

SEX IMBALANCES IN LONG-TERM MIGRATION FLOWS IN RUSSIA

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Based on Rosstat data, the distribution of long-term migration flows in Russia by sex was analyzed for the period from 2004 to 2020, taking into account differences in individual age groups. There is a clear predominance of men of working age in international migration in Russia. Disproportions grew after the change in the record-keeping methodology in 2007 and especially after 2011, leading not only to a change in the scale of recorded long-term migration, but also to a radical change in its sex and age structure.

By the end of the period under review, the disparities persisted, but their scale decreased significantly. Overall, intracountry migrations do not show sex disparity. However, at young ages, women are more active, especially in the flow of intraregional migration. The change in approaches to recording internal long-term migrants in 2011, which led to a change in their age profile, had virtually no effect on their sex distribution. Attempts have been made to explain the unequal participation of men and women in migration, but these features require further study. Given their significance, the dynamics of the age and sex composition of migrants must be taken into account in a timely manner in forecasting, along with regular adjustments of general forecast hypotheses.

Key words: *population migration, migration statistics, international migration, internal migration, intraregional migration, age and sex structure of migrants.*

Structural features of migration, of key importance for the demographic development of Russia, have been poorly studied. While age aspects of migration have been looked at in a few publications (Karachurina, Mkrtchyan 2017), researchers have paid undeservedly little attention to the distribution of migrants by sex. Meanwhile, as statistical data show, sex ratios in selected migration flows are far from normal; there are many imbalances that can affect the population of both the country as a whole and its individual regions.

Selectivity by sex and age in both international (Belanger and Rahman 2013) and domestic (Corbett 2007) flows is an intrinsic feature of migration. The resulting sex and age disparities in the populations of selected territories are most acute in developing countries, which are on the path of urban development and experiencing urban sprawl as a result of migration from rural areas (Rodriguez-Vignoli, Rowe 2018), and in countries that take in large flows of international migrants. Thus, immediately after the reunification of Germany, the outflow of young women from eastern to western lands caused a serious shortage of young women in the east, especially in rural communities (Krohnert, Vollmer 2012). The exodus of women from rural areas threatens the sustainability of local communities (Martin 2009).

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The purpose of this article is to consider the most general features of the distribution of long-term international and internal migrants in Russia by sex, including in certain age groups. To do this, Rosstat data for 2004–2020 are analyzed, taking into account changes in the methodology for migration record-keeping in the years under consideration. In Russia, as in many countries, the sex ratio is numerically biased in favor of women. This results, first of all, from the difference in mortality between men and women, due to which by middle age the numerical predominance of men among children and young people is replaced by the predominance of women. In Russia, there are already more women by the age of just over 30 years. Sex disproportions level out extremely slowly, and at some ages even increase (Vishnevsky 2013), and this despite the fact that the consequences of the Second World War, which determined the most acute disproportions in the sex ratio in older ages at the end of the 20th century, no longer have a significant impact on it.

In general, women also predominate in long-term migration, primarily due to their overall predominance in the population. However, as shown by the simplest calculations, the sex ratio in migration does not have a linear relationship with women's share in the population, and in some flows it changes abruptly in favor of men (Table 1). Particularly strong disproportions are noted in international migration.

Table 1. Sex ratio in the population of Russia and in migration flows, number of men per 1000 women, 2004-2020

Year	Population of Russia at the beginning of the year	Migration						
		total	Within Russia			International		
			total	intra-regional	inter-regional	turnover	arrivals	departures
2004	866.6	891.5	893.5	848.0	958.4	872.4	862.7	887.0
2005	863.4	865.9	869.2	824.3	933.0	841.2	826.4	879.9
2006	860.9	870.2	868.2	824.5	928.5	885.8	892.5	863.1
2007	859.7	887.9	867.0	822.3	929.5	1023.2	1059.2	827.9
2008	859.3	895.2	872.1	828.9	928.7	1047.3	1077.3	856.5
2009	859.3	918.9	885.9	838.2	947.8	1122.2	1155.5	872.6
2010	859.6	887.8	859.6	815.0	915.4	1166.8	1228.1	872.9
2011	860.3	936.5	881.4	829.5	951.2	1508.6	1574.9	1007.2
2012	861.3	964.6	883.7	831.8	947.2	1808.9	1683.0	2342.9
2013	862.4	988.6	886.9	836.2	945.9	1941.4	1757.8	2553.4
2014	863.1	992.5	870.3	827.9	916.7	1839.2	1634.0	2325.0
2015	863.3	965.3	870.3	832.4	909.2	1522.4	1253.4	2162.2
2016	863.6	939.5	875.0	837.6	913.1	1308.4	1223.5	1482.3
2017	864.4	942.6	874.3	836.5	910.5	1306.4	1293.8	1326.3
2018	865.2	937.2	868.9	834.4	901.1	1300.2	1261.6	1351.7
2019	865.9	962.2	877.9	851.6	903.2	1343.2	1341.9	1345.5
2020	866.3	962.3	866.7	837.6	893.9	1355.7	1271.1	1467.7

Source: Author's calculations based on Rosstat data.

The All-Russian population census of 2002 had already shown that in large cities (primarily Moscow) the sex proportions are greatly in favor of men in certain ethnic groups - Azerbaijanis, Uzbeks, Georgians and Armenians (Zayonchkovskaya 2009). However, this migration remained

largely invisible to current records, which did not include many migrants who had de facto lived in Russia for a long time.

The first significant change in the ratio of men and women in recorded migration flows is associated with a sharp increase in the share of men in the flow of *international migrants* arriving in 2007. It was in this year that the migration record-keeping system changed to record as arriving (long-term) migrants those receiving temporary residence in Russia for the first time. Prior to this, only those who received registration at the place of residence were subject to such recording; according to experts, record-keeping of migration in these years was in a critical state (Chudinovskikh 2004). The system of registration of international migration in place since 2007 did not completely solve this problem, but it did, apparently, make it possible to include significant contingents of long-term migrants in statistical analysis and, to a certain extent, bring their recording closer to reality.

Table 2. Sex ratio in the flow of international migration in the 2000s, arrivals, number of men per 1000 women

	2004-2006	2007-2010
International migration - total	860.5	1119.3
CIS and Baltic countries	847.1	1104.0
Azerbaijan	1223.1	1774.7
Armenia	1028.6	1144.1
Belarus	820.3	898.1
Georgia	876.5	978.8
Kazakhstan	799.7	874.4
Kirgizia	865.6	950.7
Latvia	784.6	982.0
Lithuania	903.9	1059.5
Moldavia	985.5	1094.0
Tajikistan	1306.1	2800.5
Turkmenia	738.9	855.1
Uzbekistan	822.9	1088.1
Ukraine	753.5	833.7
Estonia	1076.3	1010.2
Countries of the far-abroad	1200.5	1548.8

Source: Author's calculations based on Rosstat data.

The dynamics of arrivals of migrants by country in 2007 compared with previous years showed that the most significant increase in the number and proportion of men in the flow was in the countries of Transcaucasia (although Georgia did so only in 2007, since starting in 2008, after events in South Ossetia and the subsequent sharp deterioration in relations between Russia and Georgia, the number of migrants from there began to decline), Tajikistan, Uzbekistan and Kirgizia. It is from these countries that in the second half of the 2000s the flow of temporary labor migrants to Russia increased. The influx also increased from Ukraine, which has always been Russia's main migration donor.

On the whole, after 2007 men began to predominate in the flow of arrivals of long-term international migrants to Russia. But if we consider Russia's main migration donors,

which include, above all, the post-Soviet states, the disproportions affected the flow from Tajikistan and Azerbaijan most strongly (Table 2), and to a lesser extent those from Armenia and Uzbekistan. Among non-CIS countries, the most significant predominance of men was noted in the flow of permanent migration from China. In traditional societies, whose significant role remains strong in a number of post-Soviet countries, women are still not as independent as men, as reflected in their lesser involvement in the processes of international migration (Tyuryukanova 2011).

The sex ratio has a pronounced age specificity; people of different ages participate in migration with different degrees of intensity. The change in the proportions of men and women in the flow of international migration has affected certain age groups in different ways. After 2007, the greatest predominance of men was noted in young and middle working ages (Figure 1). At the same time, in the flow of arrivals from Tajikistan aged 20-24 there were 4.4 times more men than women, and for those aged 25-29 - 4.3 times. For migration from Ukraine and Kazakhstan, despite a general increase in the proportion of men in the flow, such sharp disproportions were not noted. In the flow of arrivals from non-CIS countries, as well as the Baltic countries, men most clearly predominated at the age of 40-49 years. At this age, highly skilled labor migrants came to Russia more often, and not always along with their family. However, this migration flow to Russia even in the aughts was small and largely latent, i.e., was not taken into account in the statistics of long-term migration.

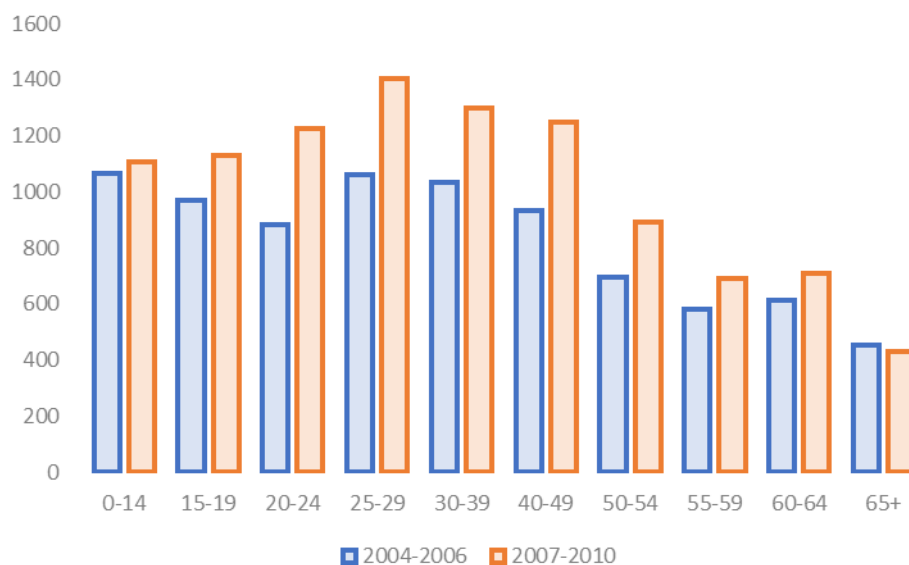


Figure 1. Sex ratio in the flow of international migration by certain age groups, arrivals, number of men per 1000 women

Source: Author's calculations based on Rosstat data.

It turns out that already by the late 2000s the age and sex distribution of international migrants in Russia had changed. The balanced age and sex structure characteristic of family and repatriation migration had undergone major changes. A new structure of migration had emerged, no longer hidden but explicit, with a clear predominance of young men, though still not as clear as in temporary labor migration in those years (Tyuryukanova 2011).

A fundamental revision of the method of statistical recording of migration in Russia in 2011, which affected both international and domestic migration, led to a further change in the sex ratios of migrants. Recall that starting in 2011, not only those registered at their place of residence, but also those registered at their place of stay for a period of 9 months or more began to be considered long-term. As soon as the registration period comes to an end, the migrant is automatically considered to have left for his place of permanent residence, which in the case of international migration means to the country from which he arrived, where until that time he permanently resided - even if he resettles within Russia.

Formally, taking into account the fact that certain categories of migrants could legally stay in Russia for up to 90 days without registration, the new criterion began to closely correspond to the UN recommendations on long-term stay in a new place of residence for 1 year or more. Despite the justified criticism of the new methodology, which distorts both the real volumes of long-term migration (Chudinovskikh 2019) and individual structural characteristics of migrants (level of education, reasons for migration, etc.) (Mkrtchyan 2020), it allows us to get an idea of previously latent or semi-latent categories of migrants, for example, those who move in connection with higher education (Kashnitsky 2017), as well as the general scale of migration. The unchanging characteristics of migrants, such as sex, as well as those that can be automatically recalculated (age), are not distorted by the new methodology.

The peculiarity of the new recording method is that it changed the scale and characteristics of arrivals immediately, while the change in the characteristics of departures occurred with a time lag. Only at the end of 2011 did the first persons appear whose registration at the place of residence had expired, and the system began to work in a completely new way by the mid-2010s. Hence the lag in the dynamics of the structural characteristics of migratory flows.

As mentioned above, the sex ratio of arriving international migrants had already changed by 2010, but after the 2011 reform the disproportions increased sharply, especially in the youngest working ages (Figure 2). The sex disproportions of those who left began to change only after 2011, but were sharper than for those who arrived. In the flow of arrivals by 2015, the share of those registered at the place of residence (according to the old method) was 28%, while in the flow of those who left, it was only 6%. Unfortunately, Rosstat data do not allow us to estimate the age and sex structure of international migrants using the old and new methods separately. But from the above figures it is clear that while the new recording system affected most arrivals, it did not affect all of them, and the flow of departures began to consist almost entirely of those whose temporary (by place of stay) registration had ended.

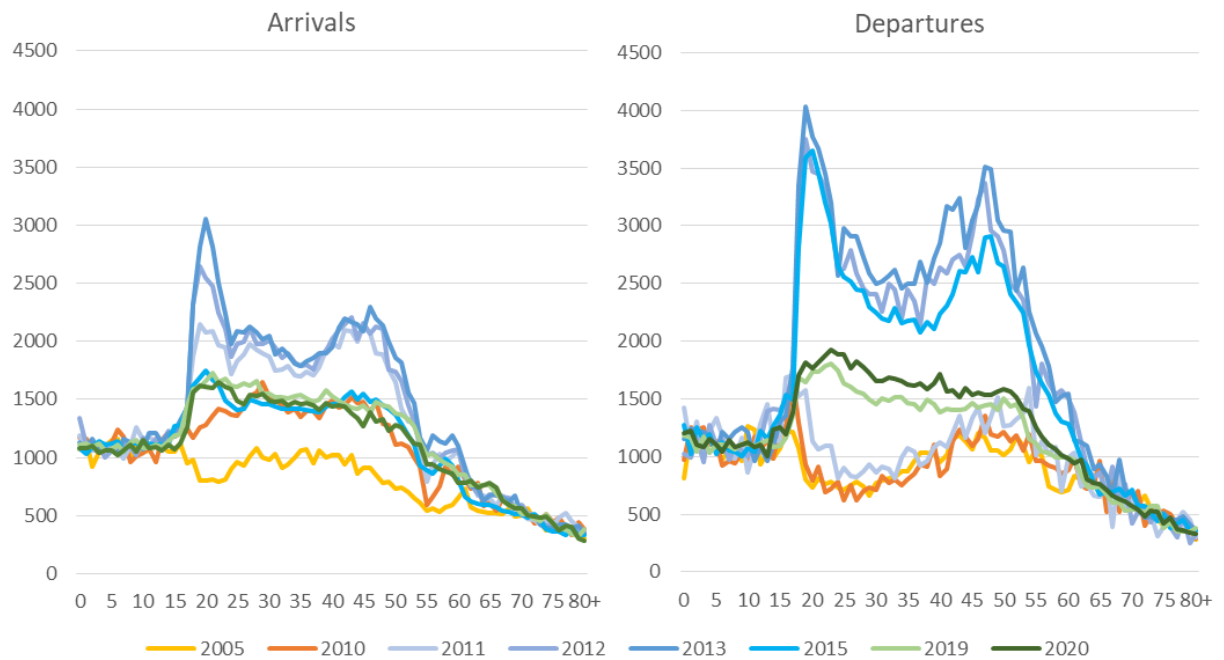


Figure 2. Sex ratio in the flow of international migration by 1-year age groups, number of men per 1000 women

Source: Author's calculations based on Rosstat data.

Figure 2 also shows that in the second half of the 2010s the sex disproportions of both arrivals and departures were significantly smoothed out. This was influenced by:

1. a change in the structure of countries who are Russia's main migration donors. The decline in the role of the countries of Central Asia in long-term migration was offset by an increase in migration from Ukraine, in the flow of which there were no such strong sex disparities;
2. an increase in the structure of long-term migration of the repatriation component, stimulated by participation in the State Program for Assistance in Resettlement to Russia of Foreign Compatriots and Members of Their Families. This again strengthened the role of family migration, which partially replaced the migration of singles, most often represented by men;
3. a sharp decrease in sex disproportions among arrivals at young and middle ages from all countries who are Russia's main migration donors. The reasons for these changes are not clear, or rather, we do not know the reasons for such a sharp and simultaneous exacerbation of sex disparities among international migrants in the early 2010s. Perhaps this is due to the fact that male migrants had more incentives to register at the place of stay for a period of 9 months or more, while women either made do with short-term registration, or did not register at all. More frequent registration of male migrants could be associated with less tolerance towards them on the part of law enforcement agencies.

The sharp predominance of men in the flow of international migration at the beginning of the 2010s obscures the current sex disproportions, which reach 1.5-2 times in working age. International migration "feeds" the population of Russia mainly by men, which brings economic

benefits in the short and medium term, but is less valuable from the standpoint of demographic development.

In *intra-country migration*, there is no such pronounced predominance of men in flows as in international migration. At ages when sex disparities in the population are not yet pronounced, there were until recent years 600-1250 men per 1000 women participating in migration (Figure 3). The new methodology for registering migration in 2011 (changes in 2007 did not affect intra-country migration) did not, as happened for international migration, result in a sharp change in the sex ratio in 2011-2012, in either the overall flow or individual ages. The significant predominance of middle-aged men in internal Russian migration had faded by the end of the 2010s, when the methodology for recording migration underwent no changes. In the case of international migration, the disproportions grew larger precisely in the first post-reform years; in internal migration, there were no changes in the ratio of men and women participating in migration at certain ages in 2011-2012.

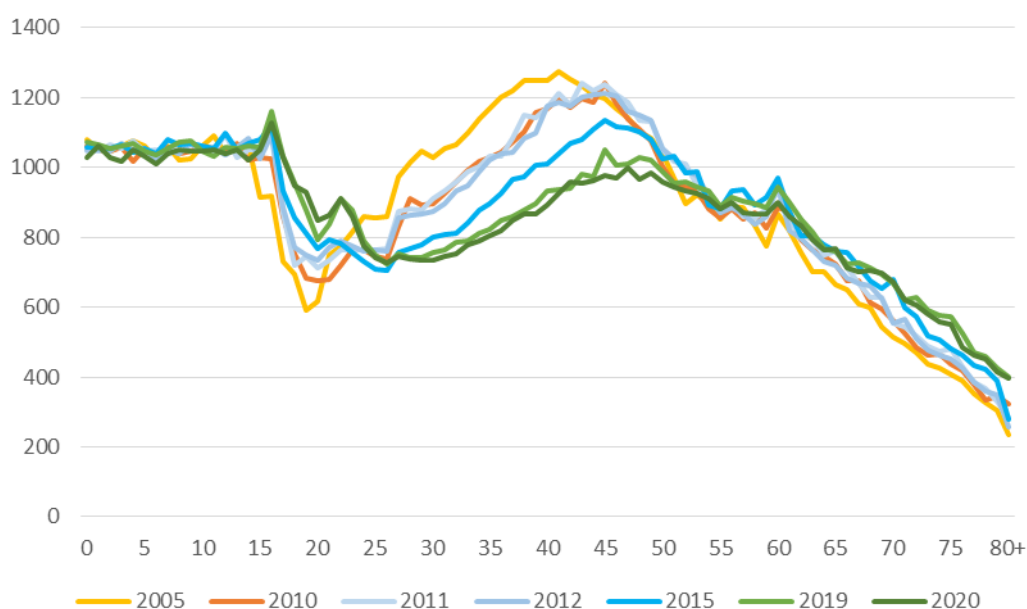


Figure 3. The sex ratio in the flow of internal Russian migration (arrivals) by 1-year age groups, number of men per 1000 women

Source: Author's calculations based on Rosstat data.

In childhood, the sex ratio in migration is close to natural, with a small “peak” of male predominance by the time they finish 9th grade, possibly because at this age some young men move in order to receive vocational education. At younger working ages, women participate in intra-country migration more often than men, but the proportions level off at older ages. In middle age, men predominate in migration flows; afterwards, the sex ratio among migrants is close to that in the general population.

In all years, men participated, if only slightly, more actively in inter-regional migration, and women in intra-regional migration (Figure 4). This feature did not change in any way even when the number of recorded long-term migrants more than doubled after the reform of the

registration system in 2011 and the proportions of these flows changed in favor of interregional ones.

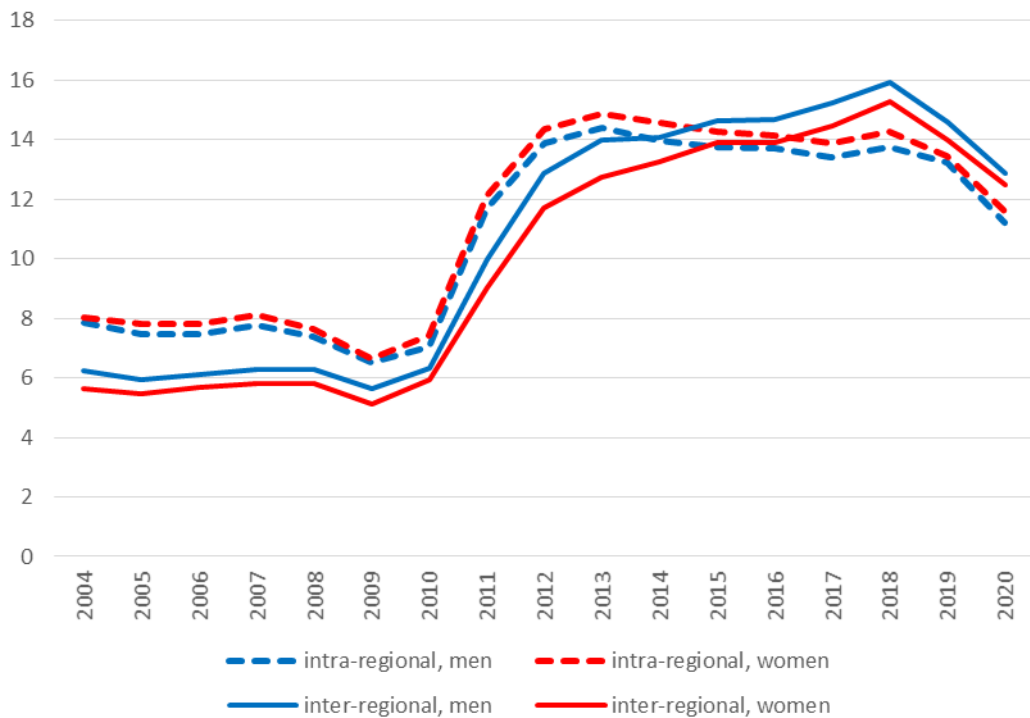


Figure 4. Intra-regional and inter-regional migration by sex, per 1000 persons

Source: Author's calculations based on Rosstat data.

By age, the intensity of migration of men and women shows similarities and differences (Figure 5). At younger ages, women are clearly more active in intra-regional migration; starting from the age of 35, men take the lead. Differences are especially pronounced at the age of graduation from school (18 years): apparently, women move more often in connection with their education, and do so within the region. The 2015 micro-census showed that women were more likely than men to be absent from the household due to study (Population micro-census 2015). But these are the most general assumptions, which do not explain the strong differences in the sex ratio at young ages. In inter-regional migration at this age, women move only slightly more often. At the age of 18 in the mid-2010s, 13% of women and 11% of men participated in intra-country migration. It is not surprising that the peak in the age of graduation from vocational education, which manifested itself after the appearance of “pseudo-return” migration (Mkrtchyan 2020) in the second half of the 2010s, is also more pronounced in women.

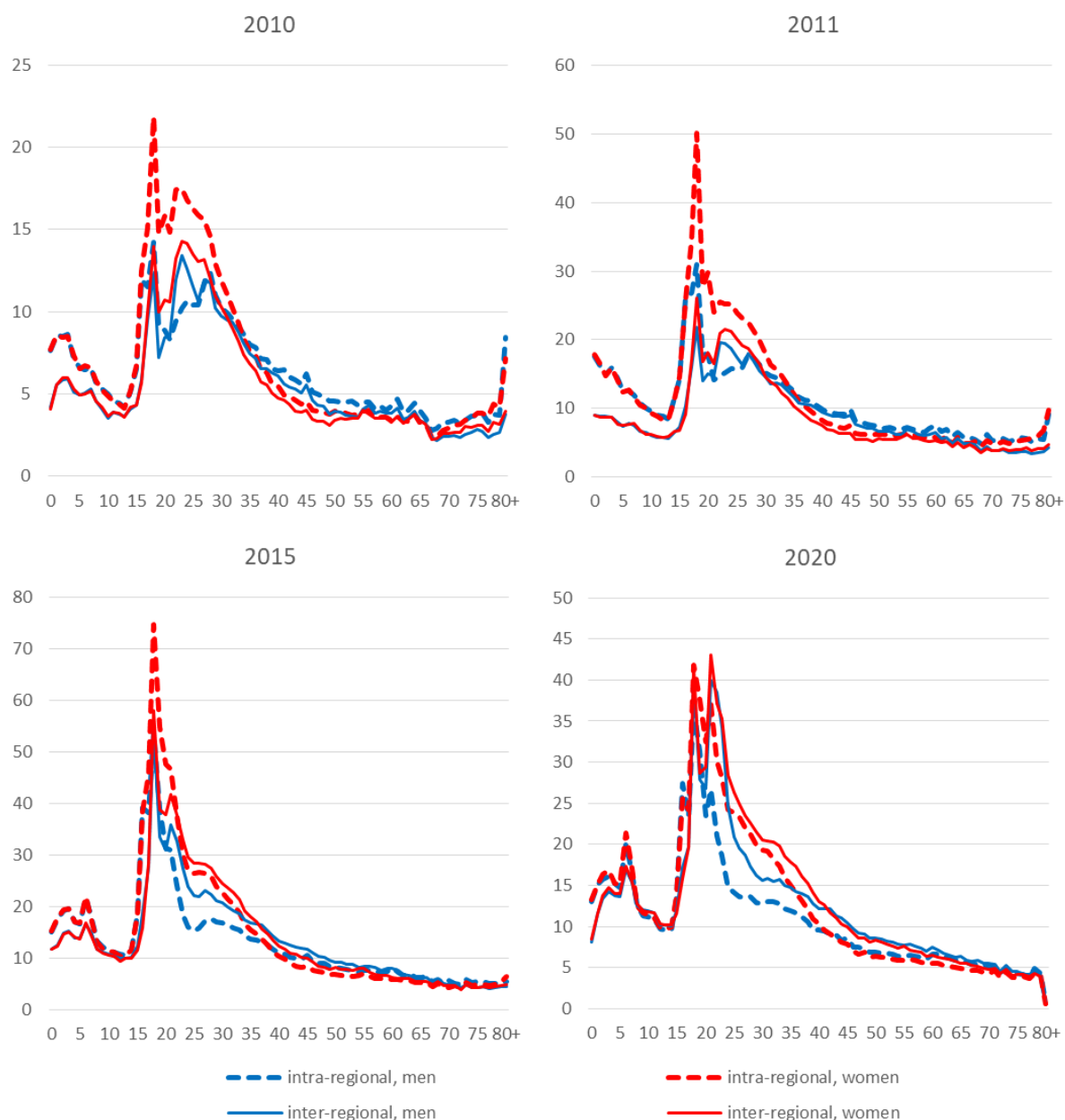


Figure 5. Intra-regional and inter-regional migration by sex and age, per 1000 population

Source: Author's calculations based on Rosstat data.

We believe that the high activity of women in intra- and inter-regional migration in young reproductive ages is explained by:

1. their earlier marriage and adulthood in general, and the likelihood of moving due to these events. Studies of internal migration show that age profiles of migration coincide with the transition to adulthood for both sexes, but this applies to women to a greater extent (Bernard, Bell, Charles-Edwards 2014);
2. their non-participation in conscription (Russian statistics do not take into account movements for this purpose). Despite the fact that conscription in the army is not now as widespread as, for example, in the late Soviet period, it still takes a significant number of young people out of ordinary life;

3. the more frequent need for women to be registered at the place of residence and stay in another region or locality. Registration may be required when a child is enrolled in a preschool or school (Mkrtchyan et al. 2020), and if the whole family cannot obtain registration, the choice most often falls on the woman - the man does not register;
4. the fact that at young working ages men are much more likely than women to participate in temporary labor (rotational) migration, and regular travel to work does not require registration. The issue of “replacing” long-term (settlement) migration with other forms of spatial mobility has been repeatedly raised by researchers (Moiseenko 2004; Mkrtchyan 2009), especially when trying to explain its decline in the 1990s;
5. the fact that, perhaps, the experience of educational migration, of living during that time in another region or settlement, often leads to a subsequent change of residence after real or pseudo-return migration. Therefore, at the age of 25-30, women are more likely than men to move.

After 35-40 years of age and up to the most advanced years, men are more active in both flows of internal migration. The differences are not as great as they are stable, including over time. We believe that they are explained by the later onset of many life course events among men related to their changing place of residence and to their more frequent mobility after a divorce. There are, however, studies showing that divorce often leads to a change of residence, but not of region (Clark 2013). At this age, women are more likely than men to be deterred from migrating by the need to care for elderly parents. Noteworthy is the absence of migration peaks associated with retirement age, which in Russia is different for men and women.

CONCLUSION

This article attempts to comprehensively analyze the distribution of long-term migrants in Russia by sex. It shows that the emerging disproportions are more characteristic of international migration and are associated with a sharp predominance of men in the flow at young and middle ages. The sex ratio in this flow was influenced by changes in the methodology for recording migration; apparently, categories of migrants were introduced into the statistical “turnover” that differed significantly in the forms and purposes of the move. Repatriation migration, which was characterized by a fairly even representation of men and women participating in it, by the 2010s ceased to dominate in international long-term migration in Russia. The new composition of migrants with a clear predominance of men in working age is not normal; such migration is quasi-long-term. It cannot be considered sustainable, which makes it difficult to predict migration for the medium and long term.

In contrast to inter-country migration, the sex structure of internal migration is more balanced, although the sex ratio differs significantly in certain age groups. But despite the fact that in general they are not so large and practically do not depend on changes in recording methods, explaining the differences that arise is difficult without more in-depth research. There are too few detailed statistics from sample surveys to answer many of the questions raised by the study.

Sex and age characteristics of migration in Russia must be taken into account in demographic forecasts. Since the sex ratio in the flows is changing quite dynamically, the patterns

of migrants should be reviewed as often as the predictive hypotheses. At the same time, in the medium and long term, sex disproportions need to be smoothed out, since the structural features of migration in the 2010s seem to be extremely unstable.

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