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**Article**

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IZA Journal of Migration

**Provided in Cooperation with:**

IZA – Institute of Labor Economics

*Suggested Citation:* Lazareva, Olga (2015) : Russian migrants to Russia: Assimilation and local labor market effects, IZA Journal of Migration, ISSN 2193-9039, Springer, Heidelberg, Vol. 4, pp. 1-25, <https://doi.org/10.1186/s40176-015-0044-9>

This Version is available at:

<https://hdl.handle.net/10419/149443>

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ORIGINAL ARTICLE

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# Russian migrants to Russia: assimilation and local labor market effects

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## Abstract

As a result of the collapse of the Soviet Union, five million Russian and Russian-speaking people repatriated to Russia during 1990–2002. I use this natural experiment to study labor market assimilation of migrants and their effect on the employment and wages of the local population. I show that male immigrants were fully integrated into the labor market, while female immigrants faced significant wage and employment gaps upon arrival, and their assimilation was slow. Using an IV strategy to account for the endogenous choice of location, I find a negative effect of the inflows of immigrants on the local population's employment but not on wages. The initial displacement effects are particularly large for men, but they disappear after about ten years after the peak of migration wave.

**JEL classifications:** J61, J31, J64a

**Keywords:** Migration; Assimilation; Wages; Employment; Russia

## 1 Introduction

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

In this paper I study two sides of the labor market effects of the immigration from fSU countries to Russia. The first side is the process of assimilation of migrants in Russia's labor market. The second side is the effect that inflows of immigrants had on the labor market position of the local population in Russia. This is the first comprehensive study of the labor market effects of the one of the largest migration waves in Europe in the recent past. I use a large individual level panel dataset, distinguish between short term and long term effects and apply instrumental variables approach to estimate the displacement effects.

This study aims to contribute to the vast literature on the effect of international migration on the host country labor market. Specific features of the post-Soviet migration wave to Russia help to isolate this effect from the typical confounding factors such as the effect of ethnic networks on the allocation of migrants, poor skill transferability and host country language proficiency of migrants, self-selection into migration and native outmigration from locations receiving immigrants. The collapse of the Soviet Union is a natural experiment which helps to at least partly address these problems. Geographic position of the source countries and the large size of the host country together create exogenous variation in the local shares of migrants within Russia, which allows identifying the displacement effects using a spatial approach.

The natural experiment approach has been used in a number of earlier papers: the most famous example is Mariel Boatlift (Card 1990); Hunt (1992) studied the effect of repatriation of Europeans from Algeria to France in 1962; Angrist and Kugler (2003) used the Balkan wars in 1990s as a natural experiment affecting the number of immigrants in European countries. In this study, similarly to Angrist and Kugler, I rely on the distance between the Russian regions and the source countries, which creates exogenous variation in the share of immigrants to identify labor market effects. Another advantage of my study is the use of micro-level panel data spanning a long period of time (Russian Longitudinal Monitoring Survey for 1995–2009), which allows tracing dynamic long term effects of the influx of immigrants.

While there were substantial movements of people among the republics of the Soviet Union before 1991, the reasons for migration and the demographic characteristics of migrants in the post-Soviet period have been quite different from earlier migrations. The existing literature on migration flows in the former Soviet Union since its collapse has emphasized the socio-political factors of migration. Locher (2002) finds that ethnic sorting was the 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 ethnic repatriation was one of the main reasons for the migration from northern and eastern Kazakhstan. As these studies show, the pushing factors behind ethnic repatriation were the political changes in FSU countries that altered the relative position of non-titular nationalities and, at the same time, removed barriers to migration. Economic factors also affected migration flows to Russia; however, they became more prominent in the late 1990s (Becker et al. 2005).

While the decision to migrate was mainly caused by exogenous political factors mentioned above, the choice of location within Russia was to some extent endogenous to the regional labor market conditions. Endogeneity of location choice may bias the estimates of the displacement effects. However, the choice of location by immigrants was not completely unconstrained due to the costs of migration related to the distance and access to information. Given these constraints, there is a relative crowding of immigrants in the regions of Russia that are closer to the border with FSU countries.

Russian migration to Russia is a unique case of migration that has some features of both international migration and internal migration. First, as several studies of location choices by international migrants show, this choice is confounded by the presence of co-ethnics in the locality (see Bartel 1989; Chiswick and Miller 2004, 2005; Jaeger 2007; Damm 2009). Migrants in this study are mostly ethnic Russians; hence, ethnic network

effects are not very important. For the same reason, Russian migrants to Russia are much less likely to be discriminated against on the labor market than typical international immigrants<sup>1</sup>. Second, there is a common problem in estimating the effects of migration: people may self-select for 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 an external political shock, although there is still some scope for selectivity.

The estimation results show that male immigrants from fSU countries were fully integrated into the Russian labor market, while female immigrants faced significant wage and employment gaps upon arrival, with their assimilation being quite slow. Using an instrumental variable approach to account for the endogenous choice of the place of residence I find a negative effect of the inflows of immigrants on the local population's employment (both in terms of increased unemployment and reduced labor force participation) but not on wages. The displacement effects are much more significant for men, which is consistent with the fast assimilation of male immigrants. Apparently they were good substitutes to the local men in the male-dominated occupations. I also show that displacement effects gradually declined and eventually disappeared after approximately ten years since the peak of migration wave.

The results of this study have implications for the debate on the effect of immigration on local labor markets, in particular on wages and employment opportunities for the native population. The majority of existing studies find only minor negative effects of migration on the labor market position of locals (see the meta-analysis in Longhi et al. 2005, 2006, surveys in Friedberg and Hunt 1995; Kerr and Kerr 2011, recent evidence in Ottaviano and Peri 2012; Manacorda et al. 2012). My results suggest that immigrants who are close substitutes to the local labor force due to the common language and similar education have more significant effects on the labor market outcomes for the local population. The finding that the displacement effects in Russia dissipated quite slowly may be partly due to the very low migration rates of the local population throughout the transition. Internal migration may dampen the labor market shocks caused by immigrant inflows (see Borjas 2006), but in Russia only around 2% of the population changed their region of residence each year during the 1990s; this number further declined to 1.4% in 2000s.

There are studies of the labor market effects of the two other large migration movements following the collapse of fSU: migration from fSU to Israel (about 1 million people during 1990s) and migration of ethnic Germans from fSU and Eastern Europe to Germany (about 2.8 million people). These studies also find quite significant labor market effects of migration inflows (Cohen-Goldner and Paserman 2011; Glitz 2012). My study is the first one to estimate the effects of the largest post-soviet migration wave.

The rest of the paper is organized as follows. The next section discusses a framework for the analysis of the location choice of immigrants. Section 3 provides a 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 assimilation and displacement effects of immigrants on the local labor markets in Russia. The last section concludes.

## 2 Choice of location and economic success of migrants

A number of studies have been devoted to the choice of location by migrants within the destination country. They are mostly based on US data. In an early study of migrant location choices in the US, Bartel (1989) shows that the location choice depends on the number of co-ethnics in the destination region; this effect is less important for higher skilled migrants. More recently, Chiswick and Miller (2004) have shown that US immigrants are highly concentrated geographically in the major “gateway cities,” depending on from where they arrived. Damm (2009) has used the Danish spatial dispersion policy as a natural experiment to show that location choices are affected by the presence of co-ethnics and other migrants as well as by economic factors such as access to jobs, education and housing, the unemployment rate and the provision of welfare benefits. Jaeger (2007) shows the importance of both ethnic networks and labor market conditions in the migrant location choices in the US. Kaushal (2005) tests the welfare magnets hypothesis and finds little effect of the changes in welfare benefits policies in various US states on the migrants’ choice of location.

Russian migrants to Russia differ from typical international migrants in several respects. First of all, immigrants usually have a different ethnicity and language from the native population and often have little knowledge of the local language. Migrants that I study either are of Russian nationality or use Russian as their native language (speak Russian at home) and have received their education in Russian. Second, in the studies of migrants in the US or in Western European countries, it is often emphasized that education which migrants receive in their home country is likely to be very different from the educational standards of the host country, making the migrants’ skills less transferable and assimilation more difficult. In contrast, educational standards in the Soviet Union were quite uniform across the country.

Third, cultural and social differences for Russian migrants are much smaller than for Asian or African migrants to Western countries. Fourth, Russian migrants can obtain official status in a host country more easily than other migrants; in principle they were automatically granted Russian citizenship, although in practice they faced many bureaucratic hurdles in obtaining it. Finally, Russian migrants face fewer informational barriers in the migration process as they already have information about their destination or can acquire it more easily (e.g., through relatives and friends in Russia). Thus, Russian migrants are much more similar to the local population of Russia than typical international migrants. In this sense, movement of Russians to Russia is similar in many respects to the interregional mobility within Russia<sup>2</sup>.

Consequently, factors that are likely to affect the choice of location by Russian migrants are mainly economic factors<sup>3</sup>. They include the costs of moving, which largely depend on the distance to the region, the probability of finding a job, expected income, and the cost of living in that location, which may be related to the price level, level of development of the regional infrastructure, etc. The cost of moving apparently played an important role as many migrants were likely to face liquidity constraints at the time of migration and credit markets were not developed. 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. As a consequence, we should observe crowding of migrants in the regions that are close to the border. Migration costs related to the difficulties in acquiring information about the destination should have the same effect.

### 3 Immigrants from the former Soviet Union to Russia

#### 3.1 Proportion of migrants in the population

The data from the 2009 round of the Russian Longitudinal Monitoring Survey (RLMS) allows us to sketch a socio-economic portrait of Russian migrants. RLMS is a panel household survey that has been conducted annually, starting from 1994 (with the exception of 1997 and 1999)<sup>4</sup>. It covers about ten thousand people annually. The survey collects a lot of information on various characteristics of individuals and families. In the 2009 survey, the respondents were asked since what year have they lived in the Russian Federation and in their current location within Russia. Note that the RLMS sample, which consists of people residing in the same dwelling units in each round, is unlikely to include illegal migrants or temporary (seasonal) labor migrants. Rather, these are mainly people who settled in Russia permanently during the 1990s and 2000s.

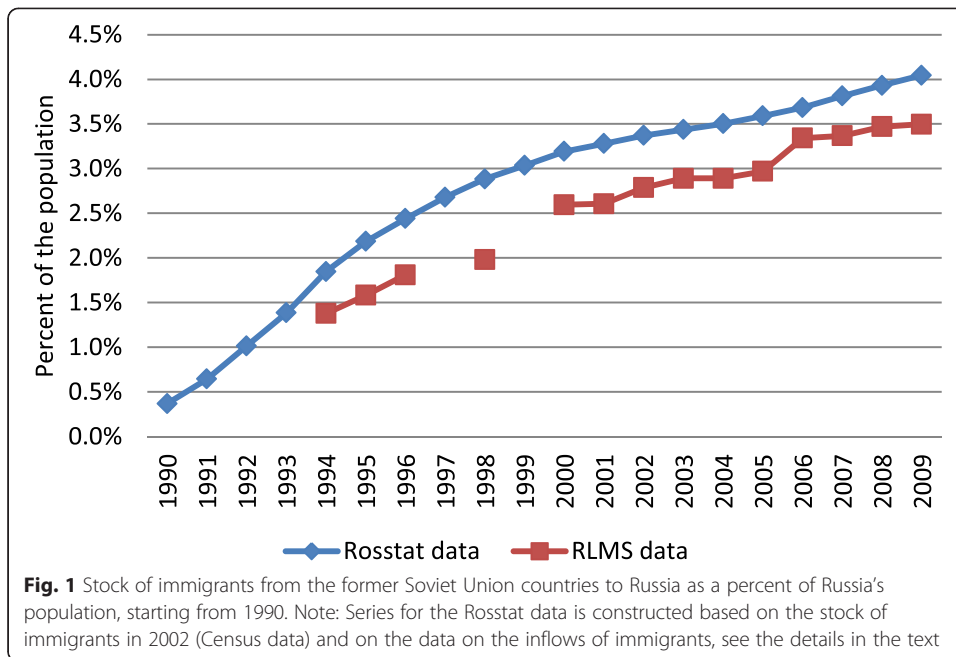
I define as immigrants people who moved to Russia since 1989 at the age of 18 and above. I consider only adult migrants because children are unlikely to enter the labor market immediately upon arrival. There are also people who moved to Russia during the Soviet era; however, in that period migration was largely motivated by different reasons than in the 1990s<sup>5</sup>. We can compare immigrants to the internal migrants, i.e., people who changed their place of residence within Russia since 1989 and were at the age of 18 and above when they moved.

As Table 1 shows, 3.6% of respondents in our sample moved to Russia since 1989. Another 11.5% of the sample changed their place of residence within Russia since 1989. The dynamics of the immigrant share in RLMS data shown in Fig. 1 is close the dynamics of this share according to the national statistics office (Rosstat) data. Thus, the sample is quite representative of the whole country in terms of the share of Russian migrants in the population. Figure 2 shows that the majority of immigrants arrived to Russia in the early and mid-1990s. Immigration peaked in 1994 when almost 1.2 million people moved to Russia and steeply declined after that; during the 2000s the registered level of immigration was at about 200,000 people per year.

As Table 2 shows, the majority of immigrants (71.7%) are of Russian ethnicity. This is consistent with the Rosstat data on ethnic composition of immigrants shown in Fig. 2. Moreover, in the 2004 wave of the survey, 97% of immigrants claimed that they speak Russian at home. Many of them are likely to be members of the large non-Russian ethnic groups traditionally living in Russia (Tatars, Bashkirs etc.). Although the majority of

**Table 1** Shares of immigrants from FSU and migrants from other regions of Russia, RLMS data, year 2009

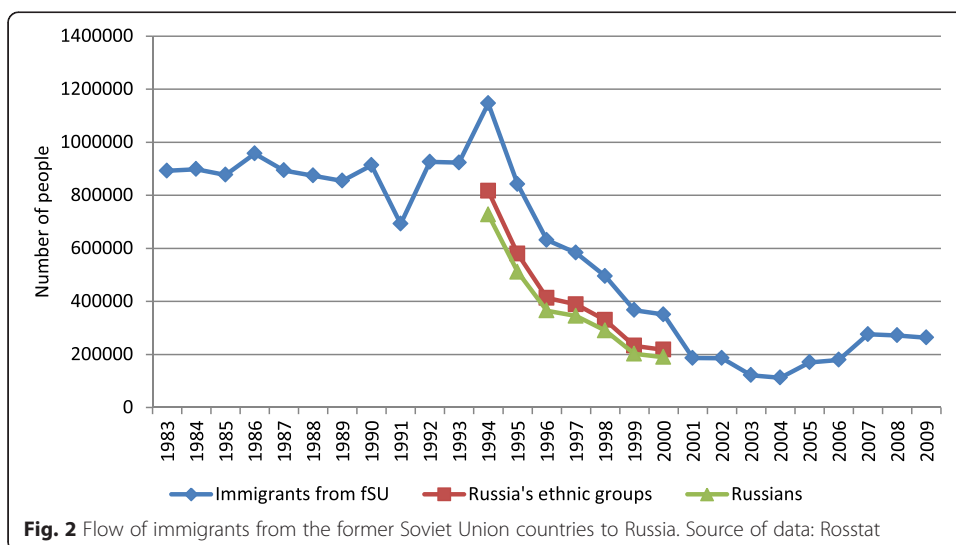
	Percent
Immigrants from FSU since 1989	3.6%
1989-1995	1.7%
1996-2000	1.0%
2001-2009	0.8%
Migrants from other regions of Russia since 1989	11.5%
1989-1995	3.2%
1996-2000	2.5%
2001-2009	5.7%



migrants were born outside Russia, 23% of them were born in Russia (see Table 3). Most likely, these people moved to one of the fSU republics during the Soviet era 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 the Soviet Union.

### 3.2 Individual characteristics

We can compare individual characteristics of immigrants, internal migrants and people who have not changed their location in Russia since 1989 (see Table 2). There is a slightly higher percent of males among immigrants. Importantly, migrants are not significantly different from the locals by their education levels. The statistics on marital



**Table 2** Individual characteristics, RLMS data, year 2009

	Lived in the same region of Russia since 1989	Migrated within Russia since 1989	Migrated into Russia since 1989	Period of immigration		
				1989-1995	1996-2000	2001-2009
Percent male	42.4%	42.0%	44.3%	44.4%	45.1%	43.0%
Age	44.0	43.1	48.1	50.0	50.1	41.5
Years of education	11.8	12.2	12.1	12.1	12.0	12.0
Married	58.7%	72.9%	76.4%	75.8%	78.6%	74.7%
Percent having children	71.5%	82.2%	88.7%	88.9%	92.0%	83.7%
Ethnic Russian	87.9%	90.4%	71.7%	72.4%	69.6%	72.6%
Live in urban area	77%	68%	71%	68.1%	71.6%	78.6%

status show that a higher share of migrants have families and children compared to locals. Apparently, family migration was a large part of this migration wave.

I further consider descriptive statistics on the employment status and sectoral employment structure of migrants as compared to the locals (see Table 4). In 2009 the self-reported unemployment rate (category “not employed and looking for a job”) among migrants was only slightly higher than among locals. There are fewer students among migrants as we consider only those who migrated at the age above 18. The share of entrepreneurs and those employed outside the formal sector among the immigrants is significantly higher than among the locals. This may be explained by the higher tolerance for risk among migrants; alternatively, self-employment may be a survival strategy for migrants who have problems finding a job in the formal sector.

The second panel in Table 4 shows the sectoral structure of employment for the respondents employed at the time of the interview in 2009. This structure does not differ dramatically for locals and migrants. A smaller share of migrants is employed in the industry.

**Table 3** Place of birth of immigrants in RLMS data

Place of birth	Percent
Kazakhstan	26.3
Russia	23.0
Ukraine	8.9
Uzbekistan	8.4
Azerbaijan	7.9
Tajikistan	5.7
Belarus	4.1
Armenia	4.1
Kirgizia	3.5
Turkmenia	2.4
Moldavia	2.4
Georgia	1.4
Other country	0.8
Estonia	0.8
Latvia	0.3
N obs	369



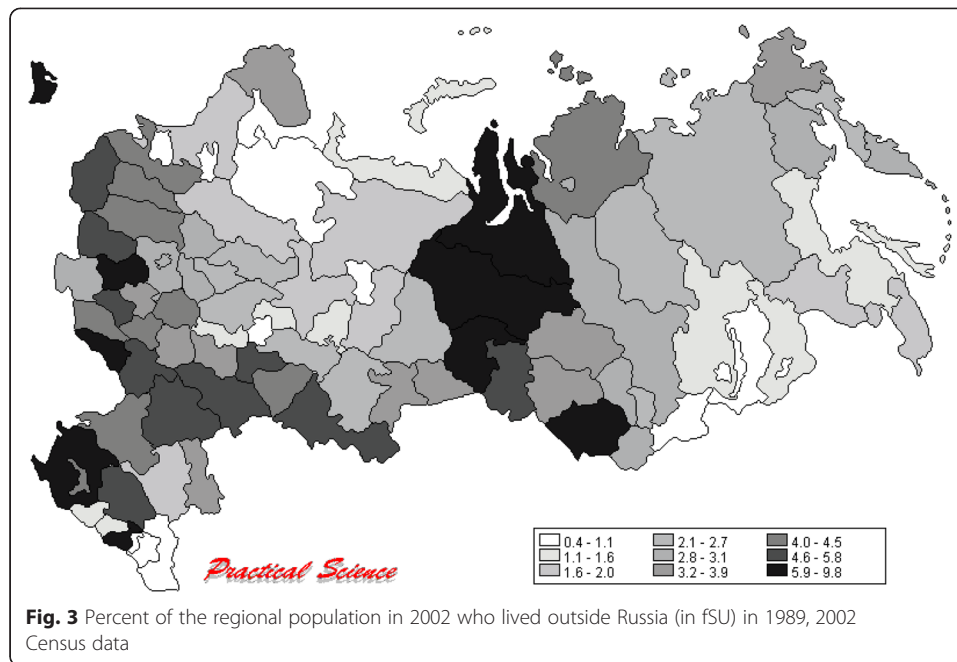
**Table 4** Employment status, sectors and occupations, year 2009

	Lived in the same region of Russia since 1989	Migrated within Russia since 1989	Migrated to Russia since 1989
Current employment status (percentage of all locals/immigrants):			
Student	9.7	1.6	0.8
Unable to work for health reasons, disabled	1.5	1.5	2.1
Retired and not working	22.3	17.3	22.9
On maternity or childcare leave, housewife	4.1	7.1	4.9
Temporarily not employed for other reasons and looking for a job	4.1	4.4	4.6
Temporarily not employed for other reasons and not looking for a job	4.6	3.7	3.9
A farmer	0.1	0.1	0.3
An entrepreneur	1.7	1.7	5.2
Working at an enterprise, organization, collective farm, state farm or cooperative	47.3	56.2	48.5
Working at some other place than an enterprise, organization, collective farm, state farm or cooperative	4.5	6.2	7.0
Sector of employment:			
Industry	19.6	14.4	12.6
Construction	9.1	9.3	13.4
Transportation, Communication	8.8	9.1	12.6
Agriculture	4.7	7.6	3.4
Government and Public Administration	7.0	11.0	6.3
Education	10.0	11.3	9.6
Public Health	7.4	6.6	6.3
Trade, Consumer Services	20.4	18.9	20.9
Other	13.0	11.8	15.1

### 3.3 Choice of location and regional dispersion

Figure 3 shows the distribution of migrants from fSU countries in 89 Russian regions according to the data from the 2002 Census. It shows that migrants are quite dispersed over Russia's vast territory: almost all regions received some share of migrants, except for the south of the Far East and European North. A relatively large number of migrants are observed along the border with fSU countries. The highest concentration of migrants is observed in Tymen *oblast* in Western Siberia, despite its cold climate: apparently, people are attracted by job opportunities in the region's thriving oil and gas industry.

Within the regions, migrants could have settled in the urban or rural areas. In our sample 77% of the locals lived in the urban settlements in 2009, while among immigrants this figure is 71%, and among internal migrants – 68% (see Table 2). The anecdotal evidence and earlier studies (Vitkovskaya 1998; Rubins 1998) suggest that it was more difficult for migrants arriving in 1990s to settle in the urban areas, especially in the big cities, due to the registration system still in place (*propiska*), which was introduced in the Soviet era to limit migration into big cities. Indeed, Moscow and St. Petersburg have a relatively small number of migrants due to the quite restrictive migration policies of the local authorities<sup>6</sup>. Nevertheless, the majority of migrants in our sample live in the urban areas, although they indeed settled in somewhat smaller cities (the median city size for migrants in the sample is 350,000 people versus 500,000 for locals).



## 4 Labor market effects of immigration from the former Soviet Union countries to Russia

### 4.1 Assimilation effects for immigrants

As we have seen in the previous section, Russian immigrants 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? As we discussed previously, Russian immigrants are likely to be more close substitutes for the local labor force than foreign immigrants as they speak same language and have quite similar education and experience. Moreover, if migrants can choose the location where their skills are most in demand and this demand is not met by the local population, they are likely to be in the advantageous labor market position relative to the locals. On the other hand, immigrants lack local knowledge and social connections that are often important for finding a job.

Following the existing literature on immigrant assimilation effects (Borjas 1987, 1995; Kerr and Kerr 2011), I estimate the following specification:

$$Y_{it} = \sum \alpha_j C_{ji} + \gamma YrsMig_{it} + \beta X_{it} + \varepsilon_{it} \quad (1)$$

$Y$  is one of the individual labor outcomes (logarithm of wage, labor force participation, unemployment status),  $C$  are the immigrant cohorts indicators,  $YrsMig$  is years since the time of migration. Using this specification of a model, we can distinguish between assimilation and cohort effects.

$X$  is a vector of individual characteristics, which include age and age squared, education, marital status, and type of settlement. All regressions also include year and region fixed effects as well as region-specific time trends. Hourly and monthly wages are deflated by the regional CPI indices to the base year of 1994. The unemployment status variable is equal to one if a person is not working and is looking for a job and zero if

the person is working. The labor force participation variable is equal to one if a person is either employed or unemployed and is zero if a person is out of labor force, i.e., not employed and not looking for a job.

I estimate equation 1 for immigrants from fSU as well as for the internal migrants. This is done in order to test whether Russian immigrants differ from the internal migrants in their labor market adjustments. I split immigrants into three cohorts by the year of arrival: 1989–1995, 1996–2000, 2001–2009. The first and second cohorts are most likely to include “forced” migrants, i.e., those who had to migrate due to the political changes.

Equation 1 is estimated separately for men and women, the results are presented in Tables 5 and 6, respectively. The results show that male immigrants did not experience any disadvantages in terms of employment or wages compared to the local population. This is true for all cohorts with the exception of immigrants arriving during 2000s – they have a higher probability of unemployment than locals. In contrast, male internal migrants who moved during 1989–1995 had about a 40% higher probability of unemployment upon arrival compared to locals and their further assimilation was quite slow.

As Table 6 shows, for immigrant women the disadvantage on the labor market was much more pronounced. For women arriving during 1990s, the probability to be in the labor force upon arrival was about 80% lower than for the local women. The gap in unemployment rate was much smaller than the gap in labor force participation, which could mean that many immigrant women did not even start looking for a job for some time after arrival.

The result on the gender gap in employment is confirmed by several surveys of migrants which were carried out in several Russian regions during 1990s (Vitkovskaya 1998). These surveys showed that female migrants in Russia had a much lower level of employment than male migrants. At the same time, before migration to Russia, employment rates of men and women were similar—around 70%. Hence, the lower employment level after migration among women cannot be explained by their lack of education, qualification or labor market experience.

Among employed immigrant women, the monthly wage upon arrival was 30% lower than for the local women, irrespective of the time of arrival. Note that for women immigrating during 1990s there is no significant gap in hourly wage, which apparently means that immigrant women who managed to find a job got the same hourly wage rate but worked fewer hours than local women. There is evidence of assimilation both in terms of employment and wage that is revealed in the positive coefficients on years-since-migration variable. However, the assimilation is quite slow: it would take 14–17 years for an average immigrant woman to reach the level of employment and wage that local women have. For the female internal migrants there are strong negative unemployment effects irrespective of the time of migration, with slow assimilation over time. At the same time, there are no significant wage gaps with local women.

The results obtained for the female immigrants are consistent with the family migration model where women are tied movers<sup>7</sup>. When the whole family migrates, it may face tougher liquidity constraints and have more problems with finding housing; consequently the family may have a more limited choice of regions. If the choice of the destination is based on the skills of the male head of the family, the other working-age members of the family—tied movers—may have problems finding jobs.

**Table 5** Assimilation of immigrants and interregional migrants, RLMS data 1995–2009, men

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	Log hourly wage	Log monthly wage	Economically active	Unemployed	Log hourly wage	Log monthly wage	Economically active	Unemployed
Immigrant 1989-1995	0.052 (0.255)	0.141 (0.269)	-0.172 (0.431)	-0.372 (0.314)				
Immigrant 1996-2000	0.216 (0.172)	0.198 (0.173)	-0.002 (0.363)	-0.129 (0.250)				
Immigrant 2001-2009	0.014 (0.120)	0.135 (0.131)	0.390 (0.276)	0.325** (0.164)				
Years since immigration	-0.006 (0.017)	-0.005 (0.018)	0.009 (0.027)	0.027 (0.021)				
Reg.migrant 1989-1995					0.050 (0.124)	0.078 (0.121)	0.059 (0.248)	0.421** (0.206)
Reg.migrant 1996-2000					-0.025 (0.085)	0.028 (0.082)	0.211 (0.202)	0.238 (0.150)
Reg.migrant 2001-2009					0.018 (0.050)	0.049 (0.048)	0.055 (0.123)	-0.039 (0.097)
Years since reg.migration					-0.005 (0.008)	-0.006 (0.008)	-0.018 (0.016)	-0.027** (0.013)
Age	0.040*** (0.005)	0.050*** (0.005)	0.273*** (0.010)	0.015 (0.009)	0.039*** (0.005)	0.050*** (0.005)	0.269*** (0.009)	0.011 (0.009)
Age squared	-0.001*** (0.000)	-0.001*** (0.000)	-0.004*** (0.000)	-0.000** (0.000)	-0.001*** (0.000)	-0.001*** (0.000)	-0.003*** (0.000)	-0.000** (0.000)
Years of education	0.051*** (0.004)	0.048*** (0.004)	0.101*** (0.009)	-0.071*** (0.008)	0.052*** (0.004)	0.050*** (0.004)	0.099*** (0.008)	-0.065*** (0.008)
Married	0.183***	0.226***	0.678***	-0.641***	0.182***	0.220***	0.673***	-0.634***

**Table 5** Assimilation of immigrants and interregional migrants, RLMS data 1995–2009, men (*Continued*)

	(0.027)	(0.026)	(0.054)	(0.044)	(0.027)	(0.027)	(0.055)	(0.045)
Urban area	0.559***	0.539***	−0.051	−0.371***	0.532***	0.522***	−0.128	−0.340***
	(0.054)	(0.053)	(0.107)	(0.099)	(0.055)	(0.054)	(0.109)	(0.100)
<i>N</i>	14969	14969	31922	22650	14794	14794	31147	22169
adj./pseudo $R^2$	0.377	0.408	0.463	0.175	0.370	0.401	0.457	0.178

Robust standard errors in parentheses, clustered on individuals; \* $p < 0.10$ , \*\* $p < 0.05$ , \*\*\* $p < 0.01$

Year and region fixed effects, region-specific time trends are included in all regressions

Regressions 1,2,5,6 are estimated on the sample of employed by OLS. Regressions 3, 7 are estimated on the total sample, regressions 4, 8 – on the sample of economically active. Regressions 3, 4, 7, 8 are estimated by binomial probit, marginal effects reported

**Table 6** Assimilation of immigrants and interregional migrants, RLMS data 1995–2009, women

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	Log hourly wage	Log monthly wage	Economic. active	Unemployed	Log hourly wage	Log monthly wage	Economic. active	Unemployed
Immigrant 1989-1995	-0.195 (0.137)	-0.298** (0.147)	-0.787*** (0.290)	0.628* (0.358)				
Immigrant 1996-2000	-0.187 (0.151)	-0.314** (0.154)	-0.855*** (0.225)	0.356 (0.253)				
Immigrant 2001-2009	-0.289*** (0.099)	-0.292*** (0.105)	-0.102 (0.181)	0.725*** (0.216)				
Years since immigration	0.012 (0.011)	0.021* (0.011)	0.038** (0.019)	-0.048* (0.026)				
Reg.migrant 1989-1995					-0.047 (0.098)	-0.008 (0.103)	-0.057 (0.174)	0.296* (0.171)
Reg.migrant 1996-2000					-0.004 (0.075)	0.002 (0.074)	-0.070 (0.124)	0.325** (0.139)
Reg.migrant 2001-2009					-0.020 (0.047)	0.012 (0.046)	-0.240*** (0.083)	0.333*** (0.099)
Years since reg.migration					0.002 (0.006)	0.001 (0.006)	0.003 (0.012)	-0.032** (0.014)
Age	0.044*** (0.004)	0.063*** (0.004)	0.274*** (0.007)	-0.032*** (0.008)	0.043*** (0.004)	0.060*** (0.004)	0.272*** (0.008)	-0.024*** (0.008)
Age squared	-0.001*** (0.000)	-0.001*** (0.000)	-0.003*** (0.000)	0.000 (0.000)	-0.001*** (0.000)	-0.001*** (0.000)	-0.003*** (0.000)	0.000 (0.000)
Years of education	0.070*** (0.003)	0.066*** (0.003)	0.124*** (0.006)	-0.083*** (0.007)	0.070*** (0.003)	0.065*** (0.003)	0.121*** (0.006)	-0.084*** (0.007)
Married	0.011	-0.008	-0.041	-0.167***	0.023	0.001	-0.070**	-0.179***

**Table 6** Assimilation of immigrants and interregional migrants, RLMS data 1995–2009, women (Continued)

	(0.017)	(0.017)	(0.032)	(0.037)	(0.017)	(0.017)	(0.033)	(0.039)
Urban area	0.384***	0.398***	0.004	−0.104	0.376***	0.398***	0.015	−0.103
	(0.059)	(0.057)	(0.082)	(0.097)	(0.059)	(0.058)	(0.084)	(0.101)
<i>N</i>	18890	18890	46321	26848	18773	18773	45302	26412
adj./pseudo $R^2$	0.395	0.441	0.431	0.140	0.394	0.438	0.435	0.143

Robust standard errors in parentheses, clustered on individuals; \* $p < 0.10$ , \*\* $p < 0.05$ , \*\*\* $p < 0.01$

Year and region fixed effects, region-specific time trends are included in all regressions

Regressions 1,2,5,6 are estimated on the sample of employed by OLS. Regressions 3, 7 are estimated on the total sample, regressions 4, 8 – on the sample of economically active. Regressions 3, 4, 7, 8 are estimated by binomial probit, marginal effects reported

Another potential explanation of the gender gap in employment among migrants is that women were less prepared to take up jobs in a different sector or occupation than they had before they migrated. Due to the dramatic structural changes in the economy during the early years of transition many people had to change their occupation (in particular, many people moved from industrial occupations into trade and services jobs). RLMS data show that the rate of occupational change in the first half of 1990s was significantly higher for migrants compared to the local population, but among migrants this rate was somewhat higher for men than for women. Surveys of migrants in Vitkovskaya (1998) also show that migrant women were more likely than men to search for a job corresponding to their previous occupation. Apparently, this preference made finding a job in Russia more difficult for migrant women.

## 4.2 Displacement effects of immigration

### 4.2.1 Methodology

In order to properly identify the displacement effects, i.e., the effects of the inflow of immigrants on the employment and wages of the local population, I exploit variation in the share of immigrants across the regions of Russia. According to the Census in 2002, this share varied from 0.42% in Tyva region to 8.5% in Kaliningrad region.

As the data on the stock of migrants on the regional level is not available for all years since 1990, I construct this variable using the official statistics data on the gross annual inflows of immigrants to the country. Construction is based on the two assumptions. The first assumption is that the constant share of migrants arriving to Russia each year stayed in the country. I take this share to be equal to the ratio of the stock of migrants in 2002 to the total inflow of immigrants during 1990–2002 (0.6). The second assumption is that the dynamics of the stock of migrants in each region was the same as at the country level. Using these assumptions and combining the data on the annual inflows of immigrants and on the regional distribution of immigrants in 2002 (Census data), I calculate time series for the share of immigrants in the population for the years 1994–2009 for each Russian region.

We can cross-check the constructed shares of immigrants for 1994 with the Micro-Census data. In 1994 the Micro-Census covering 5% of the population was conducted in Russia, its sample was representative at the regional level. Regional immigrant shares obtained from this Census correlate with the constructed shares for 1994 at almost 90%.

Further I estimate the displacement effects using the individual-level data (RLMS). There were 89 regions of Russia (some of them were merged in recent years), while the RLMS sample covers 32 regions.

Following many existing studies of the displacement effects that use spatial approach, I estimate the following equation:

$$Y_{it} = \alpha M_{rt} + \beta X_{it} + \varepsilon_{it}, \quad (2)$$

where  $Y_{it}$  is a log of individual wage, unemployment status, or labor force participation indicator;  $M_{rt}$  is the share of migrants in the regional population, and  $X$  represents individual characteristics.



The major problem when using a spatial approach for estimating the displacement effects is the endogenous choice of regions by the migrants. They tend to choose locations with better labor market conditions: higher wages, more employment opportunities. Then the share of migrants  $M$  is endogenous, and the OLS coefficient  $\alpha$  will be biased. One way to reduce the endogeneity problem is to use a panel fixed effects model which eliminates the effect of the time-invariant observed and unobserved regional characteristics. I will apply a fixed effects model to the estimation of equation 2. However, this model doesn't account for the time-varying characteristics, while regional labor market conditions obviously vary with time. It doesn't solve the problem of reverse causality either. Besides, an FE model identifies the effects from within variation in variable  $M$ , i.e., variation in the share of migrants across time. In my data this variation is much smaller than variation across regions in any year. Hence, it is more difficult to identify the effect using a fixed effects model.

An alternative is to use an instrumental variables approach. The instrument which I will use for the share of migrants in the region is the distance from this region to the border with the fSU countries. More precisely, for each region I measure geographical distance from the capital city of the region to the closest point at the border of Russia with fSU countries. In order to be a good instrument, this variable should be correlated with the share of migrants in the region and should not be correlated with the regional characteristics affecting labor market outcomes, other than the share of migrants. High correlation of the share of immigrants with the distance from the border is visible on the map in Fig. 3. Pairwise correlation coefficient between the logarithm of the distance to the border and the share of immigrants is around  $-0.6$ .

Correlation of the distance to the border with regional labor market characteristics is a potential concern. Any characteristics of border regions directly affecting labor market conditions could harm the validity of the instrument. Regions close to the border are south-western regions with a better climate and a higher population density. Also border regions may enjoy benefits of cross-border trade; at the same time, opportunities for trade there could suffer from the introduction of regulated borders after the separation of republics. However, one should remember that there was no free cross-regional trade within the Soviet Union before its collapse as it was a planned economy and trade relations were dictated by the state. After the dissolution of the Soviet Union, the trade sector was growing quickly mostly due to the opening of trade opportunities with the countries outside of the fSU. What has probably more significantly affected both the degree of decline of the regional economy during early transition and the speed of its recovery is the level of development of industrial sector in the region by the end of 1980s. The economy of many regions depended on large industrial enterprises and many of them experienced a dramatic decline in demand for their products with the shift to the market economy.

In order to address these concerns, I estimate the correlation of my instrument—distance to the border—with several important characteristics of the regional economy using regional level data from Rosstat<sup>8</sup>. One would like to test whether regional characteristics at the start of the migration wave are correlated with the distance to the border. Unfortunately, regional statistics for late 1980s and early 1990s are not available for many indicators; I use the earliest available data. The results are presented in Table 7. I control for the size of population and the share

**Table 7** Regional characteristics - correlates of the distance to the border

	(1)	(2)	(3)	(4)	(5)	(6)
Log industrial output per capita in 1985	-0.267 (0.449)					
Unemployment rate in 1992		-0.059 (0.111)				
Employment to population ratio in 1992			2.201 (3.945)			
Export to CIS in 1998				-0.000 (0.000)		
Import to CIS in 1998					-0.001 (0.001)	
Share of employed in education in 1992						10.034 (10.062)
Share of employed in healthcare in 1992						-27.384 (20.570)
Share of employed in construction in 1992						-12.021 (8.995)
Share of employed in agriculture in 1992						-18.930*** (4.959)
Share of employed in industry in 1992						-4.826 (3.217)
Log population size	-0.682*** (0.153)	-0.714*** (0.145)	-0.707*** (0.151)	-0.688*** (0.154)	-0.604*** (0.163)	-0.410** (0.168)
Share of urban population in 1994	0.049*** (0.015)	0.045*** (0.009)	0.042*** (0.010)	0.045*** (0.010)	0.048*** (0.009)	-0.031 (0.031)
Constant	12.484*** (2.018)	13.287*** (1.944)	12.034*** (2.551)	12.579*** (2.017)	11.272*** (2.147)	19.983*** (3.717)
<i>N</i>	75	74	74	74	74	74
adj. <i>R</i> <sup>2</sup>	0.207	0.206	0.205	0.204	0.220	0.384

Robust standard errors in parentheses; \* $p < 0.10$ , \*\* $p < 0.05$ , \*\*\* $p < 0.01$

Unit of observation is the region, 6 Caucasus regions are excluded due to the lack of data. Dependent variable is the logarithm of the distance from the center of a region to the border with fSU countries. Source of data - Rosstat

of urban population in the region in all regressions and introduce other variables one by one as they are significantly correlated. As the results show, the level of development of the industrial sector measured both by the level of the industrial output in 1985 and by the share of industrial employment in 1992 is not significantly correlated with the distance to the border. The earliest available data on trade of regions with CIS (fSU) countries is for 1998: volumes of export and import are not significantly related to the distance to the border either. Finally, I directly test whether labor market indicators—regional unemployment and employment to population ratio—differ between border and non-border regions. The earliest available data on these variables is for 1992, which is after the migration wave started but before the peak of immigration. The results in Table 7 show no significant correlation of unemployment and labor market participation in 1992 with the distance of the region to the border. In general, the results in Table 7 favor the validity of the instrument.

#### 4.2.2 Estimation results

I estimate equation 2 on the sample of non-immigrants<sup>9</sup>. I exclude observations only for the North Caucasus region in the RLMS sample (Kabardino-Balkar republic) because of the poor regional data quality.

Dependent variables in equation 2 are logarithm of hourly wage, the labor force participation indicator and unemployment indicator. Wages are deflated to the base year of 1994 and adjusted for the regional price levels. That is, wages are measured in terms of their purchasing power in a given region. This adjustment is important because regional price differences in Russia are very large. The unemployment indicator is equal to one if the person is not working and looking for a job. The labor force participation indicator is equal to one if a person is employed or unemployed and zero otherwise. Control variables include age, age squared, years of education, marital status, and type of settlement (urban). Equations are estimated for the sample of working-age people. Since my main variable of interest—the share of migrants in the region—varies at the regional level while the data is individual-level, I cluster standard errors in all regressions at the regional level.

Tables 8, 9 and 10 show the results of estimating the displacement effects by different methods for the wages, unemployment and labor force participation, respectively, for the period of 1995–2009. The first column in each table is an OLS model. In Table 8 in

**Table 8** The effect of immigration on the wages of the local population

	(1)	(2)	(3)
	OLS	FE	IV
Percent of immigrants in the regional population	−0.037 (0.027)	0.040 (0.052)	−0.014 (0.041)
Male	0.305*** (0.021)	.	0.305*** (0.021)
Age	0.036*** (0.007)	0.072** (0.027)	0.036*** (0.006)
Age squared	−0.000*** (0.000)	−0.001*** (0.000)	−0.000*** (0.000)
Years of education	0.065*** (0.005)	0.008* (0.004)	0.065*** (0.005)
Married	0.049** (0.024)	0.020 (0.020)	0.050** (0.024)
Urban area	0.358*** (0.070)	.	0.384*** (0.066)
Constant	−1.854*** (0.171)	−1.176 (1.122)	−1.080*** (0.191)
F-test for the exclusion of the instrument			F(1, 30) = 24.4
Partial R2 for the excluded instrument			0.34
N	28013	28013	28013
adj. R <sup>2</sup>	0.29	0.27	0.29

Robust standard errors in parentheses, clustered at the level of regions; \* $p < 0.10$ , \*\* $p < 0.05$ , \*\*\* $p < 0.01$

Dep.var. – real hourly wage adjusted for the regional price level. Year fixed effects included. Excluded instrumental variable in the IV regression – log distance from the center of a region to the border with FSU countries. Sample includes non-immigrants of age 25–55/60 (for men/women)

Source of data – RLMS, years 1995–2009

**Table 9** The effect of immigration on the unemployment level of the local population

	(1)	(2)	(3)
	Probit	FE	IV
Percent of immigrants in the regional population	0.003 (0.003)	0.002 (0.012)	0.003 (0.003)
Male	0.026*** (0.007)	.	0.029*** (0.008)
Age	0.001 (0.002)	-0.023*** (0.008)	0.001 (0.002)
Age squared	-0.000 (0.000)	0.000*** (0.000)	-0.000 (0.000)
Years of education	-0.009*** (0.001)	0.002 (0.002)	-0.009*** (0.001)
Married	-0.046*** (0.006)	-0.003 (0.008)	-0.048*** (0.007)
Urban area	-0.051*** (0.014)	.	-0.057*** (0.015)
F-test for the exclusion of the instrument			F(1, 30) = 27.7
Partial R2 for the excluded instrument			0.36
N	39563	39563	39563
Adj/pseudo R <sup>2</sup>	0.05	0.005	0.032

Robust standard errors in parentheses, clustered at the level of regions; \* $p < 0.10$ , \*\* $p < 0.05$ , \*\*\* $p < 0.01$

Dep.var. – dummy equal to one if the person is unemployed (not employed and looking for a job). Year fixed effects included. Excluded instrumental variable in the IV regression – log distance from the center of a region to the border with FSU countries. Sample includes non-immigrants of age 25-55/60 (for men/women)

Source of data – RLMS, years 1995–2009

the OLS model the effect of the share of immigrants in the region is insignificant. Fixed effects and IV models confirm the insignificant effect of the share of immigrants in the region on the wages of the local population over the period of 1995–2009. The F-statistics for the excluded instrument in the IV regression is around 24.

The effect of immigrant share on the unemployment of the local population is insignificant in all specifications, see Table 9. In contrast, IV estimates for the labor force participation show a significant negative effect of immigration on LFP of the local population (Table 10). The size of the effect is non-negligible: a one percentage point increase in the share of immigrants in the region reduces the probability for the local person to be in the labor force by 0.6 percentage points.

Thus, over the whole period of 1995–2009, Russian immigration is estimated to have some displacement effect but only in terms of labor force participation of the local population. However, we know that the majority of Russian immigrants arrived to Russia in the first half of 1990s. Such an inflow may have had quite a significant short term displacement effect, which could have gradually dissipated over time as the labor market adjusted to the shift in the labor supply. In order to distinguish short run and long run effects, I estimate the IV regressions in the same specifications as in Tables 8, 9 and 10 for the three sub-periods: 1995–2000, 2001–2004, 2005–2009. We can expect to find stronger effects for the earlier periods.

As a robustness check I also estimate equations separately for the years 1995 and 2002 using data on regional shares of migrants from the Micro-Census 1994 and

**Table 10** The effect of immigration on the labor force participation of the local population

	(1)	(2)	(3)
	Probit	FE	IV
Percent of immigrants in the regional population	-0.002 (0.003)	0.010 (0.016)	-0.006* (0.003)
Male	0.076*** (0.008)	.	0.076*** (0.009)
Age	0.035*** (0.003)	0.044*** (0.010)	0.044*** (0.003)
Age squared	-0.000*** (0.000)	-0.001*** (0.000)	-0.001*** (0.000)
Years of education	0.015*** (0.002)	0.002 (0.002)	0.017*** (0.002)
Married	-0.002 (0.007)	-0.032*** (0.007)	-0.003 (0.007)
Urban area	0.018* (0.010)	.	0.017 (0.012)
F-test for the exclusion of the instrument			F(1, 30) = 27.5
Partial R2 for the excluded instrument			0.36
N	44839	44839	44839
pseudo R <sup>2</sup>	0.096	0.035	0.072

Robust standard errors in parentheses, clustered at the level of regions; \* $p < 0.10$ , \*\* $p < 0.05$ , \*\*\* $p < 0.01$

Dep.var. – dummy equal to one if the person is unemployed (not employed and looking for a job). Year fixed effects included. Excluded instrumental variable in the IV regression – log distance from the center of a region to the border with FSU countries. Sample includes non-immigrants of age 25-55/60 (for men/women)

Source of data – RLMS, years 1995–2009

Census 2002, respectively. These data on the regional shares of immigrants are the most reliable.

The results of the estimation by sub-periods are summarized in Table 11. The last column shows estimates for the whole period where the share of immigrants is interacted with the time trend. This way we measure the initial shock and the speed of its dissipation (similarly to the assimilation regressions).

The results for the wage regressions are still insignificant in all sub-periods. While we did not find a significant effect on unemployment over the whole period, Table 11 shows that immigration did increase the unemployment among locals in the first half of 2000s. The size of the effect is quite large: a one percentage point increase in the share of the immigrants gives around a 1.1% increase in the unemployment rate. Still, this effect dissipated in the second half of 2000s.

The declining dynamics is observed for the effect of immigration on the labor force participation. It is negative and highly significant for the late 1990s, still negative and significant but smaller in magnitude in the early 2000s, and it disappears in the late 2000s. This analysis shows that the immigration wave had quite a significant displacement effect in terms of unemployment and labor force participation but not in terms of wages. This effect slowly declined and disappeared by the second half of 2000s.

An additional piece of evidence that I would like to provide is the separation of the displacement effects by gender. We have seen in section 4.1 that male immigrants assimilated into the Russian labor market much better than female immigrants did. Given

**Table 11** The effects of immigration by time periods, IV regressions

	(1)	(2)	(3)	(4)	(5)	(6)
	1995	2002	1995-2000	2001-2004	2005-2009	1995-2009
<b>Wage</b>						
Percent of immigrants in the regional population	-0.087	0.008	-0.026	-0.007	-0.015	-0.050
	(0.091)	(0.043)	(0.060)	(0.045)	(0.037)	(0.074)
Percent of immigrants in the regional population*t						0.003
						(0.004)
<b>Unemployment</b>						
Percent of immigrants in the regional population	0.011	0.012*	0.008	0.011**	-0.003	0.020**
	(0.026)	(0.006)	(0.007)	(0.005)	(0.004)	(0.008)
Percent of immigrants in the regional population*t						-0.002**
						(0.001)
<b>LFP</b>						
Percent of immigrants in the regional population	-0.039**	-0.011*	-0.016***	-0.010**	-0.001	-0.022**
	(0.016)	(0.006)	(0.005)	(0.005)	(0.004)	(0.009)
Percent of immigrants in the regional population*t						0.002**
						(0.001)

Robust standard errors in parentheses, clustered at the level of regions; \* $p < 0.10$ , \*\* $p < 0.05$ , \*\*\* $p < 0.01$

The results in this table come from separate regressions for each labor market outcome and each time period. The control variables and the instrumental variable in these regressions are the same as in tables 8–10. For the regressions in the first column the data on the percent of immigrants in the regional population is taken from 1994 Micro-Census. Sample includes non-immigrants of age 25-55/60 (for men/women)

that gender segregation is quite significant in many occupations in Russia (e.g., construction and industrial workers are predominantly men, while teachers are predominantly women), men could have faced tougher competition from immigrants than women.

In order to test gender differences in the displacement effects, I estimate the same specifications of IV regressions as in Tables 8, 9 and 10 separately for men and women. The estimation is done for the period of 1995–2004, where the significant effects for the whole sample are found, as well as for the years 1995 and 2002 separately. The results are presented in Table 12. There are once again no significant effects on wage. The effect of the share of immigrants on unemployment is significant only for men. The effect on the labor force participation is insignificant for both men and women, but the estimates for men are close to significance and larger in magnitude than the estimates for the whole sample. These results confirm that the position of local men on the labor market was affected by the inflow of immigrants more severely than the position of women.

An important question is why we obtain a significant effect of immigration on the employment of the local population but not on wages. The extensive body of literature on the wage effects of immigration shows little effect of immigration on the wages of natives. Studies for many countries for different populations and time periods typically find very small coefficients (a 10% increase in the share of immigrants in the labor force reduces wages of natives by 1%), and they are often insignificant (see surveys in

**Table 12** The effects of immigration by gender, IV regressions

	(1)		(2)		(3)		(4)		(5)		(6)	
	Wage		Unemployment		LFP							
	Men	Women	Men	Women	Men	Women	Men	Women	Men	Women	Men	Women
Percent of immigrants in the regional population, 1995-2004	-0.004	-0.027	-0.014***	-0.010	0.017	0.004						
	(0.049)	(0.048)	(0.005)	(0.006)	(0.011)	(0.011)						
Percent of immigrants in the regional population, 1995	-0.083	-0.088	-0.051**	-0.032	0.048	-0.015						
	(0.122)	(0.095)	(0.020)	(0.023)	(0.033)	(0.046)						
Percent of immigrants in the regional population, 2002	0.031	-0.021	-0.011**	-0.010	0.016	0.009						
	(0.047)	(0.045)	(0.005)	(0.010)	(0.014)	(0.009)						

Robust standard errors in parentheses, clustered at the level of regions; \* $p < 0.10$ , \*\* $p < 0.05$ , \*\*\* $p < 0.01$

The results in this table come from separate regressions for each labor market outcome and each time period. The control variables and the instrumental variable in these regressions are the same as in tables 8–10. For the regressions in the first column the data on the percent of immigrants in the regional population is taken from 1994 Micro-Census. Sample includes non-immigrants of age 25–55/60 (for men/women)

Friedberg and Hunt 1995; Longhi et al. 2005; Kerr and Kerr 2011). The employment effects found in these studies are also usually small or insignificant. Studies of the labor market effects of the ethnic repatriation waves, which are more comparable to my study, find different effects with respect to wages and employment. A study on German ethnic migration (Cohen-Goldner and Paserman 2011) finds significant negative effects on employment but not on wages. A study of the migration wave from fSU to Israel (Glitz 2012) on the contrary finds a significant effect on wages but not on employment. A study of Algerian repatriates to France (Hunt 1992) finds small but significant effects both on employment and wages.

One potential explanation for the non-significant effect on wages in my study may be related to the problems with measuring wages correctly. Note that the coefficient on the share of migrants in wage regressions shows a negative sign, and the size of the coefficient is larger for the earlier period just as we would expect. But the standard errors are large, and coefficients are imprecisely estimated. Any financial variables measured through surveys, including wages, suffer from the problem of underreporting. In my sample, about a quarter of respondents who have a job do not report their wages. Those who report it may still underreport the size of their wage. An additional problem comes from the practice of wage arrears (non-payment), which was widespread during 1990s, particularly in the declining industrial sector. In some cases wages were paid in the form of goods, which makes it difficult to estimate their monetary value. Thus, potential measurement error is substantial, and it may lead to the imprecise estimates of the wage effects.

Another explanation may be related to the role of the informal sector. During the period of study, the share of the informal employment (outside of the firms and organizations) was quite substantial. The descriptive statistics provided in Section 3 show that among migrants the share of informally employed was significantly higher than among locals. It is plausible that competition for jobs between locals and migrants was much stronger in the informal sector due to the higher barriers to entry to the formal sector for migrants (in particular, jobs in public sector are often open only to persons holding citizenship and permanent local residence). Thus, negative wage effects of migration

might be more significant in the informal sector. Unfortunately, due to the insufficient number of observations, I cannot reliably estimate the effects of immigration for the informal sector separately.

## 5 Conclusion

The move of about five million Russian and Russian-speaking people from the former Soviet republics to Russia that was caused by the collapse of the Soviet Union is a unique natural experiment. I use this case to provide new evidence on a long standing questions in the migration literature: I estimate the speed of labor market assimilation of Russian migrants to Russia and the effect this migration influx has on the employment and wages of the local population. I use a spatial approach to identify the displacement effects: the vast Russian territory creates exogenous variation in the regional shares of migrants as they were more likely to settle in the regions close to the border with FSU. I use the individual-level data from a large household survey for 1995–2009, which gives an opportunity to estimate not only the immediate displacement effects but their dynamics over a long period of time.

The results show that male immigrants were fully integrated into the labor market, while female immigrants faced significant wage and employment gaps on arrival along with quite slow assimilation rates. This is probably explained by the family nature of this migration wave, where women were tied movers. Male household heads tried to find any kind of job soon after the arrival to support their families, while women were more likely to look for jobs that corresponded to their previous occupations.

The estimation of the displacement effects shows a negative effect of the inflows of immigrants on the local population's employment (both in terms of increased unemployment and reduced labor force participation) but not on wages. The displacement effects are more significant for men, which is consistent with the fast assimilation of male immigrants.

I also show that displacement effects gradually declined and eventually disappeared after approximately ten years since the peak of migration wave. Thus, the negative effect of immigrant inflows on the regional labor markets in Russia was quite prolonged. The internal migration which could have helped to dissipate displacement effects was very low throughout the transition period.

The displacement effects that I find are larger than those typically found in the studies on international migration. This is not surprising as the Russian immigrants from the former Soviet Union to Russia, who have the same language and similar education and training, are likely to be much closer substitutes for the local labor force in Russia than typical immigrants in Europe or the US. In addition, the obtained displacement effects are less likely to be underestimated due to the outmigration of natives from the regions affected by the immigration influx (a typical problem found in studies using spatial variation to identify the effects) as the internal migration in Russia was very low. Hence, estimates reported in this study may be considered as an upper bound on the displacement effects of migration obtained through spatial approach.

## Endnotes

<sup>1</sup>Using data from a small survey of immigrants in the early 1990s, Vitkovskaya (1998) finds that 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 jobs with low qualifications or change their occupation. However, the local population experienced similar problems at that time: there were considerable occupational changes and a downshifting on the qualifications ladder due to massive structural changes in the economy (see Sabirianova 2002).

<sup>2</sup>Bauer and Zimmermann (1997) and Glitz (2012) study the 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 the local population of West Germany. However, they moved from the countries which formerly had planned economies to the country with a developed market economy, which makes their skills less transferable and their assimilation more difficult than for the Russian migrants to Russia.

<sup>3</sup>Presence of relatives or friends in the region may also be an important factor of location choice. However, it is not possible to estimate the significance of this factor as my data do not contain information on friends or relatives of migrants outside their households, and there are very few extended households in the sample which include both migrants and non-migrants (e.g., elderly parents living in Russia before 1989 and their migrant child who moved after 1989).

<sup>4</sup>The description of the RLMS survey and the actual data can be found here: <http://www.hse.ru/en/rlms/>.

<sup>5</sup>For example, because of the Soviet system of administrative distribution of jobs, people from the former republics could be sent to work in some Russian region after completing their higher education.

<sup>6</sup>The Soviet system of *propiska* was formally abandoned and replaced by the system of notification-based residence registration, according to the Law on Freedom of Movement enacted in 1993. In practice, local authorities still had a lot of discretion in setting restrictive requirements for obtaining residence in the region, such as residence fees, requirements on the presence of relatives or a place to stay, etc. Particularly restrictive settlement policies were implemented in Moscow and St. Petersburg as well as in some large cities close to the southern border of Russia which faced significant inflow of migrants. In 1996–1998 the Constitutional Court issued several decisions overruling these policies, but some of them still persisted even after the Court decisions (Rubins 1998).

<sup>7</sup>In my sample in the year 2000 about 40% of households with migrants had two or more migrants (mostly couples). In addition, some migrant couples may have already separated by that time.

<sup>8</sup>In this estimation I exclude six North Caucasus republics as the statistical data for these regions for the early 1990s are extremely unreliable and in many cases unavailable due to the local wars and political instability.

<sup>9</sup>This sample includes people who moved to Russia before 1989. Excluding these people does not affect the results.

#### Competing interests

The IZA Journal of Migration is committed to the IZA Guiding Principles of Research Integrity. The author declares that she has observed these principles.

#### Acknowledgement

I am indebted to the participants of the seminar of HSE Laboratory for Labour Market Studies and to an anonymous referee for insightful comments and suggestions.  
Responsible editor: Amelie F Constant.

Received: 2 December 2014 Accepted: 10 August 2015

Published online: 28 October 2015

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