In this article, I carry out a comparative analysis of population change in the bordering regions of Russia and the European Union. Peripheries of their countries, most of these regions enjoy a more or less favourable demographic situation, which, however, differs from place to place. To attain the aims of the study, I analyse official data from Russian and EU statistical offices and map the results obtained. I identify significant differences between border regions and cities. The most adverse demographic situation is observed in the borderlands of the Baltics, a slightly better one in Poland and Finland. As to Russia’s border regions, a population increase is characteristic of Saint Petersburg and the Leningrad and Kaliningrad regions. Yet, a number of cities in the immediate vicinity of the border face a population decline. The demographic situation could be improved by more active transboundary collaborations and by the border serving increasingly as a contact area rather than a barrier.

**Keywords:** demographic situation, border regions, border cities, Russia, Baltics, Poland, Finland

**Introduction**

The end of the 20th century became a watershed that dramatically changed the course of economic and demographic development of the former socialist countries of Eastern Europe. This also holds true for regions that became borderlands after the demise of the Soviet Union. These regions had two options — either to turn into periphery or into territories, the development of which is boosted by transboundary cooperation. Neighbours
of Eastern European states, having traditional market economy, wit-
nessed the improvement of the economic and geographical position of
former socialist countries, as frontiers turned into a contact area rather
than a barrier. The westernmost territories of Eastern European coun-
tries and their Western neighbours became more involved in trans-
boundary economic cooperation. The accession to the EU of some for-
mer socialist countries and ex-USSR republics gave their residents an
opportunity to migrate to more developed EU countries in search of a
better-paid job and higher living standards. These countries too faced an
influx of migrants from less economically developed ‘third world’ states,
although they were not affected as much as their richer western neigh-
bours were.

Russia borders on five EU member states. All Russia’s borderlands
with the EU lie within the Baltic macroregion. Recently, Russian resear-
chers have paid special attention to demographic problems. Typological
distinctions between regions have been identified and analysed [1].

A comparative analysis of the demographic situation in Russia and its
regions, on the one hand, and in the neighbouring countries and their re-
regions, on the other, is still a rare find. However, the Baltic Sea region, which
includes Russia’s North-West, is a popular object of research [2—8].
A number of studies have focused on the regional dimension of demogra-
phic development in the CIS countries [9—10] and the Barents Region
[11]. In this article, I juxtapose the demographic performance of the neigh-
bouring regions of Russia and the EU and estimate the potential and rele-
vance of transboundary cooperation.

Among Russia’s EU neighbours, Finland is a country with a tradi-
tional market economy, Poland is a former socialist state, and Lithuania,
Latvia, and Estonia are ex-USSR republics. The former socialist states
treading the path of market development, the accession of Poland and the
Baltics to NATO and the EU, and Finland’s accession to the European
Union changed the character of the border between the Russian Federa-
tion and the above countries after the disintegration of the USSR. How-
ever, this border is still less transparent than that between the EU member
states [12]. In this article, I analyse previously published statistical data
to consider how (and if) the changes in the geopolitical position of re-
regions on either side of Russia’s border with the five EU countries affect-
ed the demographic processes and structures on these territories. I also
explore differences in the demographic processes and the development of
the geodemographic situation in the said border regions. My analysis is to
demonstrate whether the concept of polarisation is applicable to the terri-
tory in question, namely, how border regions (which some researchers
class as periphery [13—15]) develop in comparison with other regions of
Russia and the neighbouring EU countries.
Methods

In this article, I examine the demographic situation in the border regions of Russia and the EU. Since the principles behind the subdivision of Russia and the EU member states do not match completely, my analysis will focus on Russian regions, on the one hand, and NUTS 3 units, on the other. I hold that these subdivisions stand in a close, although not exact, correspondence.

The study employs statistical data on population change (in 1950—2018 at the national and in 1990—2017 at the regional level), population growth, natural increase, net migration, and crude birth and mortality rates (2016). The regional demographic situation is analysed, among other things, in the context of national trends. I employ a number of methods of economic and statistical analysis — grouping, graph analysis, typology — and carry out the mapping of the results obtained.

I use statistical data from Rosstat¹ (for Russia and its regions) and those from Eurostat and national statistics handbooks.²

Population change in Russia and the neighbouring EU countries

As complex phenomena, the dynamics of population change mirror the state of economy and society [16]. Studying these dynamics is crucial for understanding the characteristics of the demographic situation and assessing the progress of economic and social processes in countries and regions. It has been stressed that population decline is not an easily reversible process [17]. Coupled with an economic downturn, population decline becomes a link in the chain of negative phenomena (a reduction in tax revenues, degrading infrastructure and social services, etc.) that force people to leave. At the same time, comparative studies into the development of European countries pay special attention to their economic development and changes in living standards [18—21]. I build on the assumption that demographic changes have a similar effect and the new

The demographic situation in the east of Europe does not only influence the economic development but also plays a significant role in the changes in living standards and even civilizational values.

The most complicated situation is observed in the Baltics, where a steep reduction in the already low birth rate and massive emigration (for instance, in Lithuania and Latvia), observed from the early 1990s, result in a rapid population decline [22]. The population of Estonia is approximately half of that of the Leningrad region and it might soon become smaller than that of the Kaliningrad region. In Latvia, the population figures are at the level of the early 1960s. In Russia, the rate of population decline is much lower. Poland’s population is growing, although at a lower rate than before. In Finland, which has not experienced such dramatic political transformations, the population growth is rather significant.

In 2016—2017, the populations of Russia, Finland, and Poland were growing, although in all the three countries, the mortality rate exceeded the birth rate. The population growth is accounted for by immigration, which is rather considerable in Finland and Russia and less significant in Poland. In Lithuania and Latvia, the situation is less favourable because of the high rate of natural decline and even greater negative net migration (the massive emigration from these countries to richer EU states testifies to the centre-periphery relations in today’s Europe [23]). In Estonia, the rate of natural decline was lower and net migration was slightly positive. However, the latter could not make up for a high mortality rate, which translates into population decline, just as in the case of the two other Baltic States. Thus, based on the characteristics and sources of population change, countries of the Baltic region can be divided into two groups. The first one, bringing together Russia, Poland, and Finland is characterised by better demographic performance (note that, in Russia, the birth rate is higher than in the other two countries, although the mortality rate is more considerable too). The other group, comprising Lithuania, Latvia, and Estonia, demonstrates poor demographic performance characterised by a low birth and a high mortality rate, particularly, in the two former states.

Population change in the border regions of Russia and the EU

Overall, the demographic performance of the studied regions is below the respective national averages. In 1990—2016, the population of the border region as a proportion of the national total decreased everywhere with the exception of Poland. The most dramatic reduction was observed in the countries where borderlands are home to from 1/5 to 1/3 of the national population (fig. 1).
Fig. 1. Changes in the population of border regions as a proportion of the national total, 1990—2016

However, the demographic development of the border regions is irregular. Below, I will consider this thesis in detail.

The Russian Federation

Russia’s territories bordering on the EU are the Republic of Karelia and the Murmansk, Leningrad, Pskov, and the Kaliningrad regions. They have slight demographic differences. Some of them, classed as ‘international development corridors’ [34; 35] (the Leningrad and the Kaliningrad regions) are characterised by better socioeconomic and demographic

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3 The concept of ‘international development corridors’ [34; 35] is a continuation of the idea first outlined by George Friedman, who defined ‘development corridors’ as regions that, sandwiched between ‘core’ regions, take advantage of their geographical position to the benefit of their economies [36]. ‘International development corridors’ — unlike their inland counterparts — lie between the ‘core’ regions of two or more states. They can cater for international trade, integrate into common value added chains, and borrow innovations from the ‘core’ regions of two or more countries.
performance. In the others — the depressed Republic of Karelia and the Murmansk and Pskov regions, — the demographic situation has been highly unfavourable throughout the post-Soviet period. The high rates of migration from the regions testify to this fact. In the former regions, the population is growing, in the latter, declining (fig. 2). However, in the Leningrad region — despite the overall positive trend, towns situated immediately at the border with Estonia are losing population [27].

A source of population in the emerging ‘international development corridors’ is net migration (fig. 3). In the Northern areas — Karelia and the Murmansk region — it is negative, whereas, in the Pskov region, it is slightly above zero.

The rate of natural increase is close to zero in the Kaliningrad and negative in the Leningrad region. However, the high rate of natural decline reflected in the regional statistics is explained by that part of birth
records pertaining to the Leningrad region is made in Saint Petersburg. This is why the region’s birth rate is the lowest among the five territories under consideration. In the other three regions — the Republic of Karelia and the Murmansk and Pskov regions — the population is declining.

![Graph showing population growth rates and migration](image)

Fig. 3. The rate of natural increase, net migration, and the total population growth rate in Russia’s regions bordering on the EU member states, 2016

The EU member states

The sources of, and differences in, the population change dynamics observed across the EU regions bordering on Russia are rather similar to those described above. In terms of demography, there are pronounced ‘growth poles’ — international ‘development corridors’ — and depressed periphery. The Gdansk area, where rapid population growth is explained by the city being part of the Tricity agglomeration, is an ‘international development corridor’, similar to Russia’s Leningrad and the Kaliningrad region. The Gdansk area is different from its counterparts: the significant growth of its population is almost equally a result of positive net migration and a high rate of natural increase, with a birth rate reaching 13.3 per 1000 population (2016) and a mortality rate as low as 7.5. This relates to a ‘younger’ age structure of the population, explained by a considerable influx of immigrants.

A slightly lower growth rate is observed in Finland’s Northern Ostrobothnia, where growth is sustained by a high rate of natural increase explained, in turn, by a considerable birth rate. In the other regions of the
five countries, the population has been declining since 1995 (fig. 4, 5).
Similarly to their Russia’s counterparts, Finland’s northern regions (fig. 4) are losing population. The most rapid decline is associated with the Baltics’ regions bordering on Russia (fig. 5). Out of the seven territories, only the Klaipėda County is losing population at a rate below the national average, which can be explained by its functioning as an ‘international development corridor’. A rapid population decline is observed across all Latvia’s municipalities lying at a considerable distance from the capital [28]. However, in the Russian regions, this process is less pronounced.

Fig. 4. Population change in Poland’s and Finland’s regions, 1990—2017, % of the 1990 level
Fig. 5. Population change in the Baltics’ regions, 1990—2017, % of the 1990 level

Fig. 6 and 7 show the correlation between the natural increase and net migration as components of population change in the regions under consideration. In Poland, among the regions sharing a border with Russia, only the Gdansk area had positive net migration in 2016. In Finland, net migration was positive only in South Karelia — home to the rapidly developing city of Lappeenranta. Note that both countries are characterised by slightly positive net migration. In the Baltics, all the regions bordering on Russia were characterised by negative net migration.
Fig. 6. The rate of natural increase, net migration, and the total population growth rate in Poland’s and Finland’s regions bordering on Russia, 2016
Source: [10].

Fig. 7. The rate of natural increase, net migration, and the total population growth rate in the Baltics’ regions bordering on Russia, 2016
Source: [10].
A comparison of population change in the bordering regions of Russia and the EU

A juxtaposition of the total growth, the rate of natural increase, and net migration per 1000 population in the borderlands with the respective national averages shows the following. Firstly, among the Russian territories, only the Kaliningrad region, despite its exclave position, performs above the national average in terms of three measures (although the high rate of natural increase is explained not by a high total fertility rate, which is below the national average, but by a high proportion of population aged 18—30). In the Leningrad region, the values of two measures are above the national average, whereas the rate of natural decline is greater than that. The only above-the-average measure in Karelia is the rate of natural increase. However, just as in the Kaliningrad region, it owes to the age structure of the local population.

The demographic performance of the EU’s border regions seems even poorer as against the respective national averages. In Poland, only the Gdansk area performs above the national average in terms of three measures. In all the other three regions, the values of all the three measures are below the national average. In Finland, only one of the six regions — Northern Ostrobothnia — demonstrates above-the-average performance in terms of one demographic measure (the rate of natural increase). In Lithuania, the values of all the three measures are slightly above the national average in the Klaipėda County. In the other two counties, all of them are below the national average. The demographic performance is below the national average in both Latvian and both Estonian regions.

The above testifies to the fact that the three border areas classed as ‘international development corridors’, the Kaliningrad and Leningrad regions and the Gdansk area, stand out among the other territories, which seem to be depressed in both demographic and economic terms. This fits the core-periphery concept. The Klaipėda County exhibits some features of a ‘development corridor’. However, its potential is limited by the small size of Lithuania’s economy. Therefore, most of the regions under consideration share a border that serves more as a barrier than as a contact zone. The ‘development corridor’ regions are no exception, since their rapid development has little to do with their transboundary ties. They are home to large port facilities catering for the transit ties of their countries or of large hinterlands.

Fig. 8 shows a geographical juxtaposition of the population change measures of Russia’s and the EU’s neighbouring regions. All the Russian regions perform better than their Polish and Baltic neighbours, the only exception being the Gdansk area, where the total population growth rate
and the rate of natural increase are higher than they are in the Kaliningrad region (although net migration is below the Kaliningrad level). The correlation between Russia’s and Finland’s regions is not as straightforward. In some Finnish border areas, the situation is better than in their Russian counterparts (especially in the north, in North Karelia, Northern Ostrobothnia, and Lapland), in the others it is worse (particularly, in Kainuu).

**Finland**
- FI1D3 North Karelia
- FI1D4 Kainuu
- FI1D6 Northern Ostrobothnia
- FI1D7 Lapland
- FI1D5 Kymenlaakso

**Estonia**
- EE008 South Estonia
- EE 007 North-East Estonia

**Latvia**
- LV 005 Latgale
- LV 008 Vidzeme

**Lithuania**
- LT 003 Klaipėda County
- LT 004 Marijampolė County
- LT 007 Tauragė County

**Poland**
- PL 633 Gdansk
- PL 621 Elbląg
- PL 622 Olsztyn
- PL 623 Elk

At the border with the Leningrad region — an area of relatively active transboundary cooperation, the demographic performance is below Finland’s average. The population is growing virtually only in the city of Lappeenranta situated close to the border. This is partly explained by Russia-speaking Ingrian Finns emigrating from Russia. It has been re-

Fig. 8. A comparison of the natural change dynamics in the neighbouring regions of Russia and the EU
ported that the city has a large proportion of the Russophones. However, the border city of Imatra, which is also located in South Karelia, as well as the region in general are losing population. As to the Russian border cities, which are connected by transport routes with Lappeenranta and Imatra and make transboundary pairs with them (Vyborg — Lappeenranta and Svetogorsk — Imatra), their population has been stable since the 2000s after a steep decline observed in the 1990 (see Table).

### Population change in the neighbouring regions of Russia and the EU*

<table>
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<tr>
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<td>Russia — Finland</td>
<td>Imatra (Finland)</td>
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<td></td>
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<td>1.4</td>
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<td></td>
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<td>0.4</td>
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<td>0.3</td>
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<td>Zelengradsk (RF)</td>
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<td>1.0</td>
<td>1.2</td>
<td>1.3</td>
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</table>

*Calculated by the author based on the official statistics from the RF, the EU, Poland, Finland, and the Baltics.

As the Table slows, in 1979—1989, the population of all the cities situated along today’s Russia — EU border was growing. The only exception is Kohtla-Järve, the economy of which was struggling at the time because of the shale industry losing its once prominent position. After

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independence, the population of Estonian border cities has been decreasing twice as rapidly as across the country due to the emigration of its Russian population. The same processes have been observed in the border cities of the other two Baltic States — with the exception of the resort of Neringa — in the post-Soviet period. Partly, the population decline is explained by the Russian population leaving the cities for Russia, particularly, the neighbouring border territories. A slight population decline (below the border voivodeship average) is observed in Poland’s border town. The neighbouring Russian towns — the only exception is the resort of Zelenogradsk — are also losing population, sometimes, at an even higher rate. For instance, Cernyakhovsk is affected by the attractiveness of the rapidly developing city of Kaliningrad.

Thus, the border position of the neighbouring Russian and EU cities and towns seems to play a negative role in their development. The exceptions are few. Only Finland’s Lappeenranta and the Polish towns have taken advantage of transboundary ties by developing transboundary trade and producing semi-finished goods imported by Kaliningrad companies. The performance of the resorts of Zelenogradsk and Neringa has little to do with their border position. In the other cases, the negative effect on the development of border cities is associated with their periphery position.

Conclusions

There are considerable differences in the population change dynamics in the neighbouring border regions of the Russian Federation and the European Union. A major negative factor is a significant rate of natural decline and negative net migration in the Baltics’ regions, across which the differences are also significant. The smallest demographic losses are associated with South Estonia. The most favourable situation is observed in Russia’s Kaliningrad and Leningrad regions, Poland’s Gdansk area, and Finland’s Northern Ostrobothnia.

The performance of all the Baltics’ regions pales in comparison with that of the Leningrad and the Kaliningrad region. However, the Pskov region is quite comparable with South Estonia, although its situation is much better than that observed in the other neighbouring territories of Latvia and Estonia. With the exception of Gdansk, the situation in Poland’s border regions is also worse than in the Kaliningrad region. This can be explained by a negative net migration in the Polish borderlands and a positive one in the Kaliningrad region. However, the difference in the rate of natural increase is insignificant. The performance of Finland’s and Russia’s cities is comparable. A rapid population growth is observed in the Leningrad region and a slow one in Finland’s Northern Ostrobothnia. The other neighbouring regions are gradually losing population due to both natural decline and negative net migration.
When examining border regions, particularly from the perspective of their demographic potential, it is important to consider their considerable differentiation. Most of them — as the polarisation concept suggests — are depressed. However, some of them turn into ‘international growth poles’ that can forge strong transboundary ties. In the others, an international neighbourhood can mitigate the periphery factor and give an impetus to socioeconomic and demographic development.

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References

5. Kuznetsova, T. Yu. 2013, Tendencies and Factors of Demographic Development in the Baltic Region: Regional Analysis, *Regional’nye Issledovaniya* [Regional research], no. 3, p. 50—57 (in Russ.).


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