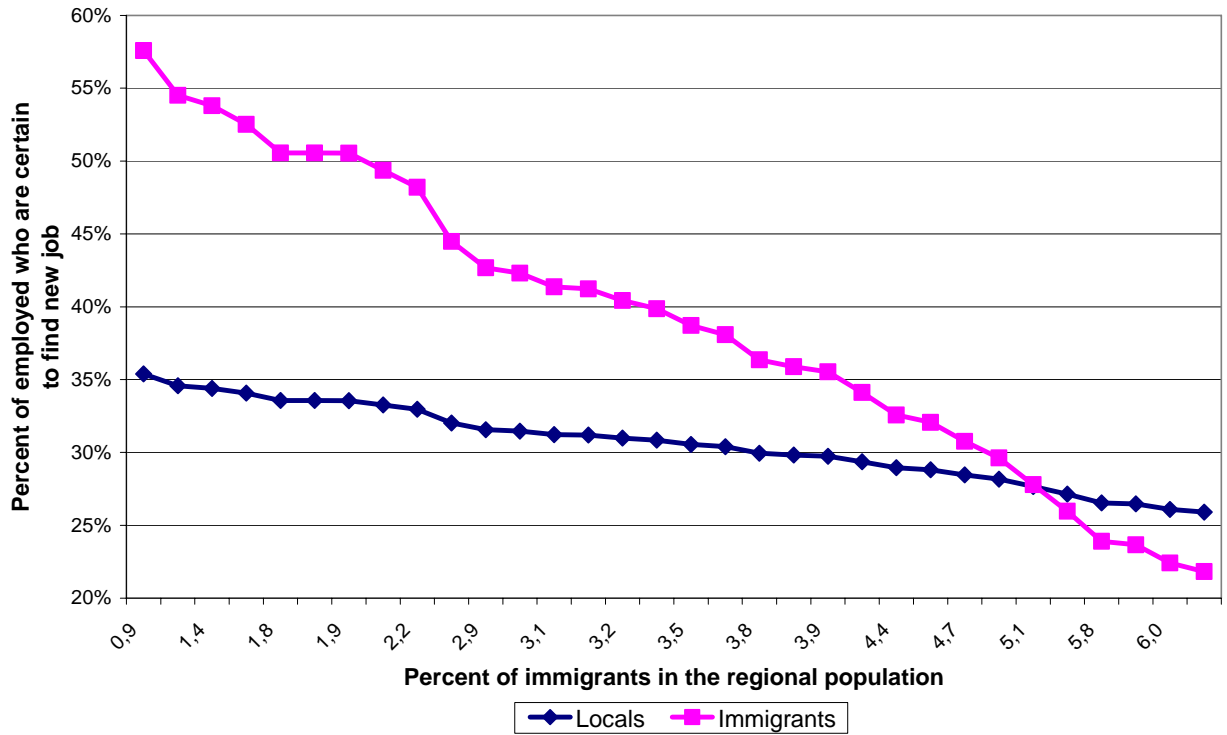
Figure 4. Predicted wages for locals and immigrants

Hourly wage, roubles (y-axis) vs. Percent of immigrants in the regional population (x-axis). Legend: Locals, Immigrants.
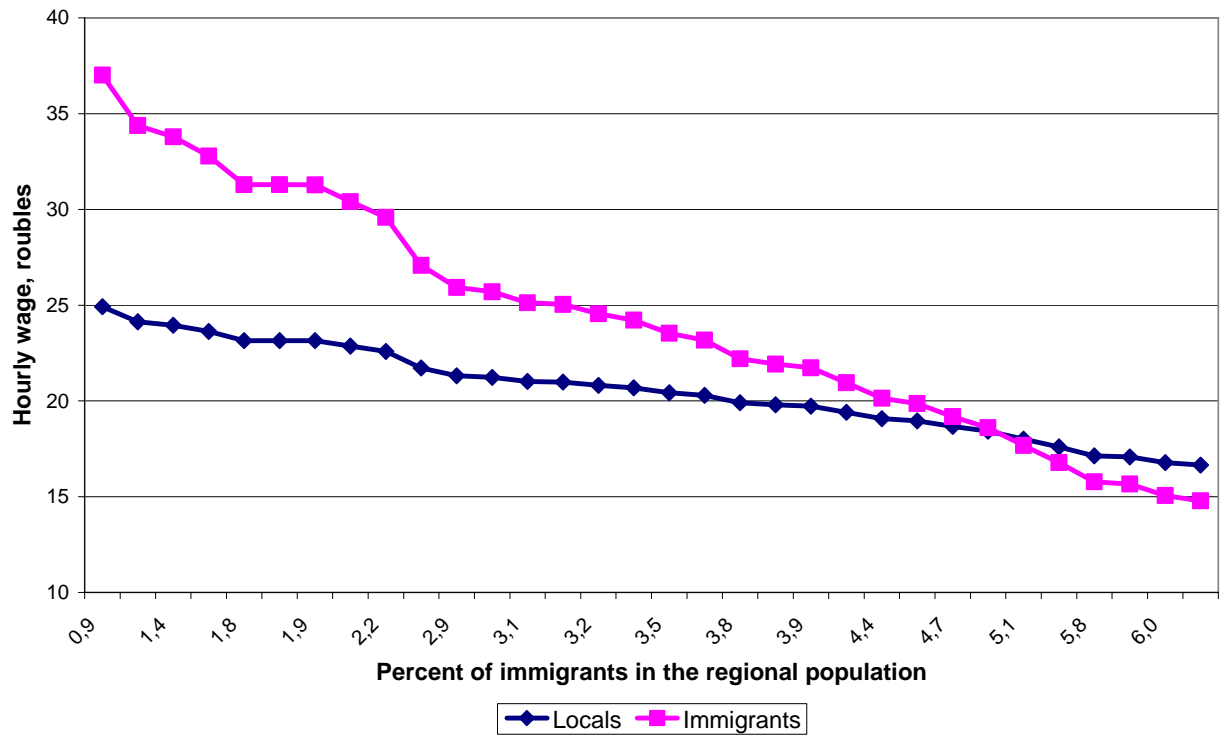
Table 1. Migrants in the RLMS data (2004)

	Percent in a sample	Percent born outside Russia	Percent of ethnic Russians	Percent speaking Russian at home
Always lived in RF	91.8	2.7	86.5	93.2
Moved to RF before 1991	5.1	75.5	59.9	92.8
Moved to RF in 1991 or later	3.2	77.7	67.9	89.6
N obs	10,649			

Table 2. Individual characteristics

	Always lived in RF	Moved to RF in 1991 or later
Percent male	43.0	46.0
Age	42.2	38.1
[st.dev.]	[18.9]	[17.2]
Years of education	11.6	11.7
[st.dev.]	[3.4]	[3.1]
Highest level of education obtained, percent:		
Secondary education	32.2	33.5
Lower level vocational education (PTU)	21.7	15.1
Higher level vocational education (technicum, college)	21.5	25.8
Higher education (institute, university)	24.6	25.5
Marital status, percent:		
Never married	21.8	21.7
In a registered marriage	49.2	46.6
Living together, not registered	9.7	16.3
Divorced and not re-married	7.6	6.2
Widow/widower	11.7	9.2
Percent that have kids	70.7	67.4

Table 3. Employment status, sectors and occupations

	Always lived in RF	Moved to RF in 1991 or later
Percent unemployed of economically active (by BLS definition)	6.7	7.6
Current employment status:		
Student	11.4	13.1
Unable to work for health reasons, disabled	1.7	0.9

Retired and not working	21.7	17.2
On maternity or childcare leave, housewife	4.7	6.5
Temporarily not employed for other reasons and looking for a job	8.3	9.2
Temporarily not employed for other reasons and not looking for a job	1.5	3.0
An entrepreneur	1.6	3.0
Working at an enterprise, organization, collective farm, state farm or cooperative	44.3	40.4
Working at some other place than an enterprise, organization, collective farm, state farm or cooperative	3.4	5.6
Other	1.4	1.2

Sector of employment:		
Light Industry	6.8	5.3
Civil Machine Construction	4.1	2.9
Military-Industrial Complex	2.5	0.0
Oil And Gas Industry	3.0	1.2
Other Branch Of Heavy Industry	5.3	4.7
Construction	7.7	12.9
Transportation, Communication	10.2	12.3
Agriculture	7.1	5.3
Government And Public Administration	2.2	1.8
Education	10.1	9.9
Science, Culture	2.8	4.7
Public Health	8.4	9.4
Army, Ministry Of Internal Affairs, Security Services	4.8	8.2
Trade, Consumer Services	21.5	21.1
Finances	1.8	0.0
Other	1.8	0.6

Occupation at the current place of work:		
Manager, including:	*6.0*	*7.4*
Occ1. Legislators, Senior Managers, Officials	6.0	7.4
Professional, including:	*38.9*	*34.1*
Occ2. Professionals	16.9	15.9
Occ3. Technicians and Associate Professionals	16.1	14.2
Occ4. Clerks	5.9	4.0
Skilled worker, including:	*42.8*	*48.9*
Occ5. Service Workers and Market Workers	10.8	13.6
Occ6. Skilled Agricultural and Fishery Workers	0.5	0.0
Occ7. Craft and Related Trades	13.7	21.0
Occ8. Plant and Machine Operators and Assemblers	17.8	14.2
Unskilled worker, including:	*12.3*	*9.7*
Occ9. Elementary (Unskilled) Occupations	12.3	9.7

Note: Occupations in RLMS data are coded according to the four-digit International Standard Classification of Occupations: ISCO-88 (Geneva: International Labor Office, 1990). Here, they are aggregated to one-digit occupational groups.

Table 4. Determinants of the share of immigrants in the regions

	(1)	(2) *Tyumen oblast excluded*
	Percent of region's population in 2002 who lived outside Russia in FSU in 1989	Percent of region's population in 2002 who lived outside Russia in FSU in 1989
Share of unemployed in 1994	-0.250***	-0.263***
	(0.071)	(0.071)
% of urban population in total population in 1994	-0.011	-0.009
	(0.018)	(0.019)
Log real income per capita in 1995	1.624**	1.108
	(0.685)	(0.921)
Region bordering fSU country	1.886***	1.803***
	(0.403)	(0.422)
Residential area per capita (sq.metres) in 1994	0.242**	0.268**
	(0.100)	(0.103)
Average temperature in January in 2001	0.013	0.013
	(0.017)	(0.017)
Number of homicides per 1000 people in 1995	-0.893	-0.916
	(1.513)	(1.492)
Constant	0.449	0.365
	(2.065)	(2.032)
Observations	72	71
R-squared	0.56	0.54

Robust standard errors in parentheses
* significant at 10%; ** significant at 5%; *** significant at 1%
Note: Chechen and Ingush republics are excluded from the analysis

Table 5. Employment probability of migrants and locals, probit

	(1)	(2)	(3)	(4)
Migrant	-0.163	-0.185	-0.192	0.945**
	(0.130)	(0.129)	(0.123)	(0.466)
Percent of migrants in regional population				0.016
				(0.016)
Migrant*Percent in reg.				-0.247***
				(0.089)
Male		-0.405***	-0.436***	-0.424***
		(0.114)	(0.120)	(0.113)
Age		-0.011	-0.002	-0.006
		(0.019)	(0.020)	(0.021)
Age squared		0.000	-0.000	-0.000

		(0.000)	(0.000)	(0.000)
Years of education		-0.005	-0.017	-0.013
		(0.061)	(0.066)	(0.062)
Years of education squared		0.001	0.002	0.002
		(0.002)	(0.003)	(0.003)
Married		-0.003	0.015	0.001
		(0.075)	(0.075)	(0.075)
# of kids <18 years		-0.118***	-0.098***	-0.102***
		(0.041)	(0.037)	(0.038)
Male*Married		0.464***	0.488***	0.473***
		(0.141)	(0.146)	(0.141)
Male*# of kids <18 years		0.115**	0.126**	0.127**
		(0.059)	(0.057)	(0.055)
Regional fixed effects	No	No	Yes	No
Regional unempl. rate				-0.030***
				(0.007)
Round 14	0.033	0.026	0.031	0.026
	(0.043)	(0.043)	(0.045)	(0.044)
Constant	1.643***	1.935***	1.293**	2.112***
	(0.036)	(0.627)	(0.645)	(0.641)
Observations	8170	8084	8084	8084

Robust standard errors in parentheses; clustering by regions
* significant at 10%; ** significant at 5%; *** significant at 1%

Table 6. How certain migrants are to find new job compared to locals, ordered probit

	(1)	(2)	(3)	(4)
Migrant	0.183	0.090	0.170**	0.684**
	(0.120)	(0.111)	(0.083)	(0.319)
Percent of migrants in regional population				-0.052
				(0.038)
Migrant*Percent in reg.				-0.133**
				(0.066)
Male		0.340***	0.348***	0.339***
		(0.048)	(0.052)	(0.049)
Age		-0.035**	-0.017	-0.030**
		(0.015)	(0.014)	(0.014)
Age squared		0.000	-0.000	0.000
		(0.000)	(0.000)	(0.000)
Years of education		-0.044	-0.088*	-0.043
		(0.056)	(0.047)	(0.055)
Years of education squared		0.003	0.004**	0.003
		(0.002)	(0.002)	(0.002)
Regional unempl. rate	No	No	Yes	No

Regional fixed effects			-0.025***
			(0.010)
Round 14	0.020	0.017	0.018
	(0.028)	(0.027)	(0.028)
Observations	6845	6791	6791

Robust standard errors in parentheses; clustering by regions
* significant at 10%; ** significant at 5%; *** significant at 1%
Dependent variable is a categorical variable from 1 (most uncertain to find new job, if loses the current job) to 5 (most certain).

Table 7. The effect of migrant status on wages, OLS

	(1)	(2)	(3)	(4)
Migrant	0.067	0.038	0.059	0.482**
	(0.073)	(0.058)	(0.047)	(0.206)
Percent of migrants in regional population				-0.077**
				(0.037)
Migrant*Percent in reg.				-0.098*
				(0.051)
Male		0.287***	0.281***	0.282***
		(0.038)	(0.030)	(0.031)
Age		0.010	0.026**	0.013
		(0.010)	(0.009)	(0.010)
Age squared		-0.000	-0.000***	-0.000*
		(0.000)	(0.000)	(0.000)
Years of education		0.087***	0.096***	0.097***
		(0.028)	(0.027)	(0.029)
Years of education squared		-0.001	-0.002	-0.001
		(0.001)	(0.001)	(0.001)
Tenure		0.003	0.007**	0.006
		(0.004)	(0.003)	(0.004)
Tenure squared		-0.000	-0.000*	-0.000
		(0.000)	(0.000)	(0.000)
Manager		0.594***	0.640***	0.618***
		(0.069)	(0.066)	(0.069)
Professional		0.472***	0.476***	0.454***
		(0.043)	(0.044)	(0.048)
Skilled worker		0.293***	0.332***	0.291***
		(0.046)	(0.033)	(0.042)
Log firm size		0.054***	0.036***	0.041***
		(0.011)	(0.008)	(0.009)
Firm size missing[+]		-0.091***	-0.112***	-0.096***
		(0.026)	(0.021)	(0.026)
Sectoral fixed effects	No	Yes	Yes	Yes
Regional fixed effects	No	No	Yes	No

				-0.034
Regional unempl. rate				
				(0.020)
Round 14	0.219***	0.218***	0.228***	0.219***
	(0.021)	(0.020)	(0.020)	(0.020)
Constant	3.197***	1.417***	1.378***	1.911***
	(0.089)	(0.280)	(0.260)	(0.357)
Observations	5918	5642	5642	5642
R-squared	0.02	0.25	0.39	0.30

Robust standard errors in parentheses; clustering by region
* significant at 10%; ** significant at 5%; *** significant at 1%
Dependent variable is a log of the last month's hourly wage
[+] As there are many missing values in the variable "firm size" (number of employees), the average values were imputed and a dummy for missing values introduced

Table 8. The effect of migrant status on wages by 4 skill groups, OLS

	(1)	(2)
Migrant*manager	-0.470**	-0.515**
	(0.192)	(0.193)
Migrant*professional	-0.063	0.030
	(0.081)	(0.082)
Migrant*skilled worker	0.190**	0.155*
	(0.087)	(0.081)
Migrant*unskilled worker	0.121	0.218
	(0.249)	(0.232)
Male	0.316***	0.284***
	(0.032)	(0.030)
Age	0.033***	0.027***
	(0.011)	(0.009)
Age squared	-0.000***	-0.000***
	(0.000)	(0.000)
Years of education	0.113***	0.095***
	(0.027)	(0.027)
Years of education squared	-0.002**	-0.002
	(0.001)	(0.001)
Tenure	0.002	0.007**
	(0.004)	(0.003)
Tenure squared	-0.000	-0.000**
	(0.000)	(0.000)
Manager	0.693***	0.669***
	(0.078)	(0.066)
Professional	0.468***	0.483***
	(0.047)	(0.046)
Skilled worker	0.384***	0.332***
	(0.042)	(0.034)
Log firm size	0.041***	0.036***
	(0.008)	(0.008)
Firm size missing[+]	-0.116***	-0.110***
	(0.018)	(0.022)
Regional fixed effects	Yes	Yes
Sectoral fixed effects	No	Yes
Round 14	0.231***	0.227***
	(0.019)	(0.020)

	(1)	(2)
Constant	1.056***	1.359***
	(0.293)	(0.255)
Observations	5729	5642
R-squared	0.34	0.39

Robust standard errors in parentheses; clustering by region
* significant at 10%; ** significant at 5%; *** significant at 1%
Dependent variable is a log of the last month's hourly wage
[+] As there are many missing values in the variable "firm size" (number of employees), the average values were imputed and a dummy for missing values introduced

Table 9. The effect of migrant status on wages by 9 skill groups, OLS

	(1)	(2)
Occ1.Legislators, Senior Managers, Officials	0.714***	0.695***
	(0.077)	(0.064)
Migrant *Occ1	-0.455**	-0.509**
	(0.198)	(0.200)
Occ2. Professionals	0.570***	0.669***
	(0.061)	(0.059)
Migrant*Occ2	-0.267**	-0.199
	(0.129)	(0.127)
Occ3.Technicians and Associate Professionals	0.414***	0.434***
	(0.042)	(0.045)
Migrant*Occ3	0.159	0.233*
	(0.118)	(0.132)
Occ4. Clerks	0.365***	0.276***
	(0.059)	(0.048)
Migrant*Occ4	-0.200	-0.065
	(0.179)	(0.207)
Occ5. Service Workers and Market Workers	0.265***	0.206***
	(0.048)	(0.035)
Migrant*Occ5	-0.192	-0.239
	(0.171)	(0.172)
Occ6. Skilled Agricultural and Fishery Workers	0.042	0.175
	(0.242)	(0.215)
Occ7. Craft and Related Trades	0.475***	0.396***
	(0.051)	(0.040)
Migrant*Occ7	0.127	0.119
	(0.150)	(0.150)
Occ8. Plant and Machine Operators and Assemblers	0.408***	0.369***
	(0.040)	(0.040)
Migrant*Occ8	0.509***	0.483***
	(0.156)	(0.154)
Migrant*Occ9	0.123	0.206
	(0.252)	(0.222)
Male	0.273***	0.232***
	(0.032)	(0.032)
Age	0.032***	0.026***
	(0.011)	(0.009)
Age squared	-0.000***	-0.000***
	(0.000)	(0.000)

Years of education	0.117***	0.096***
	(0.027)	(0.027)
Years of education squared	-0.003**	-0.002*
	(0.001)	(0.001)
Tenure	0.001	0.006*
	(0.003)	(0.003)
Tenure squared	-0.000	-0.000*
	(0.000)	(0.000)
Log firm size	0.037***	0.037***
	(0.007)	(0.007)
Firm size missing[+]	-0.103***	-0.106***
	(0.018)	(0.022)
Regional fixed effects	Yes	Yes
Sectoral fixed effects	No	Yes
Round 14	0.234***	0.236***
	(0.019)	(0.021)
Constant	1.128***	1.411***
	(0.302)	(0.268)
Observations	5729	5642
R-squared	0.35	0.40

Robust standard errors in parentheses; clustering by region
* significant at 10%; ** significant at 5%; *** significant at 1%
Dependent variable is a log of the last month's hourly wage

[+] As there are many missing values in the variable "firm size" (number of employees), the average values were imputed and a dummy for missing values introduced

Appendix 1. The RLMS dataset description

The Russian Longitudinal Monitoring Survey (RLMS)[12] is a household-based survey, designed to measure the effects of the Russian reforms on the economic well-being of the households and individuals. The RLMS is a longitudinal study of populations in the dwelling units. At each round, the RLMS interview was completed with a household and its members in the original sample dwelling unit. Thus it is a repeated cross-section sampling. The RLMS employs a multistage probability sample, starting from a list of 2029 *rayons* serving as Primary Sample Units (PSU). Moscow City, Moscow Oblast, and St. Petersburg City were included with certainty (self-representing strata), while other non-self representing rayons were allocated into 35 equally sized strata. Then 35 rayons were chosen (one from each stratum) with a probability, proportional to the rayon's size. The target sample was constructed in accordance with the proportion of urban and rural population sizes and ethnic composition. The villages in rural and districts in urban areas served as Second-Stage Units (SSU). Within these areas, the dwellings were enumerated and then drawn randomly from a list. RLMS sampling procedure ensured the sample representativeness with respect to geographical and ethnic factors (for large ethnic groups) and level of urbanization.

RLMS survey instruments were designed by an interdisciplinary group of Russian and American social science and biomedical researchers with an extensive experience in the survey research. One part of questionnaire is comprised of the questions on person's work. It also includes a variety of personal characteristics.

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[12] http://www.cpc.unc.edu/projects/rlms/