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Veröffentlichungsversion / Published Version
Zeitschriftenartikel / journal article

Empfohlene Zitierung / Suggested Citation:

Romanova, E., Vinogradova, O., & Frizina, I. (2015). Social and economic space compression in border areas: the case of the Northwestern Federal District. *Baltic Region*, 3, 28-46. <https://doi.org/10.5922/2079-8555-2015-3-3>

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ECONOMIC AND GEOGRAPHICAL DEVELOPMENT OF THE RUSSIAN NORTHWEST

SOCIAL AND ECONOMIC SPACE COMPRESSION IN BORDER AREAS: THE CASE OF THE NORTHWESTERN FEDERAL DISTRICT

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The so-called “compression” of social and economic space has been the subject of quite a few studies in the past decades. There are two principle types of compression: communicative, that is, associated with the development of transport and information systems, and physical, manifested in the rapid decrease of the number of new territories to explore. While physical and communicative compression are interrelated, they have different spatial expressions depending on geographical conditions, economic, environmental, historical, and political characteristics of the region. The authors identify the patterns of communicative and physical space compression using comparative mapping, statistical and historical research methods, and a model showing the spatial differentiation of regional socioeconomic characteristics in the Northwestern Federal District. The study focuses on border areas, where the following key manifestations of compression have been identified: transport connectivity, level of agriculture development, and depopulation. All these indicators of space compression process are studied at the municipal level. The authors identify the key features of socioeconomic space compression for the border areas of the Russian Northwest.

Key words: socioeconomic space compression, communicative connectivity, economic development of territories, depopulation

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Submitted on April 15, 2015

doi: 10.5922/2079-8555-2015-3-3

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Over the past quarter century, Russia's European part has experienced steady depopulation in rural areas. Both population and economic activities concentrate in the administrative cen-

tres and suburbs. This has often been mentioned by Russian researchers, who also stress the spatial heterogeneity of the ‘centre-periphery’ system [3; 4; 8; 15; 22]. Polarisation processes observed in non-Black earth regions triggered physical compression of the socioeconomic space — economic activities are concentrated within the selected nodes and development centres leading to the ‘desertification’ of intra-node spaces [21]. Studies into the Kaliningrad region’s landscape environment and settlement and nature management systems conducted at IKBFU over the past twenty years have shown that the compact border region is much less polarised than the central regions of non-Black earth Russia. Supposedly, space is deformed differently in border areas affected by the ‘border effect’. This study focuses on the Northwestern federal district (NWFD), eight of whose eleven regions border on foreign states. Moreover, five of these regions have land borders, including those crossing rivers and lakes.

This work aims to identify how the socioeconomic space compression affects the border districts of the NWFD.

Two interpretations of the ‘space compression’ concept as applied to the studied territory

The term ‘space compression’ was coined by D. Harvey in 1990 [31] gaining wide currency among Russian and international social geographers, sociologists, and economists [4—6; 11; 13; 28; 30; 32; 33]. The two modern interpretations of these concept were considered in detail by A. I. Treyvish, L. A. Bezrukov et al. in 2010 at a conference in the town of Myshkin and in the Demoscope e-journal [3; 8; 15; 16; 19; 21—23; 27]. These are the communicative compression of space (through reducing transport travel time and due to the development of information technology) and the physical compression resulting from a decrease in the area of reclaimed lands.

The communicative compression of space is an increase in the internal cohesion of the oecumene manifested in the reduction of time required for transporting people and cargoes. The ‘end of distances’ has been discussed in the West since the second half of the 20th century [29; 34; 35]. Indeed, due to advances in transportation, passengers and cargoes moved in the 20th century with increasing speed, whereas transportation costs were decreasing [16; 19; 34—36]. The development of communications (primarily, mobile telecommunications) as well as information systems (e-mail and the Internet) resulted in increased connectivity between countries and continents, which contributed to the communicative space compression. However, even in the 21st century, it is still early to speak of the global nature of this phenomenon. There are vast spaces, whose population still does not enjoy access to modern transportation and information systems, which is also the case in Russia.

The second interpretation of space compression in Russia was first suggested in the 1990s by Yu. L. Pivovarov. However, it was applied only to studying the development of the Asian part of Russia [17; 18]. In the past decade, the

physical compression — the reduction in the areas of reclaimed lands — has been discussed in relation to the country's European part [4; 12; 14; 20].

Despite the seeming heterogeneity, these phenomena are closely connected. A decrease in the economic activity on 'old' reclaimed territories often results in the destruction of infrastructure, which eliminates the possibility of space compression.

This study interprets the physical compression of socioeconomic space in the NWFD border areas as a reduction in the areas of reclaimed lands, i. e. those used in economic, recreational, and other human activities. The physical compression of economic space is manifested in a reduction in cultivated territories, mostly those used in agriculture and forestry, and depopulation of rural areas. The opposite process will be called space 'expansion' characterised by an increase in reclaimed areas to the point of joining.

Another aspect of the study is examining the reclamation degree of the studied areas. Increases in the population density and the landscape load are determined by several factors, for instance, the direction of migration flows. If the population is 'redistributed' across the region, the concentration of population and different activities increases in attractive areas. If migration is directed beyond the region, the concentration of population and economic activities might not take place in the remaining areas. In this case, both space and polarisation anisotropy increases.

In this study, the second interpretation of space compression — the concept of 'communicative space compression' — will be replaced by the concept of 'communicative permeability'. If the space between transport corridors is used insufficiently, as B.B. Rodoman stresses, its anisotropy increases, i. e. the space becomes less permeable. If the space is evenly reclaimed, if it has a good infrastructure, it becomes communicatively permeable. Communicative permeability is manifested spatially in transport accessibility, territory's area, distance from a paved road, mobile coverage, and Internet access.

Physical space compression — reduction in the reclaimed land area (spatial aspects of land management)

Russia's western border regions are environmentally diverse areas. Therefore, it is important to identify regions with similar characteristics, i. e. those suitable for a comparison. The exclave Kaliningrad region, four of whose 22 municipalities share borders with foreign states, was chosen as the focus territory. Apparently, it cannot be compared with the northern territories — the Murmansk region and the Republic of Karelia — due to climatic differences. Moreover, agricultural lands account for only 19.8 of the total area in the Murmansk region, 1.4% in Karelia, and 23.3% in the Leningrad region. Only the Pskov and Kaliningrad regions have more than 40% of agricultural lands (43.2% and 60.5% respectively), whereas only in the latter lands actively devoted to agricultural use account for 90% (the rest is occupied by buildings, roads, forest belts, etc.). In the Murmansk

and Leningrad regions, only 37.9% of agricultural lands are actively used in agriculture [46]. The Leningrad region cannot be compared with the others in terms of economic and geographical characteristics — it is not only a border area, but also a satellite of the largest city in North-West Russia — Saint Petersburg. Therefore, the Pskov and Kaliningrad regions were chosen for further investigation. The Novgorod region, which neighbours the Pskov region but does not border any foreign states, is analysed to identify the ‘border area effect’.

The study focuses on agriculture, since commercial forestry is absent in the Kaliningrad region due to its low forest coverage, whereas the Pskov and Novgorod regions boast a developing forest industry. The most spatially representative branch of agriculture is horticulture, since animal husbandry (especially, dairy husbandry and pig farming) are usually located in compact areas and fodder production indicators are included under general horticulture performance.

In general, the agroclimatic conditions are rather similar in these regions. The differences between the Kaliningrad and the Novgorod/Pskov regions lie in the vegetation period (it is longer in the Kaliningrad region), whereas all three of them are similar in terms of growing-degree days. Snow cover depth and stability is higher in the Pskov and Novgorod regions, which positively affects winter crops [6]. The precipitation-evaporation ratio ranges from 1.3 to 1.5 in all three regions, which is indicative of water saturation. The agrochemical characteristics of sod-podzol soil are comparable. The sod-podzol soils account for 69% of the territory in the Novgorod, 73% in the Pskov, and 50% in the Kaliningrad region. Brown forest soils, which have similar agronomic properties, account for 20.4% [2]. In all regions, most lands grow spring and winter wheat, oat, and barley, i. e. cereals, whose yield depends on the level of agricultural techniques. Therefore, the level of horticulture development and its district differentiation are affected more by socioeconomic conditions than environmental characteristics.

In agriculture, the economic space compression is manifested in two parameters — the cropland area (the reverse parameter is the fallow land area) and the yield of crops (determines the degree of horticulture intensity). Some scholars stress a trend towards a growing area of abandoned agricultural lands and a reduction in the yield (especially, in the northern districts of intensive agriculture) as the distance from the regional centres increases [9].

In the Kaliningrad region, croplands accounted for 23.4% of all agricultural lands in 2013. At the district level, this parameter ranges from 11.2% in the suburban district of Gvardeysk to 52.0% in the remote Nesterov district [42]. In the Kaliningrad region, the district difference in cropland area is 4.5-fold. In the Pskov region, 19.2% of agricultural lands were in active use ranging from 61.0% in the Palkino and 61.4% in the suburban Pskov district and 5.0% in the Kunya and 5.6 in the Pustoshka districts [41] (fig. 1). This parameter ranges 12.5-fold from region to region. The cropland distribution



difference in the Novgorod region is 20-fold, ranging from 62.6% in the most advanced to 5 and 3.8% in the most depressive districts. Therefore, there is no pronounced cropland percentage differentiation in the Kalinin-grad region. In the Pskov and Novgorod regions, the differences follow the 'centre-periphery' watershed.

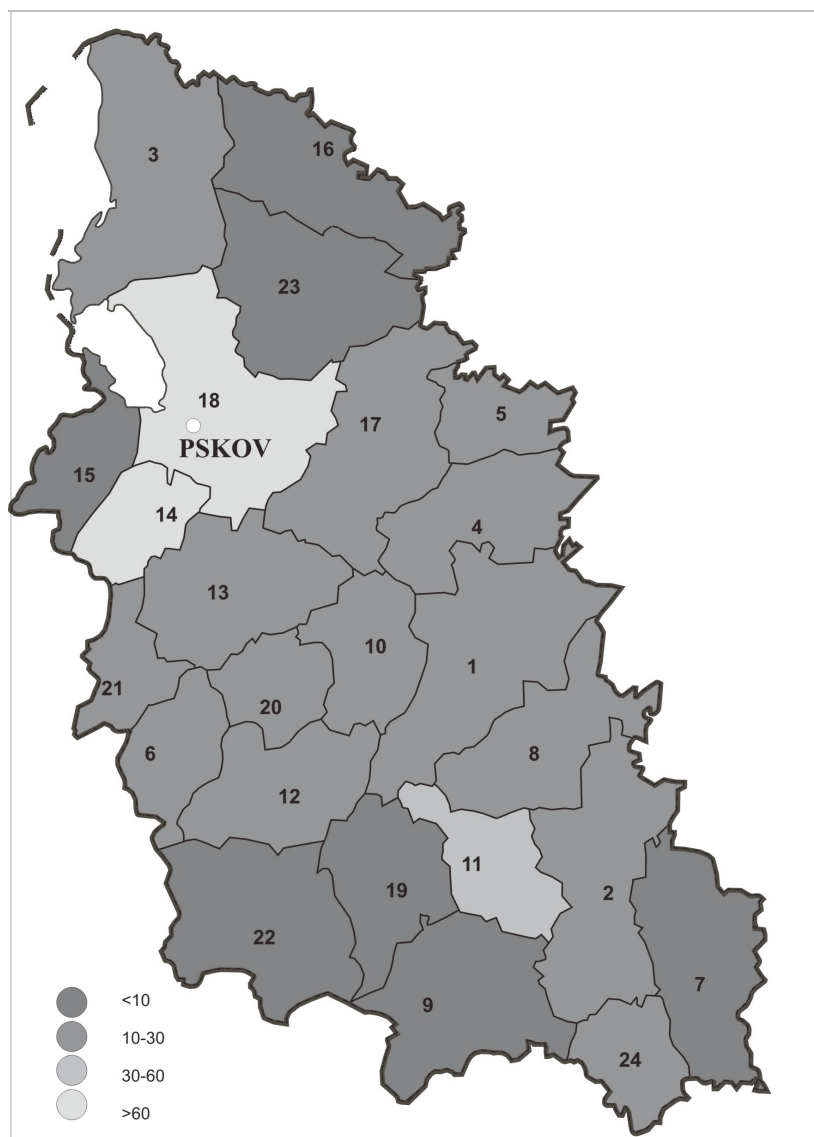


Fig. 1. Cropland area percentage in the Pskov region, %

Districts: 1 — Bezhanitsy, 2 — Velikie Luki, 3 — Gdov, 4 — Dedovichy, 5 — Dno, 6 — Krasnogorodsk, 7 — Kunya, 8 — Loknya, 9 — Nevel, 10 — Novorzhev, 11 — Novosokolniki, 12 — Opochka, 13 — Ostrov, 14 — Palkino, 15 — Pechory, 16 — Plyussa, 17 — Porkhov, 18 — Pskov, 19 — Pustoshka, 20 — Pushkinskiye Gory, 21 — Pytalovo, 22 — Sebezh, 23 — Strugi Krasnye, 24 — Usvyaty

Physical space compression — decrease in land reclamation rate

The yield of cereals is an indicator of crop farming intensity. Almost all districts of the Kaliningrad region boast advanced agricultural techniques. In 2014, against the background of favourable weather conditions, the average yield of legumes reached 4100 kg/ha. In this respect, the Kaliningrad region entered top ten of Russian regions and ranked first in terms of rapeseed yield (2500 kg/ha). The highest cereal crop was observed in the Polesk (5740 kg/ha), Slavsk, Nesterov, and Gusev districts (4160, 4970, and 5010 kg/ha) (fig.2) [38].

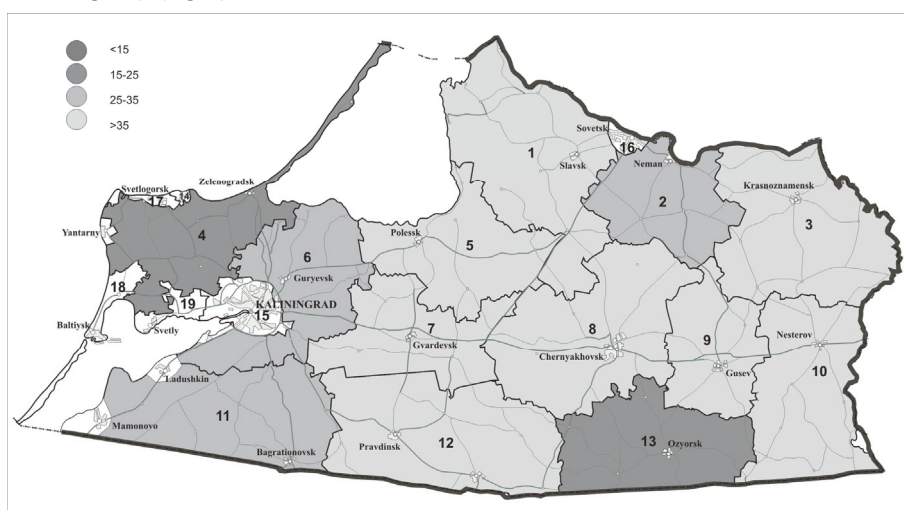


Fig. 2. Cereal crop in the Kaliningrad region, kg/ha, 2013 r.

Districts: 1 — Slavsk, 2 — Neman, 3 — Krasnoznamensk,
4 — Zelenogradsk, 5 — Polesk, 6 — Guryevsk, 7 — Gvardeysk,
8 — Chernyakhovsk, 9 — Gusev, 10 — Nesterov, 11 — Bagrationovsk,
12 — Pravdinsk, 13 — Ozersk

The average cereal crop in the Pskov region is at 1790 kg/ha ranging from 3740 kg/ha in the Nevel, 3100 kg/ha in the Ostrov, and 2570 kg/ha in the Pskov districts to 840 kg/ha in the Loknya, 970 kg/ha in the Novorzhev, and 1030 kg/ha in the Dedovichi districts [41].

As to the yield distribution, one can distinguish two types of peripheries in the Pskov region — in the North (at the border with the Novgorod region) and the Southeast (at the border with the Smolensk region) (fig. 3). Maximum cereal crop is harvested in the suburban districts and those bordering on the Republic of Belarus.

In 2013, the average cereal crop in the Novgorod region was 1990 kg/ha (ranging from 860 to 3200 kg/ha) [43]. There is a compact group of ‘southern periphery’ districts at the border with the Pskov and Tver regions.

Therefore, despite similar agroclimatic conditions, the spatial characteristics of agriculture (horticulture) development level differ in the Kaliningrad

and Pskov regions. The disparities in the cropland area percentage and yield are insignificant among the Kaliningrad municipalities; and they tend to narrow. However, in the Pskov and Novgorod regions, these disparities are more significant. Therefore, one can speak of the physical compression of economic space in these areas.

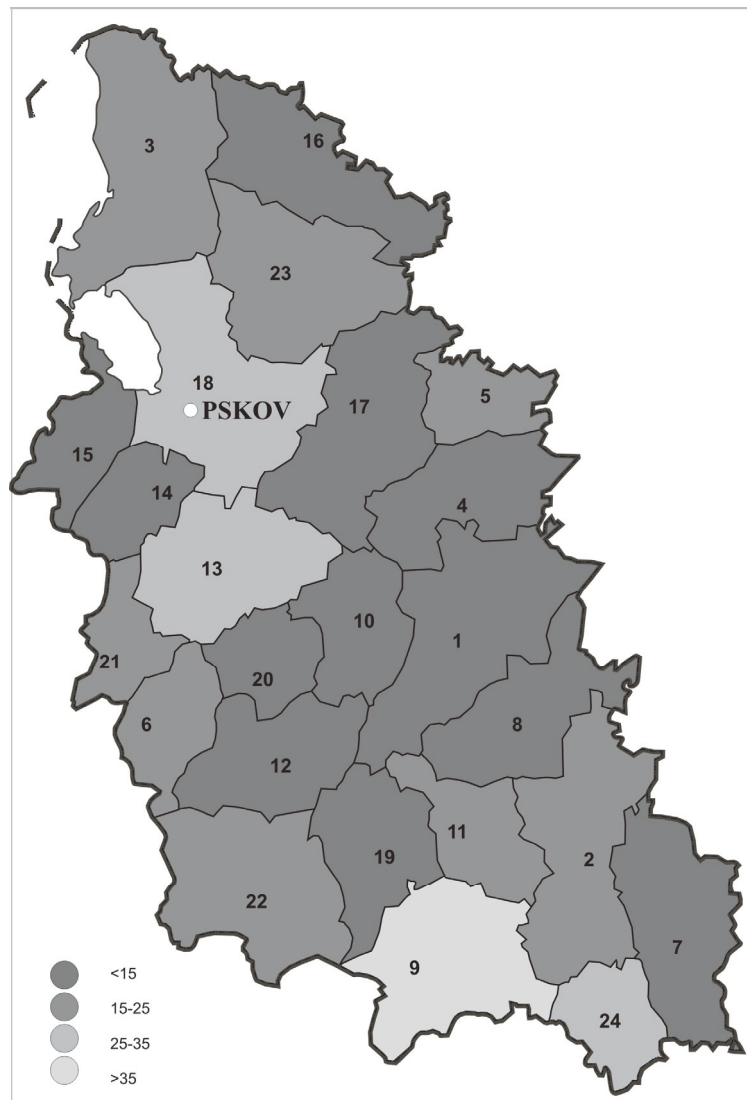


Fig. 3. Cereal crop in the Pskov region as of 2013, kg/ha
For legend, see fig. 1

Physical space compression — depopulation of rural areas

Population of all regions, except for the Leningrad and Kaliningrad ones, has been decreasing over the past decades. Most territories of the Western border area are affected by depopulation. According to the

2010 census, the number of unpopulated rural settlements or those with fewer than 10 residents accounted for 30.9% in the Murmansk region, 30.7% in Karelia, 30.8% in the Leningrad region, and 46.6% in the Pskov region. Only the Kaliningrad region stands out with 7.9% of unpopulated rural settlements [37—42]. One can assume in view of the current demographic and migration trends that the depopulation of rural areas has increased since the last census. This situation makes the western border areas of Russia a territory of cities with a high proportion of urban population (from 92.8% in the Murmansk to 65.7% in the Leningrad region). Although most small towns (except for those in the Kaliningrad region) are losing population, urban settlements are increasingly surrounded by depopulated territories, which were dubbed ‘internal periphery’ by T. G. Nefedova [14—16]. The landscape of the western borderlands is becoming increasingly polarised [20; 21].

Since 2010, the total population of the Kaliningrad region has grown due to a population increase, whereas diverse trends are observed in the rural areas (fig. 4). In 2009-2013, the population of the Bagrationovsk, Guryevsk, Krasnoznamensk, and Ozersk districts increased. In the case of the suburban district of Guryevsk, this increase is a result of both a positive migration rate (1429 people arrived in 2013) and the natural increase (the highest natural increase rate in the region of 4.2 ‰). In the other districts, population grew due to natural increase (natural increase rates ranging from 0.6 to 3.9 ‰ in 2013). Gvardeysk, Gusev, Zelenogradsk, Polessk, Slavsk, and Chernyakhovsk have rather stable population (within 5% of the total population, as of 2009), which is accounted for by a low out-migration rate and a close to zero natural increase. A steady decrease in population throughout the five-year period was observed in the Pravdinsk (10.3%), Nesterov (6.7%), and Neman (7.9%) districts as a result of out-migration not only from rural areas, but also the district centres.

The population of the Pskov region has been steadily decreasing over many decades. However, the natural decrease rate reduced in 2005 — 2014 from 15.7 to 7.6‰. A relatively stable population is observed only of the Pskov and three remote districts of Velikiye Luki (whose centre is the region’s second largest town), Sebezh (border area), and Usvyaty. In these districts, the population decrease rate was below 5% over the past 5 years (fig. 5). The maximum decrease rate is observed in the already scarcely populated districts of Gdov, Krasnogorodsk, Loknya, Novosokolniki, Porkhov and Strugi Krasnye [41]. Moreover, the Gdov, Porkhova, and Strugi Krasnye districts border on the Pskov district, from which people probably move to the suburbs.

In the Novgorod region, a population decrease has been observed over the past 25 years. However, in 2006-2013, the natural decrease rate dropped from -11.7 to -6 ‰ [43]. The rural areas demonstrate a continuous population decrease with the exception of two suburban districts boasting a positive migration rate.

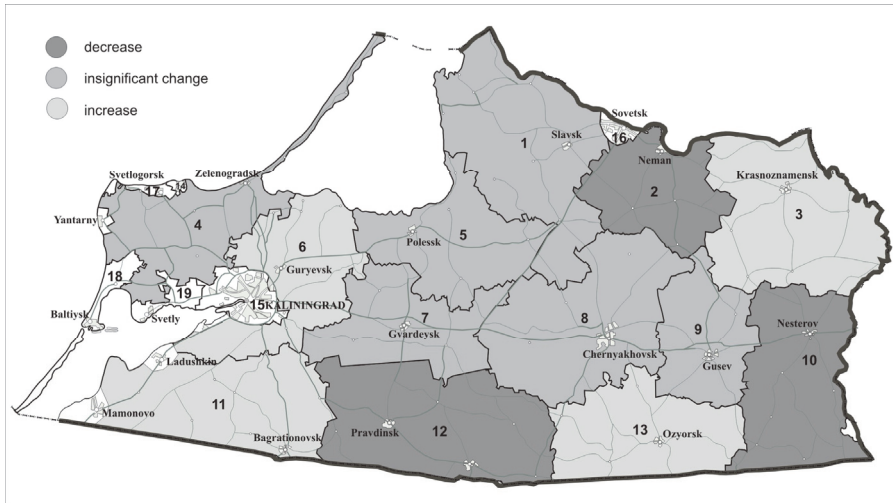


Fig 4. Population change in the Kaliningrad region in 2009-2013, %.
For legend, see fig. 2

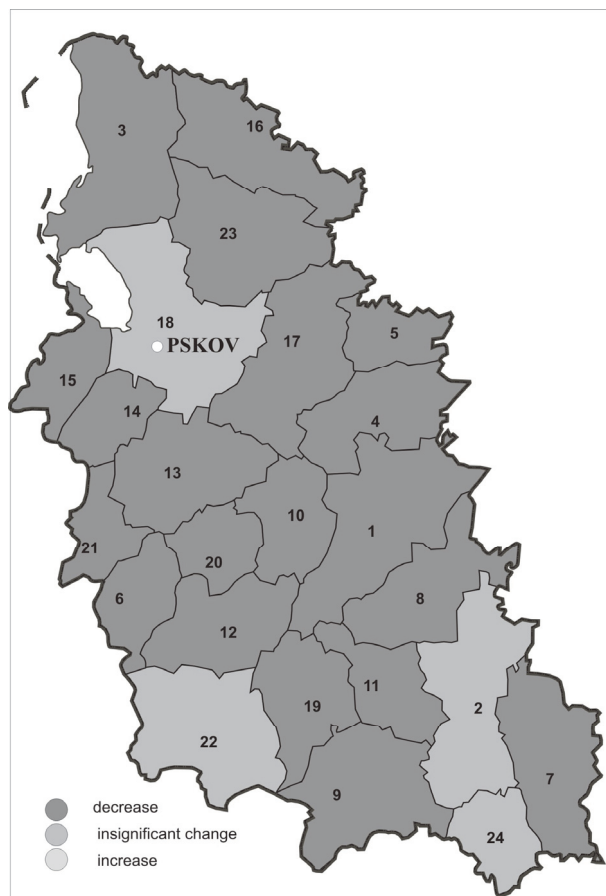


Fig. 5. Population change in the Pskov region in 2009-2013, %. For legend, see fig. 1

Another important indicator of depopulation is the proportion of scarcely populated (a population of fewer than six people) and abandoned rural settlements. Such settlements account for only 7.9% of all rural settlements in the Kaliningrad region and 46.6% in the Pskov region [41; 42]. The most ‘deserted’ districts of the Pskov regions are those of Bezhanitsy, Novorzhev, and Ostrov, where 62% of settlements are abandoned. These districts are situated in the internal districts to the south from the regional centres; they are neither border, nor suburban areas, which makes them the so-called ‘internal periphery’ (fig. 6).

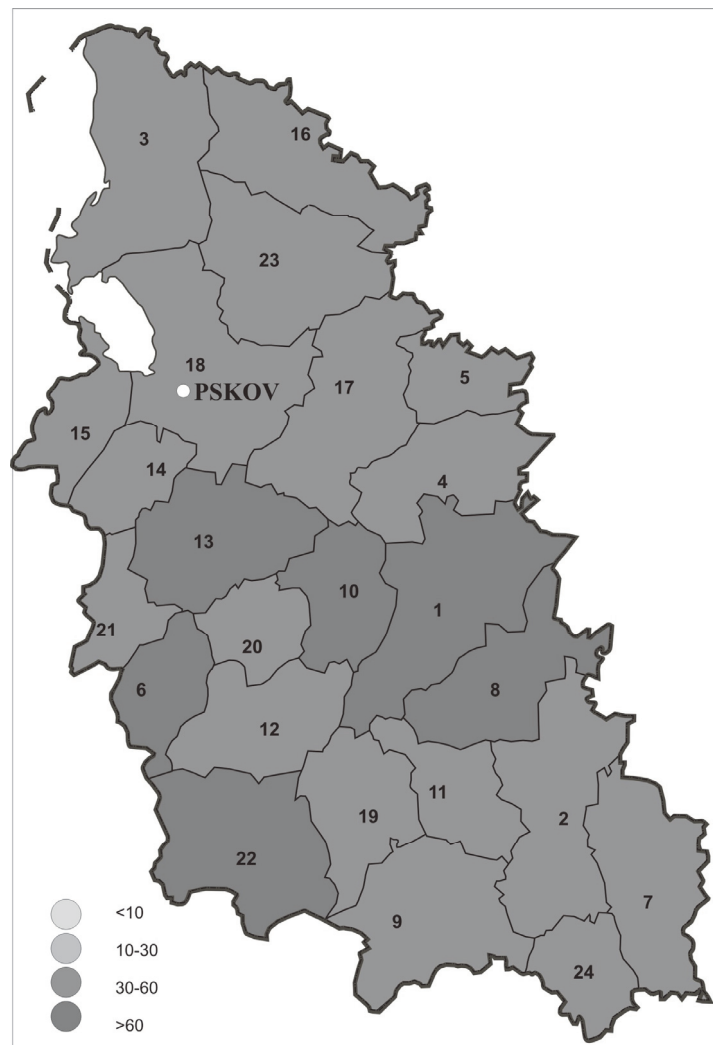


Fig. 6. The proportion of scarcely populated (< 6 people) and abandoned rural settlements in the Pskov region, % of the total number of rural settlements. For legend, see fig. 1

In the Novgorod region, scarcely populated and abandoned settlements account for 44.9% ranging from 65.7% to 13.1% at the district level [39].

The most populated districts are those bordering Veliky Novgorod; depopulation increases towards the periphery.

Therefore, the depopulation phenomena observed in the Pskov is absent in the Kaliningrad region. Unlike the inland Novgorod region, where depopulation increases from the centre to the periphery, in the Pskov region, it is pronounced in the internal district, whereas the border districts remain rather stable.

Physical space compression — changes in population density

Over the past five years, studies into the population density in rural areas of the Kaliningrad and Pskov regions have shown certain differences. As of 2014, the density of rural population in the municipal districts of the Pskov region ranged from 1.9 people/km² (Bezhanitsy district) to 10.6 people/km² (Pskov), whereas in the Kaliningrad region, it ranged from 7.1 people/km² (Krasnoznamensk district) to 31.7 people/km² (Guryevsk). The differences in five-year rates of rural population density change over the past five years are even more dramatic. In 2014, the population density of most rural areas of the Pskov region was 76—92% of the 2009 level. Only the suburban Pskov district shows a positive rate (108.2%). In the Kaliningrad region, the rates of rural population density change differ avoiding the ‘centre-periphery’ pattern. In 2014, the rate of rural population density change was similar in the suburban Guryevsk and remote Krasnoznamensk districts reaching 109%. The negative rates of population density change range from 92.3 to 96.8 % (in four out of thirteen rural districts).

Theoretical interpretation of the obtained results

Space polarisation follows a different pattern in the border regions than in the ‘inland’ ones. The borderland conditions distort the ‘centre-periphery’ system, since border checkpoints give a boost to economic, business, and other activities. The deformation of socioeconomic space is caused by many political, economic, demographic, and geographic factors, which provide opportunities for benefiting from the ‘border effect’. The above analysis of the selected areas shows that the most important factors for the spatial dimension of socioeconomic space compression are as follows:

- the size and cohesion of the territory,
- a general geographical and demographic situation in the region,
- migration increase (decrease) and its redistribution within the region,
- internal and external communicative permeability of the territory.

Without underestimating the effect of federal and regional political decisions and the impact of international situation on the development of border regions, it is worth stressing the significance of each factor for the development of socioeconomic space.

The territory's size and cohesion. The size of the region's territory and the existing transport system determine its communicative permeability. Moreover, a small area increases the significance of the border effect, which gives municipalities and economic entities additional opportunities for entering the external market.

General geographical and demographic situation in the region affects all aspects of socioeconomic space compression [7; 24—26]. A general population decrease and out-migration from rural areas to the regional centre/suburban zone create large territories with a population density below 5 people/km² (in some areas, 1 person/km²). Such population density makes continuous reclamation of the territory impossible. Reclaimed areas reduce to disconnected 'hotspots'. Space anisotropy increases. In these conditions, the border effect — insignificant for the majority of population — is tangible only in the regional centre, suburban districts, and border districts.

Migration increase/decrease and its redistribution within the region. In the conditions of natural decrease, the migration increase contributes to the stability of border regions, since part of migrants settles in the rural area thus preventing depopulation. The effect of migration increase on the borderland polarisation depends on its scale as compared to natural decrease. In the conditions of depopulation and infrastructure decline, regional population redistribution contributes to space polarisation, since population tends to migrate to regional centres or suburbs. A stable demographic situation and developed transport infrastructure may decrease polarisation and level the population density in adjacent and remote suburbs.

Internal and external communicative permeability. Internal permeability. As compared to the other territories of the NWFD, its western districts have the most developed transport systems. Deepwater ports, international airports, and a relatively dense railway network (from 408/10,000 km² in the Kaliningrad to 60 km/10,000 km² in the Murmansk region) account for high external and internal cohesion. The motorway density differs significantly on the border NWFD territories. In the Kaliningrad region, it reaches 439 km/1000 km² — a level close to that of the Moscow region, whereas it is only 19 in the Murmansk region, 37 in Karelia, and 135 in the suburban Leningrad region [37]. The Engel coefficient is the highest in the Kaliningrad region (68.2), medium in the Leningrad and Pskov regions (58.5 and 55.0), and minimum in the Murmansk region (0.7). The higher the coefficient, the more cohesive and permeable the territory. Infrastructure is not a universal defence against compression. However, the condition of roads, transport availability, and regular flights are of great importance. The development of motor and public transportation in certain regions is restricted by the number of motorways. In the Pskov region, only 77% of roads are paved as compared to 90% in the Kaliningrad and 83.7% in the Murmansk region. Of great importance is the accessibility of roads.

For instance, in the Pskov regions, large territories are situated at distances of more than 5 km from paved roads. The territory's internal cohesion also depends on the frequency of suburban and intercity public transportation.

Internal communicative permeability affects physical compression of the socioeconomic space as follows: a higher level of permeability means more employment opportunities for regional population, since job search is no longer limited by time- and transportation-related and financial considerations. Job search is less affected by the place of residence. Population of rural and urban settlements stabilises, and the whole territory is developed evenly. A compact territory with a developed transportation system ensures a high communicative permeability. Alongside the transport system, communicative permeability depends on the mobile coverage and Internet access. Mobile coverage differs in the western borderlands from the maximum (more than 90% of the territory) in the Leningrad and Kaliningrad regions and the minimum (less than 50%) in the Pskov region [44]). Mobile telecommunications and the development of Internet also contribute to a high degree of territorial development making it possible to enjoy various services, work from home, and benefit from distance learning opportunities, which makes the environment more comfortable and supports the stability of the geographic and demographic situation.

External communicative permeability is ensured by the border position of the region and the opportunities to cross the border. The stretch of the state border differs in the studied regions. The maximum length is observed in the Republic of Karelia and the Pskov region (more than 700 km). However, this figure is not very accurate, since the border permeability and, therefore, its functional significance, is determined by the availability of border checkpoints rather than by its length. Therefore, this study uses the parameter of border length per one checkpoint. The lower its value, the more permeable the border. Based on this parameter, the Kaliningrad region ranks first with 48.8 km followed by the Leningrad region (51.2 km), whereas Karelia (266 km) and the Murmansk regions (203 km) are outsiders. The Pskov region is in the middle with 69.1 km per checkpoint (without taking into account the Belarusian border, otherwise, it is 78.8 km). The intensity of border crossings is increased by the local border traffic regime introduced between the Kaliningrad region and Poland's northern voivodeships, some districts of Latvia and the Pskov region, and the Murmansk region and Norway. As to the neighbouring national regions, external communicative permeability is ensured by motorways and railways (or other infrastructure elements), as well as by their quality. Over the past three decades, Russian researchers have stressed that the administrative borders between regions and, sometimes, districts act as barriers marked by depopulation, decreased activity, and absence of infrastructure. I. e. the adjoining peripheries of two regions turn into 'barrier zones' taking on the ecological function [20]. The Kaliningrad region does not border on the other Russian regions, whereas the northern and eastern borders of the

Pskov region prove the above thesis — they are crossed only by railways and motorways, the number of paved inter-regional roads is insignificant. Probably, internal permeability should be estimated the same way as external permeability.

To characterise a region's external communicative space compression in its classical interpretation (i. e. a dramatic decrease in travel times), it is important to consider the public transport connections between the territory and national regions and the neighbouring territories of foreign states (air, railway, and motor services). Without taking into account the Saint Petersburg transport node, the most developed air connection is found in the Kaliningrad region (10 routes, over 60 weekly flights to Moscow and over 40 to Saint Petersburg) followed by the Murmansk region. The Pskov region and Karelia enjoy more developed railway transportation in comparison to the Kaliningrad region [45]. Moreover, the Pskov region has a favourable position for motor transport — federal and international motorways run through its territory. The Kaliningrad region does not have bus connections to other Russian cities, which is explained by its special geographical position.

A high level of external communicative compression contributes to the deformation of regional socioeconomic space, since territories adjoining checkpoints and international transport corridors tend to concentrate economic activities. A space deformation degree depends on the level of international cooperation development and a current geopolitical situation, as well as the size of the territory and communicative permeability of the border region. If the territory is poorly developed beyond growth poles and transport corridors, space anisotropy increases, the effect of reclaimed space compression spreads, and the landscape becomes increasingly polarised. In compact areas, a high degree of communicative compression — accompanied by sufficient internal permeability — results in even territorial development. Moreover, it cushions the effect of physical space compression.

Conclusions

- The effect of socioeconomic space compression manifests differently in the NWFD borderlands and internal regions, where it follows the 'centre-periphery' pattern.
- Socioeconomic space compression is interpreted as the physical compression of areas engaged in different human activities, as well as a general slowdown.
- The term 'communicative permeability' interpreted as a reduction in the territory's anisotropy manifested in an increase in transport and communicative (mobile coverage and the Internet) accessibility of the re-



gion is used in this study instead of the term ‘communicative space compression’.

- The border Kaliningrad and Pskov regions were chosen as focus territories due to their similar geographical position and environmental conditions. The Novgorod region does not border on foreign states, it was chosen for the purposes of comparison.

- The Novgorod region demonstrates typical territory differentiation following the ‘centre-periphery’ pattern characteristic of the non-Black earth areas of the Russian Federation. Studies have shown that the effect of physical compression of economic space is twofold in the border region — the ‘border effect’ does not affect the cropland area proportion and cereal crop. However, the maximum depopulation level is registered in the ‘inland’ areas, whereas borderlands prove to be stable. The Kaliningrad region’s rural areas are hardly affected by depopulation processes. Moreover, internal district differentiation by the agricultural development level is almost absent in the region. Due to the region’s compact area and a developed road network, the border effect spreads throughout its territory.

- The above analysis of territories shows that, in border areas, the key factors behind the spatial dimension of socioeconomic space compression are the territory’s area, general geographical and demographic situation, migration increase/decrease and its distribution within the region, and the territory’s internal and external communicative permeability.

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