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ESTONIA'S PARTY SYSTEM TODAY: ELECTORAL TURBULENCE AND CHANGES IN ETHNO-REGIONAL PATTERNS

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A well-developed party system has emerged in Estonia over the decades of independence. There are, however, distinct geographical patterns of voting. A number of new political parties have appeared in the country; the regional and ethnic patterns of voting (the latter matter much in Estonia) have changed dramatically. This study aims to analyse the recent changes in the Estonian party system as well as the causes of these changes and the effect of the ethnic and geographical factors on the transformation of the electoral behaviour of Estonian citizens. The research employs a systemic approach that makes it possible to solve the agent–structure problem to the benefit of the general structure and integral system of Estonia's party scene. The method of comparative systemic analysis is used alongside those adopted in electoral geography. It is concluded that the effect of the ethnic and geographical factors on electoral behaviour is diminishing as a civil society based on civic rather than ethnic principles is emerging in the country. The main drivers of the change are the formation of new parties and coalition-building — both have an immediate effect on how the image of the parties is perceived by voters.

Keywords:

party system, electoral geography, ethnicity, non-citizens, civic society, coalition-building

Introduction

Since regaining independence, Estonia has developed a mature party system. Almost every ideological position possible has a party to defend it in the country. According to the principles of electoral geography, some parties are traditionally more popular in certain areas. In Estonia, such set patterns have existed for over

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fifteen years. The northeastern county of Ida-Viru and Tallinn used to vote for the Estonian Centre Party (the reasons for that are considered below), whereas the southern counties of Valga and Võru preferred social democrats. The emergence of new players in the Estonian political scene, however, subverted the usual pattern. Coalitions were formed that were quite unexpected for the conservative public, and the electoral map of the country changed.

The article attempts to answer several questions. How has the Estonian party system changed over recent years? What actors are dominating this system? How have the regional patterns of support for certain Estonian parties changed in recent years? What role do the ethnic and border factors play in these changes? A viable hypothesis is that the appearance of new party players in the Country eroded the traditional region-specific electoral preferences resulting in the ethnic and border factors losing their power.

The article has the following structure. The first part provides an overview of Estonia's party system and its changes in 2007–2019, i.e. during the last four electoral cycles. The most conspicuous patterns of voting for selected parties over the study period are identified. The level of analysis is a municipality (*vald*), or a county, if county data are congruent enough for a generalisation to the first level of territorial units. Further, the paper describes the effect of the ethnic factor on Estonian electoral dynamics. Finally, it indicates the causes and consequences of these changes basing on the analysis of the dynamics of the electoral-geographical situation in Estonia over the past twelve years.

The Estonian party system and regional voting patterns

The Estonian party system is highly fragmented. Although only five parties sit in the parliament (*Riigikogu*), there are fifteen registered political groups in the country. According to Giovanni Sartori's classification, Estonia is a country of moderate pluralism. Using the data from the last parliamentary election (2019), it is possible to calculate the Laakso-Taageprea index of the effective number of parties for the country:

$$N = \frac{1}{\sum p_i^2} = \frac{1}{0.288^2 + 0.23^2 + 0.178^2 + 0.114^2 + 0.098^2} = \frac{1}{0.190128} = 5.3.$$

Therefore, if rounded to an integer, the effective number of parties in Estonia is five, which is the exact number of parties in the *Riigikogu*.

Below is an overview of the evolution and ideologies of Estonian parliamentary parties.¹

The Centre Party (*Keskerakond*) is one of the oldest parties in the country. Founded in 1991, it was as a successor to the Popular Front of Estonia, one of the two structures that had a key role in regaining independence. Edgar Savisaar

¹ We also recommend that the reader peruse Rein Toomla's comprehensive study of the 2000–2010 history and structure of Estonian political parties [1, lk. 32–50].

headed the party. Its ideology is social liberalism or left populism. The centrists, however, have traditionally taken advantage of the needs of the Russian-speaking electorate by declaring their support for education in the Russian language, the simplification of naturalisation, and other popular measures. Therefore, it did not come as a surprise that, since 1999 (when the party broke out of partial isolation imposed after a series of scandals), the colours of the centrists have covered the northeastern Ida-Viru county (the most 'Russian-speaking' area of Estonia, it borders on Russia) and Tallinn, which also has a high proportion of Russian-speakers. In 2016, Jüri Ratas replaced Savisaar as the leader of the party (the consequences of this change will be discussed below). The 'dishonourable discharge' was accompanied by the former leader being accused of corruption and connections to the Kremlin (particularly, Vladimir Yakunin and some members of the United Russia party). As early as 2010, the Estonian Internal Security Service (KaPo, Kaitsepolitsei) named Savisaar an agent of Russian influence in its report² [see also 2].

The right liberal Reform Party (Reformierakond) is another veteran of the Estonian political scene. Siim Kallas, the then president of the Bank of Estonia and a current vice-president of the European Commission, founded the party in 1994. The party was inspired by Friedrich Hayek's and Milton Friedman's ideas of economic liberalism. Party members were in the ruling coalitions from 1999 to 2016. Although the reformers (colloquially referred to as 'squirrels' because of the party logo) won the most votes in the 2019 election, their gain was not enough for them to form the government on their own. Almost all Estonian counties on the map have been painted the colours of the reformers from 2007 when the party ceased to be a comfortable coalition partner and turned into an independent political force.

The Social Democratic Party (Sotsiaaldemokraatlik erakond) was established in 1990 as a successor to several social democratic groups that struggled for the independence of Estonia both inside and outside the country. The first leader of the party was the sociologist Marju Lauristin. In 1996–2004, having merged with the agrarians, the party was renamed Moderates (Mõõdukad). The social democrats were represented in the government only in 2016 and 2019. They were a safe and compromise-seeking partner that could provide additional support for the cabinet without imposing unrealistic conditions. In this respect, the situation of the social democrats is similar to that of the Free Democratic Party in Germany — a swing party ready to support any coalition, yet a priori unable to win the majority of votes. In 2007, it became evident that the party was more popular in the south of the country (the Valga and Võru counties). An analysis of the 2015 and 2019 electoral maps shows a dramatic reduction in support for the social democrats. In 2019, there was not a single county where they won the majority of votes (see Fig. 1 and 2). The preferences of Võru county residents shifted to the Conservative People's Party of Estonia (right-wing popu-

² Kaitsepolitseiameti käskkiri, 21.12.2010, nr. 98T.

lists), whereas Valga voters supported the reformers and the centrists. The Kohtla municipality of the Russia-bordering Ida-Viru county, which voted for the Social Democratic party in 2015, was incorporated into the Toila municipality in 2017. Two years later, the untied municipality voted for the reformers (see Fig. 1 and 2).

The Pro Patria party (*Isamaa*, Pro Patria and Res Publica Union [IRL] before 2008) is a right conservative party with an ideology close to Christian democracy. The Pro Patria Union (*Isamaaliit*) was founded in 1995 by a merger of the Estonian National Independence Party (ENIP) and the Pro Patria National Coalition (a union of Christian democrats, conservatives, and republicans). In 2006, they were joined by the Res Publica conservative group. International commentators and Russian-speaking voters often associate the resultant party with Estonian nationalism. Some authors have called it (without good reason) extreme right [3, p. 84]. The Union owes this image largely to its past. In the 1990s, its representatives were the most ardent advocates of the complete economic and political overhaul of the country and its accession to European and Atlantic integration structures. In the early 1990s, the ENIP and Pro Patria absorbed most of the Soviet dissidents, the intelligentsia expressing nationalist sentiments, and re-emigrants.

In recent years, the IRL has tried to clean up its image through attracting Russian speakers. The climax of this strategy was recruiting the Russian-speaking journalist Viktoria Ladõnskaja to spearhead the parliamentary campaign [4, pp. 36–38]. The effect achieved this way was cancelled out when, just before the 2019 election, Pro Patria adopted the motto ‘*Isamaa on eesti keeles*’ (‘Fatherland in the Estonian language’). Naturally, the sensitive Russian-speaking voter saw a potential threat to the Russian-language field in that slogan. The counties and municipalities that vote predominantly for the IRL are scattered across the electoral maps of 2007–2019. Remarkably, in 2019, Pro Patria received the majority of votes only in the Jõgeva municipality of the Jõgeva county (see Fig. 2; that is especially surprising because head of the municipality Aare Olgo and his predecessor Enn Kurg are centrists; probably, the reason was Centre Party fatigue).

The Tallinn political scientist Tõnis Saarts distinguishes two types of democracies formed in Estonia. The first one is a nationalist defensive democracy, which continues the tradition of the Estonian Citizens’ Committee (established in 1990), places the values of national security above those of democracy per se, and employs a rhetoric of confrontation. The second type, civic democracy, is a descendant of the ideas of the Popular Front of Estonia. It gives priority to democratic values and the rhetoric of compromise [5, pp. 80–82]. The former is characteristic of Pro Patria and the latter of the centrists and the social democrats.

The Conservative People’s Party of Estonia (Eesti Konservatiivne Rahvaerakond, EKRE, CPPE), which can be classified as right-wing populist, was established in 2012 as the Estonian Patriotic Movement (Eesti Rahvuslik Liikumine, ERL, EPM) merged with the People’s Union of Estonia (Eestimaa Rahvaliid, PUE). The party uses eurosceptic, anti-immigrant, anti-Russian, and homophobic

rhetoric. Leaders of the EKRE have criticised the government (before becoming part of it) for the ‘non-democratic centralisation of governance and media monopolisation’ [6, p. 98]. The EKRE was headed by Mart Helme, who, among other things, was earlier the Estonian ambassador to Russia. The party exploits the theses of ‘immigration threat’, ‘Russian threat’, and the European Union allegedly undermining Estonia’s sovereignty. An important role is played by the youth wing of the party, the Blue Awakening, which is an effective tool to recruit right-minded young people. Since the party’s establishment, its electoral attractiveness has grown significantly with the help of populist mottos. On a 2015 map, only three municipalities are wearing its colours: Martna in the Lääne county, Koonga in the Pärnu county, and Orava in the Põlva county. There were many more such areas in 2019 (see Fig. 1 and 2), the year when the party joined the coalition government with Pro Patria (the cabinet was dubbed EKREIKE — EKRE, Isamaa, KeskErakond).

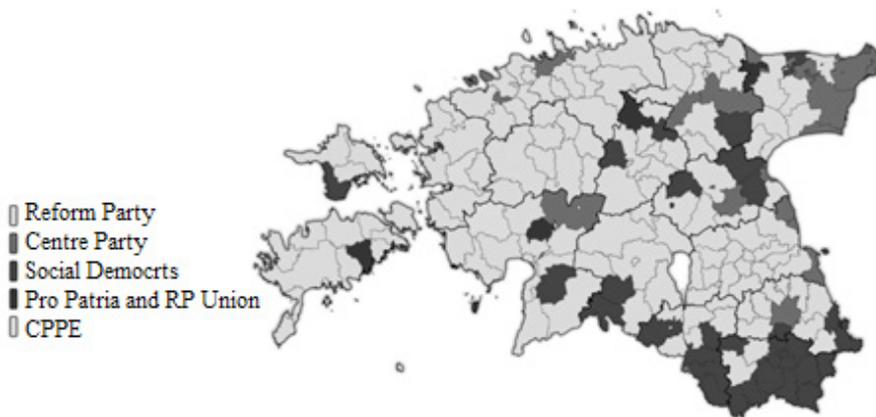


Fig. 1. The distribution of votes for major parties in the *Riigikogu* election of 2015⁵

Other parties have entered Estonian politics within the last 5 years, alongside the EKRE. The most remarkable ones are the Estonian Free Party (Eesti Vabaerakond) and Estonia 200. The former was established on the verge of the 2015 election just to attract votes and enter the parliament. It was a ‘party for a party’s sake’. The latter was founded by the ‘veterans’ of the IRL who opposed the merger of Pro Patria and Res Publica and anticipated a defeat of the union in the 2015 election [7, p. 73]. Although experts have stressed that the party lacks a clear ideology [8], the latter can be roughly described as right centrist. In 2015, having recruited several celebrities, the Free Party got into *Riigikogu*. In 2019, it, however, did not reach the 5% threshold.

Estonia 200 (Eesti 200) is a pure example of an electoral project. The party was established in 2018. Its name is an allusion to Estonia’s 100th anniversary

⁵ Eesti Erakondade Ajalugu. 2015. URL: <http://www.erakonnad.info/kaardid/2015-RK.html> (access date: 17.08.2019).

celebrated that year. The title suggests that, if led by this party, Estonia will solve all its urgent problems and reach its 200th anniversary as a prosperous country. The party was headed by the political scientist Kristina Kallas. The election campaign received much criticism. The party's political technologists put posters that read 'Estonians only' and 'Russians only' on public transport stops without explaining that the prints were part of a campaign. This way the party tried to attract attention to the persistent ethnic and linguistic divide. Following that move, the support for the party halved [9]. Scandals and the absence of a clear-cut position (except the Manichaean 'for all that is good' discourse) prevented Estonia 200 from reaching the electoral threshold.

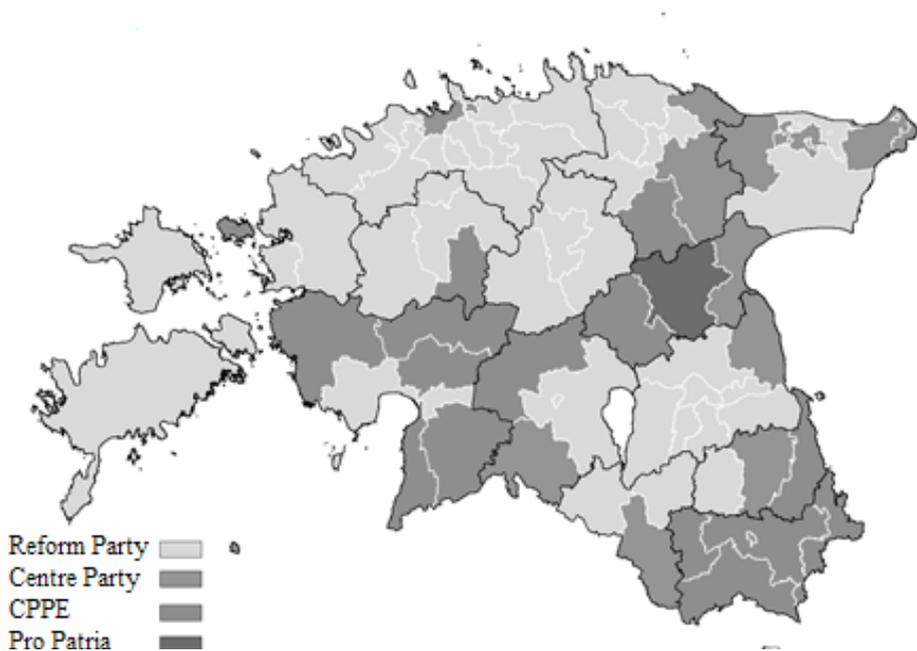


Fig. 2. The distribution of votes for major parties in the 2019 Riigikogu election⁴

The ethnic factor in Estonian party politics

The largest and most visible ethnic minority in Estonia is Russians (avoidance of the more inclusive term 'Russian-speakers' is deliberate). The Russian population of Estonia is heterogeneous. It comprises the descendants of the Russians who lived in Estonia before the 1917 Russian Revolution (a special and numerous group is Old Believers, who settled in the Lake Peipus area in the late 17th century) and during the first independence period (1918–1940); the Russians who arrived in Estonia after the country had become part of the USSR (and their descendants); and the emigrants of the most recent decades.

⁴ Estonian Legislative Election 2019. *Electoral Geography*. 2019. URL: <https://www.electoralgeography.com/new/en/estonia2019/2019-estonia-legislative-municipalities.png> (access date: 17.08.2019).

When discussing the Russian population of Estonia, it is impossible to ignore the problem of stateless persons, or 'aliens'. The set of 'aliens' and that of Russian Estonians are intersecting but not equal: firstly, the alien status applies only to those who arrived in Estonia after 1940 and their descendants (not all of them, however); secondly, not every stateless person in Estonia is Russian. According to Statistics Estonia, 328,299 Russians (24.78% of the total population) lived in the country in 2019. Most of them resided in the Harju county (184,600, including the capital city of Tallinn; 30.87% of the total county population) and the border Idu-Vira county (101,248; 74.34% of the county population).⁵ As on January 1, 2019, there were 76,148 stateless people in Estonia. The two numbers are incomparable. As to the composition of stateless people, we could find only 2011 data. Taking the continuing positive trend into account, these data suggest that the subsets 'Russians' and 'aliens' are not equal and that the discourse based on identifying the former with the latter is irrelevant: in 2011, only 21.1% of ethnic Russians in Estonia had an alien's passport.

The problem of aliens arose when, having regained independence, Estonia embraced the legal principle of continuity, i.e. the country declared itself the successor of the republic of 1918–1940. Among other things, this meant that citizenship was granted only to the citizens of that republic and their descendants [for more detail, see 10]. The others could (and still can) either acquire citizenship through naturalisation (the procedure was formalised only in 1995 when then the new version of the Law on Citizenship was adopted) or settle for the alien status (*välismaalane*, 'foreigner', in Estonian). In this sense, Estonia chose a path similar to that selected by Latvia, which also opted for continuity and introduced the alien status (*nepilsoņi*). Latvian aliens, however, have much fewer rights than their counterparts in Estonia do. Lithuania, whose Russian minority is not sizable (there was no mass internal migration from the RSFSR to the republic), chose the 'zero variant', under which there would be no qualification for citizenship. To a degree, the decision not to grant citizenship to part of the population was driven by (reasonable) concerns that, having obtained electoral rights, such a large minority will stay loyal to the USSR and, in a democratic way, impede radical reforms of the country's economy and political system.

Some experts have classified Estonia and Latvia as ethnocracies (in Russian sociology, this concept has been developed by Zhan Tereshchenko [11, p. 55]; see also [12]) or ethnic democracies (proposed by Sammy Smooha [13, pp. 55–56]). Without going into detail, this classification of the Baltic states seems debatable. Following Alexander Tevdoy-Bourmouli, the case of the Baltics is rather that of delayed (by objective circumstances) nation-state building in the time when the concept of nation-states is dying out [14, p. 194].

⁵ Rahvastik soo, rahvuse ja maakonna järgi, 1. Jaanuar. *Eesti Statistika Andmebaas*. 2019. URL: http://andmebaas.stat.ee/OECDStat_Metadata/ShowMetadata.ashx?Dataset=RV0222&Lang=et (access date: 17.08.2019).

In the context of this study, we are interested, first of all, in how aliens affect voting. This influence is almost absent: stateless people (those who hold an alien passport, *välismaalase pass*) do not have the right to vote in national elections, although they do in municipal ones. Thus, the Centre Party can count on the votes of not *all* the Russians/Russian speakers but only naturalised ones, which account for most of Estonia's Russian-speaking population. For the Russians who have naturalised or acquired Estonian citizenship by other means, the ethnic status is not the decisive factor when it comes to electoral preferences. Many Russian speakers vote for other parties, whereas the party's electorate is not limited to Russians. As Dmitry Lanko argued cogently in 2015 before the change in the party leadership, although 'the majority of Russophonic voters in Estonia support the Centre Party, every major political party in the country has its Russophonic voters' [7, pp. 67–68]. According to his calculations, in the 2015 Riigikogu election, 'twelve Russian-speaking Estonians representing almost all, both right and left, political parties won seats in the parliament' [7, p. 75]. Nevertheless, the political group led by Savisaar consciously promoted itself as a 'Russian' party. Today, amid the gradual emergence of the civic nation of 'people of the Estonian land' (*eestimaalased*), which includes naturalised Russians, the new party leader Ratas is trying to change its image. Any transformation of established public perception brings both gains and losses. The above maps of recent Estonian elections prove as much. In 2019, as compared to 2015, the centrists sustained losses in their 'home turf' in the Ida-Viru county, particularly, the Alutaguse municipality (in 2017, it incorporated the municipalities of Alajõe, Iisaku, Illuka, Mäetaguse, and Tudulinna; see. Fig. 1 and 2). The centrists lost the most voters to the Reform Party. Naturalised Russian-speaking voters are, little by little, abandoning usual loyalty to Russophile social democracy in favour of inclusive right liberalism.

It is of interest to consider the results of 2017 municipal elections, in which, as it was mentioned above, aliens had a right to vote. In contrast to the national election, the Centre Party managed to win the most votes (27.3%), with 44.4% in Tallinn and 52.9% in the Ida-Viru county. The EKRE did not have any support in the North-East. The party won only 7% in Tallinn and 6.7% nationwide.⁶ The fact that the parties did not get similar results in the 2017 municipal and 2015 national elections is explained by voters treating elections of different levels differently (they base their decision on the functions that elected candidates will perform) as well as by the conservative electoral preference of those who do not have the right to vote in national elections. There is, however, no direct link between the results of municipal and national elections, particularly, if there is a time lag.

The causes and consequences of changes in the Estonian election map

Among the central causes of changes in the regional patterns of voting for Estonian parties, two seem to be worth noting: 1) coalition building; 2) the appearance of new party actors.

⁶ Cf.: Valimistulemused//Kohalikud Valimised 2017. URL: <https://kov2017.valimised.ee/valimistulemus.html> (access date: 16.09.2019).

The 2016 coalition came as a serious blow to the parties that formed it. The centrists would usually enter into coalition negotiation only with those actors that positioned themselves close to the centre of the political spectrum. The right IRL would consider the reformers or the moderate social democrats as partners. In November 2016, the first government of Jüri Ratas was formed. It comprised ministers representing the Centre Party, the Social Democratic Party, and Pro Patria. Many voters who viewed the centrists as an electoral stronghold of the Russian speakers interpreted the agreement with Pro Patria, a clearly right and professedly nationalistic party, as a betrayal of their interests. Disappointment worked both ways: right voters were dissatisfied with a cabinet shared with 'pro-Russian' centrists. The role of the coalition in eroding electoral patterns should not be overestimated. The centrists have lost part of their electorate after having replaced their popular leader Savisaar with the young technocrat Ratas, who, among other things, annulled the party's agreement with United Russia and declared that Crimea had been occupied. The same is true for some of the 'hawks' of Estonian national idea. Having voted for Pro Patria, they were dispirited by the party's conciliatory rhetoric. Considerable parts of both groups of citizens voted for the EKRE in the next parliamentary election.

Here, the first proposed factor meets the second one. New right-wing parties (more exactly, party, since the Estonian Free Party hardly survived the last parliamentary term) benefitted from the disappointment with the major party actors and managed to sideline the latter. The EKRE gained political prominence in the previous 2015 election as a result of anti-migration sentiment, which the party successfully exploited. By 2019, the politics of its partners made the EKRE a force to be reckoned with. Amid disappointment with the 'old' parties, national populists entered the stage with ambitious slogans ready to attract both the national-conservatives and the Russian speakers. Curiously, in 2016, the EKRE members of the Riigikogu received a piece of parquet. The gift-givers aimed to make a pun: the Estonian word *parketikõlblik* means both 'suitable for parquet flooring' and 'with untarnished reputation'.

In this sense, Ratas's widely criticised decision to enter into a coalition agreement with the national-populists was justified. Many scholars of right-wing populism have stressed that, once in the government, a populist party either finds itself unable to fulfil its big promises and loses popularity or, having taken on additional responsibility, abandons its radical stance [15, p. 20]. When in opposition, such a party becomes increasingly influential, because it is seen a victim of enforced isolation. This strategy, however, is not universal. Although it worked in Finland, in Austria, the undoing of the right-wing was a political scandal, the so-called Ibiza-gate, rather than the inability to fulfil the promises.

The capacity of the EKRE to attract the votes of the Russian-speakers is noteworthy. Andrey Makarychev and Vladimir Sazonov have emphasised that some members of the EKRE, who see the Russian community as a potential partner in anti-immigrant campaigns and an electoral resource, are implementing an inclu-

sive strategy [16, p. 454]. Although the significance of the ‘Russian threat’ is not minimised, the party leaders try to distinguish in their discourse between local Russians (a part of the Estonian electorate) and the hypothetically hostile Russian Federation [17].

Of course, we do not have an election map for the next cycle, yet we can expect that the traditional maps, which we have seen since 2007, will continue to erode. There will be new areas of voting for the EKRE (and, probably, new parties that will be established before the 2023 election) and the reformers, who were forced out of the government by the centrists. Whereas some voters ‘forgave’ the Centre Party with a heavy heart for forming a coalition with right conservatives, a coalition with open right-wing populists, who have been accused (often falsely) of pro-Nazi sentiments, is too much for the traditional centrist electorate. The elder of Põhja-Tallinn, Raimond Kaljulaid, ostentatiously quit the party. The same intention was announced by the veteran of the party Vladimir Velman, even though he never carried it out. According to recent polls, the scandals that plagued the first months of Ratas’s second cabinet reduced support for the centrists to 17.8%. At the same time, support for the Reform Party (the winner of the election; Ratas rejected a coalition with the party and thus formed an unstable government with right-wing populists) increased to unprecedented 38.5% [18].

Conclusion

The five major parties in Estonian politics, which have seats in Riigikogu, are the Centre Party, the Reform Party, Pro Patria, the Social Democratic Party, and the Conservative People’s Party of Estonia. As to the new party projects established in recent years the EKRE was the only successful one. Its success was so enormous that it joined the coalition government. Although the ethnic factor of the Russian minority (and the related factor of proximity to the Estonian–Russian border) has had an important role in the political development of the country, its electoral influence is waning: naturalised Russian-speaking voters are switching from steady support for the Centre Party to voting for other parties, primarily, the Reform Party. This change is a sign that a civil society based on civic rather than ethnic principles is emerging and consolidating in Estonia. The recent parliamentary election (2019) showed that the social democrats, Pro Patria, and the centrists are gradually losing their ‘home turfs’. The cause is, however, the mistakes made by the coalition governments, the composition of which was a surprise for the voters of constituent parties, rather than the appearance of new players. The latter is a visible but not decisive factor. Recent polls suggest that the election map of Estonia will continue to change. The transformation of the party discourse and the party system itself will cause the traditional pattern to erode further. All the above suggests that the studies of the party systems of Estonia and other CEE countries should focus on interdisciplinary research using a wide range of methodological tools, particularly, the methods of electoral geography, statistics,

critical discourse analysis, event and sentiment analysis, etc. Methodological synthesis is the only way to obtain a comprehensive picture of the institutional and discursive transformation of political party systems in the region.

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PARTY SYSTEM NATIONALIZATION IN ESTONIA, 2005–2019

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This article explores the Estonian ‘integration’ project, which was launched in the early 1990s to bridge the differences between ethnic Estonians and ethnic Russians by assimilating the latter with the former. Since the project will soon turn thirty, it is timely to ask whether it has been a success. This article employs Grigorii Golosov’s index of political party nationalization to understand whether the ‘integration’ project has helped to narrow the ideological divide between ethnic Estonians and ethnic Russians. In other words, the study asks whether ethnic Estonians and ethnic Russians vote for the same political parties in comparable proportions or there are ‘Estonian’ and ‘Russian’ parties in the country. The analysis of the outcomes of four local and four parliamentary elections that took place in Estonia in 2005–2019 shows that by the mid-2000s Estonia achieved a considerable level of political party system nationalization at both national and local levels. At the national level, political party system nationalization remained high in 2007–2019 despite significant changes in the country’s political party system. At the local level, however, political party system nationalization has been diminishing since 2013, leading one to conclude that the Estonian ‘integration’ project has failed to close the ideological divide between ethnic Estonians and ethnic Russians.

Keywords:

comparative politics, political parties, party systems, nationalization, Estonia

A quarter of Estonia’s population are ethnic Russians, which allows concluding that Estonia is a plural society, i.e. a society with deep religious, linguistic, cultural, ethnic and ideological cleavages [18]. Lijphart’s ‘consociational democracy’ as well as a number of other models, including multiculturalism, suggests paths towards democratization in plural societies that include activities aimed at managing religious, ethnic, linguistic, cultural and ideological divides. Since its independence in 1991, Estonia has chosen the path towards democratization, which included activities aimed not at managing inner divides, but at eliminating them. Estonia’s elite named the chosen path “integration”. The use of the term “integration” in this context is problematic due to common belief that integration is a process of bringing different elements to a whole, the properties of

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which are different from the properties of each of the elements. To the contrary, the Estonian policy of so-called integration aims at the emergence of a whole, the properties of which would be exactly those as the properties of one segment of the Estonian society, namely ethnic Estonians.

Estonia is not unique in pursuing a policy of so-called integration aiming at eliminating differences between the dominant segment of the population and all other segments. According to Jansen [12, p. 89], “in the 1970s and 1980s, most liberal countries gradually adopted integration, because of the colonial and nationalist connotations of assimilation”. In 1990s, many post-Communist countries in Europe followed the path. In Estonia, in particular, representatives of the Russophonic minority faced the choice between “integration” and segregation. In response, some of them “returned” to Russia, many more moved into other countries of the European Union, many preferred self-segregation in predominantly Russophonic enclaves, such as Narva and some other towns of North-Eastern Estonia and even some parts of Tallinn, the capital city of Estonia. Finally, many chose the path of integration, and it took more than a decade for many of the latter to realize the threat of falling into a mimicry trap described by Bhabha [3]: the deeply they “integrated”, the more often ethnic Estonians thought that they only “mimicked” integration in order to avoid segregation or for other purposes, including serving the interests of Russia aimed at undermining Estonian statehood.

In 1990s, the identity of the Russophonic minority in Estonia was formed in the framework of relationship of the Estonian “ethnocratic” [39] regime pursuing the so-called integration, Russia, the “ethnic patron” state, and the West, mostly represented by international organizations such as the OSCE [28]. Even when the West sided with the Estonian government in 2000s, it did not help the policy of the so-called integration to succeed in the elimination of ethnic, linguistic, religious and cultural divides between ethnic Estonians and ethnic Russians. Today, almost thirty years past 1991, Estonia remains a deeply divided polity, comparable to similarly divided polities ranging from Northern Ireland in Europe to Fiji in the Pacific [4]. However, there is no debate in the Estonian society on alternatives to the so-called integration model of inter-ethnic co-existence in the country, there are no policies aimed at facilitating active inter-ethnic dialogue between ethnic Estonian majority and predominantly ethnic Russian minority [36].

Ideological divide in the Estonian society seems the easiest to eliminate. In practical terms, ideological integration can be suggested successful in Estonia, when voting behaviour of ethnic Estonians does not differ significantly from voting behaviour of the country’s Russophones eligible to vote. Specific features of voting of Russophones of Estonia are understudied. Estonian scholars tend to notice them, when they participate in popular unrest, but not when they go to polls a month before [30]. Russian scholars have not paid much attention to ethnic voting [6], not of Russophones in Estonia in particular, neither in general, not even in Russia itself. Studies have been made on ethnic voting in Russia [38], but not by Russian scholars. Research conducted outside of Russia or Estonia

tends to study voting behaviour of Russophones in Estonia as a part of comparative studies within a wider framework, sometimes within the framework of Central and Eastern Europe [5, 37], and sometimes involving countries beyond the region [20].

This article seeks to answer whether the Estonian society as a whole, including both its ethnic Estonian and ethnic Russian segments, have been eliminating the ideological divide throughout the past fifteen years, or whether it has been moving in the opposite direction. To do so, this article employs Golosov's index of party nationalization in order to understand, whether people in different parts of Estonia, those inhibited predominantly by ethnic Estonians, like the Pärnu county, those inhibited predominantly by ethnic Russians, like the town of Narva, and those inhibited almost equally by representatives of the two segments of the Estonian society, like the capital city of Tallinn, tend to vote for the same or for different political parties. Below we will demonstrate that Estonia had reached a significant level of nationalization of its political party system by 2000s, but the situation started deteriorating in the 2010s. The article will also offer explanations of the tendency.

Index of Party System Nationalization as a Measurement of Political Integration in Estonia

Multiple tools have been developed in order to assess the relationship between a minority and the society and the state, in which the minority lives. An example is the Index of Identity Group Institutionalization [22]. This article attempts to measure success of political integration in Estonia by using Golosov's index of party nationalization [8, 9, 31]. Though the index emerged as a means to measure nationalization (or lack of it) of party systems in federations, this article seeks to demonstrate that the index is also helpful in studies of party systems in unitary states, where representatives of ethnic minorities are geographically concentrated in particular regions.

In the case of Estonia, most ethnic Russians live in the capital city of Tallinn and in north-eastern Ida-Viru county, including the country's third biggest town of Narva, which is located on the border with Russia, while voters in the country's second and fourth biggest towns Tartu and Pärnu, as well as in surrounding Tartu and Pärnu counties are mostly ethnic Estonians. The index of party nationalization will help to measure, in general, index to which extent voters in all above-mentioned parts of Estonia tend to vote for the same parties, and to which extent regional preferences play a role at elections.

In general, the index of party nationalization is computed as follows:

$$\text{IPN} = 1 - \frac{n - (\sum_{i=1}^n p_i)^2 / \sum_{i=1}^n p_i^2}{n-1},$$

where IPN is the index of party nationalization, p_i is the share of votes gained by a particular party at elections in each of the constituencies in the focus of the study, while n is the total number of constituencies in focus.

Below, I will analyse the results of four national and four local elections that took place in Estonia in 2005–2019 with a focus on nationalization of the country's party system. For example, during local elections, which took place in Estonia in October 2005, the country was the first in the world to introduce countrywide binding Internet voting [19]. Probably the most remarkable outcome of the 2005 local elections was the rapid decline in popularity of Res Publica Party. It succeeded at 2003 parliamentary elections as an 'anti-establishment reform party' [10], but it started losing popularity immediately after [32]. It came only fifth at 2005 local elections according to the number of votes gained by its candidates in over 200 urban and rural municipalities that Estonia was divided into in those times. Unlike in Latvia, which only abandoned local elections on county level after 1997, Estonia has not held local elections on county level since independence in 1991 [35].

Table 1 below, which demonstrates the results of the 2005 local elections in Estonia for the towns of Tallinn, Narva, Tartu and Pärnu, as well as indices of party nationalization for four political parties most popular in the four towns altogether, namely Centre Party, Reform Party, Pro Patria Union and Social Democratic Party, does not contain results for Res Publica Party. One should note the differences between voting in urban and rural areas of Estonia that existed in those times: for example, although the Social Democratic Party collected more votes than the People's Union (previously known as the Agrarian Union) in the four biggest towns in 2005, the People's Union came fourth according to the number of votes countrywide, thanks to its popularity in rural areas.

Table 1

Index of party nationalization at 2005 local elections in Estonia

	Tallinn	Narva	Tartu	Pärnu	IPN
Kesk	41,1	59,4	15,7	24,0	0,75
Reform	20,7	6,4	34,9	20,2	0,74
Isamaa	12,2	1,3	19,0	13,6	0,68
SDE	11,1	2,1	13,8	8,4	0,74

Source: Estonian National Electoral Committee and the State Electoral Office, valimised.ee; author's calculation. Legend: Kesk — Centre Party, Reform — Reform Party, Isamaa — Pro Patria, SDE — Social Democratic Party.

As a result of 2005 local elections, the Centre Party came first according to the number of votes collected in Tallinn, Narva and Pärnu, and came only third in Tartu. In accordance with the formula presented above, the index of party nationalization for Centre Party for the four constituencies is computed as follows:

$$IPN_{kesk} = 1 - \frac{4 - (41,1 + 59,4 + 15,7 + 24,0)^2 / (41,1^2 + 59,4^2 + 15,7^2 + 24,0^2)}{4 - 1} = 0,75.$$

The index of party nationalization can be computed calculated by means of dividing for the other three political parties; corresponding indices are presented in the last column of Table 1. Index of party nationalization varies from 0 to 1. The index equal to 0 demonstrates that all voters in one part of the country vote for “their” political parties, while all voters in other parts of the country vote for other political parties. In the case of Estonia, where most residents of the city of Narva vote for Centre Party, index of party nationalization equal to 0 would mean that all voters in Narva supported Centre Party, but nobody supported Centre Party in Tallinn, Narva or Pärnu. The index equal to 1 demonstrates that Centre Party enjoyed equal support in all four major cities during the 2005 local elections. At 2005 local elections Pro Patria Party demonstrated the lowest index of party nationalization due to weak performance in Narva and second best result in Tartu; the average index of party nationalization for the four parties was 0,72.

Below, this article will analyse results of local elections of 2009, 2013 and 2017 in the same manner as in the case of 2005 local elections studied above. In the cases of parliamentary elections of 2007, 2011, 2015 and 2019, this article will analyse elections results in the capital city of Tallinn, Estonia’s second biggest town of Tartu, and the Pärnu and Ida-Viru counties. Half of all Estonia’s voters eligible to vote at parliamentary elections live in those four constituencies. At parliamentary elections the capital city of Tallinn consists of three electoral districts (altogether, Estonia consists of 12 electoral districts); each party’s support in Tallinn is calculated by dividing the total number of votes given for the party in three electoral districts of Tallinn to the total number of valid ballots cast in the same three electoral districts.

Evolution of Estonia’s Political Party System in 2005—2019

The period of 2005—2007 was crucial for the formation of Estonia’s political party system. Estonia’s political party system demonstrated greater stability than most Central and East European EU member states already in 2006 [17]. Res Publica and Pro Patria parties merged thus forming the Pro Patria and Res Publica Union, which had remained among four most popular political parties until 2019 elections, together with Centre Party, Reform Party and Social Democratic Party. The People’s Union lost its popularity together with urbanization of Estonia and emigration from the country to European Union countries with higher living standards. The party gained only 6 seats in the parliament as a result of 2007 elections compared to 13 in 2003 [25]. Table 2 presents indices of party nationalization at 2007 parliamentary elections for the four parties in the four constituencies.

Table 2

Index of party nationalization at 2007 parliamentary elections in Estonia

	Tallinn	Ida-Viru	Tartu	Pärnumaa	IPN
Kesk	32,7	53,7	16,1	22,1	0,77
Reform	25,6	15,3	34,3	27,5	0,91
IRL	19,4	8,6	21,5	19,6	0,89
SDE	8,9	4,2	13,4	10,7	0,85

Source: Estonian National Electoral Committee and the State Electoral Office, valimised.ee; author's calculation. Legend — same as in table 1, except that IRL stands for Pro Patria and Res Publica Union, the product of the merger of Pro Patria Union and Res Publica Party on the threshold of 2007 elections.

By 2007, the four parties in the focus of this article became also the four most popular parties countrywide; some Estonian experts even expressed concerns about potential cartelization of the country's political party system [33]. As a result of 2007 elections, Centre Party won Tallinn and the Ida-Viru county, where most Russophonics live, but Reform Party won Tartu and Pärnu counties as well as countrywide [30], thus paving the road to an almost ten-year-long period of Reform Party's domination in Estonia's politics on the national level. The results of 2009 local elections in Estonia were similar to those of 2005 elections. Likewise in 2005, in 2009 the Centre Party won the towns of Tallinn, Narva and Pärnu (the Reform Party won the town of Tartu) by mostly taking votes away from the Reform Party, whose performance in Centre Party-dominated towns was very similar to that of the Pro Patria and Res Publica Union. Table 3 presents indices of party nationalization at 2009 local elections for the four Estonian parties for the four constituencies.

Table 3

Index of party nationalization at 2009 local elections in Estonia

	Tallinn	Narva	Tartu	Pärnu	IPN
Kesk	53,5	76,6	17,4	21,8	0,67
Reform	16,6	7,7	30,8	14,1	0,74
IRL	15,4	5,9	23,5	12,4	0,78
SDE	9,8	4,8	15,9	6,6	0,77

Source: Estonian National Electoral Committee and the State Electoral Office, valimised.ee; author's calculation. Legend — same as in Table 2.

After having won the 2007 parliamentary elections, Andrus Ansip, then leader of the Reform Party, decided to move the WWII monument from downtown Tallinn to a military cemetery in the suburbs, thus provoking mass protests of ethnic Russians in Tallinn that became commonly known as the "Bronze Night" [16].

However, the growing division between ethnic Estonians and ethnic Russians after the “Bronze Night” did not result in a drop of average index of party nationalization at 2011 parliamentary elections compared to 2007 parliamentary elections. The performance of the two major rival parties, the Centre Party and the Reform Party, did not change significantly in the four constituencies, while the Social Democratic Party improved its performance at the expense of the Pro Patria and Res Publica Union, thus levelling the number of votes gained by the two latter parties nation-wide. Table 4 presents indices of party nationalization at 2011 parliamentary elections for the four Estonian parties for the four constituencies.

Table 4

Index of party nationalization at 2011 parliamentary elections in Estonia

	Tallinn	Ida-Viru	Tartu	Pärnumaa	IPN
Kesk	32,6	54,5	15,5	17,4	0,72
Reform	25,9	12,5	34,4	28,5	0,88
IRL	19,5	10,7	24,3	21,9	0,91
SDE	13,3	12,4	18,7	12,5	0,96

Source: Estonian National Electoral Committee and the State Electoral Office, valimised.ee; author’s calculation. Legend — same as in Table 2.

At 2009 local elections three-quarters of voters in Estonia’s third-biggest town of Narva, where the overwhelming majority of the population are ethnic Russians, supported the Centre Party. At 2013 local elections other parties united in an attempt to challenge the dominance of Centre party in Narva. Social Democrats, whose Narva activist Jevgeni Ossinovski gained extreme popularity among voters that year, led the attempt. Popular activists of other parties, for example, Katri Raik, an activist with the Pro Patria and Res Publica Union, and then Director of the Narva College, the main higher education provider in Narva, ran on Social Democratic list [2]. The Reform Party did not propose its list of candidates in Narva at all. As a result, Social Democrats gained more than one-third of votes in Narva, but scores for the index of party nationalization declined for all parties participating in the compact, but mostly for Social Democrats and the Reform Party. Table 5 presents indices of party nationalization at 2013 local elections for the four Estonian parties for the four constituencies.

Table 5

Index of party nationalization at 2013 local elections in Estonia

	Tallinn	Narva	Tartu	Pärnu	IPN
Kesk	52,7	60,1	18,4	26,1	0,78
Reform	10,6	0,0	28,2	15,1	0,52
IRL	19,2	2,9	21,1	17,0	0,75
SDE	9,9	35,8	15,8	6,6	0,59

Source: Estonian National Electoral Committee and the State Electoral Office, valimised.ee; author’s calculation. Legend — same as in Table 2.

The start of EU-Russia conflict over Ukraine could not help influencing electoral campaign in Estonia prior to 2015 parliamentary elections. While most ethnic Estonians sided with the EU in the conflict, most ethnic Russians, especially in Narva, sided with Russia. To play with the feelings of his ethnic Russian voters, then leader of the Centre Party Edgar Savisaar publicly supported the March 16, 2014 referendum in the Crimea [7]. In turn, Taavi Rõivas, the leader of the then ruling Reform party, attempted to refocus the attention of voters away from the economic difficulties that the country was facing by presenting himself as a defender of the nation facing hypothetical aggression from the East.

As a result, outcomes of 2015 parliamentary elections did not differ significantly compared to 2011 election, except for the drop in popular support to Pro Patria and Res Publica Union, whose voters preferred to support newly established far-right Estonian Conservative People's Party and Free Party [15]. Index of party nationalization did not change significantly for any of the four parties in focus. The Estonian Conservative People's Party demonstrated low score for the index of party nationalization due to low support to the party not only in predominantly Russophonic Tallinn and Ida-Viru County, but also in Tartu, which is the home for Estonia's biggest higher education provider, the Tartu University. Table 6 presents indices of party nationalization at 2015 parliamentary elections for the four Estonian parties for the four constituencies.

Table 6

Index of party nationalization at 2015 parliamentary elections in Estonia

	Tallinn	Ida-Viru	Tartu	Pärnumaa	IPN
Kesk	33,6	59,0	15,1	19,1	0,70
Reform	25,7	11,9	33,4	28,9	0,88
IRL	11,5	8,2	14,4	13,5	0,95
SDE	12,7	11,3	16,8	11,8	0,97
EKRE	6,2	3,1	6,9	18,2	0,59

Source: Estonian National Electoral Committee and the State Electoral Office, valimised.ee; author's calculation. Legend — same as in Table 2, except that EKRE stands for Estonian Conservative People's Party.

At 2017 local elections Social Democrats, Reform party and Pro Patria and Res Publica Union continued their effort to challenge the dominance of the Centre Party in Narva. This time, Social Democrats did not propose a list of candidates under its name, but most Narva Social Democratic activists and their allies from the two other parties ran under "Our Narva" non-party list of candidates [21], which gained support of 23,3% of the city's voters. That attempt was even less successful than at 2013 local elections, because in 2017 the Centre Party enjoyed support of three-thirds of voters in Narva, compared to 60% in 2013. Index of

party nationalization for the three parties attempting to challenge the dominance of the Centre Party in Narva at 2017 local elections dropped even compared to 2013 scores. The Estonian Conservative People's Party also demonstrated low score for the index of party nationalization due to lack of support to the party in Tallinn and Narva. Table 7 presents indices of party nationalization at 2017 local elections for the five Estonian parties for the four constituencies.

Table 7

Index of party nationalization at 2017 local elections in Estonia

	Tallinn	Narva	Tartu	Pärnu	IPN
Kesk	44,0	66,8	13,7	19,1	0,66
Reform	20,3	1,3	37,4	22,8	0,62
IRL	6,6	1,0	7,4	18,9	0,51
SDE	11,0	0,0	16,6	5,4	0,52
EKRE	7,0	0,0	11,2	15,4	0,58

Source: Estonian National Electoral Committee and the State Electoral Office, valimised.ee; author's calculation. Legend — same as in Table 6.

The 2019 parliamentary elections in Estonia witnessed “demobilization” [34] of low-income citizens and ethnic Russian citizens, the two largely overlapping segments of the Estonian society. That helped the Reform Party and the Estonian Conservative People's Party to significantly improve their performance compared to 2015 elections. To the contrary, electoral outcomes for the Centre Party and the Social Democratic Party were moderate compared to 2015 elections. The political party previously known as the Pro Patria and Res Publica Union was this time running under the name of Pro Patria Party; the return to the pre-2007 name did not influence the electoral performance of the party significantly. Table 8 presents indices of party nationalization at 2019 parliamentary elections for the five Estonian parties for the four constituencies.

Table 8

Index of party nationalization at 2019 parliamentary elections in Estonia

	Tallinn	Ida-Viru	Tartu	Pärnumaa	IPN
Kesk	31,4	50,7	13,6	19,2	0,74
Reform	28,9	14,0	34,6	26,3	0,90
Isamaa	8,8	6,5	12,1	12,2	0,93
SDE	9,2	14,8	11,3	6,7	0,90
EKRE	11,7	8,3	17,0	28,1	0,77

Source: Estonian National Electoral Committee and the State Electoral Office, valimised.ee; author's calculation. Legend — same as in Table 6, except that Isamaa stands for the Pro Patria Party, which ran under that name at 2005 local elections and before, and which ran under the name of Pro Patria and Res Publica Union at elections from 2007 through 2017.

From 2005 through 2019, index of party nationalization at local elections in Estonia was lower than at national elections; that tendency concerns all parties involved in this study. Three factors explain that tendency. First, mostly ethnic Russian “aliens” (non-citizens) vote at local elections, but not at national elections. As it was expected [11], those Russophonous citizens of Estonia, who were least satisfied with the ethnocratic regime in the country, migrated to other EU member states after restrictions to free movement of labour force from new member states were removed in 2007 and thus stopped playing an important role at national elections. “Aliens”, whose opportunities to migrate to other EU member states were limited due to absence of Estonian citizenship, remained in the country, thus continuing to play an important role at local elections. Second, local citizens’ electoral alliances still play an important role at local elections, despite that role declined between 2005 and 2017 local elections [24]. Third, even exactly those same voters facing the choice between exactly those same parties tend to behave differently at elections on different levels [23].

Factors of Declining Nationalization of Estonia’s Political Party System on Local Level

On the national level, nationalization of the political party system has been high across the twelve years between 2007 and 2019 general elections. In 2015, the arrival of the far-right Estonian Conservative People’s Party resulted in a slight decrease in average index of party nationalization, but the index almost returned to the level observed in 2007 by 2019. On the local level, nationalization of the political party system has been declining between 2005 and 2017 local elections. Average indices of party nationalization for the four national and four local elections analysed in this study are presented in table 9. At 2005 local elections, the Pro Patria Party, whose voters were predominantly ethnic Estonians, demonstrated the smallest score for the index of party nationalization. By 2009 local elections, however, the merger of the Pro Patria and Res Publica parties helped their union to receive votes of both ethnic Estonians and ethnic Russians; for example, in predominantly Russian Narva almost 6% of voters supported the merged party in 2009. The index of party nationalization for the merged party improved correspondingly.

Table 9

Average index of party nationalization at Estonia’s elections, 2005 – 2019

	2005	2007	2009	2011	2013	2015	2017	2019
Kesk	0,75	0,77	0,67	0,72	0,78	0,70	0,66	0,74
Reform	0,74	0,91	0,74	0,88	0,52	0,88	0,62	0,90
IRL	0,68	0,89	0,78	0,91	0,75	0,95	0,51	0,93
SDE	0,74	0,85	0,77	0,96	0,59	0,97	0,52	0,90
EKRE	n/a	n/a	n/a	n/a	n/a	0,59	0,58	0,77
Average	0,72	0,86	0,74	0,87	0,66	0,82	0,58	0,85

Source: data in tables 1 – 8 above; author’s calculation. Legend – same as in Table 6.

At the 2009 local elections, the Centre party demonstrated the smallest score for the index of party nationalization, thanks to higher support to it in Tallinn and Narva compared to the 2005 elections, and to smaller support to it in Tartu and Pärnu. However, the average index of party nationalization for all four parties remained almost unchanged compared to 2005 elections. First signs of deterioration of the situation emerged during 2013 elections, when the compact between the Reform and the Social Democratic parties resulted in the absence of the former and collecting of more than one-third of votes by the latter in Narva. As a result, scores for the index of party nationalization declined in the cases of both parties, thus decreasing average score for all four parties. In 2017, when the Estonian Conservative People's Party entered the field, the situation deteriorated even further: all parties demonstrated lower scores for the index of party nationalization at 2017 elections compared to 2013 elections.

The most important factor, why the relationship between ethnic Estonians and ethnic Russians improved before the 2000s and deteriorated again in 2010s was the EU's "minority condition" [27], which forced Estonia to change its legislation aiming at levelling of political rights of citizens and "aliens" in times, when it was a candidate country. Then, the EU demanded that potential new members from Eastern Europe adhered to higher standards than those adopted in Western European EU member states at that time [13]. While EU institutions pressured Estonia to naturalize all its Russophonic residents, whom ethnic Estonians construed as "representatives of the Russian threat" [14], many ethnic Estonians depicted European integration as dangerous to Estonian identity.

Thus, at the 2003 referendum on EU membership in the Baltic States, over 90% of voters in Lithuania, where Russophonic minority comprises less than 10% of the population, supported EU membership, but in Estonia and Latvia, where Russophonic minorities are bigger than a quarter of respective populations, only two-thirds of voters supported EU membership. While elites of Lithuania, Latvia and Estonia "unequivocally heralded accession to the European Union as the main foreign and security policy goal" [29: 1089], populations in the two latter countries, both ethnic majorities and Russophonic minorities were more cautious of European integration. However, after 2004, Estonia lost the most important factor of legislative change aimed at greater participation of "aliens" in the country's politics. As a result, the transformation of legislation aimed at building peace between ethnic Estonians and ethnic Russians stalled, thus leading to deterioration of the situation in inter-ethnic relations in Estonia in general and in the nationalization of the country's political party system in particular in 2010s.

Other reasons why the inter-ethnic situation in Estonia deteriorated throughout the observed period are linked to domestic processes in the country itself rather than external factors like the influence of the EU. First, the dichotomous differentiation of Estonian identity from the country's Russophonic population characteristic for the 1990s was in the 2000s replaced by "competing modes of identity

politics that rely on less dichotomous differentiation” [1]. In the 2010s, when the “Res Publica” part disappeared from the name of the Pro Patria and Res Publica Union, and when the Estonian Conservative People’s Party entered the field, the dichotomous differentiation returned to Estonia. Second, throughout the 1990s, the Estonian political community gained a considerable degree of control over the country’s Russophonic community, thus contributing to ethnic peace and stability in the country [26]. The “Bronze night” of 2007 demonstrated that the control was lost. So far, there has not been evidence allowing to conclude that the Estonian political community has re-gained control over the country’s Russophonic minority.

Conclusions

Bridging the ideological divide was the most promising aspect of the Estonian project aimed at “integration” of the Russophonic minority launched by ethnic Estonians-dominated elite of the country after the independence of 1991. The project received the name of “integration” because of the negative connotations of the term “assimilation”, despite the project aimed not at “integrating” of different properties of various segments of the Estonian society, but at assimilating of representatives of other segments of the society into a homogenous group bearing properties of only one segment of the society, namely ethnic Estonians. In this context, bridging the ideological divide meant creating conditions, under which ethnic Russians and representatives of other segments of the Estonian society would vote the same political parties as ethnic Estonians. This article has demonstrated that Golosov’s index of party nationalization is an effective tool helpful to assess, to what extent the task to bridge the ideological divide has been fulfilled in post-Communist Estonia.

Above we presented the results of the analysis of the outcomes of parliamentary elections that took place in Estonia in 2007, 2011, 2015 and 2019, as well as of the local elections that took place in the country in 2005, 2009, 2013 and 2017. We employed Golosov’s index of party nationalization in order to understand whether votes in places predominantly inhabited by ethnic Estonians, such as the Pärnu county, in places predominantly inhabited by ethnic Russians, such as the town of Narva, and in places with almost equal distribution of ethnic Estonians and Russians, such as the capital city of Tallinn, distribute among major political parties in a similar manner. Analysis of the elections demonstrated that voters in Narva and in Tartu differed in the way that the former preferred the Centre Party, while the latter preferred the Reform Party. In a similar manner, voters in Ida-Viru County preferred the Social Democratic Party, while voters in Pärnu County preferred the Pro Patria Party. At the same time, the results demonstrated that Estonia as a whole achieved a considerable level of political party system nationalization by mid-2000s.

The level of party nationalization at parliamentary elections was higher than at local elections, because mostly ethnic Russian “aliens” in Estonia can vote at local elections, but they cannot vote at parliamentary elections. In 2007—2019, the average level of party nationalization at parliamentary elections did not change significantly, despite the country’s political system has overcome an important change caused by far right Estonian Conservative People’s Party’s entry into politics in 2015. On local level, however, the average level of party nationalization changed significantly in 2005—2017. Besides the factor of the Estonian Conservative People’s Party, another reason for that were attempts by three political parties, namely the Reform Party, the Social Democratic Party and the Pro Patria Party to create informal unions at 2013 and 2017 local elections aiming to end the dominance of the Centre Party in Narva. Having done this, the three parties declared themselves “Estonian” parties and contrasted themselves to “Russian” Centre Party, thus seriously damaging the process of bridging the ideological divide between ethnic Estonians and ethnic Russians.

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LOCAL GOVERNMENT REFORMS IN ESTONIA: INSTITUTIONAL CONTEXT, INTENTIONS AND OUTCOMES

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The local government reforms of 1989 and 1993 were intended to establish a dual pattern of central-local relations in Estonia. The choice of this model was inspired and supported by the Nordic states. Although the legal framework for local government has remained untouched since 1993, the introduction of institutional mechanisms for strong local autonomy was not a success. The first part of this article seeks to identify the main factors that inhibited the launch of the new institutional model. These were a lack of strategic influence on national policy-making, poor cooperation from local authorities, and the diminishing role of county-level governments and their subsequent liquidation. The second part of the article analyses the objectives and results of the local government amalgamation reform of 2017 as well as the theoretical and practical possibilities to re-establish central-local balances in Estonia. The analysis draws on institutional theory, which explains the effect of deep value patterns and concrete political choices on the institutionalization logic followed after the 1993 reform. It is concluded that the local elites retaining their old value patterns will downplay the effect of the 2017 reform.

Keywords:

local government, reforms, dual model, fuse model, central-local relations, autonomy, balance, institutional theory

Introduction

Having emerged after the collapse of the communist system in Europe, all newly independent states faced the problem of creating a new system of government with local self-government as its most important part. Estonia is no exception in this regard.

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It should be noted that the problems of the Estonian public administration system are of special interest to Russian researchers. In our opinion, the works of such specialists as D. A. Lanko [1], A. V. Smirnov [2], V. Yu. Malinovsky [3] and a number of others are of particular importance. The collective monograph *Poland, Lithuania, Latvia, Estonia: Socio-economic and Political Development* edited by A. P. Klemeshev is of a considerable interest in this regard [4]. Yet in the study of modern Estonia, the problem of local self-government often falls outside the scope of scholarly investigation. In practice, we find the analysis of this problem only in the comparative study of the situation in the Baltic States by E. V. Stepanova [5] and articles by A. V. Kurochkin and E. O. Kurochkina [6; 7]. However, these works date back to the very beginning of the 2000s and, therefore, cannot reflect the current state of affairs in this sphere.

European political science demonstrates quite a high interest to the issues of state and municipal administration of the Republic of Estonia since this country is considered to be a rare example of a successful democratic transition in the post-Soviet space. Still, the main focus here is on national processes, and the problems of local self-government are revealed, for the most part, only by Estonian specialists. Local government studies in Estonia are mainly analysed within the framework of economic geography [8; 9], law [10–12] or economics [13]. Studies of local governance from the perspective of political-institutional development have been provided mainly by the Estonian authors of this article [14–19].

The novelty of this work is that the analysis of the evolution of the local government system in modern Estonia is carried out for the first time from the perspective of historical institutionalism, which, in our opinion, allows us to identify the internal logic of institutionalization and prospects of central-local relations in Estonia. This analysis is based on numerous empirical and conceptual-interpretive studies which started from 1994 onwards. For this reason, we would refer to our previous works for detailed explorations of inquiry and some key findings. Conceptually we draw on the interpretivist version of historical institutionalism [20–22], which considers historical traditions to be an important factor in the modern process of institutionalization [23; 24]. This enables us to avoid largely exogenous explorations of mechanisms of institutional changes of traditional new institutionalist approaches, and to focus on endogenous variables of institutional change in the dynamic context of deep societal changes. Firstly, we can say a lot about the role of *background* ideational variables [25] or habitual strategies in everyday behaviour as well as idealized-normative expectations (myths) and strategic plans [26]. Secondly, we can take into account how different reform pathways in the same space (local vs. central government reforms) could mutually influence and modify each other [20], as well as timing and sequence of political decisions. We specifically focus on the links between contingent short-term solutions and/or long-term expectations [27]. Thirdly, we explore how adequate

choices made by conscious and rational strategic actors may result in unexpected (and undesirable) outcomes even in the case of effective immediate political outputs of these choices. Finally, we attempt to trace changes as creative extensions [21], when the actor's new implicit understandings and interpretations bring about new informal institutional outcomes even in the context of stable formal rules. At the same time we use our case to demonstrate that in some dimensions a new institution building has a self-reproducing and self-reinforcing linear causality ("deep history matters"); but it can equally [22] produce a chain of reactive sequences in which individual events (in our case EU accession) will trigger a totally new vector of change that has not existed in the initial version.

According to a number of researchers [5–8; 17; 18], it was in Estonia that the most autonomous and democratic model of local self-government was formed back in the early 1990s. This was possible due to the consensus of political elites and active support of the country's citizens. However, by the end of the decade, the first signs of inconsistency between this model and the practice of real life began to appear. This was especially evident in the relations between the central government and the local government authorities, which even led to contradictions with some of the principles of the *European Charter on Local Self-Government*¹. In 2010, during a debate held in the Estonian Parliament, it was recognized that the accumulated imbalance in central–local relations had begun to have a negative impact on the effectiveness of government in general, and therefore required significant changes².

In this regard, it is necessary to identify the reasons for this kind of development and to better understand the problem of institutionalization of formal structures and behaviors in societies undergoing a process of systemic transformation of all aspects of social life. In this article, we aim to answer the following questions. To what extent political actors are capable to change intentionally established institutional patterns, especially in the case of policy transfer of experience of other countries? What are the main variables and mechanisms, which may favour or constrain the new institution building?

Finally, taking into account existing deep institutional path dependency, what are the perspectives of 2017 amalgamation reform, which intends to return Estonia back to the dual pattern of central–local relations? Or would it be more reasonable to introduce fused patterns of local governance, first of all through strengthening the regional (intermediate) level of self-governance?

¹ CLREA.2010. Council of Europe. Congress of Local and Regional Authorities. Local Democracy in Estonia. 45 p.

² 12. Parliamentary record 2010 Partnership of state and local government. Proceedings of particularly important issue of state development. Record of Riigikogu 23.09.2010. URL: <http://stenogrammid.riigikogu.ee/et/201009231000> (access date: 27.06.2017).

Basic models of relations between the state and local self-government

In our opinion, the explanation of the existence of various models of modern central-local relations should be found in the specifics of cultural and historical development of a particular country, the peculiarities of nation-state formation, and characteristic features of local communities and both central and local political elites.

Historically, regional and local elites in Central, or continental, Europe were strong from the military-political point of view but rather dependent on absolutist state in economic terms [19; 28]. They and the clergy heavily dominated over the local and regional communities through the institution of serfdom. In attempting to consolidate the nation-state, the absolutism tried to weaken the domination of regional elites. The modernisation reforms of the late 18th — early 19th centuries tried to free weak local communities from the economic and social dominance of nobility and church to form at least partly politically and administratively autonomous self-governing local societies [29]. The new administrative system presumed, on the one hand, the implementation of central government/public tasks at the local level under the strict supervision of central government provincial office (the right of general competences remained with local authorities). On the other hand, the system of political immunity of local elites that protected them from central interventions to community affairs was ensured together with direct access of local elites to central government institutions and policymaking through the *cumulation of mandates*, as it was done in France [30]. As a result, the so-called fused pattern (or interaction model) of central — local relations developed [31; 32].

In the Northern part of Europe, local community was more or less autonomous *vis-a-vis* the absolutist state and had self-governing bodies because of the lack, or weakness, of serfdom. A kind of stable but dynamic power balance between the central government and local communities had evolved before the formation of nation-state institutions [33]. As a sign of trust, but also because of the strength of the local communities, central authorities would not intervene into local affairs, assigning the provision of stable taxes to local self-governing bodies and giving them access to decision-making processes on the national level. For example, for many centuries the kings of Sweden, and especially Denmark, could not tax the population even in the event of war without the local elites' consent [34]). As a result, the two relatively independent spheres of public authority, or the dual pattern of central and local relations, emerged [31; 32]. Local self-government was also established at the county (intermediate) level under the leadership of strong and autonomous — in comparison with the rest of Europe — local nobility, which had an important function

to provide the basis for the balance of the two realms of public authority. To a large extent, local government reforms in the 19th century (1837 in Denmark and Norway, and 1862 in Sweden) gave the modern institutional format to those developments.

Recently, within both models — dual and fused — the local elites of European countries have contributed to the development of two important mechanisms for increasing the level of local autonomy. On the one hand, although in different ways, they strengthen the capacity of local and regional authorities, either by merging them (amalgamation), or by strengthening intermediate levels of government — provincial and regional. On the other hand, local elites monitor the possibility of securing their right to vote at the central level in the process of making decisions that are not only directly related to relations between levels of government, but also relate to a wider range of policy issues, which are reflected in special legislative acts that in recent decades have had an increasing influence on those local and regional authorities of the EU that are responsible for their implementation [35].

Main stages of intergovernmental relations development in Estonia

Local self-government started to evolve in the current Estonian territory after the partial abolition of serfdom in 1816–19 in Baltic provinces (Estonia and Livonia) of the Russian empire. These reforms were inspired by German reforms and by Emperor Alexander I's adviser Heinrich Friedrich Karl Reichsfreiherr vom und zum Stein, the former Prussian Minister of Economics and Finance, who had played an active role in Hardenberg's reforms including the foundation of local self-government system. However, manor estates owned mainly by the Baltic Germans continued to dominate economically over the Estonian peasant community until the 1866 law on municipalities and the 1870 law on towns were adopted. Those laws (with amendments) were in force in independent Estonia up to the 1937 [36].

The central — local relations of the independent Estonia (1918–1940) were based on the typical logic of the fused system: local authorities with extensive political autonomy had the primary task of adapting national policies to local specificity [37]. The scope of autonomy depended on the level of government and was much more extensive at the county level, which did not fit in the fused logic of central- local relations. This triggered high political pressures from municipalities but also from the central government elite towards the abolition of the county level [38; 39]. Under the authoritarian regime, established in 1934, these fierce political debates were over with and the classical fused pattern of

central — local relations, among which one could identify a strong prefect and prefecture at county level, was introduced by the new Parish, City and County Acts in 1937—38³.

In the Soviet period the county government became a stronghold of the central state administration machine at the local level whereas the municipal level retained only the selected routine administrative tasks. Formally both levels had councils (Soviets) and elections were held, but they actually consisted of the previously selected managers and working class representatives who were to control the actions of the executive. A large proportion of social services were provided by socialist enterprises, especially so in the rural areas; and it was only in the cities that the local government provided communal services and infrastructure. So, in fact, the Soviet system restored the subordination of local communities to the logic of political and economic domination from above that had been abolished by the 19th century modernisation reforms. This helped strengthen the corporatist — collectivist values in the Estonian society [26].

The democratic local government system began to take shape in Estonia in 1989 when Estonia was still a part of the Soviet Union. Even prior to the next local council elections, there were favourable conditions for the restoration of democratic and autonomous local government. Like in 1918, the two-tier self-government was established, however, in contrast to the interwar period, the central — local relations were formed in accordance with the logic of the dual model of local self-government. This choice was determined by a clear political orientation of the Estonian elites towards learning from the experience of their Northern neighbours — Finland, Sweden, and Denmark — and by direct professional assistance that had been received from them. This phase of reforms provided for a transition period until 1994.

After independence in 1991, the local government issues were carefully and — largely thanks to the experience of the 1989 reform— professionally debated⁴ at the Constituent Assembly. As a result, local government's autonomy was guaranteed by the new Constitution adopted in 1992. In 1993, the new Local Government Organisation Act (LG Act) was adopted to harmonize local governance with the Constitution. The county self-government was abolished: its representative bodies were eliminated and the county government was established as an autonomous central regional government agency. Two facts should be taken into account: that this law was adopted in a hurry prior to the upcoming local elections, and that at the time Estonia was in its deepest economic and social crisis, so both central and local government faced the possibility of fiscal and

³ Seaduste Kogu eriväljaanne. II köide. Omaavalitsused. URL: <http://www.hot.ee/seadustekogu/index2.html> (access date: 23.09.2012).

⁴ CCA 1997. Constitution and Constitutional Assembly. Tallinn: Juura URL: <https://www.riigikogu.ee/tutvustus-ja-ajalugu/riigikogu-ajalugu/pohiseaduse-assamblee/pohiseaduse-assamblee-stenogrammid/>(access date: 25.02.19).

resource supply collapse. Moreover, in the summer of 1993, a referendum was held in Estonia on the autonomy (in fact, secession) of the North-Eastern part of the country, where the majority of the population were Russian-speaking people. This led to the fact that specific local interests, especially in fiscal policy, were swept away.

Already in June 1994, the law On Assistance in the Cooperation between Municipalities was passed. It indicated an urgent need for capacity enhancement through cooperation and mergers. In 1996, the drafting of a new local government act started at the Ministry of Interior.

In 1997, a committee of experts led by the regional minister without portfolio was formed to design a new conception for local government⁵. Among other things, this conception included an idea of voluntary and compulsory mergers and an idea of further curbing the autonomy of county government. The reform paper was shelved at the beginning of 1999, and a few months later a new government started to work out yet another conception of local government reform. The core of the new reform strategy was to merge municipalities into larger entities. In 2001, the reform strategy plan was once again put on the back burner.

Another attempt of the local government reform in order to balance it with the central government through re-establishing of the second tier of local government was made in 2003, and then again in 2007. However, both attempts failed because of the decisive *veto* of the Reform Party, the leading member of the coalition since 1999 (which had also halted the 2001 reform). What is more, county governments and their leaders first lost the majority of administrative roles and were mainly reduced to the role of a supervisor over the legality of municipal acts; and then decentralised government field offices at the county levels were reorganized into de-concentrated subdivisions of central ministries.

This resulted in a profound shift in the perception of actors. On the one hand, the “romantic” expectation held by the local elites of autonomous self-governance as the cornerstone of the nation and efficient statehood was gradually superseded by the practical need to protect local government from further extension of the central government restraints and interventions. On the other hand, the central government began to treat local authorities as incapable actors with low efficiency and to increasingly upstage local authorities in decision-making at the central level even over issues directly related to the local government and its functioning.

As a result, one of the most decentralized versions of central — local relations first introduced in 1993, by the end of the 2000s developed into a highly centralized but loosely integrated structure of formally autonomous actors. High level of trust and cooperation between actors was replaced by competition over scarce

⁵ AHAA 1998 = Avaliku halduse arendamise alused. Seletuskiri. (Basic of public administration development. Explanatory letter). Ministry of Interior, Tallinn. (Personal archive) 12 p.; AHAK 1998 = Avaliku halduse arendamise kontseptsioon. (Conception of Public Administration Development) Ministry of the Interior, Tallinn. 10 p.

resources concentrated in the hands of the state. All parties involved in this situation agreed that something had to urgently change, yet they were not able to come to any meaningful consensus about the nature of the changes required.

Thus, the process of constructing and deconstructing the dual model of central — local relations has been going on throughout the entire period of the newly independent Estonia's existence. As a result, local autonomy has weakened in two interrelated ways.

First, local autonomy in the dual model can be ensured by effective channels of impact of local interests and involvement of their representatives in the process of national policymaking. This is both the premise and the outcome of power balance, but it is also important for partnership with central authorities in national policy implementation. Within the first two decades of the existence of the Estonian state these channels weakened significantly. An attempt to change the situation by introducing the post of the Minister of Regional Affairs (instead of the Minister without portfolio) had no impact on the existing power dynamic [40].

Hopes for the effectiveness of local government associations' activities had not been fully justified either. Restoration of local self-government associations abolished by the Soviet government in 1940 was carried out during the period (1990) when most municipalities had not yet been formed. Later in 1993, the county-level local self-government bodies created their own associations, resulting in increased competition and contradictions between different associations. In February 1994, the Assembly for Cooperation of Associations of Municipalities was created, which acted as a representative of all local government units in the country in negotiations with the government on the matters of budget allocation. It should be noted that today it is the only significant platform for regular negotiations between representatives of local and central authorities. Despite this, local elites were not able to create an organization strong enough to ensure a balance of power between the local government and the centre, and act as an equal partner in negotiations with the central government.

Second, a very important role in ensuring the power balance in local-central relations is played by the intermediate tier of government — whether by the second tier of self-government, or by regional self-government or by a strong prefecture (like in France or Poland). We should mention a number of aspects of such impact. First, it serves as an important link between municipalities and central authorities helping to ensure effective local implementation of national policies, on the one hand, and on the other — helping to formulate an articulated input of local interests into national policy. Second, the intermediate level is to a certain extent able to protect local authorities from excessive pressure from the center and the intervention of individual ministries and agencies. Third, it can become an integrating centre capable of binding together and coordinating the efforts of different actors. Finally, intermediate level can take responsibility for local tasks that require significant resources and management capacity. This role

could be taken by municipalities only in case of amalgamation into larger units or in case of extremely effective cooperation, which presumes usually effective steering by intermediate level.

It should be noted that the problem of the intermediate level of government, as well as the issue of compulsory or voluntary amalgamation of municipalities, has been and continues to be extremely acute throughout the period of the local government reforms in Estonia. Suffice it to say that since 1996 at least seven attempts have been made to restructure the existing institutional system, including one which was meant to adapt the intermediate level to the requirements of the EU's regional policy [41]. However, none of the options offered even reached the stage of discussion in the Parliament until 2015 due to purely political differences within the executive branch itself.

Paradoxically, in 1998, the German expert J. Hesse accurately foresaw such a development basing his point of view on the analysis of local government reforms in Central and Eastern Europe. He wrote, "Whilst local government reform legislation has, undoubtedly, greatly strengthened the role of the local level and succeeded in establishing a sphere of genuinely autonomous government, many argue that the reforms have shown too little appreciation of the need for active inter-governmental co-ordination and co-operation and integrated policy-making./.../The problems of sectoralisation are compounded by the fragmented nature of the local government map. Weak intermediate institutions mean that central bodies are increasingly required to try to build up direct links with local governments, a task made more difficult by the great number of local units and, especially in case of many small localities, the lack of professional capacity. Conversely, local governments cannot rely on the county councils to represent their interests at the central government level, but need to find alternative channels of access. As a result, the sectoralised and fragmented nature of intergovernmental relations is perpetuated." [42, p.172].

Hence, by 2010s Estonian local authorities had managed to retain rather high political and organizational autonomy (or immunity), which prohibited all administrative intervention into local affairs, a rule that remains unbroken to this day. The only way to ensure coordinated policy implementation at local level is a combination of national legislation and fiscal policy measures. However, as we have seen, local authorities in Estonia have not been able to build up effective policy input channels into policy-making at central level to ensure (or balance) local interests in national policymaking. On the one hand, central government (and its ministries) were thus able to start burdening local authorities with various responsibilities without providing supplementary funding. Following the procedure set in the Constitution, Tallinn city authorities appealed to State Court in 2009 in order to get rid of this additional burden. However, this had no practical implications to local budgeting. Simultaneously, central ministers started to concentrate regional capacity development via EU programs in their hands, especially so in education and social affairs. On the other hand, the tax legis-

lation, which emerged in 1993–1994 in the context of national crisis and with reference to prioritising national interests, has not changed. As a result, Estonian local authorities' current expenditures comprise 22–24% of public expenditures, with the role of local taxes falling below 1% and the main source of local budget revenues being categorical and general grants [43].

Studies of local autonomy by the EU Commission indicate that Estonia has medium-high degree of local autonomy (ranking 17th among 39 countries).⁶ However, the local government in Estonia scores differently in various dimensions of autonomy. The scores of political and organisational autonomies are the highest possible (100) in Europe, while fiscal autonomy (score 32) and the level of vertical influence of local authorities (score 33) are among the lowest. This is completely supported by our qualitative-historical study of the local government development in Estonia.

Local government and the Administrative Reform of 2017

By 2015, all political forces in the country began to realize the inevitability of reforms. A new coalition formed by three parties — the Reform Party, the Social Democratic Party of Estonia, and the Union of the Fatherland and Res Publica (since June 2018, Fatherland) initiated a new reform in the spring of 2015. Unlike previous attempts, this reform started with major changes in the organizational structure. The coordination of local government policy was transferred from the Ministry of Interior to the Ministry of Finance, and responsibility was assigned to the Minister of Public Administration.

The reform was originally designed to increase the capacity of municipalities by merging them. At the same time, it was to achieve a purely instrumental goal, i.e. reaching a political consensus on this issue. In the end, the reform program was mostly reduced to the merger of municipalities into administrative-territorial units with a minimum population of 5,000 inhabitants. The optimal number was set as at least 11 thousand inhabitants, with exceptions provided only for island municipalities (4) and for cases where the territory of the merger of three municipalities exceeded 900 square km.

However, as the reform unfolded, it became increasingly clear that in the long term, it should not only be about the potential strengthening of local government in terms of efficiency and resource savings, but also in terms of their capacity to be strategic actors in their country and the entire Baltic region. In this regard, the following main issues were raised in the discussion with the center:

1. Creating a new organizational structure for the municipality, where the functions of policy making and strategic planning would be separated from the day-to-day activities of providing services and regular citizens feedback.

⁶ Self-rule Index for Local Authorities. European Commission 2014. URL: https://ec.europa.eu/regional_policy/sources/docgener/studies/pdf/self_rule_index_en.pdf (access date: 27.11.2018).

2. Developing real opportunities for inviting high-quality professionals to work in municipalities, those who could provide a strategic direction for municipal policy. First of all, they would be capable of professional financial analysis, necessary for long-term investment planning and risk management of investments, as well as for the development of partnerships, growth of human resources, etc. The Ministry of Finance has run analyses that demonstrated that municipalities had to have a minimum of about 8 thousand people to need a competitive financial manager.

3. Achieving sustainable investment potential in order to apply for large projects, primarily those funded by the EU. The minimum indicative threshold was set at 0.5 million Euros of own investment opportunities per year, which together with loans would allow having fairly large investment projects with acceptable risks. The minimum size of a municipality with this capacity is 6—7 thousand inhabitants.

4. Ensuring that each municipality had specialists who could provide citizens with modern services, primarily in the field of consulting and assistance in the social sphere and education. An analysis of the situation with two officials — advisers on child protection and construction planning — allowed to determine the threshold for the minimum population of the municipality of 5,000 inhabitants.

The merger of municipalities was considered to be the first stage of local government reform. After the October 15, 2017 elections, the country's 219 municipalities were merged to only 79⁷. Such a radical change in the administrative-territorial structure should have led to other changes in the system of sub-national governance. Firstly, the reform program assumed that the merger would be followed by a reorganization of the county (intermediate) level of government. Secondly, the fiscal policy should have found a solution to the problem of increasing the share of local taxes in local budgets and defined a formula for compensating the losses of the rapidly declining population (and, consequently, taxpayers) in rural areas outside the cities. Thirdly, it was expected that the increase in the size of municipalities would allow the state to delegate them some of its functions.

However, after the change of the ruling coalition in the fall of 2016, the new coalition limited the whole reform to its first stage, formal merger. Moreover, in 2018, county governments were abolished. This has led to a growing power gap between the center and the local government. Their functions are now divided between ministries, municipalities, and associations of municipalities. As a result, a specific dual model of central-local relations with the centralization of power, policy, and resources continues its existence in Estonia, at least for the foreseeable future.

⁷ Municipal council election 2017. URL: <https://www.valimised.ee/en/municipal-council-election-2017> (access date: 22.01.2019).

Institutional path dependency

Our brief analysis of the situation naturally raises a question: why did the process of forming a democratic system of local self-government in Estonia turn out to be so long, contradictory and full of paradoxes of institutionalization? It seems that it is impossible to get an adequate answer without analyzing the cultural component of the processes taking place in the country.

In his 1995 paper, *The Primacy of Culture*, Fukuyama developed one of the most convincing concepts of the stages of consolidation or levels of sustainability of democracy. The easiest and simplest way is to accept democracy at the level of normative beliefs and expectations, and then to build formal institutions in a more or less favourable international environment. It is much more difficult to achieve enduring consolidation of democratic patterns at the level of civil society structures through the “bottom up” spontaneous actions of citizens. The most difficult thing, according to Fukuyama, is to achieve consolidation of democracy at the level of individual culture/values of behaviour. “The deepest level includes phenomena such as family structure, religion, moral values, ethnic consciousness, “civicness” and particularistic historical traditions.” [44, p. 8].

On the cultural level the most general and volatile are the values linked to normative expectations which enable passive and purely emotional affiliation to certain values or ideals. These ideals are not only more easily accepted but also manipulated, including by those from the political power. The most enduring values that are “passed on through traditions” are those, which presume a very active realisation in the most meaningful everyday activities of a person, like family and relations with other people etc. They could be defined as existential or archetypical values. These are the deepest values, which a person may not be discursively aware of, but which are followed spontaneously and sincerely even in the most critical situations. Those values or predispositions could be specific cognitive filters, which determine the scope and limits of institutional innovations [45; 46].

From the cognitive institutionalism point of view, it means that the most effective carriers of institutionalized values and norms are not formal organisations or the state institutions but archetypical structures, defining our everyday way of life. Hence, we can also conclude, that political regimes (among them the communist regime) would have a rather superficial impact on the most enduring and sincere values and beliefs which up to the 20th century at least in Estonia, developed primarily at the community level. Ordinary people usually translate political and social formal institutions and rules into their own language and action patterns. In interaction with formal institutions, they are shaping their own version of institutions, which are understandable and practically acceptable for them. Of course, they may consciously follow the formal rules and norms, while interpreting them according to their own vision. This would often happen during the

Soviet period, especially in its post-totalitarian stage of existence. It is obvious that those deep behavioural patterns and archetypical values could last for a very long period and survive through different periods of political history.

So, in developing new structures, in our case — local government or inter-governmental relations, — even those actors who consciously make their design may in certain periods and in making more general normative decisions follow the externally prescribed patterns of action (for example, from the EU). Yet, sooner or later, they begin to develop their own interpretation of these structures, and as we have seen from the post-Soviet NIS practices, institutionalisation may result in a different institutional pattern if the archetypical values are in conflict with the values that have formed the original meaning of formal structures. British researchers J. Mahoney and K. Thelen called this mechanism “conversion” [21]. This can also explain why transitions to democracy succeed or fail.

Based on this, we have tried to find out what impact these archetypical values may have had and continue to have on the process of reforming local government in Estonia. To understand the deep foundation of everyday attitudes and behaviours, it seems appropriate to use the well-known study of value attitudes by Hofstede⁸ that makes it possible to assume what exactly *does not allow* the Estonian political elites (despite their sincere desire to ensure the autonomy of the community) to implement the institutional models borrowed from Nordic countries in practice. It is obvious that this study indicates not only the historical roots of the dominant national cultures, but also reflects the attitude of other citizens of the country who have a different ethnic and cultural identity (i.e. Russians in Estonia, Swedes in Finland).

Country/Value	Power Distance	Individualism	Masculinity	Uncertainty Avoidance
Sweden	31	71	5	29
Denmark	18	74	16	23
Estonia	40	60	30	60
Finland	33	63	26	56
Germany	35	67	66	65
Hungary	46	80	88	82
Poland	68	60	64	93
Russia	93	39	36	95

We see that Estonian values differ greatly from those in Denmark and Sweden but are largely similar to everyday social attitudes in Finland and Germany. Firstly, Nordic people are more likely to value solidarity and consensus (femininity values), while citizens of the new EU member states from continental Europe (Hungary and Poland) prefer achievement and competition (masculinity).

⁸ Hofstede value survey URL: <https://www.hofstede-insights.com/product/compare-countries/> (access date: 20.03.2019).

Estonians and Finns occupy an intermediate position in this regard. Secondly, we see a similar picture in relation to uncertainty. Residents of Nordic countries calmly accept the uncertainty and ambiguity of the situation, the lack of rules (low level of avoidance of uncertainty), while people in the new democracies of continental Europe prefer to avoid uncertainty, would rather have strict codes of behaviour and do not accept non-traditional ways of behaviour. Estonians and Finns again occupy an intermediate position from this point of view. Thirdly, although the general image of Estonians is dominated by individualism, they are still, to a large extent, collectivists. Strong level of legitimization of national (in the sense of ethnic) interests of Estonians also indicates the important role of collective values. A. Realo [47] explains this by the controversial development of the country and Estonian nation, but this is not the only reason. The phenomenon of individualism and collectivism itself is much more complicated than it is commonly believed to be. A. Realo points out that H. Triandis and M. Gelfand [46] differentiate between horizontal individualism and collectivism. *Horizontal individualism* emphasizes the value of autonomy and distinctiveness, whereas *vertical individualism* accentuates a kind of egoistic-competitive attitudes to others, which is characteristic to masculine cultures. Horizontal collectivism treats interdependence and cooperation as a positive variable but does not accept the priority of the group over the individual, whereas the latter is characteristic of the vertical collectivism, which, besides, considers out-groups as “strangers” or even “adversaries”. A number of historical and contextual factors make it possible to assume that Estonians are closer to values of vertical individualism and collectivism, while the horizontal individualism and collectivism, their famous consensual individualism, is primarily characteristic of the Nordic nations.

One of the leading Estonian sociologists, M. Lauristin, argued that the social capital that had developed in the context of traditional peasants’ society and the experience of existence during the ESSR had a great impact on modern values and attitudes [48]. Co-operation of free individuals presumes a different set of common values and novel relations of trust from that of community solidarity. Collective defensive solidarity, developed as a result of various practices of foreign domination, is difficult to correlate to open, as well as more uncertain relationships between people.

Thus, Estonia does not follow patterns, which support high autonomy and horizontal cooperation (solidarity), which are basic presumptions of dual pattern and substantial autonomy. At the same time, the Estonian pattern is also rather different from other transition continental countries, which have adopted German pattern of local authorities, yet it is almost identical with Germany as a classical fused model of central-local relations. In this case, we cannot assume that there are causal links between historical traditions and people’s attitudes, on the one hand, and the development of institutional patterns, on the other. However, we hold the position that these traditions and attitudes at crucial moments prevented

from or contributed to the choice of specific political decisions, which, in the long run, rendered the introduction of the dual model of political governance in the life of the Estonian society impossible.

The survey demonstrates a similar pattern of attitudes in Finns. How to explain then that the Finnish local authorities are still enjoying extensive autonomy and pronounced voice in national policymaking? On the one hand, although there are extensive similarities between nations at both shores of the Finnish gulf, there are two substantial historical differences, which would cause variations of politico-administrative cultures. First, unlike Estonia, there was no serfdom in Finland and the country has had a long tradition of autonomous and self-governing local community. Second, after becoming the Grand Duchy of Finland as the part of the Russian empire, Finland developed its national government institutions (Senate, and other institutions of central government), and thus, differently from Estonia, Finland has had extensive experience in balancing central-local relations.

On the other hand, Finland has until recently (before reforms in Denmark 2007) differed from other Nordic countries by having one tier of local self-government and having (like in Estonia) an indirectly appointed regional self-government councils as representatives of municipal self-governments instead. From 1967 onwards Finnish government initiated municipal amalgamations several times, none of them succeeded. Moreover, several stages of regional governance reform took place within the last decades, so Finland is still searching for optimal institutional structure for its dual model, which would be based on a broad consensus and a balance of top-down and bottom-up approaches.

Conclusion

The formation of a new democratic system of local self-government in Estonia took place in the context of a complete overhaul of political, social and economic relations in the society. Contextual variables at the initial stage included, on the one hand, the almost complete destruction of old institutional patterns, and on the other — attractive images of the practices of the prosperous neighboring Nordic countries. At the same time, Estonia clearly lacked the experience of building a balanced central-local relationship.

However, despite certain specificities, the analysis of local government reforms in Estonia allows, in our opinion, to draw a number of conclusions that are important not only for this country, but also for other post-Soviet states.

Firstly, institutional traditions matter. The core reason of the failure to promote institutional pattern installed at the beginning of the transition was the different historical experience of Estonia and, hence, different mind-set and patterns of practical behaviour of Estonian elites as compared to the values and patterns, from which the dual or autonomous pattern of central — local relations in Northern Europe historically draws. In our opinion, it was not only, and not so much,

the post-communist legacy, but a much deeper historical path dependency that had played a decisive role in the institutionalization of democratic patterns during the transition.

The collective-corporatist community values based on the opposites of “us” and “them” heavily restrain cooperation and consensus building between local authorities. Community autonomy in this case is grounded on values of “defensive autonomy”, which favours a stance of political immunity of local elites provided by central authorities. This creates a strong deference to the central authorities; no wonder that after elections or promotion to the national governing institutions Estonian local leaders break away their local identity and favour centralized instruments in central-local institution building.

Secondly, institutional (historical and cultural) path dependency, but also critical junctures and contingencies, which shape the directions of development at critical stages of history, matter. In this sense, the policy transfer should be handled very skilfully and cautiously. The decision in favour of Nordic pattern of central-local relations transfer at the beginning of 1990 was supported by the strong normative expectations as well as unique political context that temporarily emerged in Estonia. These normative expectations started to weaken as soon as the Estonian society started to move from the state of emergency to the stage of stable development. After stabilization, the habitual patterns of behaviour and attitudes towards central-local relations that could be observed after the birth of the Republic of Estonia in 1918 began to dominate again.

Thirdly, democratic politics matters. National integrity and unity would be important, especially in a society with multicultural cleavage, but those values should not foreshadow that the democratic society is based on the ability to recognize and balance the conflicts of different interests, among them interests of local, regional, central and, we would say, global actors. The only way to manage those conflicts in a democratic way is to balance them and, if possible, to negotiate them in the framework of mechanisms of multilevel governance.

This balancing strategy is risky and time consuming, especially in the context of insufficient experience in mutual trust and, consequently, attitudes to cooperation. Thus, both local and central government elites started searching for suitable and fast results by building walls in the realm of formal authority rather than developing mutually beneficial intergovernmental relations. The first step towards the former purpose was the restraining and finally abolishing an unsuitable competitor, an autonomous county governor. Here, local elites made a logical and also historical miscalculation: the lack of balance and weak channels of intergovernmental negotiations favoured the power position of the central government in any case. Local elites' counter-reaction was the development of protective and re-active stance of local policy. In this way they perfectly adapted behind the shield of political immunity granted by the central authorities that was acceptable for the latter. As a result, the dynamics of central-local relations froze, which hindered local government reforms.

Fourthly, only proactive innovation can ensure the consistent implementation of reforms. The reforms of the beginning of 1990s were temporary solutions. However, gradually, the support to innovations faded and orientation to *status quo* began to prevail. At the same time both sides — central and local authorities — were dissatisfied with their partnership. In 2015, differences of interests and opinions were so extensive, that politicians unanimously in favor of reforms failed to achieve much more than an agreement on the future size of a municipality.

Hence, a more substantive conclusion could be deduced. In a democracy, one should not expect to have to wait for the success of grand opportunities of re-engineering of institutions and to rely on a breaking reform narrative, but must rather take a permanent proactive stance promoting continuous innovations.

Finally, the main question today is whether the new political power of the country will be able to carry out the long-overdue transformations of the local government system. So far, in addition to the amalgamation of municipalities by merging them and eliminating the county level, no other important steps have been taken, as there has been no financial decentralization or redistribution of powers in favor of local governments (except for the transfer of some functions of the intermediate level).

Perhaps, however, Estonian political elite should give up trying to “return” to subjectively preferred Nordic institutional patterns of local governance, because overall Estonian basic attitudes and behavioral scripts (informal institutions) do not support those formal patterns in everyday governance anyway. A more reasonable and pragmatic solution could entail the introduction of strong intermediate regional administrations and elected councils.

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DISINFORMATION (FAKE NEWS, PROPAGANDA) AS A THREAT TO RESILIENCE: APPROACHES USED IN THE EU AND ITS MEMBER STATE LITHUANIA

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This study analyses EU and Lithuanian documents on countering disinformation/fake news to present the plurality of the Union's approaches to ensuring resilience. Currently, there are three approaches to the problem in the EU. The first one, used by the European Commission, is the recognition of citizens' right to information as well as of the need to promote critical thinking and information literacy. This approach fits into the adaptive paradigm of action in the information space and the concept of autopoietic resilience. The second approach, taken by the European External Action Service, is to expose fake news and the media spreading it. In combining adaptive and paternalistic paradigms of action in the information space, this approach employs a more static interpretation of resilience. Lithuania has adopted a third approach, which is dominated by the paternalistic paradigm and homeostatic resilience. This approach consists of the state isolating citizens from certain information. Thus, the popular use of the term 'resilience' in the EU disguises the plurality of approaches to both disinformation and resilience itself. Theoretically, this study draws on the concept of resilience and paradigms for countering disinformation/fake news. Methodologically, it relies on critical discourse analysis. The article suggests several possible causes of intra-EU differences in countering disinformation/fake news/propaganda and interpreting resilience.

Keywords:

European Union, Lithuania, resilience, fake news, propaganda, disinformation

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The phenomenon of fake news (FN) was brought to the fore by the withdrawal of the UK from the European Union (EU) and the 2016 US presidential election. Russia was accused of information meddling in both cases. To this and other changes taking place in the world, the EU responded in 2016 with the European Union Global Strategy (EUGS). Central to the document is the concept of resilience. The EUGS names disinformation a major threat to resilience. However, the EU also frequently uses the term FN. The EU did not come to a consistent understanding of the phenomenon at once. And it still lacks a uniform approach to achieving resilience in this respect.

This article aims to outline the plurality of approaches to ensuring resilience to disinformation (FN, propaganda) as presented in the documents of the EU and its member state Lithuania. The analysis of terminology and the documents that regulate EU and Lithuania's policy distinguishes three approaches that differ in their treatment of public-private interaction and resilience theories. The objects of this study are Lithuania and the EU at its supranational level. Its focus is on the discourse on countering disinformation/FN/propaganda in the context of ensuring resilience.

Lithuania's choice is explained by its active foreign policy (particularly, towards Russia) and the ambition to lead the Baltic region. To attain the goal of the study, the following objectives are set: 1) to identify approaches to disinformation and how they relate to the concept of resilience; 2) to demonstrate the plurality of definitions of disinformation (FN, propaganda) at the level of the EU and Lithuania; 3) to describe approaches to increasing the resilience of the EU and Lithuania to disinformation (FN, propaganda); 4) to summarise the differences and similarities of the approaches adopted by the EU and Lithuania.

The theoretical framework for the study is the academic concept of resilience. Despite the lack of a single vision, most researchers agree on a number of its basic characteristics [1]. Another element of the theoretical framework is two paradigms for treating disinformation: the paternalistic and adaptive ones. Methodologically, the article relies on discourse analysis [2–4].

The corpus of the documents used in the study includes the EUGS¹, the Communication on Resilience,² EU reports [5; 6], documents of the Lithuanian

¹ *Shared vision, common action: a stronger Europe. A Global Strategy for the European Union's Foreign and Security Policy.* 2016. URL: https://eeas.europa.eu/archives/docs/top_stories/pdf/eugs_review_web.pdf (access date: 03.08.2019).

² *Communication from the Commission to the European Parliament and the Council. The EU Approach to Resilience: Learning from food security crises.* 2012. URL: http://ec.europa.eu/echo/files/policies/resilience/com_2012_586_resilience_en.pdf (access date: 03.08.2019).

Republic (Lithuanian Defence Policy White Paper,³ National Security Strategy⁴ and reports of the State Security Department⁵). The study also analysed statements made by officials.

The first part of this study outlines paradigms for countering disinformation (FN) and traces their connection to the academic concepts of resilience. The second part discusses the EU's concept of resilience. The three following sections focus on approaches adopted by the European Commission (EC), the European External Affairs Service (EEAS), and Lithuania when handling disinformation. Part six compares the three approaches and exposes the causes of the plurality of initiatives disguised by the resilience concept.

The paradigm for treating disinformation (FN) and resilience

Researches offer two paradigms for countering disinformation/FN: the paternalistic and adaptive ones. They can be pictured at the opposite ends of a continuum, one extreme of which is public freedom and the other public security.

The paternalistic paradigm suggests 'the interference with a person's liberty of action justified by reasons referring exclusively to the welfare, good, happiness, needs, interests or values of the person being coerced' [7, p. 65]. To protect society from the adverse effects of disinformation/FN, it is considered reasonable to impose any limitations, including blocking information sources or deforming public discourse by propaganda [8]. Public intervention through bans and limitations is a case of paternalism [9]. But paternalism is not a characteristic of public actors only: it can manifest itself at the level of corporations [10] and supranational actors.

Freedom of speech gave rise to an alternative, adaptive, paradigm. Within this paradigm, the resilience of society to disinformation/FN is achieved by influencing citizens without resorting to measures that 'could... harm free speech' [11, p. 42]. This approach includes improving media literacy [12], fact-checking [13], outsourcing responsibility for the quality of information to its sources [14], and platform self-regulation [15].

³ *Krašto* apsaugos ministerija. Lietuvos gynybos politikos Baltoji knyga. 2017. URL: https://kam.lt/lt/gynybos_politika_490/aktualus_dokumentai_492/strateginiai_dokumentai_494.html (access date: 03.08.2019).

⁴ *Lietuvos* Respublikos Seimas, Nacionalinio saugumo strategija, 2017. URL: <https://www.e-tar.lt/portal/lt/legalAct/TAR.2627131DA3D2/LLwfQepmnd> (access date: 03.08.2019).

⁵ *Bendras* VSD ir AOTD 2016 metų grėsmių nacionaliniam saugumui vertinimas. URL: <https://www.vsd.lt/wp-content/uploads/2017/03/2016-grėsmių-vertinimas.pdf> (access date: 11.09.2018); *Bendras* VSD ir AOTD 2018 metų grėsmių nacionaliniam saugumui vertinimas. URL: <https://www.vsd.lt/wp-content/uploads/2018/03/LTU.pdf> (access date: 12.09.2018); *Bendras* VSD ir AOTD 2019 metų grėsmių nacionaliniam saugumui vertinimas. URL: <https://www.vsd.lt/wp-content/uploads/2019/02/2019-Gresmes-internetui-LT.pdf> (access date: 03.08.2019).

Experts trace the origins of the term ‘resilience’ to the Middle Ages, regarding particularly its usage in engineering and physics [16, p. 19–35, 17]. The term took on the meaning explored in this article in the 1970s when Crawford Stanley Holling defined it as ‘a measure of the persistence of systems and of their ability to absorb change and disturbance and still maintain the same relationships between populations or state variables’ [18, p. 14]. This definition is used by all the authors that examine the concept of resilience in social science [1]. The term ‘resilience’ penetrated the social sphere in the 1990s. Firstly, it was a response to the incapability of prevention of some threats (including disinformation) and of protecting society from them. Secondly, the domination of the neo-liberal approach made it possible for the state to place part of the responsibility for ensuring security on society [see 1; 19].

Today, however, there are serious differences in the interpretation of resilience. The two above paradigms for treating disinformation/FN well illustrate this circumstance. Within the paternalistic paradigm, resilience means bouncing back or restoring homeostasis [1, pp. 5–6]. This view originates in hard science. According to this, the authorities play the leading and society a supporting role. The adaptive paradigm corresponds to an autopoietic understanding of resilience as bouncing forward [1, pp. 6–7]. Many functions are delegated to citizens, whereas the state merely outlines local-level practices.

In the EU, the term ‘resilience’ was introduced gradually. For the first time, this notion was used by the EC in 2012.⁶ Resilience became key too foreign policy after the adoption of the EUGS in 2016. The coordinator of the EUGS process, Nathalie Tocci [20, p. 88], attributes the emergence of resilience to the non-linear approach to current threats and the inability of the state to not only prevent but sometimes also forecast them. The EU includes disinformation/FN into such challenges.

Thus, the EU uses the framework developed in social science to introduce the concept of resilience. The neo-liberal nature of the EU is another catalyst for embracing autopoietic resilience. But the documents of the EU and its member states interpret the ways to ensure resilience to disinformation differently. We will trace precisely these differences below.

The EU and Lithuania: searching for definitions of disinformation

The struggle against disinformation/FN was triggered by the Ukraine events of 2014. The definition of disinformation/FN, however, appeared only in 2018 in an EC report on digital transformation. It proposed to define FN as 1) verifiably

⁶ *European Commission*. 2012, *The EU Approach to Resilience: Learning from food security crises*. Op. cit.

false information; and 2) deliberate attempts at disinformation and distortion of news; the use of filtered versions to promote ideologies, confuse, sow discontent and create polarization [5, p. 10–11]. The authors of the report stress citizens' concerns about Russia's attempts to influence elections [5].

The report *A multi-dimensional approach to disinformation*, which was commissioned by the EC in 2018, avoids the term FN because it 'is inadequate to capture the complex problem of disinformation'. The latter is defined as 'false, inaccurate, or misleading information designed, presented and promoted to intentionally cause public harm or for profit' [6, p. 10].

The East StratCom Task Force, which was created by the EEAS, uses both the term 'FN' and the term 'disinformation'. StratCom sees its mission in countering *Russian* disinformation and FN campaigns.⁷ The term 'FN' is used most often in the 'news and analysis' section, which publishes, among other things, Russia reports of external organisations.⁸ StratCom itself prefers the term disinformation. In this respect, its position converges with that of the EC. StratCom, however, was initially established to counter FN.

The choice of the term is essential: FN excludes the possibility of an honest mistake, whereas disinformation is a broader neutral term.

Lithuania prefers the term 'propaganda' when speaking about Russia.⁹ A report of the State Security Department (SSD) of 2017 mentions 'disinformation' two and 'propaganda' fifteen times. The term covers both news distribution and public events, for instance, the meetings of the Format A3 international journalism club that feature talks by Russian experts.¹⁰ Remarkably, the EC uses the term 'propaganda' only in the context of inciting terrorism¹¹ and emphasises the need to prevent the dissemination of related content. The negative connotation of 'propaganda' excludes the possibility of an honest mistake and denies one the right to a corresponding point of view. The aspect of prevention is characteristic of Lithuania's vocabulary too.

The use of terms that have such different connotations points to differences in the discourses adopted in the EU and Lithuania. This way, it is possible to distinguish three approaches to threats in the field of information. The EC favours the term 'disinformation', which suggests openness and grants a right to

⁷ European Union External Action Service. 2017, Don't be deceived: EU acts against fake news and disinformation, URL: https://eeas.europa.eu/headquarters/headquarters-homepage/32408/dont-be-deceived-eu-acts-against-fake-news-and-disinformation_en (access date: 03.08.2019).

⁸ EU vs Disinfo. 2017, News and analysis. EU vs. Disinfo. URL: <https://euvsdisinfo.eu/news/> (access date: 03.08.2019).

⁹ Bendras VSD ir AOTD 2016 metų grėsmių nacionaliniam saugumui vertinimas.

¹⁰ Ibid.

¹¹ See, for example, European Commission — Press release. State of the Union 2018: Commission proposes new rules to get terrorist content off the web. 2018. European Union. URL: http://europa.eu/rapid/press-release_IP-18-5561_en.htm (access date: 03.08.2019).

an honest mistake. The EEAS approach focuses on spotting fake news. Finally, Lithuania's vision concentrates on the dangers of propaganda. These three understandings of threats to resilience determine the approaches to it. Below we will examine these approaches in detail.

EU approach No. 1.

Disinformation and civic responsibility

In April 2017, Vice President of the European Commission Andrus Ansip said: 'We are aware of the need to protect freedom of speech and to trust people's common sense ... [A] key task is to improve the EU's capacity to forecast, address and respond to disinformation activities by external parties'.¹² This statement had a pronounced emphasis on free speech and the presence of an external threat. Ansip identified two pillars of the EU strategy: citizens' media literacy and journalists' ethical standards. He stressed: 'fake news is bad, but the Ministry of Truth is even worse'.¹⁵ In other words, priority is given to the ability of society to live in the conditions of possible disinformation.

Further documents prove that the EC approach fits well with the adaptive paradigm. The resilience communication of 2017 says: 'measures to increase citizens' resilience to hostile disinformation will be further developed by raising awareness, supporting greater media plurality and professionalism'.¹⁴ The 2018 communication reaffirms¹⁵ commitment to the adaptive paradigm.

This way the EC is declaring its intention to teach citizens and maintain a plurality of perspectives. Civil society and the media are fully involved in this process. Citizens are encouraged to expose disinformation, using special services (for example, StopFake.org, hoaxmap.org). At the same time, the EU has launched fact-checking platforms (for instance, Social Observatory for Disinformation and Social Media Analysis). The media have improved their standards and made some of their algorithms transparent [6]. An important step forward is the Code

¹² *Statement* by Vice-President Ansip at the European Parliament, Strasbourg in the plenary debate: „Hate speech, populism and fake news on social media — towards an EU response“. Strasbourg, 2017. URL: https://ec.europa.eu/commission/commissioners/2014-2019/ansip/announcements/statement-vice-president-ansip-european-parliament-strasbourg-plenary-debate-hate-speech-populism_en (access date: 03.08.2019).

¹³ *Ibid.*

¹⁴ *European Commission*. 2017, Joint communication to the European Union Parliament and the Council. A strategic approach to resilience in the EU's external action, European Commission. URL: https://ec.europa.eu/europeaid/sites/devco/files/joint_communication_-_a_strategic_approach_to_resilience_in_the_eus_external_action-2017.pdf (access date: 22.09.2019).

¹⁵ *European Commission*. 2018, Communication — Tackling online disinformation: a European Approach. Brussels, April. COM (2018) 236 final. URL: <https://ec.europa.eu/transparency/regdoc/rep/1/2018/EN/COM-2018-236-F1-EN-MAIN-PART-1.PDF> (access date: 03.08.2019).

of Practice¹⁶ signed by Facebook and Google. The Code seeks to increase the transparency of advertising and information. Online platforms have introduced further initiatives (for instance, Facebook has launched a fact-checking service for users to report disinformation-spreading fake accounts). Platforms have laid down rules for political content. Accounts that break these rules are getting to be blocked. Since 2019, platforms submit a monthly report to the EC.

All the above initiatives are brought together by an understanding of the inability to prevent disinformation threats at the level of institutions. This vision suggests placing part of the responsibility on citizens as well as official structure encouraging grassroots practices. Institutions, however, set the general framework and try to improve the resilience of society. This approach builds on commitment to liberal values as well as the belief in the importance of an alternative opinion and the ability of people to make a conscious choice.¹⁷ What it postulates is not conservation but a continuous development of society and authorities. Overall, this approach corresponds to the adaptive paradigm and autopoietic resilience.

EU approach No. 2.

Fake news and intervention by the authorities

There is an alternative approach in the EU to ensuring resilience to disinformation. In 2015, the Action Plan on Strategic Communication was prepared to counter unacceptable information.¹⁸ Its primary area was the Eastern Partnership region. By an irony of fate, the author of the document was once again the EC. The plan contained both the above approaches and proposals to involve authorities in combating disinformation.

The leading promoter of this approach is the European Parliament, whose resolution of 2016 stressed the ‘need to ensure resilience of the information systems at EU and Member State level’.¹⁹ A 2017 resolution commissioned the EC to analyse the current legislative framework to ‘verify the possibility of legislative intervention to limit the dissemination and spreading of fake content’.²⁰ These steps fit within the paternalistic paradigm.

¹⁶ European Commission, 2018, Code of Practice on disinformation and digital single market. URL: <https://ec.europa.eu/digital-single-market/en/news/code-practice-disinformation> (access date: 03.08.2019).

¹⁷ European Commission. 2019, Online disinformation: a major challenge for Europe (blog post). URL: <https://ec.europa.eu/digital-single-market/en/blogposts/online-disinformation-major-challenge-europe> (access date: 03.08.2019).

¹⁸ European Commission. 2015, Action plan on strategic communication. URL: <http://archive.eap-csf.eu/assets/files/Action%20Plan.pdf> (access date: 03.08.2019).

¹⁹ European Parliament. 2016, Resolution of 23 November 2016 on EU strategic communication to counteract propaganda against it by third parties (2016/2030 (INI)). URL: https://www.europarl.europa.eu/doceo/document/TA-8-2016-0441_EN.pdf (access date: 03.08.2019).

²⁰ European Parliament. 2017, Resolution of 15 June 2017 on online platforms and the digital single market (2016/2276 (INI)). URL: https://www.europarl.europa.eu/doceo/document/TA-8-2017-0272_EN.pdf (access date: 03.08.2019).

In this context, StratCom was set up. The task force ‘develops communication products and campaigns focused on better explaining EU policies’ as well as ‘analyses disinformation trends, explains and exposes disinformation narratives, and raises awareness of disinformation coming from Russian State’.²¹ In practice, this means publishing regular disinformation reviews that cover data misrepresentation, opinions appearing in the media, and biased generalisations.

The work of StratCom is closely connected to EU resilience. The task force website offers guidelines for exposing pro-Kremlin disinformation. A task force employee, when analysing StratCom activities, said that the project contributes to the resilience of EU citizens by inoculating them against Russian information.²² As a result, Russia is stigmatised through creating a strong connection between this country and FN. Trust in information coming from Moscow is being ruined as a result.

This approach provides citizens with ready-made decisions rather than teaches them to make conscious choices. In other words, it is a paternalistic attempt to shield citizens and to deny them any ability to think critically. Remarkably, most of the content of the StratCom website is in English and Russian. This language choice makes it possible to reach the EU’s Russian-speaking population, which is most susceptible to Russian influence, as well as residents of post-Soviet states.

StratCom’s actions are often questioned in the EU. The most vivid example is the complaint to the European Ombudsman about the EU anti-fake news initiative. The document stresses the lack of criteria for rating information as false and blacklisting its source [21].

Thus, the second EU approach to disinformation/FN as a threat to resilience is a combination of the adaptive and paternalistic paradigms. Although the circulation of information is not restricted, authorities are actively involved in refuting some messages. The source of disinformation is clearly defined (Russia); news coming from there are stigmatised. The skew towards paternalism nurtures public distrust of Russia. This approach relates to the homeostatic interpretation of resilience, which is characteristic of engineering sciences.

Lithuania’s approach: propaganda as a paternalistic denial of resilience

The Lithuanian approach suggests active prevention of the threat labelled as propaganda at state level. The Defence Policy White Paper proposes three possible avenues: 1) monitoring and analysing the information space and identifying the topics that have come under attack; 2) public awareness campaigns;

²¹ *European External Action Service*. 2018, Questions and Answers about the East StratCom Task Force. URL: https://eeas.europa.eu/headquarters/headquarters-homepage/2116/questions-and-answers-about-east-stratcom-task-force_en (access date: 03.08.2019).

²² Our own interview with an EEAS official, October 4, 2018.

3) cooperation with the institutions and member-states of the EU and NATO.²³ Lithuanian politicians maintain that their country is more exposed to the growing destabilising effects of Russian disinformation than any other EU state is.²⁴

The Radio and Television Commission, which functions under the Law on the Provision of Information to the Public,²⁵ has the right to ban cable broadcasts of Russian channels and restrict access to online resources. In January 2019, the list of undesirable information was expanded to include the content that ‘tampers with Lithuania’s historical memory, cultivates distrust of the state and grievances against it’ and betrays an ‘ambition to reinforce national and cultural divides, to undermine national identity and civil consciousness’²⁶). Another measure to combat ‘Russian propaganda’ is embedding alternative opinions into the annual report of the State Security Department.²⁷

The Lithuanian approach to countering information threats to resilience consists of tarnishing the image of Russian mass media and blocking information generated by them. The ways to achieve resilience are interpreted in the same vein. The National Security Strategy²⁸ mentions resilience four times, three of them in the context of countering propaganda from without. Interestingly, Lithuanian documents link resilience to countering the Russian threat. Minister of Foreign Affairs of Lithuania Linus Linkevičius went as far as stating that resilience to Russian propaganda should be the country’s priority.²⁹

Finally, in September 2018, the English-language Debunk.eu platform was created for people to report trolls and disinformation. According to its creators, the initiative seeks to increase the resilience of society. At the same time, the initiative is clearly aimed at looking for anything that comes from Russia and looks bad. Moreover, it works closely with officials from the ministries of defence and foreign affairs.³⁰

²³ *Krašto apsaugos ministerija*. 2017, Lietuvos gynybos politikos Baltoji knyga.

²⁴ See, for example, Paulauskas A. 2015, Rusijos propagandos mašina Lietuvoje finansuojama pažeidžiant įstatymus, *15 min*. URL: <https://www.15min.lt/naujiena/aktualu/lietuva/a-paulauskas-rusijos-propagandos-masina-lietuvoje-finansuojama-pazeidziant-istatymus-56—552679> (access date: 03.08.2019).

²⁵ *Lietuvos Respublikos visuomenės informavimo įstatymas* 1996 m. liepos 2 d. Nr. I-1418 Vilnius. URL: <https://www.e-tar.lt/portal/lt/legalAct/TAR.065AB8483E1E/KambyVXeSS> (access date: 03.08.2019).

²⁶ *Lietuvos Respublikos visuomenės informavimo įstatymo* nr. I-1418 19, 31, 34¹, 48 straipsnių ir priedo pakeitimo įstatymas. 2019. URL: <https://e-seimas.lrs.lt/portal/legalAct/lt/TAP/3b843be00e5d11e98a758703636ea610> (access date: 03.08.2019).

²⁷ *Bendras VSD ir AOTD 2018 metų grėsmių nacionaliniam saugumui vertinimas*.

²⁸ *Ibid.*

²⁹ *Lietuvos Respublikos užsienio reikalų ministerija*. 2018, L. Linkevičius: atsparumas Rusijos propagandai turi būti mūsų prioritetas. URL: <https://www.urm.lt/default/lt/naujienos/l-linkevicius-atsparumas-propagandai-turi-buti-musu-prioritetas> (access date: 03.08.2019).

³⁰ Debunk. A disinformation crackdown initiative, 2019. URL: <https://debunk.eu/about-debunk/> (access date: 03.08.2019).

It is worth analysing the statements made by members of the Seimas. For instance, Laurynas Kasčiūnas says that the West ‘does not understand the genesis of the current information war [...]. Absolute freedom of speech can lead to chaos controlled from without. The more so when society lacks the skills of critical thinking, media literacy, etc’.³¹ He also proposed to ban information ‘coming from other countries or their agents and threatening national security’.³² Žygmantas Pavilionis suggests limiting the airtime of Russian cable channels, stressing that ‘the Kremlin pays special attention to the heart- and brainwashing of our compatriots’.³³

Lithuania’s approach is a case of the paternalistic paradigm taken to the extreme. Rooted in basic distrust of society, it seeks to shield citizens from the Russian information flow (which is classified as propaganda) at state level. Public institutions act paternalistically when protecting their citizens from real or imaginary threats. Obviously, the focus is on introducing restrictive measures rather than teaching people. Society and business play a minor role in countering information threats. Potentially, this approach questions the liberal values promoted by the EU. Moreover, it sacrifices dynamic development to the homoeostatic resilience characteristic of hard science. Lithuania’s approach is not an exceptional case in the EU [22].

Three approaches to disinformation in a comparative context

We identified three approaches to countering information threats to resilience. The first one draws on the adaptive paradigm and autopoietic resilience. The second one puts in a tangible paternalistic component, thus approaching the homoeostatic interpretation of resilience. Finally, the third approach is dominated by the paternalistic paradigm and homoeostatic resilience. The second and third approaches are associated with greater involvement of authorities; lower trust in citizens and their ability to think critically; and stronger risks of free speech and information infringement. The table below sums up the results obtained.

³¹ Amelyushkin, K. ‘Banning Dostoevsky is, of course, absurd’. Laurynas Kasčiūnas promises to ensure Lithuania’s information security. Delfi news portal. 2018. URL: https://ru.delfi.lt/news/politics/zapreschat-dostoevskogo-eto-konechno-absurd-laurinas-kaschyunas-obeschaet-stoyat-na-strazhe-infobezopasnosti-litvy.d?id=78675143&fbclid=IwAR1yfaXezjbzyC-Q66U8NiologuUDZZGF-EbLHW4mpemKqiXQni2_BAT7YqM (access date: 03.08.2019).

³² Kasčiūnas L. 2019, Kova su dezinformacija neturi riboti žodžio laisvės // The official website of the Homeland Union party. URL: <https://tsajunga.lt/aktualijos/kova-su-dezinformacija-neturi-riboti-zodzio-laisves/>(access date: 03.08.2019).

³³ Ž. Pavilionis: demokratiją niekinančią rusišką produkciją Kremlius duoda dykai // *diena.lt*. 2017. URL: <https://www.diena.lt/naujienos/pasaulis/ekonomika-ir-politika/z-pavilionis-demokratija-niekinancia-rusiska-produkcija-kremlius-duoda-dykai-804280> (access date: 03.08.2019).

Table 1

Three ways the EU approaches disinformation as a threat to resilience

	Approach 1 (EU – EC)	Approach 2 (EU – EEAS)	Approach 3 (Lithuania)
Preferred term	disinformation	FN and disinformation	propaganda
Public authorities	moderate and hand over the initiative to business and society	expose FN and stigmatise the media from certain countries	dominate the field and actively use restrictive measures; substitute independent actions
Business	puts recommendations from authorities into practice	does not play an essential role	abides by the restrictive laws
Society	individuals play a key role in countering disinformation	people consume content offered by public authorities and have access to alternative information, which is stigmatized	people consume content offered by public authorities; access to alternative information is restricted

A comparison of approaches to countering disinformation for ensuring EU resilience draws attention to the causes of differences in the treatment of information threats and the interpretation of resilience. The origins of these differences are worth a special study, the outlines of which we will draw below.

The dissimilarities between the approaches advocated by the EC and EEAS may relate to the differences between the fields in which these institutions are active. Traditionally, the EC concentrates on economic problems and processes within the EU. This focus translates into delegating responsibility to business and citizens. The EEAS articulates with greater clarity the problems of external threats and the need to combat them. Moreover, the anti-disinformation efforts of the EEAS are aimed at the citizens of both the EU and neighbouring countries.

Dissimilarities between the positions of EU member states in general and on Russia in particular have been extensively studied in the literature. The most frequently reported causes are historical differences, geographical proximity, and the degree of economic dependence [23, pp. 146–168, 27]. Special attention is paid to the traumatic past of the Baltics [24] and their concerns about threats to national integrity coming from Russian-speaking minorities [25]. Other factors mentioned are social inequality, a weak economy, migration, and unemployment [26, p. 62–63].

Finally, as the Lithuanian political scientist Evaldas Nekrašas cogently points out, Lithuania itself chooses Russia as the principal object of criticism. In con-

demning Russia, Lithuania comes to prominence and assumes a clear mission — to become the leader in the region, just as it was in the times of the Grand Duchy of Lithuania [28].

Conclusion

Our analysis demonstrated the lack of a single EU vision of how to ensure resilience to information threats. We identified three approaches.

The first one is promoted by the EC, which prefers the term disinformation. This approach consists of educating citizens and encouraging them to develop critical thinking, as well as of commitment to free speech and unrestricted access to information. As a result, an equal partnership between institutions, business, and structures emerges. The EC approach fits best the neo-liberal nature of the EU and the values it propagates. Remarkably, it does not link disinformation directly to Russia. Well in line with the contemporary interpretations of resilience in social sciences, this approach is based on the adaptive paradigm for treating disinformation.

The second approach lies in combating FN, primarily, that from Russia. The EU explains its activities by striving for resilience, albeit the latter receives a more static treatment in this case. This attitude is shared by the EEAS (especially StratCom) and the EP. It comprises elements of paternalism, potentially infringes on free speech, and tempers with information. Some mass media become stigmatised. Nevertheless, all information remains available and personal freedoms are preserved. This approach gravitates towards paternalism: citizens' involvement is kept to the minimum, whereas authorities tend to determine what is right and who the source of lies is.

Finally, the third approach is represented by Lithuania. In the country, information coming from official Russia or its mass media is almost automatically classified as propaganda. Resources disseminating this information are blocked; some individuals are persecuted. Although official Lithuania views these measures as enhancing resilience, they correspond to the extremely homoeostatic interpretation of resilience typical of engineering and hard science. Authorities actively introduce restrictive measures, whereas society and business can do nothing but observe the established rules. Even voluntary practices (exposing disinformation) are replaced in effect by public initiatives.

The adaptive paradigm of handling disinformation and autopoietic resilience requires delegating substantial responsibility to citizens as well as a transformation of authorities. At the same time, this approach makes it possible to respond flexibly to current challenges, including those in the field of information. Although the paternalistic paradigm and homoeostatic resilience may seem more reliable and easier to implement, they translate into rigidity when dealing with certain threats.

The disinformation-related concerns of the EU and its ambition to increase resilience will not disappear in the future. It is still unclear what approach to information threats and resilience will prevail. The term ‘resilience’ itself is a mere disguise for plurality in EU approaches to countering disinformation and some other current threats.

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THE DANISH PARLIAMENT AS AN ACTOR OF DENMARK'S FOREIGN POLICY TOWARDS THE EU AND RUSSIA: A COMPARATIVE ANALYSIS

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The growing number of participants in foreign policy decision-making calls for a study of the forces affecting the behaviour of states in the international arena. In contemporary states, parliaments are increasingly challenging the exclusive prerogatives of executive power in foreign and defence policy. Many experts stress that the powers of the Danish Parliament in these fields are among the most considerable in the world. The question is, however, whether these powers are exercised in the same manner towards different states and regions. This article aims to find out how the Danish Parliament contributes to the country's foreign policy towards the EU and Russia. The concentric circles model is employed to assess the level of the Danish Parliament's participation in the foreign policy of the Kingdom of Denmark in different regions of the world. The study conducts a comparative analysis of the evidence of the Parliament's influence on Denmark's relations with the EU, the EFTA, and Russia. The findings lead one to conclude that the Danish Parliament's participation in the country's foreign policy towards EU bodies is highly institutionalised and coherent, which can be explained by close integration of Danish political elites into European ones as well as by European processes being clear and predictable for Danish parliamentarians. The participation of the Parliament in Danish–Russian relations is less systematic and structured since the Danish Parliament sometimes lacks diplomatic experience and resources to influence more complex and ambiguous relations with the Russian Federation.

Keywords:

concentric circles model, the Kingdom of Denmark, the Danish Parliament, EU, Danish-Russian relations

Introduction

In the contemporary world, parliaments are relatively independent participants in international relations, as they have broad powers in supervising the implementation of foreign policy by the government. Additionally, they can effectively influence the foreign policy of states through several means (various

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forms of parliamentary diplomacy: visits of parliamentary delegations, participation in interparliamentary bodies, etc.).

The Scandinavian parliaments, along with the British and US ones, are those who most fully exercise their rights in scrutinising foreign policy of the government. The parliaments of these states have created the most effective mechanisms to participate in the foreign policy decision-making process and to supervise its conduct and implementation as compared to many other legislative bodies of other states.

The Kingdom of Denmark, where these mechanisms were formed relatively earlier than in other countries, is also unique since the powers of the Danish Parliament in foreign policy are regulated by the Constitutional Act.

Russian researchers (see Maxim A. Isaev [1], Maria A. Mogunova [2]) tend to consider the Parliament's influence on the formation of foreign policy in the context of the overall analysis of parliamentary functioning, noting how consistent the parliament-government interaction in different spheres is.

Danish political thought went through two stages of development in the study of the Parliament's participation in foreign policy formation. Academic researchers of the second half of the 20th century (Bramsen [3], Jørgen A. Jensen [4], Ross [5], Sjøqvist [6], Sørensen [7], Zahle [8]) carried out a historical and legal analysis of the Parliament's participation in foreign policy, identifying the stages of a gradual increase in the MPs' powers in this area. Modern researchers, first of all, evaluate the effectiveness of the Parliament as an actor of Danish foreign policy. Yet, most of the cases studied are devoted to the activities of the European Affairs Committee (see, for example, Arter [9], Henrik Jensen [10], Christensen [11], Laursen [12], Riis [13], Sousa [14], Fich [15], Holzacker [16]).

Political scientists of other countries, studying the features of parliamentary control over foreign policy, give considerable prominence to the activities of the European Affairs Committee of the Danish Parliament as one of the paradigmatic cases (see Mendel [17], Travers [18]).

Generally speaking, the subject is sufficiently studied in the academic literature, but none of the studies we reviewed present any description of Parliament's areas of interest in international relations. There are also no comparative studies of parliamentary participation in the implementation of foreign policy decisions towards different regions, which would help to identify the specific features of such involvement in the context of one or more areas.

Precisely this type of research, in our opinion, will allow us to more fully understand the characteristics of the parliament-government interaction in the foreign policy area, as well as provide a more objective and detailed assessment of the specific features of the Danish legislature in the sphere of international politics. By applying the concentric circles model to figure out the Parliament's regions of interest, we seek to conduct a more diversified study of the international activities of the Danish Parliament.

The Parliament's participation in the formation and implementation of the foreign policy of the Kingdom of Denmark can be considered from two perspec-

tives: the Parliament's activities in the clear and understandable (from Danish politicians' view) legal framework of cooperation with the EU institutions, as well as ad hoc activities, where the Parliament acts under the national strategy of foreign policy. The participation of the Parliament in the Danish-Russian relations can be attributed to ad hoc activities.

Thus, this article aims to identify the specific features of the Danish Parliament's participation in the foreign policy of the Kingdom of Denmark towards the EU and Russia.

The theoretical basis of the study is the concept of institutional isomorphism, presented in the works of American scientists DiMaggio and Powell [19]. Institutional normative isomorphism describes the mechanism of the Parliament's interaction with pan-European supranational institutions, since the Danish MPs' understanding of the functioning and decision-making procedures in the EU, which is institutionally and idiomatically similar to those in the Kingdom itself, has led to the professionalisation of parliamentary institutions responsible for the control of the European policy. Mimetic isomorphism is used by the Parliament in those cases when an area or region concerned is not a priority for the legislature's international activities, as a result of which the MPs can allow themselves to act within the framework of the government foreign policy strategy, imitating the institutional mechanisms of the Cabinet.

Finally, the influence of the Danish Parliament on the formation of a diplomatic course towards the Russian Federation seems to be the most compelling case. Danish-Russian relations are some of the most ambiguous in the Northern region since the political and ideological contradictions that emerged during the Cold War and persist until now are invariably opposed by the strong historical and cultural ties.

Political and Legal Framework for the Danish Parliament's Participation in the Foreign Policy of the Kingdom of Denmark

During the development of parliamentarism in the 20th century, the Danish Parliament was assigned relatively broad powers in the field of foreign and defence policy. It can be explained by the following reason: the monarch's prerogatives in the area concerned were almost entirely vested in the Cabinet, whose legitimacy relied on the support of MPs and whose tenure in power depended directly on the Parliament. As Mogunova puts it [2, p. 191].

[I]n comparison with the parliaments of several other bourgeois countries, the parliaments of the Scandinavian states managed to establish significantly more effective forms of control over the activities of the executive branch in these [foreign policy and defence] spheres.

Therefore, it is necessary to consider the political and legal framework for the Danish Parliament's participation in the foreign policy that has developed until now.

An important difference between the Foreign Policy Committee and other standing committees of the Danish Parliament, as well as similar committees of

other states' legislatures, is that its role and duties are stipulated in the Constitutional Act of Denmark. The Committee's functioning is regulated not by the Standing Orders of the Parliament, but by a specific law — the Foreign Policy Committee Act No. 54, dated March 03, 1954. Paragraph 2 of the Act establishes that “*the Government must consult the Committee in matters of major importance to foreign policy*”, as well as constantly inform the Committee members about all foreign policy decisions and actions, including those that are kept secret (according to paragraph 4, all Committee members are obliged to sign non-disclosure documents)¹.

As noted by Mendel, quoting from the work of Ross “*The Study of State Law*” (*Statsretlige studier*), the Committee is “*an independent organ that acts in the place of the [Danish Parliament]*” and “*has a semi-autonomous status*” [17, p. 55].

Besides, there are two other standing committees in the Danish Parliament — the Foreign Affairs Committee and the European Affairs Committee, the latter playing a significant role in foreign policy decision-making.

In the process of parliamentary activity development, the need to create a “parliamentary counterpart” of the Foreign Policy Committee was recognised, which, unlike the former, would participate in debates on bills and daily work of the Parliament. This is how the Foreign Affairs Committee was created, which, in addition, was assigned scrutiny functions over the governmental actions in the field of aid and development policies². Thus, the Foreign Affairs Committee is not much different from similar standing committees of parliaments in other countries, since it is not a direct participant in the decision-making process, in contrast to the Foreign Policy Committee. Nevertheless, the Foreign Affairs Committee cannot be ignored when analysing the participation of the Parliament in external affairs.

The European Affairs Committee (formerly the Market Relations Committee), which was created in 1961, following section 2 of para. 6 of Denmark's Accession to the European Community Act no. 447 dated October 11, 1972 (with the amendment of 1984, 1986, 1993, 1998, 2001 and 2008) gives the government a “negotiating mandate,” i. e., the Cabinet must obtain parliamentary permission to take certain measures required from Denmark to conduct a coherent policy within the EU³. The government has the right to conduct any policy within the European Union as long as it is approved by the Committee. However, in the Report of the Market Relations Committee published on March 29, 1973, it was

¹ Lov om Det udenrigspolitiske Nævn // *Retsinformation*. URL: <https://www.retsinformation.dk/Forms/R0710.aspx?id=72035> (access date: 14.05.2019).

² Forretningsorden for Folketinget 2018 // *Folketinget*. URL: <https://www.ft.dk/da/dokumenter/bestil-publikationer/publikationer/forretningsorden/forretningsorden-for-folketinget> (access date: 14.05.2019).

³ Lov om Danmarks tiltrædelse af De europæiske Fællesskaber (Tiltrædelsesloven) // *Retsinformation*. URL: <https://www.retsinformation.dk/forms/R0710.aspx?id=72060> (access date: 14.05.2019).

noted that “both the [Danish Parliament’s] influence and the government’s negotiating freedom should be considered and respected” [17, p. 59]. Therefore, the report proclaimed that the basis of the parliament-government interaction within the European policy formation was cooperation, not confrontation.

A few words should be said about the Defence Committee. This standing Committee performs supervisory functions in relation to the Ministry of Defence and Ministry of Foreign Affairs of the Kingdom in the field of defence policy, as well as takes part in the debates on draft laws and budget items related to the competence of the Committee⁴.

We have figured out the following forms of the Parliament’s participation in the foreign policy of the Kingdom of Denmark:

firstly, the expression of “consent” to the conclusion of international treaties and agreements by the government;

secondly, the “parliamentary question” (*spørgsel*) — “hour of questions” (*spørgetime*), “questions asked on Wednesdays” (*onsdagsspørgsmål*), “§ 20-questions” (*§ 20-spørgsmål*), “questions to ministers” (*ministerspørgsmål*);

thirdly, a parliamentary request (*forespørgsel*);

fourth, interpellation;

fifthly, a vote of no confidence or impeachment to the Minister of Foreign Affairs;

sixth, a parliamentary investigation;

seventh, the functioning of standing and special committees;

eighth, the election of delegates to certain intergovernmental organisations;

ninth, parliamentary delegations and interparliamentary exchanges [1, p. 192–194].

To conclude, the Parliament has fairly broad political and legal powers to participate in the formation of the foreign policy of the Kingdom. However, the Government traditionally retains a leading position in the process of formulating the goals and objectives of external relations of Denmark. The forms of the Parliament’s participation in Denmark’s foreign policy can be divided into two groups: forms of control over the Cabinet’s foreign policy and types of involvement in the country’s foreign policy. The latter group is of particular interest since it is a direct expression of the diplomatic course of the Parliament towards a specific state.

Concentric Circles Model of the Danish Parliament’s Diplomacy

The concentric circles model, introduced to social sciences by Burgess [20], has been applied by many scholars to analyse foreign policy and decision-making process, for example, by Barber [21], Kalniņš [22], Landsberg [23] and others.

The Danish Parliament’s areas of interest in foreign policy can be represented,

⁴ Forretningsorden for Folketinget 2018 // *Folketinget*. URL: <https://www.ft.dk/da/dokumenter/bestil-publikationer/publikationer/forretningsorden/forretningsorden-for-folketinget> (access date: 14.05.2019).

as shown in the Figure. The model was built, taking into account the following factors: territorial proximity, which largely determines the maturity of relations; and the level of economic turnover and the significance of relations. Moreover, a degree of institutionalisation of regional policies formation in the Parliament and the intensity of inter-parliamentary ties were considered as well. The farther the concentric circle is from the centre, the more complex and ambiguous (from the MPs' view) relations can be built. The latter will primarily be expressed by a much wider variety of opinions on the region presented in the Parliament and by vague and woolly wordings. Moreover, the farther the concentric circle denoting a particular sphere of interest is, the more the Parliament will rely on the Cabinet in matters of building relationships. The closer to the centre, the more independent role the Parliament will try to play, complementing the Cabinet's foreign policy or to a large extent determining its vector.

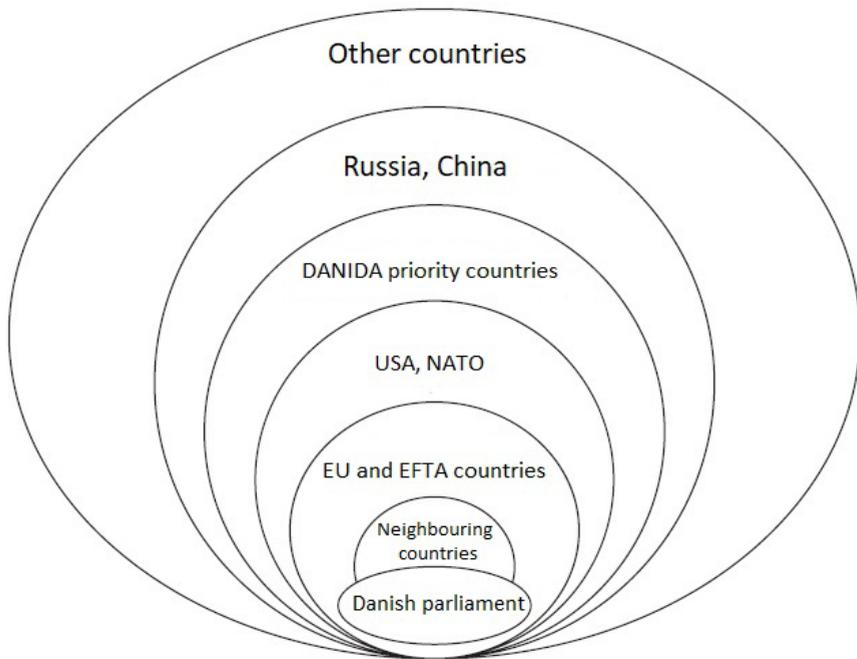


Fig. Concentric Circles of the Danish Parliament's Diplomacy

Neighbouring countries (Norway, Sweden, Germany) traditionally play a significant role in the foreign policy of the Danish Parliament. The institutionalisation of Nordic cooperation did begin with the creation of an inter-parliamentary body at the instigation of Denmark — the Nordic Council in 1952⁵. The Nordic Council of Ministers was established in 1971. As for Germany, the Danish Parliament mainly maintains ties with Schleswig-Holstein: in 2016, the federal state

⁵ The History of the Nordic Council // *The Nordic Council*. URL: <https://www.norden.org/en/information/history-nordic-council> (access date: 14.05.2019).

took part in the work of the Nordic Council as a visiting observer. In essence, two observers and two parliamentary delegates representing the Danish minority in the Landtag were sent to the Council⁶.

The USA and NATO are important directions in the foreign policy of the Parliament, but it is worth remarking that cooperation has an intergovernmental rather than inter-parliamentary character. The Danish Parliament often plays the role of the supervisory authority, ensuring that the Cabinet does not sacrifice Danish interests and sovereignty to build a special relationship with its transatlantic partner.

Aid and assistance to developing countries are the key areas of activity of the Ministry for Foreign Affairs since it is seen as an area where the Kingdom can take the lead among all states of the world. The Parliament again plays a more supervisory role, approving the budget of aid programmes. Also, as already noted, one of the main functions of the Foreign Affairs Committee is to oversee Danish policy issues in the field of development assistance.

The recent special relations with China are related mainly to the desire to enlist the support of one of the most influential players on the world stage in the Arctic region. Opposing China to Russia and the United States and getting Chinese backing against these great powers, in exchange Denmark facilitates China's penetration into the Arctic region both through cooperation in Greenland and through the support of the PRC in international organisations dealing with Arctic issues. Yet, the Parliament is more likely to keep up with the Cabinet by holding meetings with Chinese representatives. However, it is still too early to talk about the specific viewpoint of the Parliament on Danish-Chinese relations.

The effectiveness of the Danish Parliament in shaping foreign policy towards the EU, EFTA and the Russian Federation deserves special attention. These regions were not chosen by chance: building relationships with them has always played a significant role in Danish foreign policy, not only the Parliament but also the Cabinet may see it as a tough business. However, while in the case of the EU and EFTA, the Parliament rather successfully influences the determination of the general course, in the case of the Russian Federation the legislature is very cautious and sometimes indecisive.

Specific Features of the Danish Parliament's Participation in Danish-EU and Danish-EFTA Relations

The Danish Parliament occupies one of the key positions in the system of relations between the Kingdom and the bodies of the European Union, EFTA and the Council of Europe. Over the years, the European Affairs Committee has developed effective mechanisms for influencing the government's European policy, by expressing its position on important issues.

Such high efficiency and coherence of the Committee's work can be explained by the following reasons: the efficiency and flexibility of the mandate system, the

⁶ Beobachterstatus für das Land Schleswig-Holstein im Nordischen Rat//*Schleswig-Holsteinischer Landtag*. URL: www.landtag.ltsh.de/infotehek/wahl18/drucks/4800/drucksache-18-4839.pdf (access date: 14.05.2019).

coalitional nature of cabinets, centralized decision-making in the Parliament on EU-EFTA relations, the high integration of Danish political elites into pan-European ones, clear understanding by Danish MPs of how the EU functions and how the decisions are made in Brussels.

The mandate system described above, over the years, has truly justified its high efficiency and ability to adapt to changing conditions. Such an arrangement allows the Parliament to successfully play the role of a policy shaper and claim the part of one of the decision-making agents in pan-European institutions [11]. In the early 1990s, there was a popular joke in Brussels: “There are 13 members in the European Communities — 12 member states and the Danish European Communities Committee” [15]. Despite the grotesque nature of this statement and ongoing complication and expansion of the EU institutions, the Danish model of foreign policy formation towards the EU and the EFTA is still recognized as one of the exemplary ones [18].

One cannot help but agree with the opinion of Strøm about the influence of the coalitional nature of the Danish cabinets on the decision-making process. The Kingdom of Denmark is a parliamentary democracy, where after competitive elections the winning coalition forms a cabinet. The Parliament’s support for the governmental policy is of great importance to cabinet members [24]. This means, among other things, that the cabinet as a whole and the Ministry of Foreign Affairs, in particular, will never come to the Parliament with a proposal that has no majority support. Therefore, a kind of “self-censorship” occurs even at the stage of development of foreign policy. In addition, the coalitional nature of the cabinet opens up the possibility for all parties to express their opinion at any stage of decision-making, thereby exerting some influence on it.

Centralised decision making, on the one hand, consolidates all parliamentary influence on the decision-making process in European politics in the hands of 29 members of the European Affairs Committee. On the other hand, the broad representation of all parties in the Committee allows it to reflect the full range of opinions. Moreover, a limited number of participants in the process can speed up and somewhat simplify the formation of a joint Parliament’s advice on policy issues regarding the EU and EFTA.

There is no doubt that the Danish elites are highly integrated into the pan-European ones, as Denmark became a member of the Communities during the first expansion and over the years was able to build close ties with pan-European authorities. However, in this regard, one significant point should be noted regarding contacts between the Danish deputies of the European Parliament and the MPs of the Danish Parliament. Christensen notes that, unlike many EU member states, Denmark is characterised by rather weak ties between MPs of the pan-European and national parliaments [11]. If representatives of parties comprising the cabinet coalition might receive some instructions and recommendations from Copenhagen, representatives of opposition parties in most cases are left to their own devices and are not controlled in any way [11]. This specific feature can be once again

explained by the centralisation of decision-making regarding policies towards the EU and EFTA in the European Affairs Committee. In the current system, the MPs in Copenhagen can more effectively protect the interests of Denmark within the EU than the deputies in Strasbourg.

Let us consider two cases from the recent past that exemplifies the features discussed above.

In December 2009, the Italian government appealed to the EU Council to provide additional subsidies to Italian farmers in excess of the EU norms⁷. The Danish government was ready to support Italy, if not by voting for, then by abstaining, which, given the unanimous positive opinion of other members, would allow Italy to get extra support. However, the European Affairs Committee was categorically against the subsidies, arguing that it was a violation of the market competition rules as one of the EU priorities. The Committee issued a mandate to the Cabinet representative only to vote against the decision. When the voting took place, Denmark, along with Germany, Sweden and the Netherlands, voted against the subsidies. It is no coincidence that in the Juncker European Commission (2014–2019) the Commissioner for Competition was Margrethe Vestager, the representative of Denmark⁸.

The Danish chairmanship of the Committee of Ministers of the Council of Europe took place in November 2017 – May 2018 in close cooperation between the Cabinet and the Parliament. The Danish Parliament was the responsible body for conducting PACE sessions in January and April 2018, and together with the Danish Ministry for Foreign Affairs held a Conference on the private and family life of LGBTI persons on March 2, 2018⁹.

Thus, even the cases from the recent past presented here may indicate a high degree of the Parliament's participation in Danish foreign policy within the framework of pan-European institutions and the existence of effective mechanisms to influence foreign policy decisions towards the EU and EFTA.

Specific Features of the Danish Parliament's Participation in Danish-Russian Relations

The end of the Cold War and the disappearance of bloc confrontation as the basis for the development of the bipolar system created a rather complicated world system in which the Danish Parliament needed to find its place. Many experts

⁷ Danmark nægter italienske landmænd støtte // *Berlingske Tidende*. URL: <https://www.berlingske.dk/virksomheder/danmark-naegter-italienske-landmaend-stoette> (access date: 14.05.2019).

⁸ Kommissærerne // *The European Commission*. URL: https://ec.europa.eu/commission/commissioners/2014-2019_da (access date: 14.05.2019).

⁹ Calendar of activities during the Danish chairmanship // *Committee of Ministers of the Council of Europe*. URL: <https://rm.coe.int/-priorities-the-danish-chairmanship-of-the-committee-of-ministers-of-t/pdf/1680767c64> (access date: 14.05.2019).

and politicians in Denmark shared their confidence in overcoming all contradictions and returning to *l'Entente cordiale*, which determined Russian-Danish relations in the 15th — beginning of the 20th centuries. The signing of Declaration of Basic Relations in 1993, the year of the 500th anniversary of the Treaty of Love and Brotherhood between the Danish Kingdom and the United Moscow Dutchy, was meant to symbolise a turning point in bilateral relations¹⁰. Yet, further developments have shown that relationships could not be built within the framework of one model. Speaking of issues concerning cooperation in the Arctic region, Denmark seeks to build the negotiation process with the Russian Federation on the principles of equal partnership.

In contrast, in the field of security and defence, the Russian Federation remains a great power and Denmark — a small power in the minds of Danish politicians. For a while, the Danish Parliament sought to become an ambassador for peace in relations between the two states. However, the lack of experience and resources for multi-way diplomatic manoeuvres forces the Parliament to support the position of the Cabinet fully, and sometimes even insist on stricter measures against the Russian Federation, which is a more straightforward and more understandable diplomatic course.

One of the most relevant cases illustrating how the informal agreements and status quo described above works in the foreign policy decision-making process regarding Russia is the case of issuing permission to lay a section of the Nord Stream-2 gas pipeline in Danish territorial waters near the island of Bornholm.

Among the central events taking place in the process was the adoption of the Act Amendmending the Continental Shelf Act dated December 5, 2017, no. 1401, which vested the Cabinet with the right to reject projects for the construction of networks and pipelines in the territorial waters of Denmark, if it contradicts foreign policy, as well as security and defence policy¹¹. The Act was later included in the Consolidated Act on the Provisions of the Continental Shelf and Several Pipelines in the Territorial Waters Act dated September 21, 2018, no. 1189, issued by the Danish Ministry for Energy, Utilities and Climate¹². Thus, the Danish Parliament created a legal framework allowing the Cabinet to reject the Nord Stream-2 project. At the same time, this does not mean that the Parliament issued a mandate only to decide against the gas pipeline (as was the case with the decision on subsidies to the Italian government). Hereafter we would like to present

¹⁰ Deklaratsiya ob osnovakh otnoshenij mezhdru Rossijskoj Federatsiej i Korolevstvom Daniya «Eshhe 500 let druzhby i mira» (prinyata v g. Kopenhagene 04.11.1993 g.) [Declaration of Basic Relations between the Russian Federation and the Kingdom of Denmark “500 more years of Love and Brotherhood” (signed in Copenhagen 04.11.1993)] // GARANT. URL: <http://base.garant.ru/2564471/> (access date: 14.05.2019).

¹¹ Lov om ændring af lov om kontinentalsoklen // *Retsinformation*. URL: <https://www.retsinformation.dk/forms/R0710.aspx?id=195148> (access date: 14.05.2019).

¹² Bekendtgørelse af lov om kontinentalsoklen og visse rørledningsanlæg på søterritoriet // *Retsinformation*. URL: <https://www.retsinformation.dk/Forms/R0710.aspx?id=202937> (access date: 14.05.2019).

our analysis of the process of adopting the bill in the Parliament, as it reflects the full range of political contradictions regarding the issue, which explains why Denmark has not yet taken a positive or negative decision.

The bill was introduced to the Parliament on October 4, 2017¹³. On October 12, 2017, the draft was reviewed in its first reading. All Danish factions represented in the Parliament supported the bill¹⁴. Yet, as the debate proceeded, the parties divided into two groups. The first group of parties (Venstre, the Danish People's Party — hereinafter referred to as the DPP, the Conservative People's Party — hereinafter the CPP) insisted on the universal value of the draft law protecting Danish interests and filling the gap in the legislation of the Kingdom. Nord Stream-2 was characterized by representatives of these parties as one of many cases covered by the bill; moreover, these three parties refused to recognize the pipeline as the main reason for adopting amendments¹⁵. The second group of parties (the Social Democrats — hereinafter the SD, the Liberal Alliance, Unity List — The Red-Greens — hereinafter the Red-Green Alliance, The Alternative, the Danish Social Liberal Party — hereinafter the Radical Left, the Socialist People's Party — hereinafter the SPP) insisted that the adoption of the bill was aimed primarily at shaping the future of the Nord Stream-2 project in the Danish territorial waters, "*the elephant in the room that cannot be overlooked*", as Nick Hækkerup, the SD representative and then deputy chairman of the Foreign Policy Committee, put it in his speech¹⁶.

Moreover, representatives of the Red-Green Alliance and The Alternative party directly expressed their negative attitude to the gas pipeline project: if the former motivated it with considerations of geopolitics and counteracting Russian expansion, the latter insisted on the negative environmental impact of the gas pipeline¹⁷. Representatives of the Radical Left and the SPP expressed extreme scepticism of party members regarding Nord Stream-2. In addition to that, the representative of the Liberal Alliance described Russia as a source of threats to the EU. Therefore the Nord Stream-2 project should be discussed at the level of pan-European bodies (which generally corresponded to the rhetoric of the Lars Løkke Rasmussen Cabinet, in which the then chairman of the Liberal Alliance,

¹³ L 43 Forslag til lov om ændring af lov om kontinentalsoklen. Lovforslag som fremsat.//*Folketinget*. URL: https://www.ft.dk/samling/20171/lovforslag/L43/som_fremsat.htm (access date: 14.05.2019).

¹⁴ L 43 Forslag til lov om ændring af lov om kontinentalsoklen. 1. Behandling//*Folketinget*. URL: <https://www.ft.dk/samling/20171/lovforslag/L43/BEH1-6/forhandling.htm> (access date: 14.05.2019).

¹⁵ L 43 Forslag til lov om ændring af lov om kontinentalsoklen. 1. Behandling//*Folketinget*. URL: <https://www.ft.dk/samling/20171/lovforslag/L43/BEH1-6/forhandling.htm> (access date: 14.05.2019).

¹⁶ Ibid.

¹⁷ Ibid.

Anders Samuelsen, was Minister of Foreign Affairs)¹⁸. Regarding the position of the SD, an interesting paradox can be noted: Nick Hækkerup sought a direct answer from each speaker regarding the attitude of the party they represented to the gas pipeline project. However, he did not express the position of his own party neither in his speech nor after the question of Ida Auken, the representative of the Radical Left¹⁹.

One can figure out the following trend: parties whose members comprise the Cabinet the Rasmussen Cabinet (except for the Liberal Alliance) and DPP that supports the Cabinet are incredibly cautious in evaluating the Nord Stream-2 project, preferring to bypass this issue. The Liberal Alliance as a government party and the SD, the largest opposition party, are more open in their attitude to the gas pipeline project, but they do not express their position unambiguously. Other opposition parties openly declare that they are against Nord Stream-2. Still, the bill is supported by all factions according to different considerations.

At the stage of the second reading in the Climate, Energy and Utilities Committee, the MPs' questions and the answers to them by the Minister for Climate, Energy and Utilities Lars Lilleholt (Venstre) are of primary interest. Out of the six MPs' questions from the Committee, five were asked by Søren Rasmussen, a member of the Red-Green Alliance, which was perhaps the most fierce opponent of the Nord Stream-2 project. Four questions related to the degree of independence and autonomy of the Cabinet as a whole and the Ministry of Foreign Affairs in particular in deciding whether to approve or reject a pipeline project in territorial waters, as well as the Parliament's ability to influence this decision²⁰. The fifth question of Rasmussen is whether it is true that the Danish Parliament was able to reject the Nord Stream project in 2009 based on political reasons.²¹ It can be noted that in contemporary Danish political discourse the situation around Nord Stream in 2009, during the years of Lars Løkke Rasmussen's first premiership term, is often compared with the time when Denmark permitted to lay a gas pipeline in its territorial waters. The answers of the minister can be summarized as follows: the Cabinet and the Ministry of Foreign Affairs will be autonomous in making decisions; however, the opinion of the Foreign Policy Committee and the experts involved in the process will be taken into account²².

Regarding Nord Stream, the minister did not give a clear answer, noting that the permit was issued based on the decision by the Danish Energy Agency and

¹⁸ L 43 Forslag til lov om ændring af lov om kontinentalsoklen. 1. Behandling//*Folketinget*. URL: <https://www.ft.dk/samling/20171/lovforslag/L43/BEH1-6/forhandling.htm> (access date: 14.05.2019).

¹⁹ Ibid.

²⁰ L 43 Forslag til lov om ændring af lov om kontinentalsoklen. Spørgsmål//*Folketinget*. URL: <https://www.ft.dk/samling/20171/lovforslag/L43/spm.htm> (access date: 14.05.2019).

²¹ Ibid.

²² L 43 Forslag til lov om ændring af lov om kontinentalsoklen. Spørgsmål//*Folketinget*. URL: <https://www.ft.dk/samling/20171/lovforslag/L43/spm.htm> (access date: 14.05.2019).

after careful consultation of all interested parties. The Committee's decision dated November 23, 2017, noted that the bill was being submitted for the second reading without any amendments, and expressed the position of the members of The Alternative, the Red-Green Alliance and the Liberal Alliance regarding the protection of the environment as being a part of national security issues: if the pipeline brought harm to the ecosystem, then it harmed the security of the Kingdom. Thus, such a project had to be rejected²⁵. One can see how these parties seek to set a precedent for an expanded interpretation of the provisions of the bill to increase the legal basis for the rejection of Nord Stream-2.

Due to the absence of amendments and comments by party representatives, the text of the draft law was adopted in the second reading on November 28, 2017, and was sent for consideration in third reading²⁴.

On November 30, 2017, the draft law was passed unanimously in the third reading: 106/0, 0 abstentions²⁵. More than half of the members (90 or more) are considered as the quorum in the Danish Parliament²⁶. There were 73 members absent from the session: MPs, according to the informal inter-party pairing (*clearingsaftaler*), have the right to be absent from voting. However, the total number of absent MPs from parties that comprise the Cabinet or support it must be equal to the number of absent MPs from opposition parties²⁷. It is noteworthy that the majority of members of the Cabinet (16 out of 22 ministers), including the key ministers and the prime minister, were absent from voting²⁸.

It can be concluded that the Danish Parliament has vested the Cabinet with additional legal powers to take more decisive action on the issue of approving/rejecting the Nord Stream-2 project. However, the Cabinet is still in a stalemate: a positive or negative decision may affect relations with both the Russian Federation and Germany, the EU and the USA. The situation is complicated by the fact that the rest of the countries in whose territorial waters or EEZ the gas pipeline would be constructed had given their permissions²⁹. The Lars Løkke Rasmussen

²⁵ Betænkning over Forslag til lov om ændring af lov om kontinentalsoklen // *Folketinget*. URL: https://www.ft.dk/ripdf/samling/20171/lovforslag/143/20171_143_betaenkning.pdf (access date: 14.05.2019).

²⁴ L 43 Forslag til lov om ændring af lov om kontinentalsoklen. 2. behandling // *Folketinget*. URL: <https://www.ft.dk/samling/20171/lovforslag/L43/BEH2—24/forhandling.htm> (access date: 14.05.2019).

²⁵ L 43 Forslag til lov om ændring af lov om kontinentalsoklen. 3. behandling // *Folketinget*. URL: <https://www.ft.dk/samling/20171/lovforslag/L43/BEH3—26/forhandling.htm> (access date: 14.05.2019).

²⁶ L 43 Forslag til lov om ændring af lov om kontinentalsoklen. Afstemning // *Folketinget*. URL: <https://www.ft.dk/samling/20171/lovforslag/143/26/17/afstemning.htm> (access date: 14.05.2019).

²⁷ L 43 Forslag til lov om ændring af lov om kontinentalsoklen. Afstemning // *Folketinget*. URL: <https://www.ft.dk/samling/20171/lovforslag/143/26/17/afstemning.htm> (access date: 14.05.2019).

²⁸ Ibid.

²⁹ Permitting Overview // *Nord Stream 2 AG*. URL: <https://www.nord-stream2.com/environment-permitting/permitting-and-consultation/> (access date: 14.05.2019).

Cabinet continues to pursue a policy that can be described using the phrase of Theresa May, “no deal is better than a bad deal”³⁰. Generally speaking, this allows Denmark to avoid conflicts with all interested parties. However, on August 10, 2018, Nord Stream 2 AG submitted a new application to the Danish Energy Agency with a description of an alternative route for laying a gas pipeline section in the Danish EEZ³¹. In this case, the Danish Government will be forced to follow only the provisions of the 1982 UN Convention on the Law of the Sea and permit/reject the project only on the basis of compliance of environmental parameters with the legislation of the country. In turn, it means that Denmark will have to issue a permit, losing in its own political game. These circumstances very much worried the previously mentioned MP Søren Rasmussen and the Red-Green Alliance he represented. The parliamentary question was sent to Minister Lilleholt, which can be paraphrased as the following, “Does Denmark have any reason to reject an alternative pipeline route to the EEZ?”³² The Minister replied that the decision would be made under the UN Convention and the rules of the Danish Energy Agency, thus, the Danish Parliament and the Cabinet will not be able to influence the decision radically³³.

On March 26, 2019, the Danish Energy Agency, while considering the application for the north-western route in the Danish EEZ, decided on the need to study the possibility of laying a pipeline in the EEZ southeast of the island³⁴. On April 17, 2019, Nord Stream 2 AG filed an appeal against the Danish Energy Agency regarding the illegality of this decision³⁵. Still, on April 15, 2019, the third application with plans to construct a pipeline southeast of Bornholm was indeed submitted³⁶. In our opinion, the Danish side will give neither a positive nor

³⁰ The government’s negotiating objectives for exiting the EU: PM speech // *UK Government*. URL: <https://www.gov.uk/government/speeches/the-governments-negotiating-objectives-for-exiting-the-eu-pm-speech> (access date: 14.05.2019).

³¹ Submission of Application and Environmental Impact Assessment for an Alternative Route in Denmark // *Nord Stream 2 AG*. URL: <https://www.nord-stream2.com/media-info/news-events/submission-of-application-and-environmental-impact-assessment-for-an-alternative-route-in-denmark-104/>(access date: 14.05.2019).

³² Svar på spm. 314 om, hvorledes miljøaspektet kan anvendes ift. en eventuel dansk afvisning af den alternative linjeføring for Nord Stream 2, fra Energi-, forsynings- og klimaministeren // *Folketinget*. URL: [https://www.eu.dk/samling/20171/kommissionsforslag/kom_\(2017\)0320/bilag/12/index.htm](https://www.eu.dk/samling/20171/kommissionsforslag/kom_(2017)0320/bilag/12/index.htm) (access date: 14.05.2019).

³³ Ibid.

³⁴ Nord Stream 2 Files Appeal Against the Decision of the Danish Energy Agency // *Nord Stream 2 AG*. URL: <https://www.nord-stream2.com/media-info/news-events/nord-stream-2-files-appeal-against-the-decision-of-the-danish-energy-agency-124/>(access date: 14.05.2019).

³⁵ Ibid.

³⁶ Approved Danish Route Stretches South-East of Bornholm // *Nord Stream 2 AG*. URL: <https://www.nord-stream2.com/permitting-denmark/south-eastern-route/> (access date: 14.05.2019).

negative answer until the election is held (the parliamentary election is scheduled for June 5, 2019)³⁷, since any decision can have an ambiguous effect on the electoral results³⁸.

Therefore, we have concluded that the Danish parliament uses more harsh rhetoric on the issue of diplomatic policy towards Russia. A multi-way foreign policy game with many combinations remains the tactic of the Cabinet, which cannot take hasty actions and is forced to stay inactive, hoping for support from the EU, the United States or for a change in the political environment which would allow for smoother and more beneficial decision-making.

Conclusion

The Danish Parliament has a relatively broad political and legal basis for participation in the formation of the Kingdom's foreign policy. However, the Cabinet traditionally retains a leading role in the process of setting goals and objectives of external relations of Denmark.

The Constitutional Act regulates the powers of the Parliament to participate in the foreign policy decision-making process and to supervise how this policy is implemented and conducted. Moreover, compared with other states of the world, Denmark has developed some of the most effective mechanisms for the MPs' participation in foreign policy formation procedures.

The forms of how the Danish Parliament is involved in international relations can be categorised as following: forms of parliamentary control over the government's foreign policy and forms of parliamentary diplomacy. MPs' delegations and inter-parliamentary exchanges, as well as the elections of delegates to international organisations, are the main examples of the Parliament's direct participation in Denmark's foreign policy. A parliamentary delegation, along with a head of state and a prime minister or member of the Cabinet, represents the state abroad, expresses the official position on a particular issue, contributes to the development of the country's image around the world. Additionally, a visit of a delegation can become one of the ways to enhance interstate cooperation and establish relations, if executive authorities are not ready for such steps.

One cannot help but highlight the role of such standing committees of the Danish Parliament as the Foreign Policy Committee and the European Affairs Committee. Unlike many similar committees in the parliaments of other states, these two committees of the Danish parliament have managed to become direct participants in the foreign policy decision-making process, which makes the role of the Parliament in Denmark's external affairs a pivotal one.

³⁷ Folketingsvalg // *Statsministeriet*. URL: http://www.stm.dk/_p_14811.html (access date: 14.05.2019).

³⁸ The hypothesis was put forward by the authors at the time of submitting the manuscript to the publisher. Further developments confirmed our assumption: on October 30, 2019, the Danish Energy Agency issued a permit for the construction of a gas pipeline, which took place almost 5 months after the election and in the context of the aggravation of Danish-American relations on the issue of Greenland (Authors' note).

Depiction of the foreign policy areas of the Danish Parliament with the help of the concentric circle model enables us to see the degree of importance of a particular part of the world for the Parliament, as well as analyse what specific features the Parliament's influence on the governmental course of action in the studied region possesses. Our study allows us to conclude that the Danish Parliament's participation in building relationships with pan-European bodies can be described as highly institutionalised and well-coordinated. We have found out that it could be explained by the integration of the Danish political elites into pan-European ones and by the clarity and predictability of European processes from Danish MPs' point of view. On the other hand, the Parliament's participation in Danish-Russian relations is less systematic and structured, since when finding themselves in more complex and controversial relations with the Russian Federation, the MPs frequently lack diplomatic experience and resources to influence relations between the two states effectively.

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SOCIAL GEOGRAPHY AND REGIONAL SOCIOLOGY

SOCIO-SPATIAL DIFFERENTIATION IN TRANSITION: A PRELIMINARY COMPARATIVE ANALYSIS OF POST-SOVIET SAINT PETERSBURG AND RIGA

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Research into the socio-spatial dynamics in Central-Eastern European cities is an important area of contemporary transition studies. Open issues in this domain range from defining a theoretical framework to data availability and methodological approaches. As to the former aspect, recent literature focuses on the hybrid nature of the post-socialist urban space, which underwent transformation in the conditions of globalization and economic liberalization; the earlier model of spatial development changed dramatically as a result. The multi-scalar and comparative approaches may shed new light on the complex patterns of urban socio-spatial differentiation and its post-Soviet dynamics. Growing regional socio-economic imbalances observed in the former socialist states are lending new urgency to this area of research.

This study employs a comparative approach to investigate post-1991 socio-spatial transformations in St Petersburg and Riga — the two largest post-Soviet urban centres in the Baltic Sea region. An important result of the research is a methodology for multi-level analysis of changes in the urban environment of post-socialist cities. Data from post-1991 national censuses and population registers are used to calculate measures of social well-being in urban districts as well as to identify territorial imbalances. Comparative analysis makes it possible to trace the spatial patterns of post-Soviet differentiation and set out guidelines for further research in the area.

Keywords:

population, city, dormitory districts, suburbanization, social well-being, territorial imbalances, spatial transformation

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Introduction

It is widely accepted that growing socio-economic inequality is a major trend in most post-socialist countries of Central and Eastern Europe. It is observed at all levels — from interregional to intra-city ones [1; 2]. Spatial differences emphasise the depth of this inequality. On the one hand, there is a growing contrast between the socioeconomic and demographic performance of capital regions and provinces, especially, the periphery, which was most strongly affected by the economic transformation of the 1990s [3]. On the other hand, the socio-spatial dynamics of large cities give rise to various forms of spatial segmentation at the district level.

Exploring the spatial dynamics of social transformation is an important area of urban studies. Such research contributed enormously to the understanding of what causes variations in the forms of the increasing spatial segmentation of cities. These forms include segregation, gentrification, and sub- and de-urbanisation. Most studies in the field are empirical. They focus on various aspects of spatial development in post-socialist cities. What is often overlooked is the multi-scalar dimension of changes. A multi-scalar perspective is decisive for the formation of a theoretical-conceptual framework for the analysis of urban environment transformations [4; 5]. Recent works have considered post-Soviet cities as *hybrid spaces*, the transformation of which is determined by the logic of neoliberalism and market rather than by changes occurring within the inherited spatial development paradigm [5].

Most historiographical works of the past three decades, despite all the dissimilarities, view the Soviet model as an alternative project of modernity, different from the Western capitalistic one (see, for instance, [6]). That project predetermined particular architectural and urban planning of infrastructure [7]. Although Soviet urban planning had much in common with the international modernist tendencies in the West, socialist urban planning differed dramatically from capitalist planning in terms of functions, property structure, and the organisation of everyday life [8]. It seems relevant to study the non-linear results of interactions between the post-socialist market economy and the organisation of urban spaces inherited from the Soviet era [9]. According to many economic geographers and specialists in regional economics, such research requires multi-level analysis that treats space as a more complex dimension than urban territory [10–12]. For example, Golubchikov [9] emphasises the fact that most analyses of social transformation in post-socialist cities are restricted to empirical accounts of socio-territorial change. However, many of these analyses fail to give a full picture of the actual dynamics in the economic and societal sphere.

This study attempts to use available statistical data to examine, in a comparative perspective, spatial aspects social differentiation in the two largest post-Soviet cities of the Baltic region as a starting point for a multi-scalar analysis of post-socialist urban transformations.

Data sources and methodology

We compare interconnected indicators calculated using official statistical data to understand the patterns of socio-spatial differentiation at a city level in St Petersburg and Riga. Our exploration of residential conditions differentiation in both cities, which became more pronounced as social differentiation started to grow, aims to give a new perspective on the post-socialist transition period. The study area is limited by the administrative borders of St Petersburg and Riga. Their internal divisions into statistical areas/municipalities are taken into account.

Riga is divided into fifty-eight statistical units (micro-districts). This division developed in three stages, within which distinctive city zones and their constituent micro-districts emerged. The historical parts of the 'inner' and 'outer' city formed before World War II. Today, they are home to approximately 25% of the capital's residents. City zones developed based on the principles of the market economy. Having escaped the interest of Soviet urban planners, both areas became fields of physical desolation and social degradation. Rapid residential development began in Riga after World War II and continued until the end of the Soviet period in 1991. Flats in large blocks were centrally distributed among skilled workers (the middle class of the Soviet era) and the nomenklatura (the upper class in the Soviet social structure). Today, 75% of the residents of Riga still live in buildings constructed in the Soviet time. Although new houses have been built in the city centre after the Soviets, most of them are located in fringe areas. The districts of the Soviet-built tower blocks have been little affected by new residential development. As a rule, new housing built after 2000 is the most expensive and thus available only to the most well-off residents of Riga.

St Petersburg has a similar territorial structure. The city is divided into eighteen large districts, which comprise 111 municipalities.¹ Similarly to Riga, the centre of St Petersburg consists of districts built primarily before the twentieth century (twenty municipalities). They are home to 11% of the residents of the city. St Petersburg is a monocentric city, a 'nut in a shell'. It did not deeply change until the 1950s when it grew northward and southward [13]. Soviet-era residential areas built in the 1950–80s account for most of St Petersburg's area. They are home to three fourths of all the city's residents. This new city, which emerged in the late 1980s, has a greater area and population than the historical centre. Moreover, the former is a conglomerate of residential zones that are isolated both from each other and from the historical centre [14]. Only a few transport corridors running between industrial premises connect the centre of St Petersburg with its dormitory districts. The suburbs of the city are large modern

¹ Most municipalities of Saint Petersburg (81) are called districts; twenty-one remote municipalities are classified as villages; nine have retained the 'town' status (Krasnoye Selo, Kronstadt, Kolpino, Pushkin, Pavlovsk, Petrodvorets, Lomonosov, Sestroretsk, Zelenogorsk).

dacha communities (Repino, Komarovo, Lisiy Nos, Pargolovo, Strelna, etc.) as well as the towns that grew around 18th-century palaces (Pavlovsk, Pushkin, Lomonosov, Petrodvorets, etc.) and 19th/early 20th-century factories (Sestroretsk, Kolpino, Pontonny, Metallostroy). These territories became administrative constituents of Leningrad (St Petersburg) in the Soviet period. These once small towns have become sites of large-scale residential development [15]. Suburbs account for 16% of the St Petersburg population.

Our approach to the study is based on comparing two groups of indicators of the social differentiation of urban space. The first group comprises the indicators of the average concentration of residents with a higher socioeconomic status. The second group assesses housing prices as an indicator of the attractiveness of a certain residential area. The data for Riga come from the 2011 census. For St Petersburg, we used various information sources: data on the social parameters of the population (in particular, the level of education) are from the 2010 census, whereas information on housing prices comes from 2016–2019 evaluations.

This is a two-stage study. At first, we considered spatial differences in the indicators of socioeconomic status. Most statistics come from the 2010/2011 national censuses and population registers. The price indicators of housing attractiveness in St. Petersburg are calculated based on 2016–2019 evaluations. At stage two, we produced a taxonomy of municipalities and micro-districts in St Petersburg and Riga respectively, according to their social affluence.

Table 1

Socio-economic indicators used in the study

Indicator, year	St Petersburg	Riga
Percentage of people with a university degree (in the 20+ population), 2010/2011,%	34.0	33.9
Percentage of people with a doctoral/postdoctoral degree (in the 25+ population), 2010/2011,%	1.8	0.8
Percentage of managers and skilled professionals (in the economically active population aged fifteen and over), 2011,%	—	29.7
Percentage of entrepreneurs employing any number of people (in the economically active population), 2010/2011,%	4.4 ¹	4.0
Housing prices (1,000 roubles per sq. m), 2019	102.2	—
Property tax per person (roubles per year), 2016	434	—
Percentage of population living in houses built after 2000, 2011,%	—	4.9

Russian and Latvian censuses do not contain any information on household and individual incomes. The average concentration of well-off residents was thus calculated based on employment/occupational status and education degree data. To obtain the employment data for Latvia, we used the International Standard Classification of Occupations (ISCO) as a major socioeconomic status indicator. At the same time, managers and skilled professionals comprise the category of the population with the highest social status. There is general consensus that the ISCO gives a comprehensive picture of social differentiation in rapidly transforming post-Socialist countries [16]. Since Russian censuses do not report occupations and areas of employment, we analysed the percentage of entrepreneurs with employees to assess the social status of the residents of St Petersburg. In the case of Riga, we considered all entrepreneurs. The level of education, which is believed to be an indicator of the socioeconomic status (see [17]) was also used in the spatial analysis of social differentiation. Particularly, we took into account the percentages of people with a) a university degree; and b) a doctoral degree.²

As to the housing price indicator, it became evident when gathering information that there were significant differences in the availability of these data for the two cities. In Riga, just as any other Latvian city, there are no systematised data on land and housing prices in municipalities. Latvian censuses, however, contain detailed and accurate information on the years when each residential building was constructed. In Russia, housing data are difficult to obtain. Therefore, we used different indicators to assess the comfort of the urban environments of St Petersburg and Riga. In the case of St Petersburg, these were price per one sq. m and the average property tax per person.

Alongside the indicators of the socio-economic differentiation of urban areas, we employed data on intra-census population change in municipalities. We deliberately did not consider ethnic differentiation in the city: unlike multi-ethnic Riga, St Petersburg is a predominately mono-ethnic city. Signs of ethnic segregation have appeared only recently in St Petersburg in response to a mass migration to the city from CIS countries [18].

To illustrate spatial differences, we use sketch maps showing the municipal divisions of cities. Percent deviation from the city average is given for the indicator in question.

Results. St Petersburg

At the end of the Soviet period, the population of St Petersburg (then, Leningrad) exceeded five million people. That happened at the end of 1989. In

² A doctoral or postdoctoral degree in Russia.

1991, just like any other large city in Russia, St Petersburg witnessed a rapid population decline caused by a natural decrease and negative net migration [19]. There are very different evaluations of the rate at depopulation in St Petersburg in the last decade of the 20th century/the first years of the 21st century. According to statistics, the population of St Petersburg had to be below 4,600 thousand people at the beginning of 2002. The census carried out in October 2002 reported a population of 100 thousand people above the estimate. The underestimation of migrations has undermined the reliability of population data in Russian regions.

In 2003, the population of the Northern Capital started to grow. At first, the growth was sustained by immigration; in 2012, natural increase became a significant factor (Fig. 1). Of course, a positive difference between the birth and death rates has accounted for a mere 15–20% of population growth in recent years (Fig. 2).

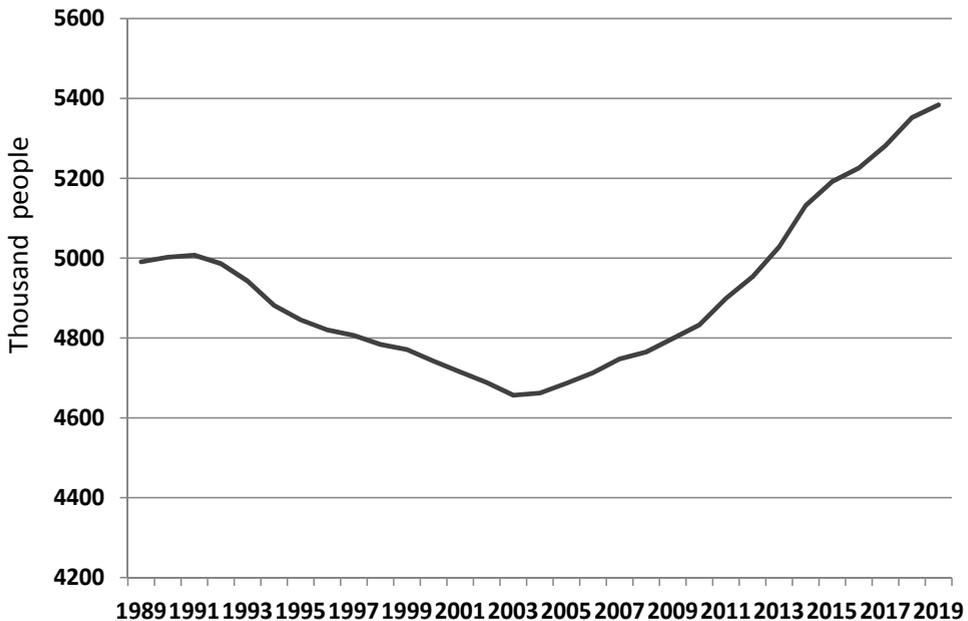


Fig. 1. Population change in St Petersburg in 1989–2019

Since 2000, the population of St Petersburg has increased by 15.6%.³ The rate of increase, however, varied from district to district.

In the past three decades, the city has gone through significant changes in population distribution. The city experienced the most rapid growth in the second half of the 1960s when large-scale residential development started behind the

³ Saint Petersburg. 2018. A book of statistics. Petrostat. St Petersburg, 2019.

factory belt⁴ that surrounded the 20th century St Petersburg. This resulted in the fragmentation of the city — its division into the centre and peripheral dormitory districts. Each of the latter is connected to the city centre by one-two transport corridors. Connections between contiguous dormitory districts are often less stable than those with the centre are.

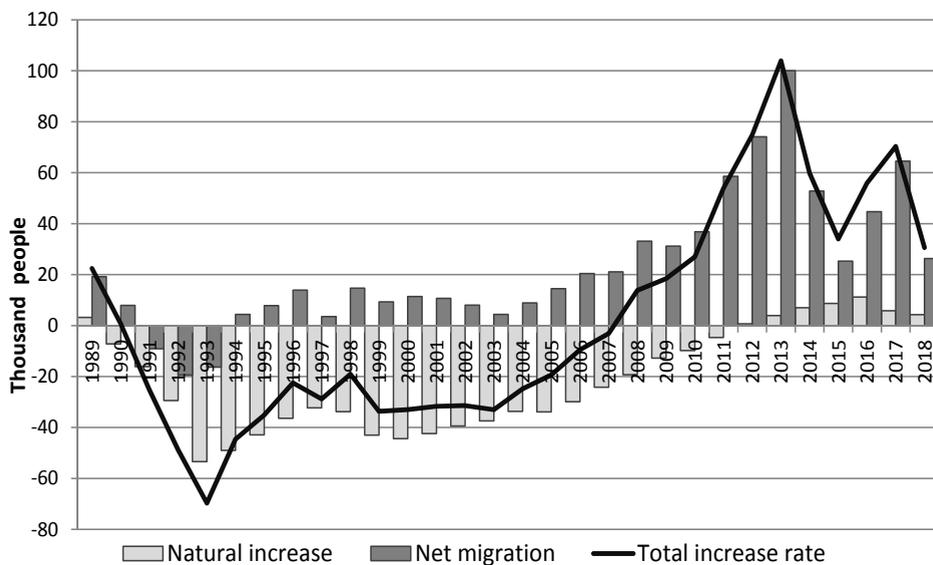


Fig. 2. Natural increase and net migration in St Petersburg, 1989—2019

Over the sixteen years from 2003 to 2018, thirty-four of St Petersburg's 111 municipalities saw their population increase by 10—30%, eleven by 30—50%, ten by 50—100%. The population of three municipalities (the villages of Pargolovo (Vyborg district), Shushary, Aleksandrovskaya (Pushkin district) more than doubled.⁵

In the same period, ten municipal units (MU) in the city saw their population decrease by 10—30% and one (the 'Palace District' in the city centre) by 34%. In forty-two municipalities, the number of residents has changed within 10% from the last census (2002) (Fig. 3).

There are distinct spatial patterns of the population dynamics in the districts of St Petersburg. Most municipalities in the historical centre are losing population, whereas suburbs are turning into new dormitory districts, and the number of their residents is growing. The lack of residential development lands within

⁴ The so-called 'grey zone' of the city.

⁵ The population of the villages of Pargolovo and Shushary, which have become sites of frenetic residential development, more than quintupled. Source: Rosstat official website. Municipal indicator database. URL: http://www.gks.ru/free_doc/new_site/bd_munst/munst.htm (access date: 10.09.2019).

the administrative boundaries of the city and the spatial configuration of St Petersburg contribute to rapid population growth in the municipalities located in the north (Primorsky and Vyborgsky) and south (Pushkinsky and Krasnoselsky) of St Petersburg. The population is redistributed from the centre of the city to its periphery.

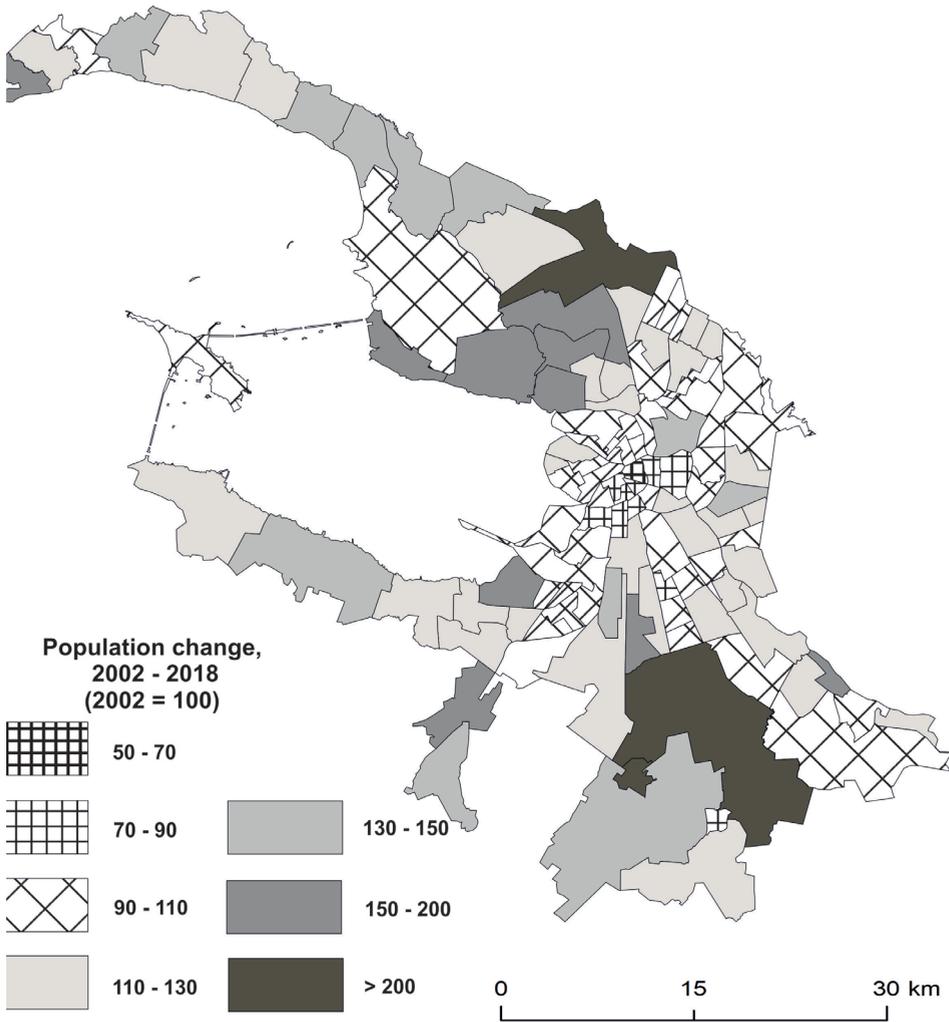


Fig. 3. Population change in St Petersburg municipalities, 2002—2018

All large cities (St Petersburg is no exception) are socially heterogeneous. Although in the Soviet period, inequality was effectively concealed, the residential quarters of Leningrad differed dramatically in comfort and thus had different social compositions. The Stalinist buildings of the 1930—50s with better layouts had a higher consumer value than the ‘khrushchyovkas’ and ‘brezh-

nevkas' of the 1960–70s. During the 1990s' transition to market relationships, the spatial division of urban societies started to resemble differentiation, primarily, in terms of income. For most people, the flat they owned was the main and often only financial asset and an indicator of their living standards [20].

The commercial value of residential property is an important, yet not the only, indicator of social differentiation. There are many indicators, which can be divided into several groups measuring *the level of income, the level of education, occupation, and behavioural rule compliance*.

Unfortunately, the available statistics reporting the standards of living across all 111 municipalities of St Petersburg has a limited number of indicators. Many of these measures register the situation at the time of the census only. The most recent national survey was held in October 2010.

Nevertheless, we will consider the indicators of quantitative differences in the social composition of St Petersburg population at a municipal level and try to identify the least well-off districts.

We selected the following available indicators of social differentiation in the city: 1) *the commercial value of a sq. m of residential housing*; 2) *individual property tax per person in a given municipality*; 3) *percentage of entrepreneurs employing any number of people*; 4) *the percentage of people with a university degree*; 5) *the percentage of people with a doctoral/postdoctoral degree*.

Housing prices. The source of data on housing prices in St Petersburg municipalities is the database of CIAN⁶ — Russia's largest real estate agency. According to CIAN, at the beginning of 2019, housing prices ranged between 62 to 247 roubles per sq. m across St Petersburg municipalities (Fig. 4).

The most expensive residential properties are in the historical centre of the city — the Central, Admiralteyski, and Perogradsky districts. The most luxurious area is the 'Palace District' municipal unit, which lies between the Palace Embankment of the Neva and the beginning of Nevsky Prospect. The average price of one sq. m of residential property in the area is almost 250 thousand roubles (around 3.5 thousand euros). Above 200 thousand roubles per sq. m are the prices for residential property in the Chkalovskoe municipal unit (Petrogradsky district), which include Krestovskiy Island — a favoured open-air spot of St Petersburgians. This area is being built over with posh residential properties, which already cost almost as much as those lining the main street of the city — Nevsky Prospect.

The cheapest residential property is in the industrial outskirts of St Petersburg, primarily, its southern districts. In the villages of *Pesochny (Kurortny district), Pontonny, and Saperny (Kolpino district both)*, and the 'town of *Krasnoe Selo*' (Krasnoselksy district), the price per sq. m did not exceed 70 thousand roubles (below one thousand euros). Fig. 4 demonstrates the centre-periphery distribution of housing prices in St Petersburg with a northward axis of expensive properties.

⁶ CIAN property database. Online resource. URL: <https://www.cian.ru/> (access date: 19.06.2019).

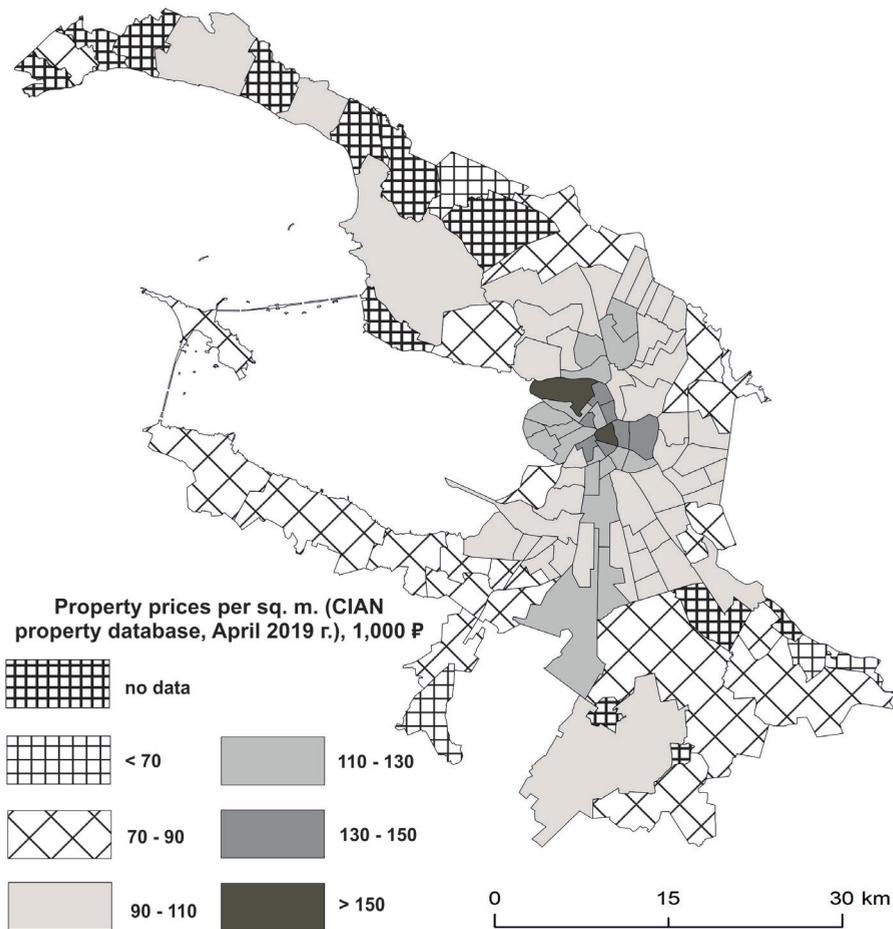


Fig. 4. Housing prices in St Petersburg municipalities, 2019

Property tax. The places where citizens live, their houses and flats, account for the largest proportion of their immovable property. The tax is levied by municipalities, and the relevant information is available through the *Municipal Indicator Database (MID)*. The amount of tax per person is another indicator of housing prices and thus the well-being of St Petersburgians. In 2016⁷ the average property tax per person in St Petersburg was 434 roubles a year; the amount of tax ranged from 50 to 2000 roubles.⁸

The largest tax amounts are paid in the municipalities in the city centre: *Smolninskoe, No. 78, 'Palace District'* (Central district all), *Chkalovskoe, Petrovskoe, Aptekarsky Island* (Perogradsky district all), and in some villages of the *Kurortny district (Komarovo, Repino, Solnechnoe, Ushkovo, Molodezhnoe)*. In these municipalities, the amount of tax per person is two-five times the city average (Fig. 5).

⁷ The most recent open data on taxes collected by St Petersburg municipalities.

⁸ Rosstat official website. Municipal indicator database. URL: http://www.gks.ru/free_doc/new_site/bd_munst/munst.htm (access date: 10.09.2019).

Housing prices are higher in the municipalities that have been built over rapidly in recent decades. These are MU No. 65 and *Kolomyagi* (both *Primorsky district*), *Yuzhno-Primorsky* (*Krasnoselsky*), *Zvezdnoe* (*Moskovsky*), *Pravoberezhny* (*Krasnogvardeyski*), and *Aleksandrovsкая* (*Pushkinsky*).

The lowest property tax is associated with the municipalities that saw frenetic residential development in the 1960–80s. In most MUs of the *Kolpinsky*, *Krasnoselsky*, *Petrodvortsovy*, *Kalininsky*, and *Nevsky districts* as well as in *Kronstadt*, this indicator is 0.3–0.7 times the city average. The lowest levels are observed in the municipalities of *Krasnoselsky district* — *Sosnovaya Polyana* and *Gorelovo* where the amount of property tax is 1.28–0.22 the city average.

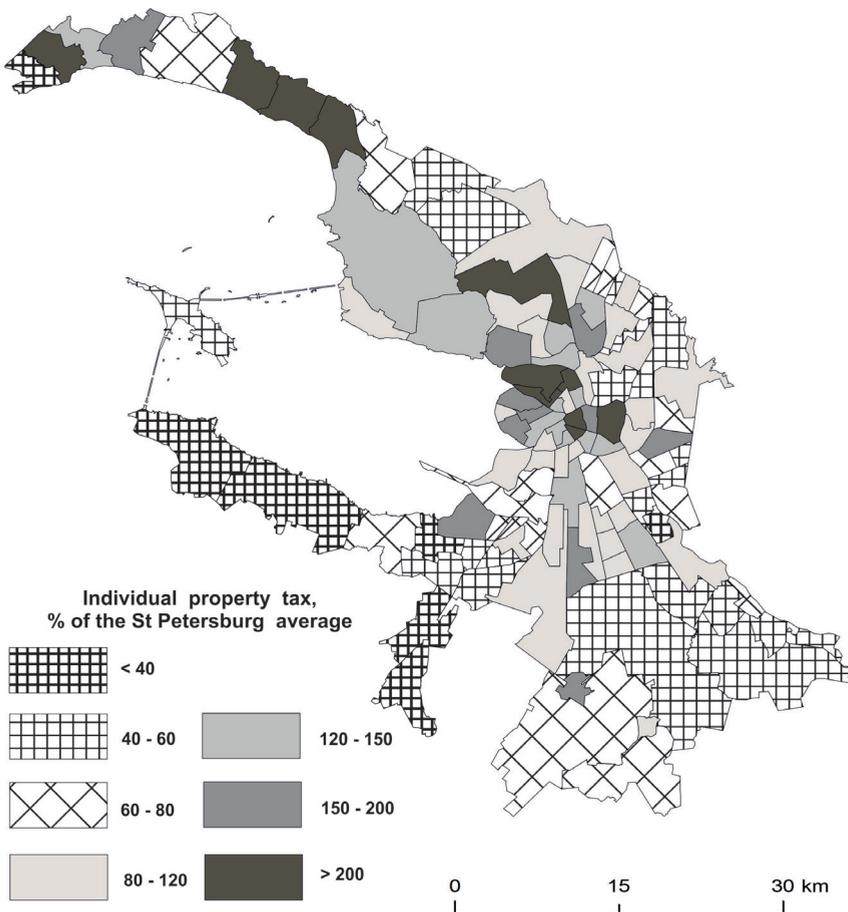


Fig. 5. Individual property tax in St Petersburg municipalities, 2016

Percentage of entrepreneurs. The distribution of business owners across St Petersburg is also very uneven. According to the 2010 census, 4.4% of the economically active population of St Petersburg owned a business, yet only half of them (2.2%) employed any number of people. The largest number of employers, two-three times higher than the city average, is observed in the suburban villages

of *Ust-Izhora* (*Kolpinsky district*), *Repino*, *Solnechnoe*, and *Komarovo* (*Kurortny district* all). The percentage of business owners employing others was the highest in the village of *Aleksandrovskaya* in the *Puskinsky district* where this category of entrepreneurs accounted for almost 10% of the employed population. Among St Petersburg multi-storey housing areas, the number of entrepreneurs is twice the average in the historical centre, namely, the municipal units of the *Perogradsky* (*Aptekarsky Island MU*), *Central* (*'Palace District' MU*), and *Vasileostrovsky* (*Dekabristov Island MU*) districts.⁹

In eleven MUs, most of which are situated in the south of St Petersburg, this proportion does not exceed 1.3%. Overall, there is a correlation between the concentration of entrepreneurs and the amount of property tax paid (a correlation coefficient of 0.544) (Fig. 6).

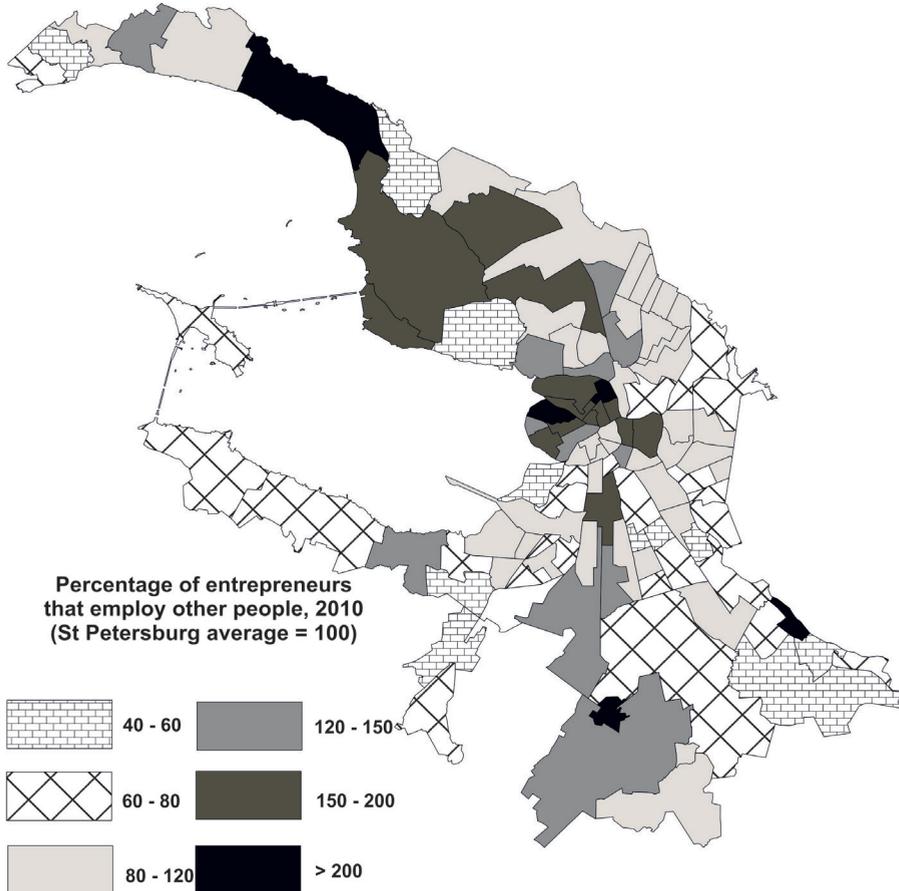


Fig. 6. Percentage of entrepreneurs employing other people, by St Petersburg municipalities, 2010

⁹ The economic activity of St Petersburg population. 2010 Russian national census results. A book of statistics. Part 2. Petrostat. St Petersburg, 2013.

Percentage of people with a university degree. An important indicator of social structure is the level of education. A major Russian centre of culture and education dubbed the ‘cultural capital’, St Petersburg has a high percentage of people with a university degree. According to the 2010 census, 38%¹⁰ of the city’s population aged twenty and older had a university degree. In this respect, Saint Petersburg ranks second in Russia after Moscow (42.4%).¹¹

The distribution of people with a university degree is very uneven in St Petersburg. The highest concentration of this category of St Petersburgians is associated with the central districts. In the *Admiralteysky district*, their proportion among all residents aged 20 and older is almost 39%; in the *Petrogradsky* and *Central districts*, it is above 46%. Moreover, in some municipal units, such as *Aptekarsky Island* in the *Perogradsky* district and the *Palace District* in the *Central district*, over half of the adult population had a university degree.¹² A high level of education is characteristic of the population of some remote municipalities: *Komarovo (Kurortny district)* (51.8% of people with a university degree) and *Tyarlevp (Pushkinsky district)* (49.4%)¹³ (Fig. 7).

The *Moskovsky* and *Puskinsky* districts also stand out for their high percentage of people with a university degree (40% on average).

The largest dormitory districts of St Petersburg, *Primorsky* and *Nevsky*, as well as the town of *Kronstadt* and the remote industrial *Kolpinsky district* have the lowest proportion of people with a university degree. In 2010, this indicator ranged between 26.4 to 29.8%, which is 13–23% below the city average. The lowest level of education is associated with small municipal units of the *Kurortny* and *Kolpinsky districts* — the villages of *Smolyachkovo*, *Molodezhnoe*, and *Pontonny* located at the farthest distance from the centre of St Petersburg. The percentage of people with a university degree in those municipalities was one-third below the city average.

When analysing spatial differences in the level of education of St Petersburg residents, it is important to keep in mind that the transition from districts (municipalities) performing better and worse on this indicator is rather abrupt. This may be attributed to the incipient spatialization trends of social segregation.

¹⁰ Of respondents who answered the question about the education background.

¹¹ According to the 2010 census, the national percentage of people aged 20+ with a university degree was 23.8%. Source: Russian census 2010. Volume 3. Education. The population of Russian regions by age, sex, and level of education. URL: http://www.gks.ru/free_doc/new_site/perepis2010/croc/perepis_itogi1612.htm (access date: 02.09.2019).

¹² Here and below, the percentage of people with a university degree is calculated as a proportion of people aged twenty and older.

¹³ The population of St Petersburg by age and level of education. Russian census 2010 in St Petersburg. A book of statistics. Part 1. Saint Petersburg, 2012.

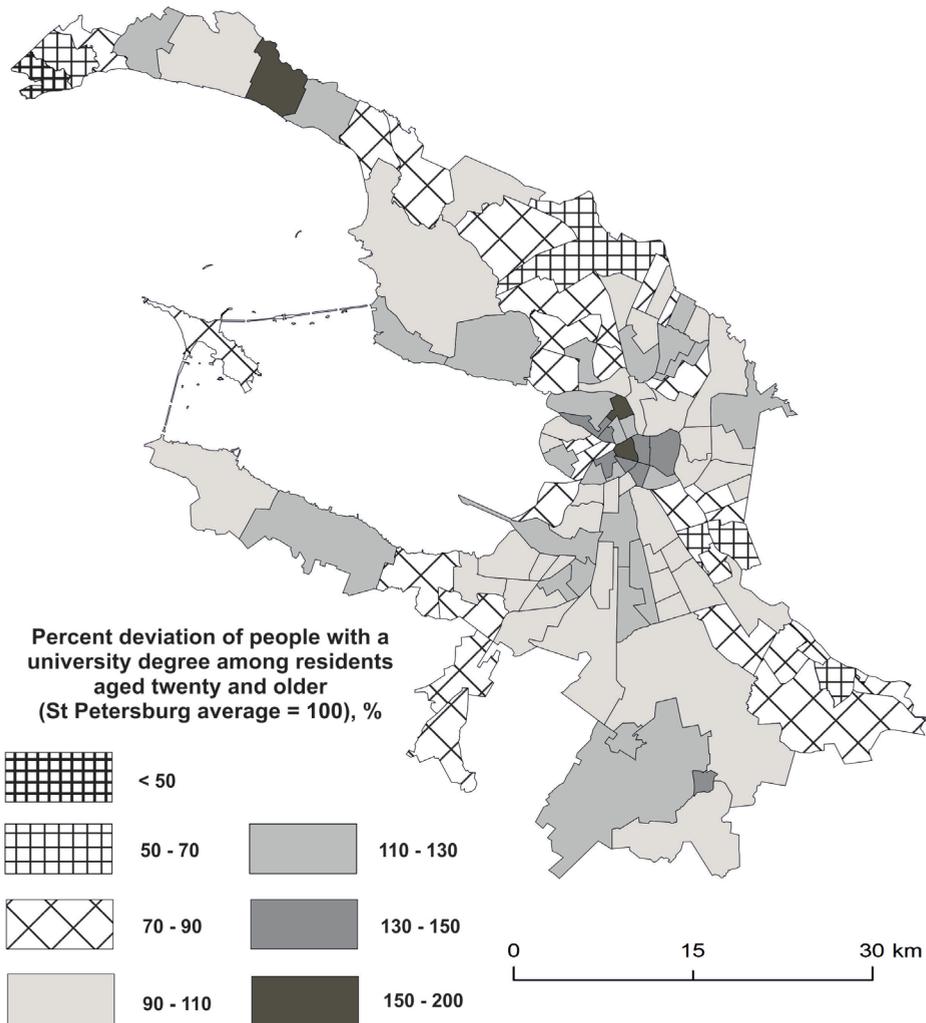


Fig. 7. People with a university degree by St Petersburg municipalities, 2010

Nevertheless, the spatial unevenness of the level of education in St Petersburg should have a demographic explanation since the characteristic in question depends strongly on the age structure of the population. Whereas the average city percentage of people with a university degree among the population aged 20 and older is 38%, in the 25–29 age cohort, this indicator reached 45.7% in 2010. In the 50–54 age group, it was 33.4% and, among the population aged seventy and older, only 24.5%. Thus, the older the age group, the lower the percentage of people with a university degree. For St Peterburgians, as well as residents of other Russian regions, higher education is becoming obligatory, turning from

an indicator of one's professional status to that of social status. This category is more numerous in the areas where there are many young (and technically more educated) people.

Percentage of people with a (post-doctoral) degree. Today, when higher education is becoming universal, not to say obligatory, the percentage of people with a university degree cannot any longer be considered a reliable indicator of social differentiation. It is necessary to consider the spatial distribution of both the population with a university degree and those with a doctoral/postdoctoral degree (Fig. 8). These data, similarly to other information on the level of education, are reported in censuses.¹⁴

According to the most recent census (2010), St Petersburg was home to 56.1 thousand people with a doctoral and 12.9 thousand with a postdoctoral degree. In the 25+ age group,¹⁵ the percentage of people with a doctoral/postdoctoral degree averaged 18.4‰ across the city. The highest concentration of people in this category was observed in the municipal units of the *Petrogradsky* and *Central districts*. In these areas, there were 34–35 people with a doctoral/postdoctoral degree per 1,000 population.

The percentage of people with a doctoral/postdoctoral degree is high in some municipal units of the *Admiralteysky (Sennyoy and Admiralteysky MUs)*, *Vasileostrovsky ('The Harbour' and Morskoy MUs)*, *Vasileostrovsky (Svetlanovskoe and Sampsonievskoe MUs)*, *Kalininsky (Akademicheskoe and Grazhdanka MUs)* and *Moskovsky (Moskovskaya zastava and Zvezdnoe MUs) districts*. A high concentration of academicians is characteristic of villages of *Komarovo* and *Repino* in the *Kurortny district* as well as of the town of *Pushkin*.¹⁶ In the municipalities of the *Kolpinsky, Krasnoselsky, Nevsky, and Frunzensky districts*, the percentage of people with a doctoral/postdoctoral degree is rather low.

A comparison of the above indicators makes it possible to rank St Petersburg municipalities by the level of social affluence. To this end, we will rank municipalities by each indicator in descending order. For our indicators (*property tax; the percentage of entrepreneurs employing any number of people; the percentage of people with a university degree; the percentage of people with a doctoral/postdoctoral degree*), the rank will be from 1 to 111, and for one indicator (*housing prices*), it will be from 1 to 99: data on the commercial value of one sq. m of housing is unavailable for twelve St Petersburg municipalities. The obtained ranks summed up, and the average rank value calculated.¹⁷

¹⁴ The population of St Petersburg by age and level of education. Russian census 2010 in St Petersburg. A book of statistics. Part 1. Saint Petersburg, 2012.

¹⁵ In view of the years of study at secondary school and university in Russia, it is virtually impossible for a person under twenty-five to obtain a doctoral degree. The 2010 census did not report in St Petersburg any people under twenty-five with a doctoral degree.

¹⁶ The 'town of Pushkin' municipality.

¹⁷ For ninety-nine St Petersburg MUs, the sum of ranks is divided by five and for twelve MUs by four.

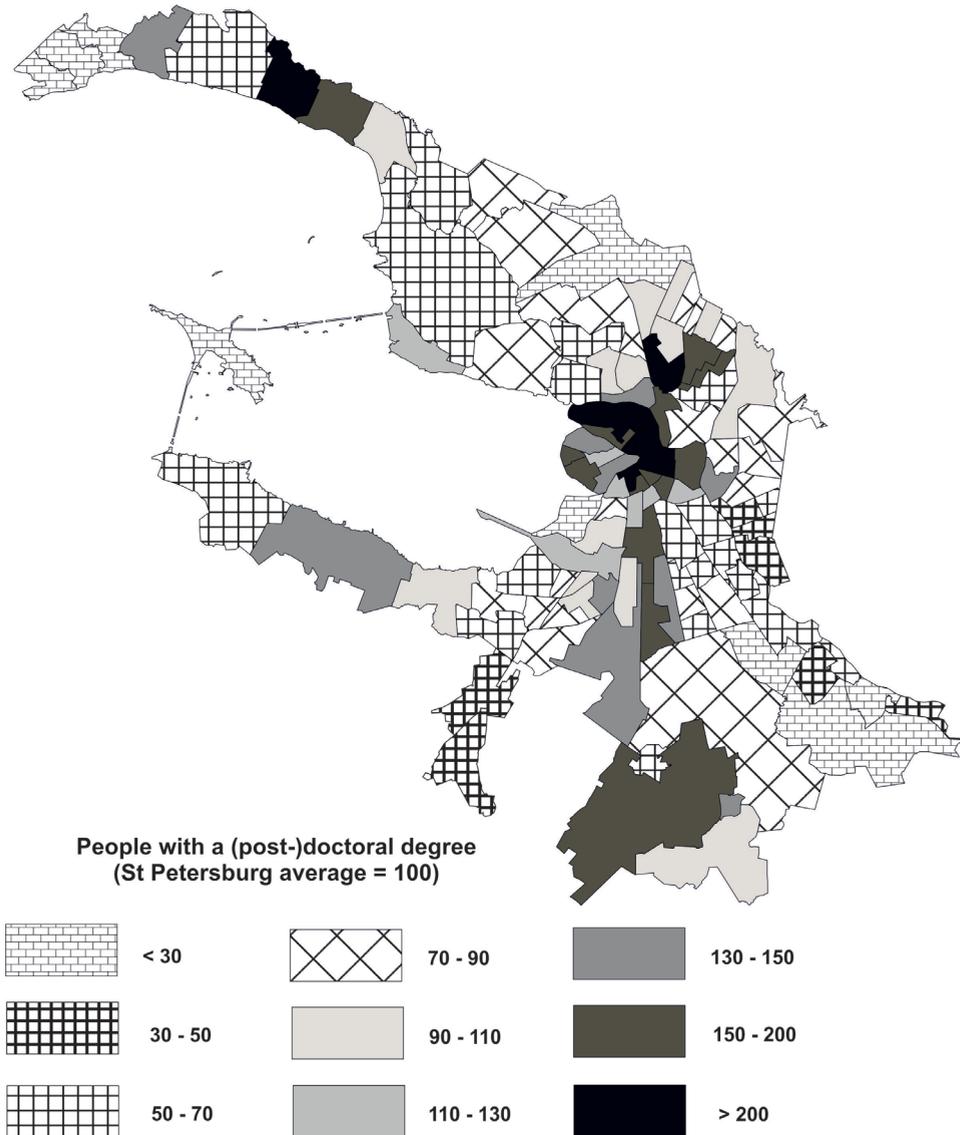


Fig. 8. The concentration of people with a doctoral degree by St Petersburg municipalities, 2010

The lowest indicator score (let us call it *an average rank by social affluence, ARSW*) is associated with the most prosperous municipalities. Vice versa, the highest indicator score is characteristic of areas with lower living standards. Although, theoretically, the ARSW of St Petersburg municipalities can range between 1 and 111, its actual range is narrower — from 2.6 (*the 'Palace District' MU in the Central district*) to 107.3 (*Smolyachkovo MU in the Kurortny district*) (Fig. 9).

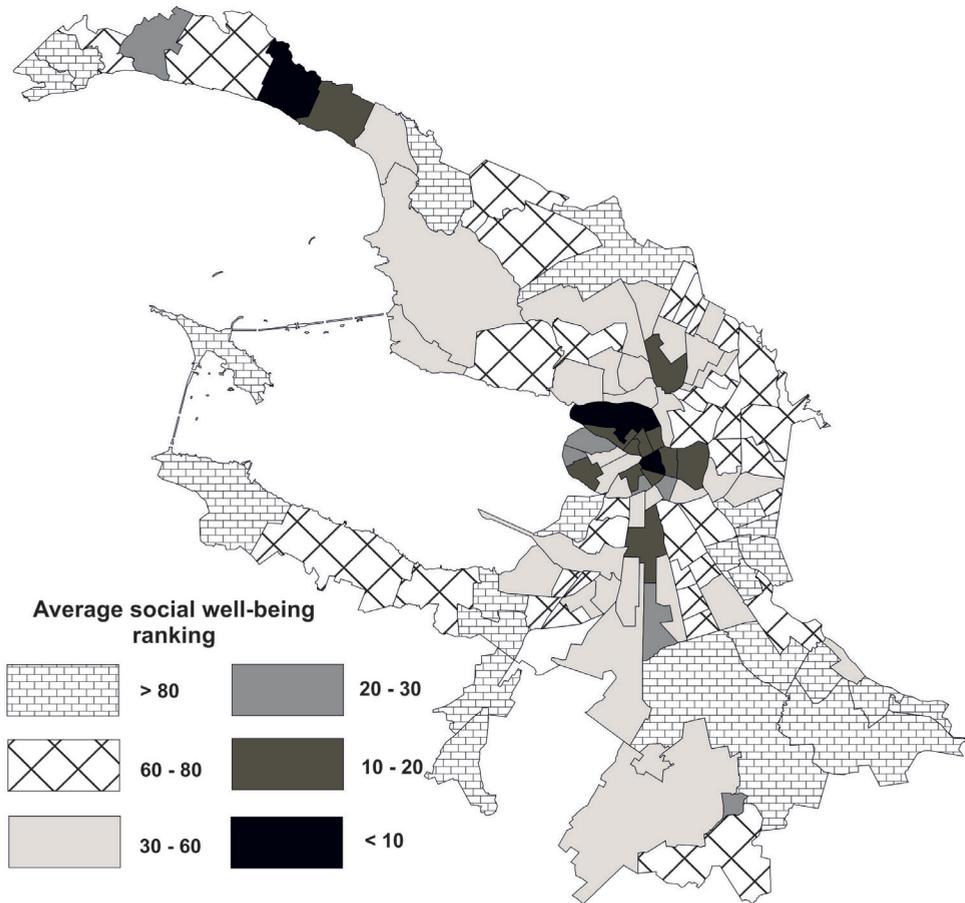


Fig. 9. Average ranking of St Petersburg municipalities by social affluence

The most prosperous municipalities of St Petersburg are situated in the city centre in the *Petrogradsky* and *Central districts*. Among affluent areas are the municipal units of *Moskovskaya zastava* (*Moskovsky district*), *Svetlanovskoe* (*Vyborgsky district*), *Admiralteysky* (*Adirealteysky district*), and 'The Harbour' (*Vasileostrovsky district*) as well as the villages of *Komarovo* and *Repino* in the *Kurortny district*.

The worst-performing municipalities in terms of social affluence are those in the southern part of the city (*Kolpinsky*, *Nevsky*, *Krasnoselsky*, and *Petrodvortsovy districts* and *Kronstadt*). Fig. 9 shows that the incipient social differentiation of St Petersburg has clear spatial localisation: 'poor' and 'rich' municipalities group in different parts of the city.

Results. Riga

At the beginning of 2019, Riga — the capital and the largest city of Latvia — had a population of 632.6 thousand people and was home to almost half of the country's urban residents. Since the early 1990s, the population of Riga has been gradually decreasing (Fig. 10). Both natural decline and negative net migration contributed to that process. Immigration became a decisive factor in the 2000s when Latvia acceded to the EU (Fig. 11).

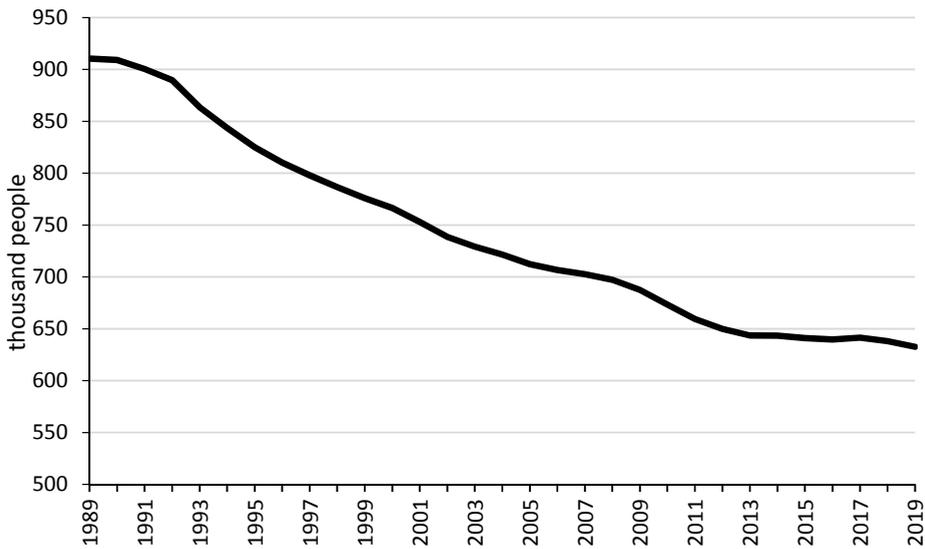


Fig. 10. Population change in Riga, 1989—2018

In the past three decades, the population of Riga has been rapidly decreasing: in 1989—2008, it declined by almost one-third (in 1989, Riga was home to 915.1 thousand people).¹⁸ The post-Socialist transition brought about dramatic changes in population distribution across different parts of the city. This process accelerated after 2000. Large residential areas built in the Soviet period (dormitory districts) were also becoming less populous, albeit at a higher rate. Only in the suburbs of Riga where new low-rise residential properties appeared, the population was growing in that period. The above applies to both new detached house districts and luxurious historical suburbs such as *Mežaparks* and *Vecāķi*. Out of the districts in the centre of the city, only one, *Skanste*, saw its population increase. The growth is explained by the area's advantageous location and large-scale residential development (Fig. 12).

¹⁸ Central Statistical Bureau of Latvia. URL: <https://www.csb.gov.lv/en/statistika/db> (access date: 03.09.2019).

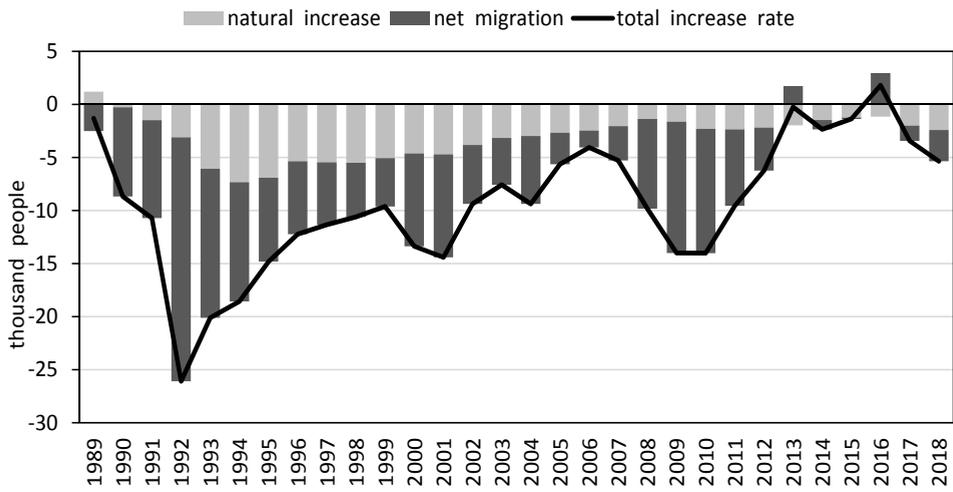


Fig. 11. Natural increase and net migration in Riga, 1989—2018

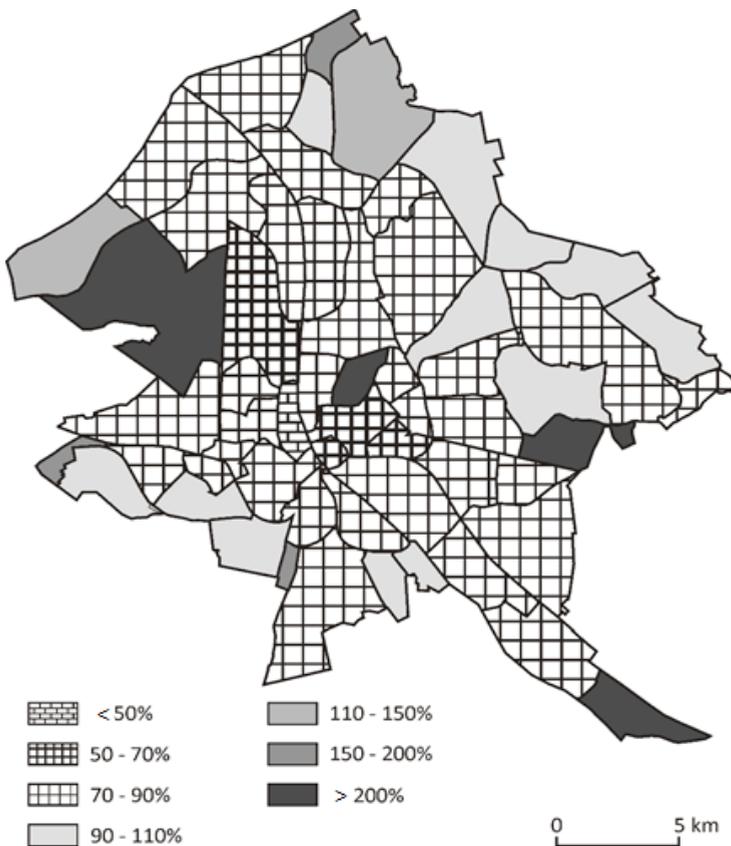


Fig. 12. Population change in the residential areas of Riga, 2000—2018 (2000 = 100%)

The average percentage of people with a university degree among the population aged 15+ is 32.1% across the city. The highest indicator score is observed in the *Old Town* (49.1%) and the lowest in *Spilve* (4.1%), a fringe area of Riga. The concentration of people with a university degree is above average in the most luxurious micro-districts of the historical cities and some multi-storey residential areas of the late Soviet period (the second half of the 1980s), such as *Zolitūde* and *Purvciems*. The percentage of people with a university degree is the lowest in the Soviet-era micro-districts built in the 1960–70s (*Kengarags*, *Daugavgrīva*) and some remote areas that have a ‘semi-rural’ type of housing (Fig. 13).

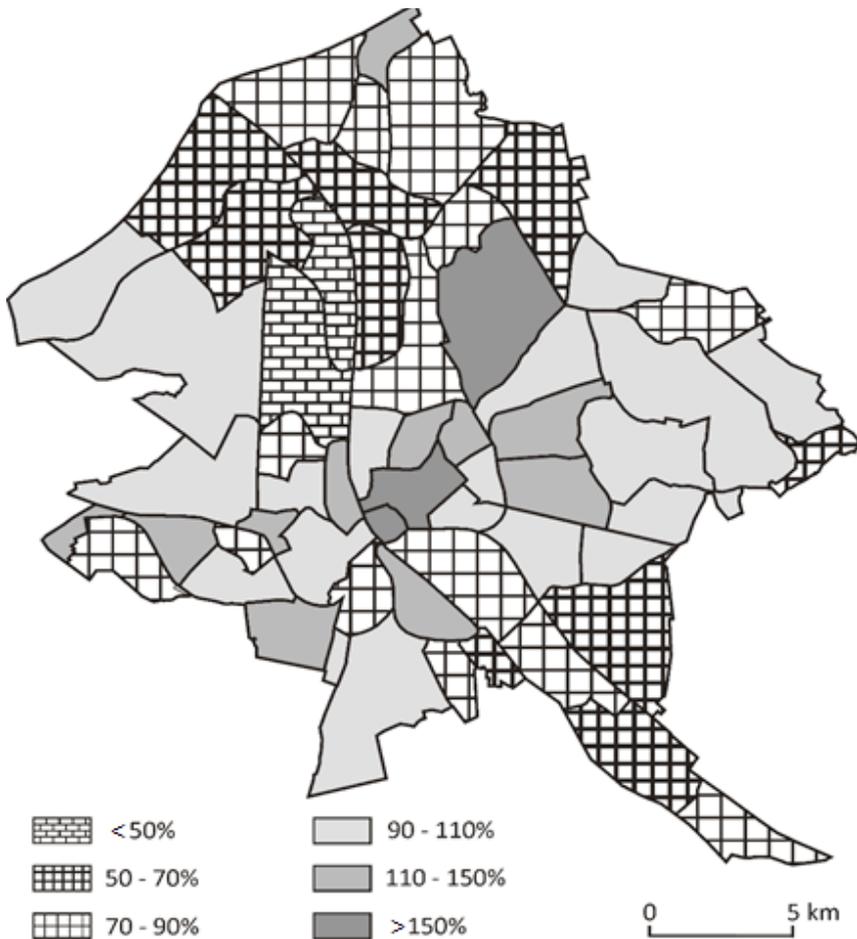


Fig. 13. The distribution of people with a university degree among the population aged twenty and older, 2011 (Riga average = 100%)

The average percentage of people with a doctoral degree among the population aged twenty-five and older is 8%; the highest is in the suburban district of *Kleisti* (32%). In some less populous micro-districts there are no residents

with a doctoral degree. An above-average percentage of people in this category is observed in other affluent districts of Riga, whereas the Soviet-built residential areas, especially remote ones, underperform in this respect (Fig. 14).

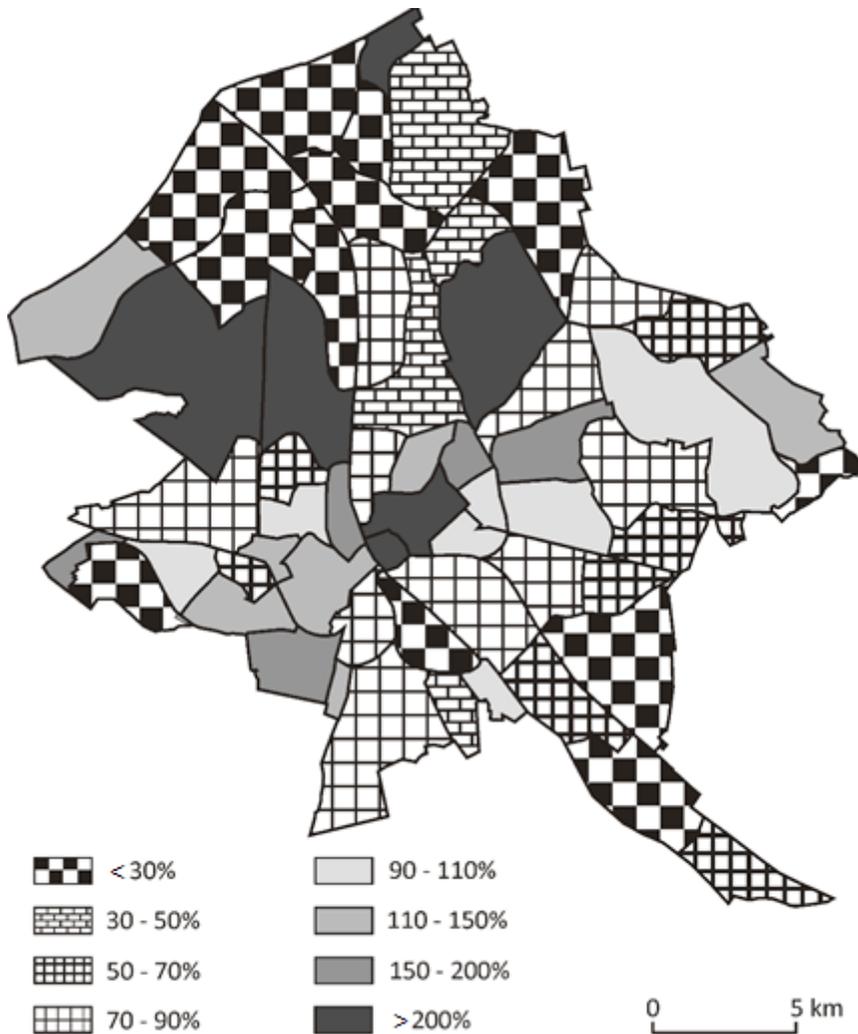


Fig. 14. The distribution of people with a doctoral degree among people aged twenty-five and older, 2011 (Riga average = 100%)

Among the city's population aged fifteen and older, the average percentage of *managers and skilled professionals* is 29.7%. *Mežaparks*, the most luxurious historical district outside the city centre, has the highest indicator score among Riga's districts (50.6%). The percentage of people in the category is the lowest in *Spilve* (3/9%) (Fig. 15).

Higher values are observed in the city centre, the late Soviet micro-districts, and some of the more affluent suburbs where the population has been increasing after the Soviet period.

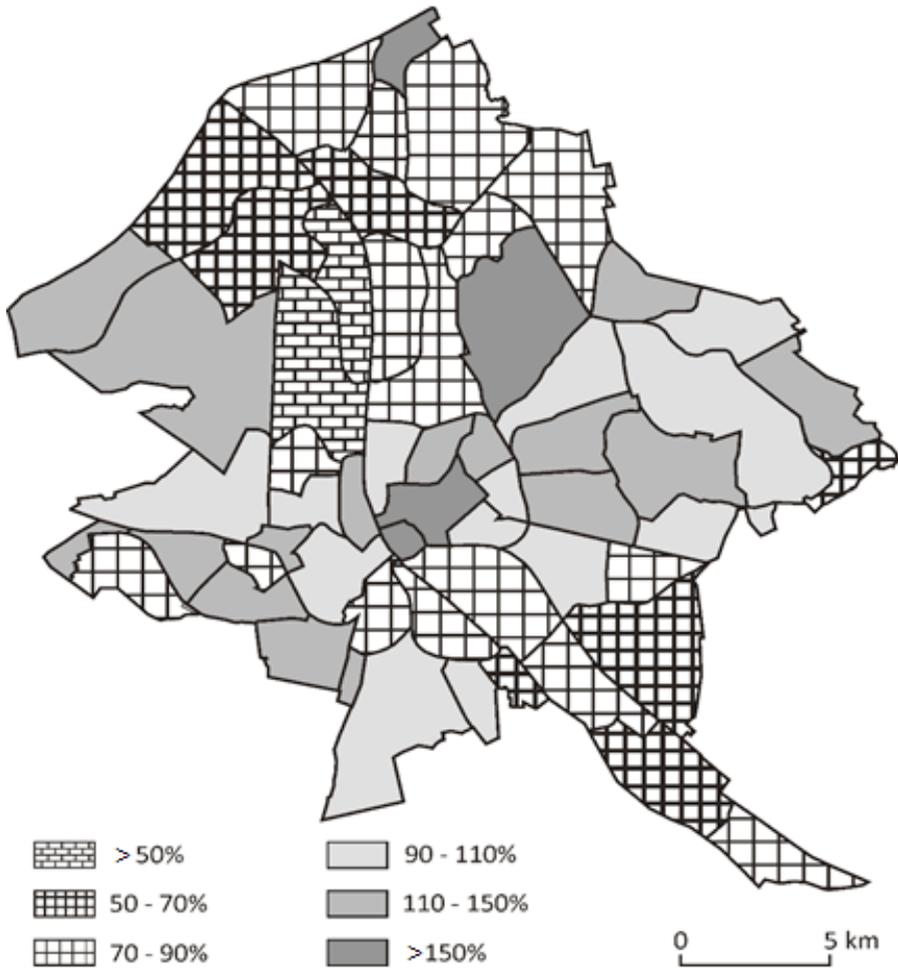


Fig. 15. The distribution of managers and skilled professionals among the economically active population aged fifteen and older, 2011 (Riga average = 100%)

The average percentage of entrepreneurs among the economically active population of Riga aged fifteen and older is 4.0%. This proportion is the highest in the micro-district of Mūkupurvs (13.5%), which is part of the 'outer city'. The distribution of entrepreneurs across Riga districts largely coincides with that of managers and skilled professionals. A high percentage of people in the category concentrating in some 'outer city' districts is explained by the patterns of residential development in the late Soviet period (Fig. 16).

Despite some differences, all the sketch maps illustrate similar trends: residents with higher social status tend to concentrate in the 'inner city', the affluent historical districts of the 'outer city', and the new suburbs that have developed rapidly in the past two decades. Only a few Soviet-era multi-storey residential

areas, the attractiveness of which is explained by their transport accessibility and developed infrastructure, boast a significant concentration of people with high social status.

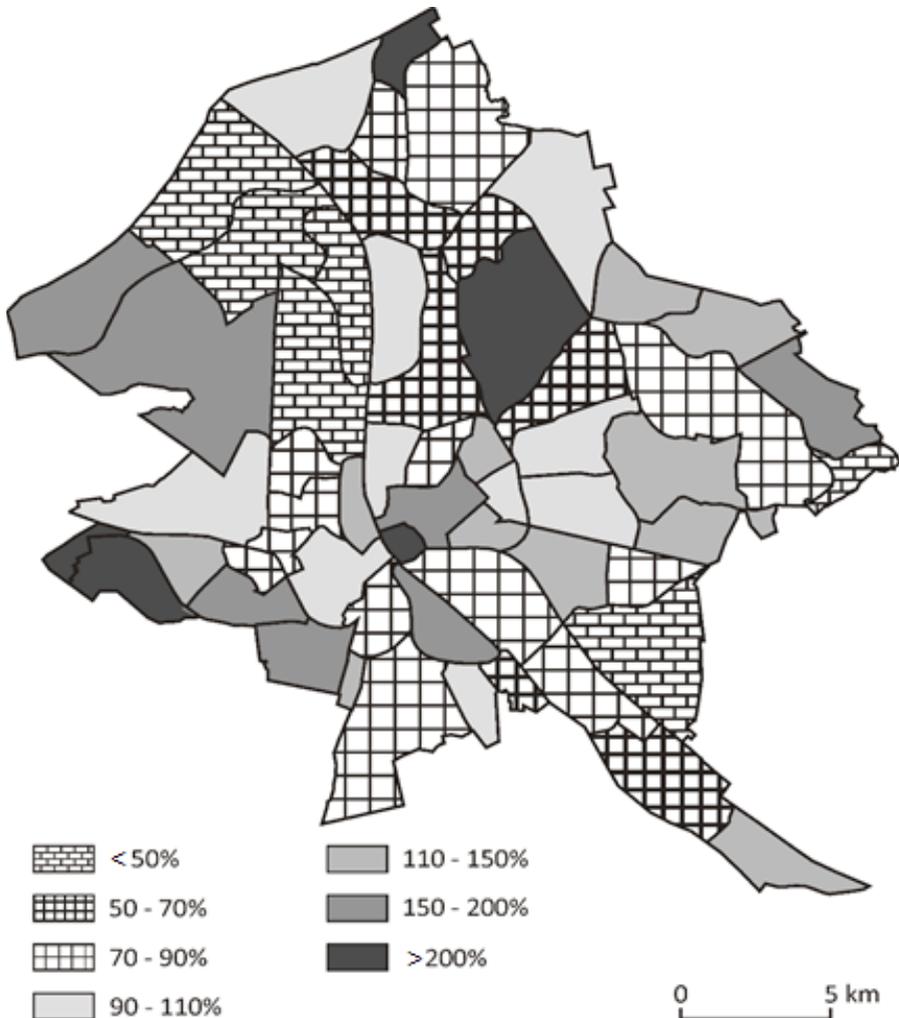


Fig. 16. The distribution of entrepreneurs among the economically active population aged fifteen and older, 2011 (Riga average = 100%)

The ranking of Riga micro-districts by the level of social affluence, calculated using the above indicators, shows that the most luxurious districts of Latvia's capital are the quarters of the historical centre (the 'inner city') and some pre-Soviet quarters of the 'outer city', such as *Mežaparks* and *Vecāķi*. Among socially affluent areas of Riga are some 'dormitory districts' built at the end of the Soviet period and located in the eastern and western parts of the city. The population

of these districts has been growing since 2000. Less affluent areas are primarily located in the southern and northern parts of the city. They consist of quarters built in the 1960–70s, which have low-quality housing and poorly developed infrastructure. One of such areas is the micro-district of *Maskavas*, which receives zero investment in reconstruction and development. It has buildings of both Soviet and pre-Soviet period; its level of social affluence is the lowest among the central districts of Riga (Fig. 17).

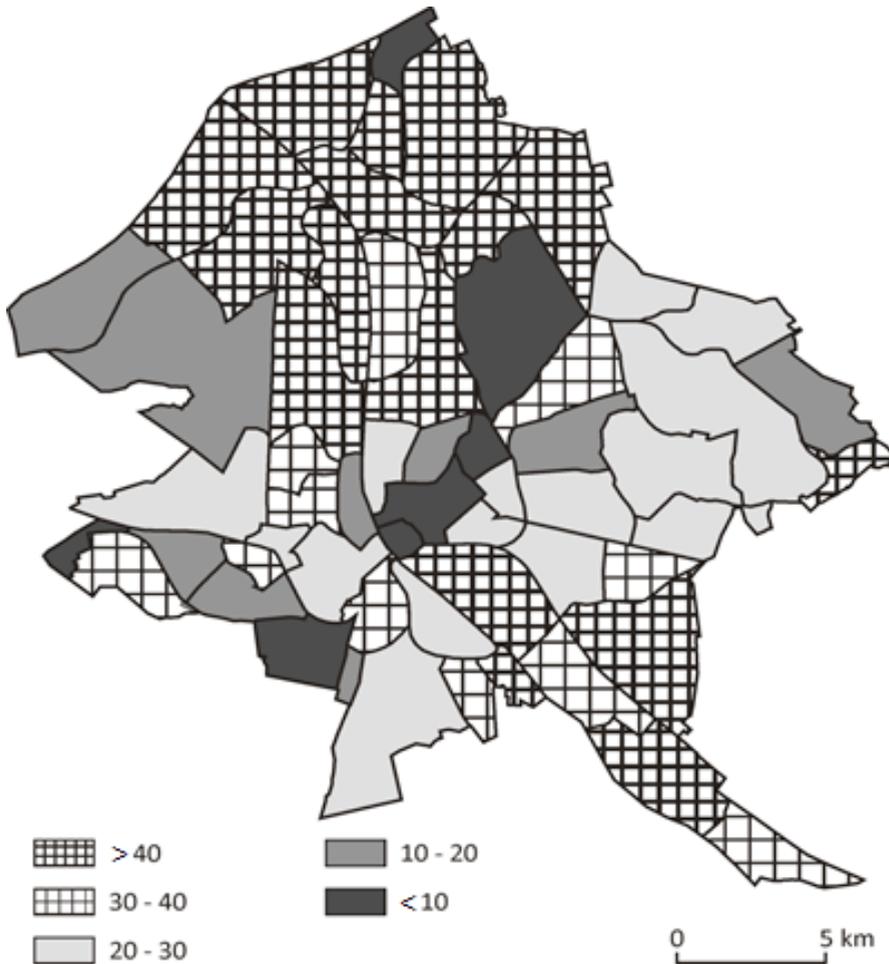


Fig. 17. The average ranking of social affluence in Riga's residential areas, 2011.

Discussion and conclusions

Our study sought to compare spatial trends in demographic development and social segmentation at a municipal level in the post-Soviet cities of St Petersburg and Riga. To this end, we analysed available quantitative data reflecting the social status of residents and the attractiveness of housing.

Overall, the models of post-Soviet spatial segmentation are very similar for the two cities, though St Petersburg and Riga have different geography, demography, and historical traditions of urban development. In both cases, the oblivion of the Soviet period was followed by the socio-economic modernisation of city territories with a high architectural value (pre-Soviet city centres) and/or luxurious suburbs. There are, however, differences in demand for Soviet-era housing. Stalinist buildings are valued in both cities for their high construction quality and bigger apartments. Abundant in St Petersburg, these buildings are quite rare in Riga where the erection of Stalinist houses began only in 1946. Attitudes to the 'economy-class' multi-storey housing built after 1954, which has plenty of maintenance problems, are different in the two cities. In St Petersburg, almost none of the dormitory districts built in the 1960–80s are considered attractive, whereas the situation in Riga is more complicated. Some of Riga's micro-districts built in the late Soviet era (the second half of the 1980s) have good layouts, spacious flats, and high transport accessibility. All this translates into considerable attractiveness to the city's residents [21]. The demand for post-Soviet housing is also different in St Petersburg and Riga. The former city is building multi-storey residential property, whereas the latter is erecting housing aimed at the middle class. Riga's new housing boasts low density and abundant green space. In St Petersburg, this type of new housing is classified as 'premium'. In Riga, new suburbs beyond the bounds of dormitory areas consist almost exclusively of private houses or low-rise buildings. They have greater social homogeneity than their counterparts in St Petersburg do.

In other words, social differentiation manifests itself mainly in the spatial segregation of residents by income and socioeconomic status. Well-off people tend to concentrate in the historical cores and the most exclusive suburbs. Yet the process of social polarization is more complicated. It involves all areas of the two cities, including Soviet-era dormitory districts (Riga) and coastal dacha communities (St Petersburg). This conclusion may be illustrated by the rapid residential development and a high percentage of entrepreneurs in Riga's districts whose level of social affluence is average, as well as by the considerable increase in the population of St Petersburg's northern districts, whose residents are far from being well-off. An earlier spatial analysis of the population composition in Riga shows that the socio-economic polarisation outside the central part of the city was insignificant in 1991 and quite noticeable in 2011 [22]. The emergence of more socially affluent micro-districts can be explained by both the growing fortunes of their residents and the migration of wealthier residents to those areas. To understand the actual dynamics and features of this process, it is necessary to carry out a more detailed micro-level analysis of the population composition. In this respect, data on private investment and the development of the housing market are as important as the information on the occupational structure of labour resources. Limited attraction of EU fund-

ing and an overall lack of investment in the reconstruction of Riga's Soviet-era buildings prompt middle-class residents to contribute money to the construction of new housing rather than to the renovation of the existing ones. New construction projects aimed at more affluent residents lead to the polarization of urban space, segregation at micro-district level, and changes in everyone's quality of life (see [23]).

Table 2

**The Pearson correlation coefficient for social differentiation indicators
in the urban space of St Petersburg**

Indicator	Correlation coefficient				
	1	2	3	4	5
Housing prices (1)		0.739	0.707	0.714	0.813
Individual property tax (2)	0.739		0.544	0.467	0.535
Percentage of entrepreneurs employing any number of people (3)	0.707	0.544		0.430	0.518
Percentage of people with a university degree (4)	0.714	0.467	0.430		0.848
Percentage of people with a doctoral/postdoctoral degree (5)	0.813	0.535	0.518	0.848	

Prepared by the authors.

A comparison of the five indicators of social affluence of St Petersburg municipalities suggests that these measures are interconnected. Our analysis pointed to a high degree of correlation between most of the studied indicators. The Pearson coefficient of correlation between housing prices and the percentage of people with a doctoral/postdoctoral degree, calculated for 111 municipalities, is 0.813. That between housing prices and the percentage of entrepreneurs employing any number of people is 0.797. The coefficient of correlation between housing prices and the amount of property tax per person is 0.739 (Table 2).

The situation is quite similar in Riga. There is a high degree of correlation between the distribution of people with a university degree across the city and the areas of preferred residence of managers and skilled professionals. The Pearson coefficient of correlation between these measures is 0.947. There is a significant correlation between the areas of preferred residences of managers and skilled professions, on the one hand, and entrepreneurs, on the other (0.727); between people with a university degree and entrepreneurs (0.626); between people with a doctoral degree and managers (0.636) (Table 3).

Table 3

**The Pearson correlation coefficient for social differentiation indicators
in the urban space of Riga**

Indicator	Correlation coefficient				
	1	2	3	4	5
Percentage of people with higher education (1)		0.564	0.947	0.609	- 0.012
Percentage of people with a doctoral/postdoctoral degree (2)	0.564		0.631	0.396	- 0.054
Percentage of managers and skilled professionals (3)	0.947	0.631		0.727	0.001
Percentage of entrepreneurs (4)	0.609	0.396	0.727		0.029
Population change in Riga, 2000–2018 (5)	- 0.012	- 0.054	0.001	0.029	

Prepared by the authors.

Our findings point to two conclusions. Firstly, there are similarities between the spatial trends of social segmentation in St Petersburg and Riga at municipal/micro-district level. The differences in the demographic structure and historical urban settlement patterns do not have a significant effect on spatial differentiation, which is shaped by similar parameters as well as the dynamics and logic of socioeconomic and spatial development. The two cities have historical similarities, namely, they are experiencing a strong effect of pre-Soviet urbanisation, which is absent in most industrial cities that developed in the Soviet period [24]. It would be helpful to carry out a comparative study covering different types of cities in the post-Soviet space to investigate their differences in historical development and urban planning. The similarities identified in this analysis suggest that there are transitional processes common to all post-Soviet cities.

Moreover, our analysis of social differences demonstrated that, despite being an important research tool, it is not sufficient to give a comprehensive picture of the spatial dimension of transformations in the urban environment. On the one hand, there is a need to compare urban planning strategies and national spatial development documents to understand how much ideology and political priorities affect the observed processes of social differentiation in post-Soviet cities. On the other hand, the results obtained lay the groundwork for further research into urban space segmentation and social segregation at an intra-district level. This way, our work may contribute to the discussion on the prospects of multi-scale studies of post-Socialist cities.

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MIGRATION OF RESEARCHERS IN THE BALTIC REGION: A FORECAST AND FACTORS

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The importance of this research relates to the need for increasing the human capital of Russian science and for assisting the spatial development of the country, particularly, its border areas. This study tests several hypotheses. The first one holds that the outflow of researchers will reduce over the next few years. Others concern factors affecting the number of researchers in the Russian Federation in general and its Baltic part in particular. These factors include salaries and workplace environment. Methodologically, the study draws on Russian and international sources on the migration of researchers and builds models of two types to trace connections and to produce forecasts, while calculating the emigration rate. The models of the first type describe how the amount of salary and workplace conditions affect the number of researchers. These are vector autoregression models built in the R software environment, using statistical time series. The models of the second type use Excel forecast function to carry out prospective evaluations of the number of researchers and migration rates. The study did not confirm the hypothesis that the reduction in the number of researchers was slowing down in Russia and St Petersburg in particular. Thus, the state measures aimed to preserve the human capital of national science will be insufficient to prevent either a decline in the number of researchers or their emigration in the near future. The article provides concrete recommendations for reforming the system of remuneration in research to reverse the negative trend.

Keywords:

emigration of researchers, salaries in research, academic workplace environment, Russia, Baltic region, vector autoregression model, research staff forecast, reforms

Attracting talented young people interested in scientific research while retaining mature scientists is becoming increasingly relevant for Russia. The National Project for Science is aimed at solving it. According to the National Project for Science approved in 2018 (NPS), the challenges of state policy in research and technology will be, among others, to establish in Russia favour-

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able conditions for prominent world-class scientists, including those from leading industrial countries, and to increase the effectiveness of Russian science. These aspects are highlighted as an independent federal program within the framework of the NPS.

The second issue gaining increasing attention is the spatial development of Russia. The regions near international borders have a special place in this context. From the viewpoint of scientific development, they have lower barriers to the cross-flow of talent and, therefore, in the absence of directed circulation, there is a risk of a relatively high outflow of professional researchers. The relevance of this study follows from the combination of these two aspects: consolidation of human resources and spatial development of territories.

Statement of the problem and hypotheses

In a broader context, the factors of interest for this study are those that influence the changing number of scientists in the Russian Federation, both on the national level and in Russian constituent entities in the Baltic Sea Region. The interest in the changing number of scientists in the Russian part of this region is due, among other things, to a contradiction between the general positive growth of population in the Baltic territories of Russia impacted by migration and the negative trend in the total number of scientists from 2014. For the national economy in general, 2014 was a turning point because of changes in geopolitical conditions which affected science as well. Besides, it was in that period that the implementation of Presidential Decree 597 setting target ratio of the average salary of researchers to the average wage in the economy¹ started taking effect. In practice, in some cases, these decisions led to the reduction in the number of scientists on the payrolls.

Experts describe two Russian Baltic regions, the Kaliningrad and the Leningrad ones, as the cross-border 'development corridors' and note a significant positive growth in population with migration as its main contributor [1].

Against the background of favourable demographic conditions in the Baltic region of Russia, there is an overall fall in the number of researchers, the most skilled category of those employed in the scientific sector (see Table 1).

¹ Decree of the President of the Russian Federation of 05.07.2012 No. 597 «On measures for the implementation of state social policy» // RLS «Consultant-plus.»

Table 1

**Number of researchers in the Russian constituent entities
of the Baltic region, thousand people²**

Russian constituent entity	2010	2011	2012	2013	2014	2015	2016	2017	2018
Kaliningrad region	0.62	0.67	0.67	0.67	0.68	0.72	0.73	0.69	0.78
Leningrad region	2.54	2.59	2.61	2.44	2.87	2.84	2.81	2.80	2.22
St Petersburg	43.56	44.68	45.50	43.93	43.32	42.96	40.93	40.39	36.51
<i>Total</i>	46.72	47.94	48.79	47.05	46.87	46.52	44.46	43.88	39.51

The general decline in the number of researchers in the Russian part of the Baltic Sea Region does not mean that there are no relatively well-off areas. In the Kaliningrad region, the number of researchers in 2018 grew by almost 25% compared to 2010, and 15% compared to 2013. This is explained by the participation of the region's leading research organization, the Immanuel Kant Baltic Federal University (IKBFU), in the large-scale projects aimed at consolidating scientific potential, namely, the implementation of the IKBFU Development Program and the 5–100 Project.

The number of researchers in the Leningrad region varies considerably. By 2017, in comparison with 2010, the number rose by 10.2%, while by the end of 2018 it fell significantly. A steadily declining number of researchers has been observed in St Petersburg since 2013. This is the main contributor to the changing number of researchers in the Russian part of the Baltic Sea Region. Clearly, this trend is determined by factors which are typical of Russian academia in general.

Quantitative and structural changes in employment in Russian academia in the post-Soviet period are the subject of analyses by the Institute for Statistical Studies and Economics of Knowledge, which is a part of the Higher School of Economics — National Research University (HSE-NRU). According to their most recent reviews, in 1995–2017 the number of researchers in the Russian Federation fell from 518,690 in 1995 to 359,793 in 2017³. It is estimated that the outflow of talent is mainly directed to other economic sectors although there is no accurate data concerning the scale of scientific emigration. At present, no Russian-wide governmental statistics covers those who relocate to permanently live or work abroad on a contract basis [2, p. 8]. The number of compatriot scientists leaving and returning is not monitored either [3, p. 135]. Thus, we can only draw

² Science and Innovation // Federal State Statistics Service. URL: http://www.gks.ru/wps/wcm/connect/rosstat_main/rosstat/ru/statistics/science_and_innovations/science/# (access date: 21.06.2019).

³ Indicators of science: 2019: statistical compilation / L. M. Gokhberg, K. A. Ditkovsky, E. L. Dyachenko *et al*; Nat Research University “Higher School of Economics”. — M.: NRU HSE 2019. — pp. 42.

upon selective studies presenting a wide range of opinions. Nevertheless, the agreed position is that the main outflow of talent occurs within the country, and emigration accounts only for a small percentage [4]. Even in the mid-90s, at the time when the outflow of talent was high, and the employment conditions abroad were significantly more favourable, relocation overseas amounted to only about 5% of the total number of researchers leaving the academia [5]. Notably, the researchers studying this issue name St Petersburg and the Leningrad region among the leading regions in terms of intellectual emigration. Some authors point to Western Europe as the area absorbing the largest share of Russian researchers scientists (42.2%). At the same time, Scandinavian countries accept 5.2%, and 1.1% of scientists head for Eastern Europe [6]. However, alternative estimates mention the United States, Germany and France as the major destinations. According to the Center for Scientific Research and Statistics, these three countries account for more than half of the Russian researchers [7]. These data should be deemed most reliable as they were obtained during an all-Russian survey of the scale of outflow of research staff. Thus, for the Baltic region, it can be assumed that the bordering countries serve as an intermediate point en route. Although, as evidenced by international authors, in the early 2000s, scientists from Russia were actively seeking research positions in the institutes and universities of Eastern Europe and Germany [8].

There is an abundance of literature on the impact of scientific migration on the country of origin and destination. A review of theoretical approaches to the assessment of the consequences of migration for the recipient country was presented by A. V. Lyalina [9]. Some researchers agree that the impact of migration is not straightforward and can lead to problems for both origin and destination countries [10–13].

Raul Ramos [14] offered his explanation for the directions of migration flows in the Baltic region, specifically, the scientific ones. As follows from his findings, the main source of migration flows to the EU are the neighbouring European countries (including Russia). The assessment of the gravity model offered by Ramos demonstrates that the most statistically significant migration factors are distance, territorial adjacency of the countries of origin and destination, as well as differences in the GDP per capita.

In the context of declining natural population growth in the EU countries, as well as the outflow of scientific talent from the European Baltic countries to the United States and Great Britain mentioned by researchers [15, p. 31], research migration, including the flows from the neighbouring countries, is the source of expansion of this professional category. For the Baltic countries of the EU, this source also includes Russian Baltic regions.

According to Eurostat⁴, the number of scientists in the EU countries was steadily increasing between 2008 and 2018. Figures for a subgroup of indicators

⁴ See.: *Eurostat*. URL: <https://ec.europa.eu/eurostat/data/database> (access date: 21.06.2019).

describing the number of scientists in the EU countries of the Baltic Sea Region (Germany, Denmark, Poland, Lithuania, Latvia, Estonia, Sweden and Finland) is also in line with this trend.

Figure 1 shows the growth index calculated as a ratio of the number of scientists in the current year vs the previous year for the EU Baltic Sea countries and Russian Baltic regions between 2011 and 2017.

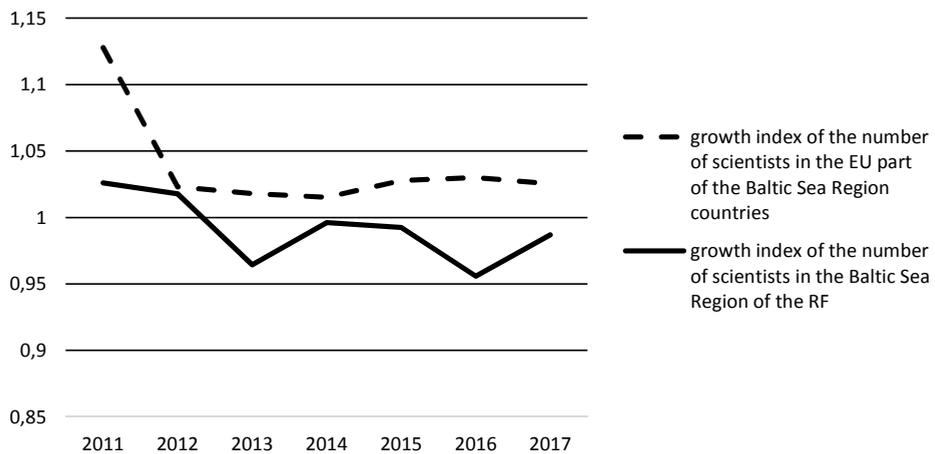


Fig. 1. Growth index of the number of scientists in the Baltic Sea Region

The graph shows a slowdown in growth rate for the EU Baltic Sea countries which corresponds to the fact that academia in these countries has been saturated with migrants. Thus, the migrant absorptive capacity of European science is reducing.

According to V. Yu. Ledeneva, the immediate cause of intellectual migration which comprises the migration of scientific talent is “the contradiction between the level of personal development, the individual’s needs and capabilities on the one hand, and the conditions for their satisfaction on the other hand” [16, p. 108]. The researcher identifies two approaches to the identification of the main motives for the migration of scientific talent. The first stems from the prioritized pursuit of professional interests while the second is based on the desire for better living conditions, expansion and consolidation of personal economic security.

The opinions of international researchers on the causes of scientific migration differ. Some of them believe that currently the role of general professional and economic motives in the migration of scientists is greatly overestimated. For instance, S. Stern proves based on empirical evidence that ‘dedicated’ scientists would be willing to pay themselves for the opportunity to remain in the realm of science while working in commercial companies [17]. From the viewpoint of some authors, age-specific motives attract too much attention [18; 19]. The motives which come to the forefront are related to research activities. These are the need to overcome cognitive and resource limitations, to maintain close personal contact with colleagues on a project team, and to collaborate [20].

However, some authors adhere to a more traditional approach in explaining the reasons behind the migration of scientists. It turns out that the migration behaviour of 'stars of science' is significantly influenced by economic factors where the most important one is the level of taxes in the country of origin or destination [21]. The escalation of the economic downturn still has a significant impact on the direction of scientific migration flows [22–24]. The time of life of a researcher remains a significant factor in scientific migration as well [25].

Generally speaking, for the countries with catching-up development patterns, for instance, Russia, economic factors, including salary, are a major motive for emigration.

As can be concluded from the literature review, the increase in salary in the country of a potential migrant's origin might have both deterrent and stimulating effect. The latter holds true when finding a better environment and conditions for professional development is of primary importance. In this case, higher salary helps to offset the tangible costs accompanying migration. According to R. Ramos, the decision to migrate is based on cost-benefit analysis (with costs associated with the distance or unfavourable migration policy) [26] Other authors who share this approach use the same reasoning [27; 28].

This study pursued 2 major objectives: 1) finding the relation between the number of Russian researchers and the amount of remuneration as well as the working conditions; 2) making a forecast for the number of researchers highlighting migration outflow figures. These relations are reviewed in the context of three Russian constituent entities in the Baltic Sea Region: the Kaliningrad region, the Leningrad region and St Petersburg. The reason for choosing the study area is the fact that the migration behaviour of Russia scientists living in the Baltic Sea Region is determined by the factors which are both common to Russian academia in general and specific to the Baltic region. The latter include, among others, the geographical proximity to the EU countries and the use of these territories by Russian scientists as a transit point on the way to another country.

In this study, 'the Baltic Sea Region' is limited to European countries and Russian territories directly adjacent to the Baltic Sea. The reason is that, according to Russian researchers, the residents of bordering and coastal regions and countries having seaports are most actively involved in external migration [29].

The following three main hypotheses were proposed:

the number of researchers in the Russian Federation can be significantly affected by the way the target ratio of the average researcher's salary to the average wage in the economy is to be achieved;

the second significant factor which influences the changing number of researchers is the productive work of scientific organizations and universities which is an indirect characteristic of the workplace environment of scientists;

the outflow of researchers from the academia will be moderate because for middle-aged and older scientists the situation is now quite stable; those who wanted to emigrate or leave the realm of science have already done so. As for

younger researchers, there have been efforts taken aimed to attract and retain young people in science which will further expand within the framework of NPS and other nationwide initiatives.

Data and tools

The researchers draw attention to the problems in establishing a statistical database to describe the total emigration from Russia and, specifically, the emigration of scientific talent [29; 30]. There is no systematic collection of data concerning the 'pushing' and 'pulling' factors in the migration of Russian scientific talent. As was noted above, there were some isolated studies of this issue based on limited sampling. The data obtained in the course of such selective studies cannot be used to build quantitative multi-factor models satisfying the criteria of statistical significance.

A review of international publications over the last decade demonstrates that there were scarcely any attempts to model migration based on the 'pushing' and 'pulling' factors. For example, in 2009 Iranian researchers designed a system dynamics model to characterize the long-term impact of the emigration of scientists on the economy and society of the country. However, the developers were forced to limit themselves to the structure of accumulators, flows and links, because, by as they admitted, it was impossible to populate the model with quantitative parameters due to the lack of key data [31]. In 2011, Romanian researchers built an econometric model using binary variables based on interviews with 589 Romanian migrants. The model studied the influence of individual factors, including, among others, employment, marital status and cultural preferences, on the decision to return home [32]. Gravitational migration models were developed as well [14].

As far as the modelling scenarios listed above are concerned, only the system dynamics approach could help in the identification of practical measures to influence the external migration processes, provided that the model worked.

At the same time, over a long period, the Russian statistical recording system has been accumulating data on the number of researchers, including broken down by region. A starting point of the corresponding time series is 1995. They can serve as a basis to build statistically significant trend models describing retrospective changes in the number of researchers and make it possible to obtain a valid forecast for the future. Combining the expert estimates of the share of emigrants in the reduction of the number of Russian scientists and the projected changes in the number of researchers derived from the trend models makes it possible to calculate the level of external migration. The level of external migration multiplied by the expert estimate of the share of migrant scientists from Russia received by the EU Baltic countries gives an estimate of the number of Russian migrant scientists who are heading to the countries of the Baltic Sea Region. This is the algorithm utilized in the study.

The factors which affect the number of scientists in the Russian Federation and can potentially act as ‘pushers’ leading to internal or external migration were analyzed with the use of a different method and over a shorter time interval. The set of factors which affect the number of researchers was limited to controllable conditions and parameters of the scientists’ activities which can be directly regulated by public authorities because decisions at the governmental level are underpinned by regular relevant statistics. The choice of the time interval, in this case, was determined by the time when data collection started, which is 2012–2013. The number of researchers was defined according to Rosstat (the Russian Federal State Statistics Service) data for the period of 2012–2017. Current information about the growth rate of the average number of scientists in 2018 provided by the Institute for Statistical Studies and Economics of Knowledge of HSE-NRU was used for a preliminary estimate of the number of scientists in the Russian Federation in 2018. The Rosstat and HSE-NRU data are presented broken down by regions; thus, the figures of the Russian Baltic regions, the Kaliningrad and the Leningrad ones, as well as St Petersburg, were specifically selected from those described above. The number of researchers in the Russian Federation was unstable, with alternating periods of increase and decrease in the number of scientists. Since 2015 the number of researchers in the country has fallen. It should be noted that a steady reduction in the number of scientists in the Russian Baltic regions began after 2013.

The ratios between the average scientist’s salary in Russia and the average wages established in the economy in 2012–2017 are presented in the collected works of the Institute for Statistical Studies and Economics of Knowledge of HSE-NRU⁵. The ratio for 2018 was obtained from the current information submitted by the Institute for Statistical Studies and Economics of Knowledge of HSE-NRU. Despite the divergent nature of changes in the ratios between the average scientist’s salary and the average region-specific wages in individual years of the period, in general, they were increasing over the whole period.

Performance of the employees of Russian scientific organizations and universities was evaluated based on the number of publications indexed in the Russian and international scientific citation databases, Scopus and Web of Science, also presented in the above-mentioned collected works⁶. The estimate for 2018 was obtained with the use of a linear forecast function in Excel.

Similar indicators for the Russian Baltic regions were evaluated based on data from the federal performance monitoring system, for the scientific organizations engaged in research, development and engineering projects of non-military nature. The relevant statistics are available for 2013–2017. The estimate for 2018 was obtained with the use of a linear forecast function in Excel.

⁵ Indicators of science: 2019: statistical compilation / L. M. Gokhberg, K. A. Ditkovsky, E. L. Dyachenko *et al*; Nat Research University “Higher School of Economics”. — M.: NRU HSE 2019. — pp. 111.

⁶ As above pp. 218–219.

The statistics recorded over the whole period under consideration show a steady increase in the performance indicators for the country in general and the Baltic regions of Russia in particular.

The distribution of the increase in the number of scientists was analyzed based on expert estimates: 1) the external migration outflow, as was noted earlier, is estimated at 5% of the reduction of the number of researchers; 2) according to estimates, the aggregate share of Russian emigrant scientists received by the EU countries belonging or adjacent to the Baltic Sea Region is 23.8% which is distributed as follows: a) Germany: 17.5%; Scandinavia: 5.2%; Eastern Europe: 1.1% [6, p. 333, 335].

Methodology

The influence of salary and working conditions on the number of researchers in Russia was characterized on the basis of the Vector AutoRegression model (VAR) built and implemented in the R software environment. The number of academic staff was projected with the use of Excel forecast functions.

VAR model describes the behaviour of several time series where current values depend on past values of the same time series. The following three time series were loaded in the system to model the dependence: a) the number of researchers; b) the number of publications by Russian authors indexed in Russian and international scientific citation databases; c) the ratio between the average researcher's salary and the average wage in the economy.

The results describe the dependence of the number of scientists (Y_t) on the previous value of this indicator (Y_{t-1}), as well as on the previous number of publications (X_{t-1}) and the ratio between the average scientist's salary and the average wage in the economy (Z_{t-1}). The nature of these dependencies is as follows:

1) in the Russian Federation:

$$Y_t = 1.4353Y_{t-1} - 0.2676X_{t-1} - 2484Z_{t-1} + 164508 \quad (1)$$

2) in the Russian part of the Baltic Sea Region:

$$Y_t = 0.7183Y_{t-1} - 0.0053X_{t-1} - 105Z_{t-1} + 28339 \quad (2)$$

The modelling framework included the model adequacy and accuracy tests specified in the R package documentation which serve to confirm the applicability of the model according to the testing criteria.

The dependencies obtained indicate that there is a negative relationship between the 'salary' indicator and the number of researchers. It appears that this might be an effect of the efforts aimed at achieving the target ratio between the average scientist's salary and the average wage in the economy. A review of the academic staff' payrolls in 2013—2017 performed by the Russian Research Institute of Economics, Politics and Law in Science and Technology (RIEPL) revealed the following. In 2017, the aggregate accrued payroll fund for academic staff amount-

ed to 54.8% of the level of 2013. At the same time, the calculations of the Institute for Statistical Studies and Economics of Knowledge of HSE-NRU show that in 2013—2017 the average monthly salary of staff engaged in research and development increased by 37%⁷. Clearly, the increase in average salary for academic staff along with the decrease in total payroll stems from a reduction in staff.

As follows from formulas (1) and (2), the number of academic staff over the time interval under review has a positive dependence on its previous value, but the effect of the remaining two factors is negative. This is typical both for the country in general and for the Baltic region in particular. The models presented only serve to record the practice of managing the remunerations and numbers of Russian researchers and, thus, they are not utilized to produce forecasts.

The Excel functions used for forecasting make it possible to flexibly take in consideration upward and downward fluctuations of the time series indicators, obtain statistically accurate trend characteristics and build forecasts on their basis. The future number of researchers for the next three years was modelled with this tool. The type of forecast function was individually chosen in each specific case based on the criterion of the adequacy of the time series description.

Results

The estimated change of the countrywide number of researchers was obtained with the use of an exponential forecast function in Excel. In order to get a more authentic picture, an extended time series starting in 1995 was taken as a basis for the forecast model. This series was reconstructed according to the data of the Institute for Statistical Studies and Economics of Knowledge of HSE-NRU⁸. However, the estimated figure for 2018 presented as a part of current information was removed from this series, because it is preliminary and needs to be refined. The forecast contains a retrospective indicator for 2018, also calculated with the use of an exponential function, and three perspective indicators for the next three years. The nationwide number of researchers and absolute changes in their quantity in Russia are presented in Table 2. The same table contains the estimate numbers of annual external migration obtained as a product of the negative increase in the number of researchers multiplied by the share of external migration outflow (5%). The estimated figure of Russian researchers migrating to the EU countries of the Baltic Sea Region was obtained as a product of the indicator of external migration of Russian researchers multiplied by the total share of the incoming flow of Russian migrant scientists received by Germany, Scandinavia and Eastern Europe (23.8%).

⁷ Indicators of science: 2019: statistical compilation / L.M. Gokhberg, K.A. Ditkovsky, E.L. Dyachenko *et al*; Nat Research University «Higher School of Economics». — M.: NRU HSE 2019. — pp. 111.

⁸ Indicators of science: 2019: statistical compilation / L.M. Gokhberg, K.A. Ditkovsky, E.L. Dyachenko *et al*; Nat Research University «Higher School of Economics». — M.: NRU HSE 2019. — pp. 42.

Table 2

**Forecast of the number and migration of Russian researchers in 2019–2021,
number of people**

Years	Number of researchers obtained with the use of an exponential forecast function	Change in the number of Russian researchers	Forecast for external migration of researchers from the Russian Federation	Migration of Russian researchers to the EU Baltic Sea countries
2017	359,800	—	—	—
2018*	358,678	- 1,122	- 56	- 13
2019	356,824	- 1,855	- 93	- 22
2020	355,051	- 1,773	- 89	- 21
2021	353,353	- 1,698	- 85	- 20

* A retrospective forecast indicator

In designing the forecasts of the number of researchers broken down by the Baltic constituent entities of the Russian Federation, preliminary assessments were made concerning the adequacy of description of the time series indicators in various combinations (for three regions and for two regions out of three) and with the use of different types of regressions. It was discovered that the most adequate description of the changing number of researchers is achieved in the case of separate examination of the time series for St Petersburg, on the one hand, and the time series of aggregated figures for the Kaliningrad region and the Leningrad region. The forecast of the number of researchers and its absolute change for the Kaliningrad region and the Leningrad region is presented in Table 3. The same table contains the estimates of annual external migration.

Table 3

**Forecast of the number and migration of researchers in the Kaliningrad region
and the Leningrad region in 2019–2021, number of people**

Years	Number of researchers obtained with the use of a polynomial forecast function	Change in the number of researchers in the two Baltic constituent entities of the Russian Federation	Forecast of external migration of researchers from the two Baltic constituent entities of the Russian Federation	Migration of researchers from the two Baltic constituent entities of the Russian Federation to the EU Baltic Sea countries
2018	3,003	—	—	—
2019	2,502	- 502	- 25	- 6
2020	2,275	- 227	- 11	- 3
2021	3,007	732	—	—

Thus, the forecast shows a trend towards wave-shaped changes in the quantity and reduced rate of migration of the most qualified scientists from the two Russian constituent entities of the Baltic Sea Region to its foreign segment.

Table 4 shows the forecast for the number of researchers and its absolute change for St Petersburg. The same table contains the estimates of annual external migration.

Table 4

**Forecast for the number and migration of researchers in St Petersburg
in 2019–2021, number of people**

Years	Number of re-searchers obtained with the use of a polynomial forecast function	Change in the number of researchers in St Petersburg	Forecast for external migration of researchers from St Petersburg	Migration of researchers from St Petersburg to the EU Baltic Sea countries
2018	36,508	—	—	—
2019	34,229	- 2,279	- 114	- 27
2020	31,022	- 3,207	- 160	- 38
2021	27,388	- 3,635	- 182	- 43

The forecast shows a trend towards a greater reduction in the number of researchers in St Petersburg, as well as greater migration from the city.

Of course, these calculations serve as a warning rather than a firm prediction. They describe the possible consequences of past trends continuing in the future.

Discussion and conclusions

The research hypotheses were confirmed only partially.

Hypothesis 1 was confirmed with the use of the VAR model, both at the level of the Russian Federation and at the level of the Russian part of the Baltic Sea Region. Indeed, as follows from formula (1), each per cent of the increase of ratio between the average scientist's salary and the average wage in the economy over the previous period (provided that the target level is achieved with the use of above-described methods) would reduce the number of researchers in the current period by 2484 people. A similar figure obtained from formula (2) for the Baltic region equals 105 people. It should be noted that the optimization of staffing which is currently underway in scientific organizations and universities forcibly pushes researchers out of science.

Hypothesis 2 was also confirmed in the VAR model. As follows from formula (1), on an average, every 3–4 additional publications which appeared during the previous period resulted in a loss of one researcher for Russian science in the current period. A similar figure obtained from formula (2) for the Baltic region is

189 publications. Thus, the pressure to publish proves to be a significant factor pushing people out of the realm of science in the Russian Federation; however, it is much less important in the Baltic region.

As demonstrated by the forecast models, hypothesis 3 on the reduced rate of outflow of scientific human resources was not justified at the level of the Russian Federation and St Petersburg. However, we should pay attention to moderately optimistic estimates of changes in the number of researchers presented in the forecast for the Kaliningrad and the Leningrad regions.

In order to maintain the number of Russian researchers, it is required to review their salary in a broader context, taking in consideration both the specific features of remuneration mechanisms in Russian science and alternative employment options for scientists in the commercial sector.

Studies show a positive correlation between the level of scientists' remuneration and their performance in the country where they get paid. For example, the examination of data concerning 145 Korean universities and colleges revealed a positive relationship between the number of scientific publications in international magazines and the level of scientists' salary [33]. However, evidence exists to the contrary as well. For example, the examination of data from one of the major Norwegian universities revealed a weak correlation between high-profile scientific publications of academic staff and the level of their remuneration [34]. Nevertheless, this might demonstrate that at the Norwegian university incentive payments for publications do contribute much to the researchers' salaries in comparison to the basic salary. By contrast to this, a low level of academic staff's basic salaries is still a problem for Russia. Despite the abolition of the Russian Federal Agency for Scientific Organizations (FANO) by Presidential Decree No. 215 of 15.05.2018⁹, many leading research organizations and universities still use the scale of minimum salaries for academic staff recommended by the FANO order of 15 April 2016 No. 16n¹⁰ which is currently in force. The minimum salary can be viewed as the basic guaranteed salary; its size does not seem attractive for potential researchers compared to the average level of remuneration for skilled work in the commercial sector. Following the Decree of the President of the Russian Federation No. 597 of 7.05.2012¹¹, the level of remuneration for scientists has increased significantly. According to Rosstat data, in 2017 through-

⁹ Decree of the President of the Russian Federation of 05.15.2018 N 215 (as amended on 26.02.2019) "On the structure of federal executive bodies" // "Collection of the legislation of the Russian Federation 21.05.2018, N 21, Art. 2981.

¹⁰ Order of the FASO of Russia dated 15.04.2016 N 16n "On approval of the Provisional Regulation on the remuneration of employees of federal state budgetary and autonomous institutions of scientific research and development, subordinate to the Federal Agency for Scientific Organizations" Registered in the Ministry of Justice of Russia on 09.06.2016 N 42495).

¹¹ Decree of the President of the Russian Federation of 07.05.2012 No. 597 "On measures for the implementation of state social policy" // "Compilation of the legislation of the Russian Federation", 07.05.2012, N 19, Art. 2334.

out the Russian Federation, it amounted to 183.5% of the average wage in the relevant region. Nevertheless, in many organizations a researcher's salary is still largely made up by incentives, that is, a non-guaranteed part of the remuneration, which does not help to attract young talents to science or maintain the number of researchers at the proper level.

The attractiveness of the commercial sector for the Russian researchers is supported by the persistent salary gap between scientists in research organizations and similar positions (like analysts or managers) in commercial organizations. According to expert estimates, in 2017 the average monthly salary in the commercial sector was between 60,000 and 200,000 rubles for analysts and between 90,000 and 600,000 rubles for managers [35]. The average monthly remuneration in research and development in 2017 was 48,833.6 rubles¹².

An upward trend in migration of high-potential Russian researchers caused by the occupation-specific motives for migration is also highly probable. As noted by P. Børing et al. (2015), the pull factors like reasonable salaries are important in explaining the labour mobility in general, but not relevant as researchers' motives for migration. The research environment, remuneration structure and competitive access to funding programs and equipment might be more important for individual scientists [36].

In general, the results obtained confirm the importance of a broader and more comprehensive approach to the determination of ways to achieve the goals set by the NPS to maintain and increase the number of researchers in the Russian Federation, including the border regions.

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¹² Indicators of science: 2019: statistical compilation/L. M. Gokhberg, K. A. Ditkovsky, E. L. Dyachenko et al; Nat Research University "Higher School of Economics". — M.: NRU, HSE 2019. — pp. 111.

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SPATIO-TEMPORAL PATTERNS OF KNOWLEDGE TRANSFER IN THE BORDERLAND

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A key competitive advantage of a contemporary economy, knowledge, is distributed unevenly, tending to concentrate in cities and urban agglomerations. A border position translates into distinctive features of regional innovative development. In a favourable institutional context, proximity to a border strengthens transboundary cooperation and interaction between neighbouring regions. Although frequent social contacts across borders are well documented in the literature, the effect that the border has on intensive knowledge transfer is yet to be investigated. This article analyses models of knowledge integration taking place between Russia's northwestern regions and the countries that their border. The study covers six territories of the Northwestern federal district (the Republic of Karelia, St Petersburg, and the Kaliningrad, Leningrad, Murmansk, and Pskov regions); five regions of the Central federal district (Belgorod, Bryansk, Voronezh, Kursk, and Smolensk); and one region of the Southern federal district (Rostov). The methodology of the study consists of using information from the Scopus abstract and citation database to assess the intensity of research cooperation. The findings suggest that the degree of involvement in transboundary research cooperation varies widely across Russia's border regions.

Keywords:

knowledge geography, border region, borderland, knowledge transfer, cross-border cooperation, Baltic region

Introduction

Literature offers two opposite views on the innovative development of border areas and their contribution to the national innovation system (NIS).

On the one hand, border areas are often considered as peripheral or even marginal in terms of economic, socio-economic and innovative development

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[1–7]. Most international [2; 8] and Russian [9–10] studies on regional divergence confirm the asymmetric distribution of innovative potential and classify borderlands as the periphery or catching-up, depressed, and lagging-behind regions. Research, technological, innovation, and related infrastructure develop slowly in border areas [11–12]. The density of innovation-active organisations [13–15] is low there; the local sales market is narrow [18]; the institutional environment is unstable and highly dependent on geopolitical and macroeconomic fluctuations [20–21]. All this predetermines a focus on producing incremental (secondary or complementary) innovations. Findings point to that the spatial capital of these regions is limited and their influence on the national innovative landscape is insignificant.

On the other hand, border regions are natural contact zones that interact with elements of the spatial socio-economic and innovation systems of neighbouring states. These areas can be considered as strategic development corridors. Andrey Klemeshev and Gennady Fedorov [22–23] emphasise that border areas have a major role in developing bilateral (Russia–EU) international innovation flows. The contact function of the state border manifests itself in the intensity of movement of material goods (commodities, services, capital), people, and intellectual capital (knowledge, culture, competencies). This function is also essential for international ties [24]. Neighbouring regions of two countries are usually quite close in socio-cultural and institutional terms. This kinship creates a favourable environment for stable cross-country cooperation and enhances the ability to embrace new knowledge and disseminate it nationwide, as well as to adapt it to local conditions) [25]. Stronger integration between neighbouring regions of two countries helps to accumulate a critical mass of participants in innovations to ensure competitiveness at national (NIS) and global level. Researchers have described many cases of successful transboundary regionalisation of innovative systems of border areas in Europe. These examples include transboundary clusters: Øresund between Denmark and Sweden [26–29], the Alsace BioValley between France, Germany, and Sweden [30], and others. According to [31–32], transboundary regionalisation is a strategic priority in developing the regional innovation systems (RIS) of border areas: regionalisation makes it possible to change dramatically the existing development trajectory and shift the balance of the centre-periphery model of innovation production.

The duality of research findings precludes a conclusive answer to the question about the role and place of border regions in developing the NIS. In particular, researchers have stressed the need for devising a new approach to evaluating the innovative performance of border areas. This new technique should take into account indicators other than the critical mass, network density, and their likes used in studying central regions [33]. In this article, we seek to provide a comprehensive evaluation of the intensity of transboundary research cooperation involv-

ing Russia's western borderlands. Concentrating on one RIS component makes it possible to measure the engagement of local actors in cross-country networking, evaluate the quality of intellectual collaborations, understand the localisation of interacting parties, and identify the role of the geographical factor in the distribution of knowledge-intensive activities. Special attention is paid to the potential for strengthening transboundary cooperation and integration. To this end, we analyse the unilateral use of research findings by international academics. The key hypothesis of our study is that most of the potential of the RIS research component remains untapped in the states bordering Russia to the east.

Literature review

The internationalisation of research is a result of the growing trend for innovation processes to become more complicated and for R&D to accelerate. To an extent, these processes are a result of the shrinking product lifecycle and commercialisation period. In an open market when information on the potential of possible counterparties is widely available, the role of effective management of innovation processes aimed at developing and introducing complementary 'value propositions' is increasing [34–36]. State-of-the-art hi-tech infrastructure including laboratory and experimental facilities, top specialist and the ability to recruit and train them, as well as business and intellectual excellence may contribute to transboundary research cooperation. How much international partners are *committed* to forging partnerships with regional actors depends directly on the expected synergistic effect, the presence of which indicates a significant increase in efficiency. Despite geographical proximity, the research components of a border area RIS can be so unlike that the complementarity of key strategic development areas is impossible [37–38]. At the same time, absolute compatibility, which means identical infrastructure as well as similar competences and challenges, makes cooperation less attractive an option. Research cooperation between border region agents requires that they should be at a similar level of development as regards the range of complementary competencies in question (particularly, in terms of disciplinary micro-specialisations), explore similar problems, and share a common research paradigm. According to [39], similar approaches and technology ensure the transfer of knowledge between collaborating parties. Wesley M. Cohen and Daniel A. Levinthal [40] emphasise that the success of cooperation is largely determined by the capacity of the parties to absorb newly acquired information. Key to their concept is prior related knowledge, which is transferred through direct personal contacts. It includes experience, skills, abilities, know-how, and processes. Here, confidence in results is crucial for a decision to cooperate. A major consideration is thus the *quality* of current findings and their prospects for implementation in joint projects.

In the research community, *Quality* is closely linked to the elusive category of academic reputation.¹ At the same time, an additional and commonly recognised quality criterion is the status of research periodicals where a university's employees publish their findings. The Web of Science international citation database uses the impact factor indicator, the Scopus counterpart of which is CiteScore². The literature has confirmed that findings from international collaborations are associated with higher quality than those from national ones are [41–43].

As the geography of cooperation network expands, the cost of maintaining permanent contacts increases. For instance, André Torre [44–45] writes that information and communications technology meet the need for personal communication only partially and cannot replace it completely. Temporal geographical proximity, which is achieved through working meetings, roundtables, conferences, etc., does not ensure the level of engagement necessary for innovative collaborations, particularly, the generation of new basic knowledge. Only quality results that significantly boost average values ensure return on investment in a cooperation network (finances, time, intellectual efforts, labour, etc.).

The degree of *engagement* of a wide range of stakeholders on either side of the border in the joint process of knowledge generation describes the development of network ties. The stability of a transboundary RIS (TRIS) is ensured by a pool of various interacting parties committed to long-term cooperation with a prospect of delegating part of equally significant functions to international partners, including laboratory tests, design and engineering, software development, etc. Accumulating a critical mass of participants in a transboundary cooperation network facilitates devising a coordinated and prospectively common development strategy. It covers, as a rule, investment policy, promising projects, technical and operational harmonisation, and qualification requirements (KPI, working conditions, etc.). The proportion of researchers involved in networking reflects the weight given to the area of cooperation in question and readiness to develop it. An important factor is a favourable institutional environment that can help to streamline transboundary contacts by simplifying the visa regime, modernising the road network and border-crossing infrastructure, enhancing passenger communications, etc. Since trust is a sine qua non of R&D collaborations [46–47], socio-cultural projects and joint non-profit organisations have a significant role in the emergence of a TRIS. A major obstacle, however, is the institutional

¹ Two out of three major university rankings (QS World university ranking and the Times Higher Education World university ranking) poll research and academic staff to identify the most authoritative research and educational institutions.

² The impact factor indicator (Web of Science) represents the citation rate over two years after publication for an average article in a given journal. Although CiteScore (Scopus) is a derivative of the impact factor, it is calculated for a citation window of three years.

context, which is largely a product of the geopolitical situation. A good environment for bilateral contact between regions of two countries translates into the natural comfort of cooperation.

Geographical proximity facilitates frequent social contacts between the members of the research subsystem of a TRIS. Empirical findings suggest that the density of intra-network contacts depends on geographical remoteness [48]. *Localisation* and later clustering create a favourable background for mutual education and knowledge spillover supported by informal personal communication [49–53]. Geographical closeness contributes enormously to stronger informal ties [52; 54], trust, recognition of belonging [50; 51; 52], easier information exchange and access to various types of knowledge [55], as well as the solidarity of like-minded individuals and a common identity [53].

Methodology

Methodologically, this study draws on approaches used in contemporary scientometrics and analyses a vast array of bibliometric data. This way, it becomes possible to get an idea of the dynamics of transboundary research cooperation. We analysed twelve Russian border regions, six of them in the Northwestern federal district (NWFD) (the Republic of Karelia, the Kaliningrad, Leningrad, Murmansk, and Pskov regions, and St Petersburg); five in the Central federal district (CFO) (the Belgorod, Bryansk, Voronezh, Kursk and Smolensk regions); one in the Southern federal district (SFD) (the Rostov district). These territories are grouped according to bilateral transboundary ties with the border regions of neighbouring countries (Belarus, Latvia, Lithuania, Norway, Poland, Ukraine, Finland, Estonia):

NWFD:

Republic of Karelia (Finland),

Kaliningrad region (Poland, Lithuania),

Leningrad region (Finland, Estonia),

Murmansk region (Finland, Norway),

Pskov region (Belarus, Latvia, Estonia),

St Petersburg (Finland, Estonia) (the St Petersburg agglomeration is included in the list as an active player in transboundary relations);

CFO:

Belgorod region (Ukraine),

Bryansk region (Belarus, Ukraine),

Voronezh region (Ukraine),

Kursk region (Ukraine),

Smolensk region (Belarus),

SFO:

Rostov region (Ukraine).

The source of the bibliometric data used in our analysis is Socpus — the largest international citation database, which covers findings distributed by over 5000 publishing houses worldwide, including Elsevier, Springer-Nature, Wiley, Taylor & Francis, Sage, and others. We analyse six-year-data (2013–2018). The list of indicators includes the number of publications with international co-authors, the total number of authoring teams, and the citation rate (with the field-weighted citation impact, FWCI, taken into account). The latter measure helps to compare the number of publications across different fields of knowledge.

We searched Scopus for research publications, using the following advanced search queries (those below are for the Kaliningrad region (Russia) — Poland pair):

“AFFILCOUNTRY (Russia) AND AFFILCITY (“Kaliningrad”) OR AFFILCITY (“Bagratiouovsk”) OR AFFILCITY (“Guryevsk”) OR AFFILCITY (“Gusev”) OR AFFILCITY (“Zelenogradsk”) OR (AF-ID (“Immanuel Kant Baltic Federal University” 60031254) OR AF-ID (“Kaliningrad State Technical University” 60018744)) AND (LIMIT-TO (PUBYEAR, 2018) OR LIMIT-TO (PUBYEAR, 2017) OR LIMIT-TO (PUBYEAR, 2016) OR LIMIT-TO (PUBYEAR, 2015) OR LIMIT-TO (PUBYEAR, 2014) OR LIMIT-TO (PUBYEAR, 2013)) AND (LIMIT-TO (AFFILCOUNTRY, “Poland”))*

The search query for each Russian regions included all publishing cities and towns and the names of all research and educational institutions. The resultant publication pool was exported into the SciVal analytics tool for a detailed analysis of international partner organisations. On the list of analysed measures are the organisation types (an institute of an academy of sciences, a university, a commercial organisation, other), as well as the region and the city/town where this organisation was located.

Data processing consisted of three key stages.

Stage 1: using the information on the current network of research cooperation, a pattern of current interregional cooperation was established and the intensity of ties in the border area identified. To this end, network relations were built between cities. The intensity of these relations was characterised by the volume of co-authored publications and the total number of authoring teams.

Stage 2: based on an analysis of works citing the findings of Russian researcher, potential cooperation channels were identified. At this stage, the analysis covered all research centres that did not carry out joint research over the reporting period but benefitted from the intellectual results of Russian authors.

Stage 3: a transboundary research cooperation index was calculated using four subindices:

Subindex 1: engagement. This index comprised the following measures: X1, the ratio of joint publication authors from a neighbouring country to the country’s organisations listed in affiliation; X2, joint publications with authors from

a Russian border region as a proportion of all publications of the neighbouring country's research centres that have at least one joint publication with a research centre in the Russian region.

Subindex 2: commitment. This index consisted of the following measures: X3, the ratio of citations of a publication from a Russian region by researchers from a neighbouring country to all research publications in the neighbouring country; X4, the ratio of researchers from a neighbouring country, citing publications from the Russian region, to all researchers from the citing organisations in the neighbouring country.

Subindex 3: quality. This index covers the following measures: X5, citations to publications co-authored by researchers from a Russian region and the neighbouring country (citations per paper); X6, the average FWCI of publications co-authored by researchers from a Russian region and the neighbouring country.

Subindex 4: localisation. This index is based on the following measures: X7, the ratio of cities where the research centres of affiliation of neighbouring country's co-authors are situated to all borderland cities that are home to universities; X8, the ratio of organisations of affiliation of a neighbouring country's co-authors to all research centres in that country.

The measures were normalised by linear scaling to the range [0; 1], where 0 is the minimum and 1 the maximum attribute value. The initial data normalisation formula for the measures of positive attributes is as follows:

$$Z_{ij} = \frac{a_{ij} - a_j^{\min}}{a_j^{\max} - a_j^{\min}}, \text{ provided } a_j^{\max} \neq a_j^{\min}, \quad (1)$$

where Z_{ij} is the normalised value of the j^{th} measure for the i^{th} region;

a_{ij} is the values of the j^{th} measure of the i^{th} region;

a_j^{\max} is the maximum value of the j^{th} measure;

a_j^{\min} the minimum value of the j^{th} measure.

The subindices and the integrated index are calculated using the arithmetic mean:

$$\overline{Z_{ij}} = \frac{\sum_{j=1}^n Z_{ij}}{n}, \quad (2)$$

where $\overline{Z_{ij}}$ is the value of the integrated index;

Z_{ij} is the normalised value of the j^{th} measure for the i^{th} region;

n is the total number of measures ($n=2$ for the subindices and $n=4$ for the integrated index).

The validation of the measures considered within the above subindices is given in some economic-geographical studies, including those by Russian authors [56—58]. Methodological limitations include the emergence of extreme values that were excluded from calculations and the cases when no publications were cited and the FWCI was zero (such observations were not analysed further).

Results

The total number of Russian works indexed in the Scopus international database in 2013–2018 was 447,818, which places the country 13th worldwide. The contribution of the border regions under study to the total number of publications in Russia is insignificant (Table 1).

Table 1

The contribution of Western border regions to the array of Russian publications, 2013–2018

Region of Russia	Contribution to publications in Russia	Proportion of publications with neighbouring countries
St Petersburg	15.40%	Finland, 4.25% (9*) Estonia, 1.29% (45)
Rostov region	1.87%	Ukraine, 1.65% (6)
Leningrad region	0.94%	Finland, 21.73% (33) Estonia, 14.55% (52)
Voronezh region	0.82%	Ukraine, 1.16% (4)
Belgorod region	0.75%	Ukraine, 8.91% (1)
Murmansk region	0.43%	Norway, 6.10% (1) Finland, 3.28% (2)
Kursk region	0.41%	Ukraine, 1.64% (3)
Kaliningrad region	0.37%	Poland, 3.51% (6) Lithuania, 2.48% (10)
Republic of Karelia	0.32%	Finland, 8.76% (1)
Bryansk region	0.14%	Belarus, 2.96% (1) Ukraine, 1.40% (9)
Smolensk region	0.09%	Belarus, 3.43% (2)
Pskov region	0.03%	Estonia, 6.34% (1) Latvia, 2.82% (2) Belarus, 2.11% (4)

Comment: * ranking on the ratio of co-authored works to all regional works in 2013–2018.

Over the reporting period, 24.7% of Russian publications had international co-authors. In 2013–2018, this proportion fell from 28.5% to 22.5%. Key partners are developed countries of the West: the US, Germany, France, UK, and Italy. A similar distribution is characteristic of the dynamics of international co-authorship in Russia's border regions with varying involvement of neigh-

bouring countries in research collaborations (table 1). An examination of the top five countries by the proportion of publications co-authored by experts from a Russian region and the neighbouring state reveals differences in the internationalisation of the research component of a RIS:

— St Petersburg: Germany — 10.88%, US — 10.69%, France — 6.76%, UK — 6.66%, Italy — 5.42%.

— Rostov region: Germany — 3.24%, France — 2.81%, US — 2.49%, Italy — 2.30%, UK — 1.73%.

— Leningrad region: Germany — 63.68%, US — 61.64%, France — 53.84%, Italy — 52.75%, China — 51.56%.

— Voronezh region: Germany — 2.92%, US — 2.70%, Japan — 1.35%, Ukraine — 1.16%, Vietnam — 1.13%.

— Belgorod region: Ukraine — 8.91%, Germany — 2.69%, US — 2.40%, Poland — 1.57%, France — 1.39%.

— Murmansk region: Norway — 6.10%; Finland — 3.28%; Germany — 2.97%; UK — 2.82%; US — 2.82%.

— Kursk region: Germany — 3.12%, Kazakhstan — 1.97%, Ukraine — 1.64%, Poland — 1.09%, Denmark — 0.99%.

— Kaliningrad region: Germany — 8.83%, France — 5.74%, US — 4.78%, Spain — 4.72%, UK — 4.35%.

— Republic of Karelia: Finland — 8.76%, Sweden — 3.71%, Germany — 3.01%, US — 3.01%, Norway — 2.59%.

— Bryansk region: Belarus — 2.96%, US — 2.18%, Serbia — 2.02%, South Korea — 1.40%, Ukraine — 1.40%.

— Smolensk region: US — 4.17%, Belarus — 3.43%, UK — 3.43%, Italy — 3.43%, Germany — 2.70%.

— Pskov region: Estonia — 6.34%, Latvia — 2.82%, Sweden — 2.82%, Belarus — 2.11%, Finland — 2.11%.

St Petersburg and the Leningrad, Rostov, and Kaliningrad regions are the closest to the national pattern of international partner distribution. The Pskov region focuses on networking with neighbouring countries, albeit the total number of publications is below ten in either case.

At Stage 1 of the study, measures of the transboundary cooperation potential were analysed: the dynamics of the impact of joint studies at the city and regional levels; the demand for the knowledge capital of Russia's border regions from international partners (fig. 1, 2).

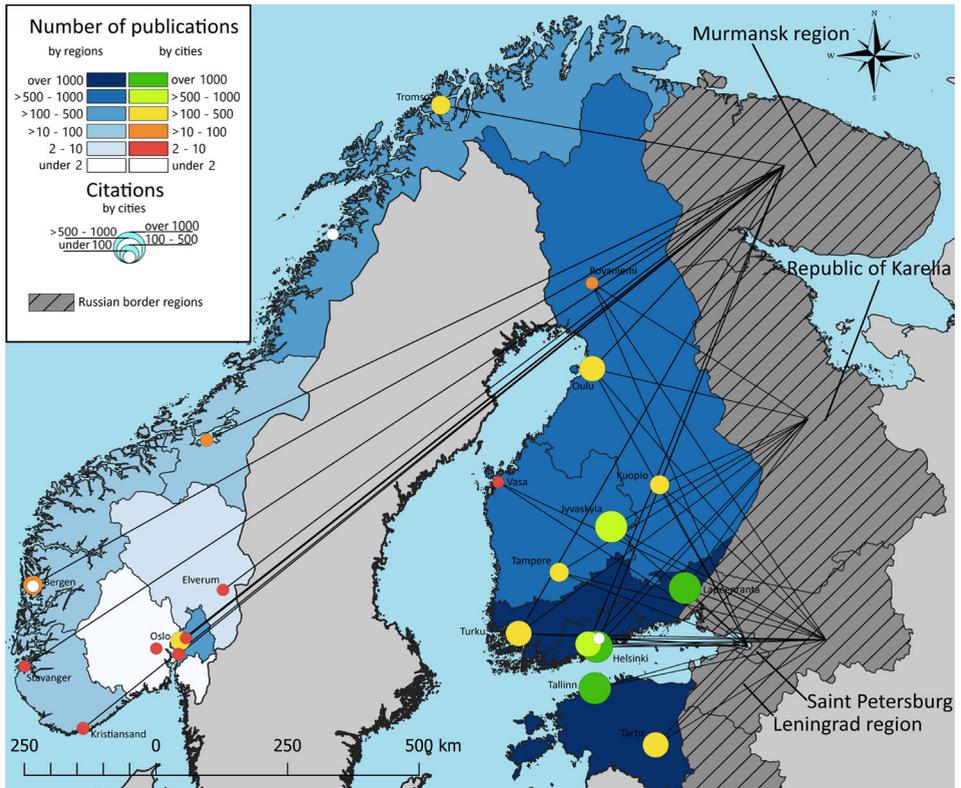


Fig. 1. Research networking between Russia’s western borderlands and neighbouring Northern European countries [59]

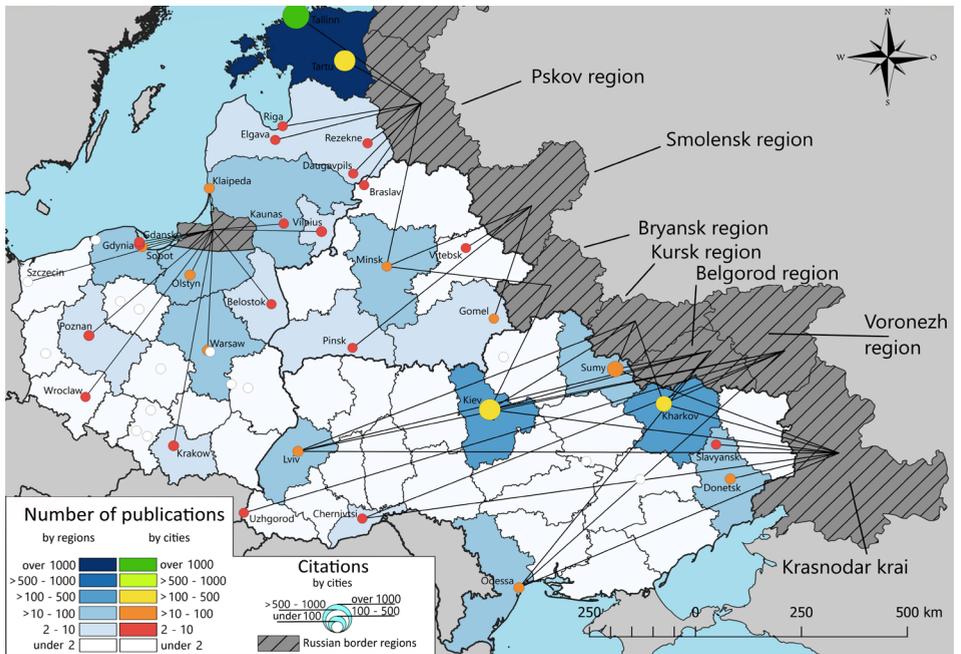


Fig. 2. Research networking between Russia’s western borderlands and neighbouring eastern European countries [59]

Based on the data on the current and potential structure of research ties, the transboundary research cooperation index was calculated (Table 2). The computation did not include regions that have fewer than ten publications with the neighbouring states: the Bryansk region–Ukraine, the Pskov region–Belarus, the Pskov region–Latvia, the Pskov region–Estonia.

Table 2

Transboundary research cooperation index for Russia’s western borderlands

Region-of cooperation	Index	Subindex			
		I	II	III	IV
St Petersburg–Estonia	0.753	0.652	1.000	0.659	0.700
Leningrad region–Estonia	0.592	1.000	0.469	0.616	0.284
St Petersburg Finland	0.450	0.491	0.603	0.426	0.281
Leningrad region–Finland	0.291	0.468	0.119	0.533	0.045
Murmansk region–Norway	0.273	0.036	0.065	0.673	0.319
Kursk region–Ukraine	0.252	0.016	0.011	0.371	0.610
Belgorod region–Ukraine	0.251	0.088	0.102	0.296	0.519
Kaliningrad region–Lithuania	0.242	0.047	0.073	0.419	0.430
Kaliningrad region–Poland	0.227	0.007	0.008	0.515	0.380
Republic of Karelia–Finland	0.220	0.079	0.046	0.556	0.198
Murmansk region–Finland	0.217	0.032	0.027	0.685	0.124
Rostov region–Ukraine	0.214	0.037	0.055	0.242	0.522
Smolensk region–Belarus	0.179	0.012	0.000	0.080	0.624
Bryansk region–Belarus	0.164	0.021	0.010	0.028	0.598
Voronezh region–Ukraine	0.140	0.010	0.021	0.313	0.215

Comment: I stands for the Engagement subindex, II the Commitment subindex, III the Quality subindex, and IV the Localisation subindex.

Among the regions studied, St Petersburg and the Leningrad region are the most deeply integrated into cross-border research cooperation. Together, they constitute the largest research centre of Russia’s North-West. Their transboundary research cooperation has two directions: southwestern (Estonia) and north-western (Finland). The closest research connections link St Petersburg and the Leningrad region with Estonia. For St Petersburg–Estonia and Leningrad region–Estonia, the transboundary research cooperation index reached 0.753 and 0.592 respectively in 2013–2018; the maximum value is 1. Although collaborations with Finland are less active, they are of considerable interest for the Russian border regions willing to strengthen transboundary research. Russia–Finnish partnerships develop along several channels. The most developed is St Pe-

tersburg–Finland (0.450); three others (the Leningrad region–Finland [0.291], the Republic of Karelia–Finland [0.220], and the Murmansk region–Finland [0.217]) have strong potential. Collaborations between the Murmansk region and the border areas of Norway, the Kursk and Belgorod regions and Ukraine, and the Kaliningrad region and the border areas of Lithuania and Poland also seem promising. These partnerships, however, are at their teething stage: their average value of the transboundary research cooperation index is 0.25. The weakest research integration was observed in 2013–2018 in the Russian–Ukrainian and Russian–Belarusian borderlands, which comprise the Rostov, Smolensk, Bryansk, and Voronezh regions.

Structural analysis of the index reveals how cross-border research cooperation develops in terms of engagement, commitment, quality, and localisation. Relatively high values of the I-subindex were obtained for the research centres of the Leningrad region and St Petersburg and their collaborations with Estonia and Finland. This result is explained by the significant involvement of researchers within a single organisation and a considerable proportion of joint publications (Table 2). The engagement of other Russian border regions in transboundary research cooperation is low, below 0.1. The distribution of regions according to their commitment to transboundary research cooperation (II-subindex) has a similar pattern. The leading position of St Petersburg, a major research centre whose findings are in demand from Finnish and Estonian experts, is reflected in the relative number of citations and the number of citing researchers. The Leningrad region ranks second; its ties with Estonia are stronger than they are with Finland. As to the lowest II-subindex levels, Ukraine, Poland, and Belarus are little interested in research collaborations with the Kursk, Kaliningrad, and Smolensk regions respectively. The cooperation priorities of researchers from these countries, thus, lie elsewhere.

Quality is an important measure of research cooperation of border regions. It is reflected in the recognition of and demand for research findings from international academia. In this respect, collaborations between the research centres of the Murmansk region and the border areas of Finland and Norway and between St Petersburg/the Leningrad region and Estonia rank the highest. Their III-subindex values are above 0.6. Average quality values are associated with publications prepared in collaborations between researchers from the Republic of Karelia, the Leningrad region, and St Petersburg, on the one hand, and Finland, on the other, as well as with contributions co-authored by Kaliningrad, Polish, and Lithuanian experts (Table 2). The lowest III-subindex values are characteristic of the Russian–Belarusian and vast Russian–Ukrainian borderlands. The quality of joint studies carried out in those areas is rather low by international research standards. The distribution of regions by localisation is remarkable. St Petersburg–Estonia (0.700), the Smolensk region–Belarus (0.624), the Kursk

region–Ukraine (0.610), the Bryansk region–Belarus (0.598), the Rostov region–Ukraine (0.522), and the Belgorod region–Ukraine pairs (0.519) score highly on the IV-subindex. The IV-subindex values of two cooperation areas are average (0.4). These are the Kaliningrad region–Lithuania and the Kaliningrad region–Poland. The other areas have a rather low level of transboundary research localisation.

Discussion and conclusions

In this study, we examined nineteen geographical areas of transboundary research cooperation between twelve Russian border regions and eight neighbouring countries in 2013–2018. We evaluated interactions between each of the Russian regions and the neighbouring country (ies) in general, carried out a comparative analysis, and identified the most active areas of research collaborations.

Cooperation with Estonia involves three Russian regions: St Petersburg, the Leningrad region (with which the country has forged stable transboundary ties), and the Pskov region (it had only nine joint publications over the studied period). Although the number of Estonian research centres whose experts publish their findings in Scopus-indexed periodicals (seventy-four) is rather small, most of them cooperate with their counterparts from Russian borderlands, primarily, St Petersburg (10.8%). The geographical scope of the Leningrad region–Estonia partner network is smaller. The level of engagement, however, is one-third higher than that in St Petersburg, being the highest among all the research cooperation areas considered in this article. According to the quality and commitment subindices, research cooperation in the Russian–Estonian borderlands is valued by both parties, whereas its outcomes meet high standards.

The above is explained by stronger contacts in biomedicine, which is a traditional research area for Estonia [60] and a current strategic priority for both countries. Key research partners from Estonia are the National Institution of Chemical Physics and Biophysics (Tallinn) and the University of Tartu. The latter is home to the Estonian Biocentre, which was established in the Soviet period. Today, Estonia is one of the few countries in the world that has a successfully functioning genome biobank. In 2015, with financial support from the Russian Science Foundation, St Petersburg State University (SPSU) launched the project to create the first Russian biobank — a dedicated cryostorage for biological materials and a clinical laboratory for biomedical studies in health and longevity. Alongside the key Estonian Universities, Tallinn University, Tallinn University of Technology, and the Estonian University of Life Sciences, the partnership involves the National Institute for Health Development, which con-

ducts population studies in healthcare. The St Petersburg agglomeration is a strong research centre that has attracted considerable resources from across the country, including those of Russia's leading universities topping international rankings (St Petersburg State University, LETI St Petersburg State Electrotechnical University, ITMO University, and Peter the Great St Petersburg Polytechnical University).

Research collaborations with Finland are pursued by several regions of Russia's western borderlands: St Petersburg, the Leningrad and Murmansk regions, and the Republic of Karelia. Finland's population and economic patterns are shifted southward (Helsinki, Turku, and Tampere). This factor and the significant research potential of Helsinki and St Petersburg make close interactions between Estonian research centres, on the one hand, and the Leningrad region and its attractor city (St Petersburg), on the other, a logical step. The geographical proximity of the two strong Baltic centres of research and innovation contributes to their comprehensive integration. Transboundary collaborations with St Petersburg involve the greatest number of researchers from all the regions considered — 2,314 people, which places it far ahead of the second-ranked Leningrad region with 567 people. The city accounts for most joint publications, 2,994, (the Leningrad region ranks second with 914). Twenty-seven Finnish research and education institutions, 5% of all national research centres visible to Scopus, have formed partnerships with their St Petersburg counterparts. Transboundary ties with the Republic of Karelia and the Murmansk region have considerable potential for growth, which is fuelled by the strong interest of Finnish researchers in the findings of their Russian colleagues. The number of Finnish experts citing works authored in the Republic of Karelia is 30% above that of co-authors. As to the Murmansk region, this difference reaches 64.7%. There is a disparity between the number of citations and the number of joint publications: 40.9% in the Republic of Karelia and 61.3% in the Murmansk region. Moreover, the quality of research conducted in collaboration with the Republic of Karelia is 2.61 and that with the Murmansk region 2.39 times the worldwide average. In this respect, the two territories outperform St Petersburg (1.96).

Cross-border cooperation programmes, including those co-financed by the EU (Russia–South-East Finland, Kolarctic, and Karelia), and the Interreg Baltic Sea Region programme ensure the stability of transboundary contacts. Many of these projects support research and knowledge-intensive innovations in environmental protection and ecology. The practical focus of transboundary cooperation is a clear advantage of Russian–Finnish contacts, which gave rise to transboundary clusters of cleantech, energy, and timber companies, thus contributing to the stability of transboundary cooperation. Among the cities involved in active cooperation are Helsinki (the University of Helsinki, the Finnish Meteorologi-

cal Institute, Natural Resource Institute Finland, etc.), Kuopio (the University of Eastern Finland), and the border of Lappeenranta, the administrative centre of South Karelia (Lappeenranta University of Technology).

Norway is a transboundary partner of the Murmansk region. The transboundary research cooperation index for the two areas is 0.273, which is above that for Murmansk–Finland collaborations (0.217). Although the difference in the index values is significant, the disparity between some important measures is even greater. The difference is 1.88-fold when it comes to the number of co-authors from the neighbouring country, 1.80-fold in the case collaborating organisations, 1.89-fold in that of the number of joint publications, and 2.26-fold in that of the number of citations. At the same time, Finland outperforms Norway in some aspects of research interactions with Russian regions: the FWCI (2.39 against 1.68) and the number of networking cities (a threefold difference).

Common research areas are a key factor for cooperation. In this case, these are marine resources, ecology, and Arctic studies. A priority for both countries, projects in these areas receive considerable support. The city of Tromsø, which is located relatively close to Murmansk, is one of the key partners in transboundary cooperation that brings together the University of Tromsø — The Arctic University of Norway and Norwegian Polar University. The latter organises Arctic expeditions and conducts research at the Ny-Ålesund station on the island of Spitsbergen. Some of the expeditions are joint initiatives supported by the Arctic Council, the Nordic Council of Ministers, the Northern Dimension, and other institutions. Other important partners are the Institute of Marine Research (Bergen), Norwegian Institute for Water Research (Oslo), Centre for International Climate and Environmental Research (Oslo), the Geological Survey of Norway, SINTEF (an independent research organisation that conducts contract research and development projects), and Equinor ASA (Norwegian international energy company). These organisations are located at a significant distance from Russian border regions.

Poland is a partner of the Kaliningrad region, Russia's Baltic exclave. This cooperation area has the lowest engagement subindex. Twenty-five organisations are involved in cooperation, yet only three-four researchers from each contribute to cross-border collaborations. Moreover, the proportion of joint studies does not exceed 0.04% of all studies. To a degree, this is explained by the intensive publication activity of Polish research centres collaborating with the Kaliningrad region (over 132.8 thousand publications). In terms of this measure, Polish partners are outperformed only by the Finnish research centres cooperating with St Petersburg (155.3 thousand) and the Republic of Karelia (143.0 thousand). The value of the engagement subindex is rather low (a lower one is observed only in the case of the Smolensk region–Belarus pair). The limited engagement is explained by the low rate of citations of Kaliningrad researchers by Polish colleagues (127,

or 0.05% of all publications). The quality subindex has a rather high level of 0.515, placing the cooperation area seventh among the regions considered. The localisation subindex value is 0.380 (8th place).

The most active interactions involve Warmian-Masurian University in Olsztyn, research centres of the Tricity (Gdansk-Sopot-Gdynia, including the Gdansk University of Technology and the University of Gdansk), the Institute of Oceanology and the Institute of Water-Supply Engineering of the Polish Academy of Sciences, Gdynia Maritime University, the National Marine Fisheries Research Institute, and the Polish Naval Academy of the *Heroes of Westerplatte*. Overall, the four cities of the two border voivodeships (Warmian-Masurian and Pomeranian) account for a third (36%) of the collaborating research centres and a half of the publications (46.6%). At the same time, publications of the highest quality were prepared in cooperation with organisations from Krakow (Jagiellonian University and its Medical College), Warsaw (the University of Warsaw, the Jarosław Dąbrowski Military University of Technology), and Wrocław (the University of Wrocław). The average FWCI is 4.45. The fields of cooperation can be divided into two groups: marine studies concentrated in the border voivodeships and medical/biological studies carried out throughout the geographically and institutionally diverse network of cooperation. When considering the measures of the engagement subindex, we established that 67.8% of research centres citing works from their Kaliningrad counterparts did not cooperate with the latter. All these centres were located in remote voivodeships, most of them specialised in maritime studies (the Maritime University of Szczecin) and medicine (the Medical University of Łódź, the Medical University of Warsaw, etc.).

Active interactions are supported by transboundary mobility. An important factor in the latter was the local border traffic regime between Poland and the Kaliningrad region. Contacts in the field of maritime economy are developed by Kaliningrad research centres specialising in the area: the Shirshov Institute of Oceanology of the Russian Academy of Sciences, the Atlantic branch of the Russian Research Institute for Maritime Economy and Oceanography, the Baltic Fish Fleet State Academy, and the Museum of the World Ocean. Research teams of the Institute of Regional Studies at the Immanuel Kant Baltic Federal University (IKBFU) also contribute to the process. Biomedical collaborations are supported by the IKBFU's laboratories, including those located at the Fabrika science park.

Only four Lithuanian research centres have formed partnerships with the Kaliningrad region: Klaipėda University (13 joint publications), Vilnius University (9), Kaunas University of Technology (2), and Vytautas Magnus University (1). The Lithuanian cooperation area has higher engagement (0.047) and commitment (0.073) indices than the Polish one. Firstly, interactions involve at least

eight people per organisation, which is twice the Polish level. Secondly, findings obtained in Lithuanian–Kaliningrad collaborations account for 0.33% of all Lithuanian publications, which is 86.8% above the Polish proportion. Thirdly, the rate of citations of Kaliningrad authors by Lithuanian colleagues is higher than by the Polish ones (0.44% and 0.05%). Alongside the research centres involved in cooperation, citing organisations include the Lithuanian Energy Institute of the Lithuanian Academy of Sciences (Kaunas) and Vilnius academic organisations: Mykolas Romeris University, Vilnius Gediminas Technical University, National Centre of Physical and Technological Sciences. All of these research centres are potential partners. The quality subindex is close to average (0.419 against 0.428). Most of the published works have a FWCI 10% above the worldwide average. The dynamics of transboundary cooperation, however, declined twelvefold in 2015–2018, to one publication. The number of citations of Kaliningrad publications was increasing from 2013, despite a dip in 2017. The average annual increase reached 300% in 2013–2018.

Collaborations with Ukraine are pursued by a considerable number of Russian borderland organisations from the Belgorod, Bryansk, Voronezh, Kursk, and Rostov regions (table 2). At the same time, these regions score among the lowest on the transboundary research cooperation index for 2013–2018 (table 2). The Bryansk region was excluded from the calculation because it had not reached the threshold value of ten joint publications. The levels of commitment and engagement are also rather low (Table 2). The Russian–Ukrainian cross-border cooperation involves only 6% of the Ukrainian research centres visible to Scopus. Most of the Ukrainian organisations collaborate with the Rostov region (26) and the fewest with the Kursk region (11). At the same time, the ties of the Kursk region cover all the university cities of Ukrainian borderlands, whereas the Rostov region collaborates only with 38% of those (three out of eight) and the Belgorod region with 40%. The Voronezh region is the only border area in Russia that does not cooperate with the border research centres of a neighbouring country.

Research cooperation with the Kursk region focuses on materials science and physics. Key Ukrainian partners are the cities of Sumy (Sumy State University) and Kharkiv (Kharkiv Institute of Technology, the Karazin National University of Kharkiv, the Verkin Institute of Low-Temperature Physics, and the Institute of Radio Astronomy of the National Academy of Sciences of Ukraine [NASU]).

The Belgorod region also seeks cooperation with the border cities of Kharkiv (Kharkiv Institute for Physics and Technology, the Karazin National University of Kharkiv, Kharkiv Institute of Technology, Kharkiv National University of Radio Electronics, the Institute of Cryobiology and Cryomedicine of the NASU, Usikov Institute for Radiophysics and Electronics of the

NASU), and Sumy (Sumy State University). Alongside materials science and electrophysics (colloid chemistry, electro-welding, and solid-state physics), the Belgorod region collaborates with Ukrainian research centres in medical and biological fields (cell biology, cryobiology, biochemistry). The number of Belgorod-Ukraine publications is one of the highest in the studied regions (298), second only to St Petersburg and the Leningrad region (collaborations with Finland and Estonia).

The dynamics of research collaborations of the Kursk and Belgorod regions are unstable and often negative. In the Rostov region, the number of joint publication increased in 2013–2018, from eighteen to thirty-four. The area has forged the strongest ties with remote Ukrainian cities — Kyiv (the Frantsevich Institute for Materials Science of the NASU) and Odesa (the Mechnikov National University of Odesa and the Bogatsky Institute of Physics and Chemistry of the NASU). Despite the precarious situation in the region, border cities are integrated into research cooperation. The Litvinenko Institute for Physical-Organic and Coal Chemistry in Donetsk accounts for 14% of all the joint publications. Overall, the border area of Ukraine has four research centres involved in cooperation, including the Institute for Applied Mathematics and mechanics in Sloviansk. Remarkably, top-rated contributions are co-authored by experts from Donetsk (the Litvinenko Institute for Physical-Organic and Coal Chemistry of the NASU, 2.35 FWCI). Physics and engineering are the focus of the collaborations.

Cooperation with Belarus involves many Russian border regions — Pskov, Smolensk, and Bryansk. The number of joint publications in the Pskov region, however, did not exceed ten in 2013–2018. Despite lagging on most subindices, the Belarus-Smolensk region and Belarus-Bryansk region rank in the top five for localisation (0.624 and 0.598 respectively). Particularly, the Smolensk region has formed ties with 11% of the country's research centres and the Bryansk region with 8%. At the same time, there is no direct connection between geographical proximity and research cooperation intensity. The principal co-authors of Smolensk researchers are experts from Gomel State Medical University and various Minsk institutions (City Teaching Hospital No. 9, the First City Teaching Hospital, Belarusian Post-graduate Medical Academy, etc.). Findings from these collaborations have the highest value; the citation rate of the joint publications is five times the worldwide average. The Bryansk region gives priority to collaborations with Minsk institutes of the National Academy of Sciences of Belarus. The proximity factor and transport connectivity make the second-largest city of Belarus Gomel and its research centres (the Francysk Skaryna State University of Gomel, Bely Institute of the Mechanics of Metal-Polymer Systems of the National Academy of Sciences of Belarus) sought-after partners.

This study revealed several patterns in transboundary research cooperation:

— intense research cooperation was observed in regions that boasted an equally high level of research and had considerable commitment to international partnerships;

— complementary competencies and knowledge bases within a common research area was a major factor for forming transboundary ties;

— a strong impetus for developing research cooperation in the borderlands was programmes aimed to support transboundary projects and joint studies;

— the population pattern, economic clustering, and transport connectivity made frequent personal contacts possible and thus contributed to forming research ties;

— a developed transboundary institutional environment, a favourable geopolitical situation, and cultural proximity were important factors in strengthening research cooperation.

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ECONOMIC GEOGRAPHY AND REGIONAL ECONOMICS

AN ECONOMIC COMPLEXITY ANALYSIS OF THE KALININGRAD REGION: IDENTIFYING SECTORAL PRIORITIES IN THE EMERGING VALUE CREATION PARADIGM

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The ongoing technological development leads to the emergence of a new value-creation paradigm that calls for changes and structural transformations in economic systems at different levels. Structural transformations are prompted by growing economic complexity. In this context, the selection of industrial strategies and the validation of key regional industrial policies is of paramount importance. Economic complexity (EC) analysis is a new effective tool to address the issue. Its application at a subnational level is, however, limited by methodological problems.

To analyse economic complexity at a subnational level, a basic methodology and special software were developed within this study. The object of the research is the exclave Kaliningrad region, whose location makes it possible to capture accurate and comprehensive data on international and interregional trade. Based on the EC analysis theory and practice, the study involved the development of methods, algorithms, and software to form a source database and measure economic complexity.

The findings may guide the use of EC analyses in regional policies. The article suggests activities for sequential upgrading of the industry in the Kaliningrad region. These activities will facilitate the development of the existing and new capabilities, improve the business environment, and increase the complexity of products, productions, and industries.

Keywords:

economic complexity, capability, sector strategy, industrial policy, international and interregional trade flows, exclave, Kaliningrad region

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Introduction

The economic complexity (EC) of a country (region, state, city, etc.) is understood as its ability to produce more diverse and complex products by means of accumulating capabilities¹ [1]. Being well-studied in various contexts [see, for example, 2–4], the concept of capability acquires a new meaning within the framework of economic complexity theory. According to its founders, in a broad sense, capabilities are non-tradable productive inputs [5], in the narrow sense, these are technologies, ways or methods of work, know-how, legislation, modern institutions, organizational skills, relational capital, etc. These capabilities are embodied in useful knowledge that is formed at the level of individuals, organizations, and even network structures [6, p. 16]. The structure of capabilities required for the production of a certain product is referred to as *product complexity* [7], while *economic complexity* is associated with the capabilities locally concentrated on a specific territory. It determines the differences between economic systems both in their ability to produce complex products and, as a result, in the possibilities they have for economic growth.

The EC analysis provides insights into the competitiveness and development prospects of certain types of products, industries and sectors. Thus, it has become an important analytical tool successfully used at the country level in different parts of the world. Another advantage of the approach is that it allows for consideration of current technological trends and the ongoing value creation paradigm shift. The explanatory power of the EC theory is constantly growing, which is confirmed by numerous international studies as it finds its application in various domains, including diversification, knowledge diffusion, unemployment and employment, productivity, patent rights, agglomeration effects, energy consumption and emissions, etc. [8, 9]. However, currently, the most relevant application, which has also been empirically tested, lies in using it to underpin industrial policy decisions and development priority selection.

Given that economic activity in regions has a number of specific features, the results of studies at the national level and the EC analysis methodology originally developed for countries are not always applicable at subnational level. For this reason, the practice of economic complexity analysis in regions is limited.

This study aims to further develop EC methodology in terms of its application for prioritizing sectoral strategies and selecting key industrial policies at subnational level.

This requires consideration of modern practice of EC theory application and identification of its specific features, the development of basic methodological framework and software for EC analysis at subnational level, and experimental testing. The aforementioned works were carried within the RFBR scientific project No. 19-410-390002 “Economic Complexity and Sector-Specific Strategy

¹ Authors' note: it is worth mentioning that in Russian research on Economic Complexity there is no established equivalent of the term “capability” yet.

Selection by the Regions of Russia in the Context of the Emerging Value Creation Paradigm, Using the Case of the Kaliningrad Region.” The article presents the final results of the testing of the developed methodological approach.

The research object is the exclave Kaliningrad region, whose location makes it the most convenient object for modelling and testing economic tools and methods, as it is close to the idealized concept of the “region”. Another reason is that the EC analysis at subnational level relies on both global and regional trade statistics data, and the exclave provides the best possibilities for capturing all trade flows in the region.

Drawing on the results of the study and the analysis of the economic complexity of the Kaliningrad region, the study puts forward recommendations on application of the method in state and regional governance and examines specific proposals to justify choice of industry strategies and the formation of a new industrial policy.

A significant limitation of the study is that at this stage it is impossible to carry out a comparative analysis of the application of the developed methodological approach to other Russian and foreign regions. The reason is threefold. Firstly, it requires a bigger research team including both Russian and international experts. Secondly, access to sources of information needed for the source database is limited. Thirdly, given the differences in regional specifics, data processing and results evaluation are time and money consuming.

Nevertheless, despite the limitations, the results of the study are of interest in terms of developing both the EC methodology and analytical tools that can be applied to select sectoral priorities and to identify ways to change the existing production structure in order to ensure a highly productive vector of growth and development of regional economy both in Russia and in other countries.

Theoretical importance of the economic complexity analysis and the practice of its application

Every 50—70 years there is a major shift occurring in the way the value is created in society due to emerging technologies with a systemic impact across most sectors of the economy [10]. Throughout the industrial history, there were five of such major shifts in technology paradigms that have laid the foundation for transformations and changes in countries and regions (macro-level), sectors of the economy (meso-level) and organisations and people’s lives (micro-level) [11]. These are 1) the industrial revolution (1770), 2) the steam engine paradigm (1830), 3) the heavy engineering paradigm (1870), 4) the combustion engine paradigm (1910), 5) the digital paradigm (1970).

These paradigm shifts have had a considerable impact on the economy. On the micro-level, they have changed the way value is created, and consequently, the structure of organizations as well as the tasks that make up a certain job. On the meso-level, they have laid the foundation for the creation of new sectors and for

the demise of existing ones. On the macro-level, they have altered the boundary conditions for growth of a region's prosperity or its decline without successful policy intervention [11].

It is worth noting that all the paradigms have gone through the same stages of development: an emergence, which is followed by one or more bubbles; a recession (which is also a turning point, with the new ways of value creation now perceived as the basis for the future with associated deep transformation of institutional framework in and across economies); a long era of prosperity; a decline in productivity laying the foundation for the next paradigm. At the moment, the global community is at the beginning of the prosperity period of the digital paradigm.

During paradigm shifts, there is a dramatic increase in the creative destruction across an economy. This means that a company, as well as any other type of organization, must choose to adopt new technologies and change its way of value creation or be expelled from the market. Thus, shifts in the value creation paradigm mean radical changes in the structure of the economy.

Looking at shifts in specific technologies in terms of changes in the ways of creating value, one can notice the following patterns [10]:

- distribution of new technology causes major reallocation of resources between sectors;
- growth primarily takes place in sectors providing new technology-enabled offers, the major beneficiaries are the first mover sectors and firms;
- growth is also observed in sectors providing input to the first movers, as well as sectors and firms that provide products and services complementing the products and services from the first movers;
- more divergence between sectors of the economy linked to the new ways of creating value accelerates their growth. In those linked to the old way of creating value, growth slows down, eventually leading to their decline.

Each paradigm shows its unique causality between innovation, diffusion, institutional change, productivity change, change in the number of firms and employees and relative factor prices [12]. The same applies to spatial distribution of emerging technology-enabled sectors that changes over time contributing to the imbalance in net jobs [13].

In this regard, economic complexity plays an important role since a capability base is causally related to the absorptive capacity of the economy [10; 14; 15]. Numerous studies confirm that there is a strong correlation and causality between the level of economic complexity in a region and its prosperity [1; 6].

The core concept of EC is that specific products are produced when knowledge, natural resources and monetary capital come together in a specific way, with each economy having its own combination of the three factors. EC theory proposes that since natural resources and monetary capital are scarce, it is by increasing the amount of knowledge in an economy that more products can be made available for production, specifically for export. Thus, it is the differentiation of knowledge capital between economies that shapes each economy's unique eco-

economic complexity measures. Being a relative measure of existing capabilities for production and export of products, the EC allows us to evaluate the prospects and benefits to be gained by an economy from shifting to more complex products [8].

The economic complexity theory first proposed by Hausmann & Hidalgo [1; 5; 6; 16] was further developed in works studying EC impact on economic growth and welfare, income inequality, middle-income trap, labour market and job polarization, structural shifts in value chains, etc. [8]. Today, researchers pay special attention to technological congruence, study the principle of relatedness, the diversification of economic activity, the dominance of technological innovation and optimization of the diffusion of productive knowledge [9]. Combined with value-added mapping and technology foresight, economic complexity is a powerful tool for industrial policy development [17]. The best-known and largest project of this kind is the EU Smart Specialization strategy [see, for example, 18].

Hausmann & Hidalgo propose two complementary measures to assess the amount of knowledge capital in an economy: a) diversity, reflecting the number of different products exported by the economy; and b) ubiquity, reflecting the number of countries exporting a particular product [6; 8]. The ubiquity of a product reveals information about the amount of knowledge required for its production, while the diversity can indicate the relative level of knowledge in an economy compared to other economies. Reliance on the ideas put forward by Hausmann & Hidalgo [1; 6], combined with the global trade statistics data, a network approach and econometric tools, has allowed researchers to empirically prove the existence of a systematic relationship between the diversity of a country's exports and the ubiquity of its products, thus providing an alternative to the popular theories of economic growth and international trade.

Two major indicators are used to measure the level of economic complexity: 1) Economic Complexity Index (ECI) and 2) Product Complexity Index, (PCI). Within this framework, the following derivatives or related indicators are calculated [6]:

- revealed comparative advantage (RCA) as per Balassa's definition [34];
- opportunity value (OV) and complexity outlook index (COI) — the value to be gained by an economy from shifting production to unexploited prospects (more complex products);
- relative opportunity gain (OG) and complexity outlook gain (COG) — the 'spillover' benefit to an economy from producing new products in terms of providing capacity for producing even more complex products;
- diversity, ubiquity, density and distance.

Calculation of the above indicators (the detailed calculation algorithm is provided in [1; 6]) allows one to identify the current level of the economy's complexity and its positions the global product space. The capabilities available in a country or a region determine the products for which there is, or, conversely, there is no comparative advantage. The information on the density of the product space, proximity of and distance between more complex products and those that

are produced (or can be produced) underpin industrial strategies. It helps identify the areas for existing capability development and new knowledge accumulation. Shaping new industrial policies based on an increase in economic complexity involves the development of measures supporting various industries (declining industries, emerging industries that are highly complex, new industries with growth potential or ability to fill structural holes, etc.) at various territorial levels, especially the regional one. 17]²).

Today, the annual country data is available from two official sources: 1) the Atlas of Economic Complexity³ developed by the Center for International Development at Harvard University and 2) the Observatory of Economic Complexity⁴ — supported by the MIT Media Lab consortia for undirected research.

Judging by the limited number of publications and research on the subject in Russian [see, for example, 19; 20—22], the EC analysis has not received proper development in the country yet. The Russian works on the economic complexity of regions use the methodology developed for the country-level analysis and are thus not applicable at the subnational level. They take into account only international trade flows leaving interregional trade out. They neither investigate the shift towards more complex products nor provide any justification for the selected industry priorities. In this regard, a comparison of the results obtained in this research and earlier studies is not possible due to significant methodological differences.

The main difficulty of applying the EC approach to regional studies, which largely explains the low interest among not only Russian but also international researchers, is its poorly developed methodology for subnational analysis. That the methodology does not incorporate services and that trade data may not reflect the actual value-added of final exports due to geographically dispersed production constitute significant drawbacks of the EC approach. Fragmentation of global value chains further distorts the picture, so an assembly industry will significantly increase the complexity of an export portfolio [9].

Despite the ongoing development of the approach, there are still no theoretical works on the methodology for measuring subnational economic complexity. The scope is limited to a few empirical studies at the regional level of individual countries [8]. The most significant and interesting works on economic complexity analysis at subnational level include those on Spain [23], Brazil [24]⁵, Australia [25; 26], China [27], USA [28], Eastern European countries [29].

² A structural hole is a sector that is currently absent in the economy, but if it existed it would connect two or more existing sectors. An example is the drone service sector serving both the agricultural and mining sectors.

³ *The Atlas of Economic Complexity*. URL: <http://atlas.cid.harvard.edu> (access date: 10.10.2019).

⁴ <https://atlas.media.mit.edu> — The Observatory of Economic Complexity.

⁵ There was an Economic Complexity resource created within its framework: DataViva — <http://dataviva.info>.

The conducted theoretical review indicates the relevance of measuring sub-national economic complexity. The importance of developing the methodology stems from the approach's significance for the development of economic systems (at micro-, meso, macro-levels), and the need to design special measures to support the development of existing and the emergence of new productions, industries, sectors in the context of the new value-creation paradigm. Providing a favourable environment for new export- and growth-oriented firms (start-ups or spin-outs) grounded in emerging and converging technologies is of particular importance.

Methodology and software for subnational economic complexity analysis

The accuracy of measuring the economic complexity of an economy (of a country, state, region, etc.) depends substantially on the quality and completeness of the source data, as well as on the assessment methods and algorithms chosen by the researchers. Therefore, the methodology and software for the EC analysis at the subnational level developed within the framework of this study has some specific features and is based on the following provisions.

1. Choosing between global and national product spaces in assessing the regional economic complexity.

When it comes to Russian regions, some studies consider the global export space, while earlier works assess export diversity through the national product space. International studies assess regional economic complexity not only taking into account the region's position in the global product space but also using various databases characterizing intra-national trade flows to analyze its interactions with other regions of the country or with the rest of the country as a whole. This study considers the economy of the region as a separate statistical unit in the global and national product spaces. Therefore, it takes into account two types of trade flows: a) international export and import and b) inter-regional export and import.

2. Selecting available sources of international trade statistics for measuring subnational economic complexity.

There are several sources of international trade data traditionally used for this type of analysis: UN Comtrade, BACI, Atlas of Economic Complexity, Center for International Data,⁶ etc. However, there are numerous examples of using alternative data sources. For instance, patent and trademark databases, distributed global network of R&D centres, input-output tables. Conventional supplementary sources of information include customs export and import declarations, business registers, transport and logistics flows, etc.

This study relies on the data presented in the Atlas of Economic Complexity of Harvard University. As, firstly, they have already been adjusted to measure eco-

⁶ The Center for International Data. URL: <https://cid.econ.ucdavis.edu> (access date: 10.10.2019).

conomic complexity. Secondly, they include the latest relevant information (2017). Thirdly, they are presented in HS classification corresponding to the EAEU Commodity Nomenclature of Foreign Economic Activity used to register international trade in Russia.

3. Evaluating the scope and quality of national and regional sources of international trade statistics, the level of disaggregation and relevance to world trade statistics databases.

The problem with data sources is twofold: 1) the availability of regional customs statistics on all commodity items at the HS 4-or 6-digit level, and 2) refinement of data (accounting for transit flows, non-coincident producing and exporting regions, the balance of trade by exporting and importing countries, etc.). For this reason, the research relies on customs statistics providing detailed international trade data for regions (see, for example, IAS “Customs” by Expert-FEA; IAS “Mosaic”, by NeoStatis; Customs statistics of the Russian Federation by Monitoring-FEA, etc.).

4. Accounting for inter-regional trade flows at the subnational level.

Most often, researchers do not include inter-regional trade flows citing the lack of such information in open sources or the difficulty of collecting it [19]. There are also issues around the level of disaggregation of international trade data. An even more significant problem is considered to be the difference between competition in the national and international markets. Researchers believe that for this reason a part of a region’s exports, including interregional trade flows, reflects “... import substitution and the result of lobbying efforts” [30, p. 33], while the analysis of economic complexity is replaced by measuring the industrial complexity of a region’s economy. This is often underpinned by the fact that the volume and structure of inter-regional trade in Russia are largely explained by the peculiarities of the spatial distribution of manufacturing in the Soviet period and can hardly be considered a reflection of market patterns in the formation of regional comparative advantage [31].

However, accounting for interregional (intranational) trade flows is indispensable for the economic complexity analysis, since value creation potential and identification of key areas for economic diversification depend not only on the complexity of internationally traded products but also on the complexity of products traded intra-nationally. The analysis of interregional trade allows for assessing any region’s capacity to increase the output of complex products it exports within the country and to include them into its international export portfolio. The proposed methodological approach is discussed below.

The sources of the Kaliningrad region’s interregional trade statistics include the Federal Customs Service of the Russian Federation, Kaliningrad Regional Customs, Rosstat and Kaliningradstat (national and regional statistics authorities respectively). These data sources differ in their completeness and coverage of regional trade flows. Moreover, they are often incompatible due to the difference in

classification systems used. Therefore the creation of a unified database posed a methodological problem. To resolve the issue, the authors developed correspondence tables and HS-OKPD keys allowing to combine the data from several sources. The tables also applied the unique algorithms to “clean” the information from data on transit and customs procedures not related to the movement of locally produced goods.

5. Choosing between the linear method of measuring complexity, The Method of Reflections (MR) [1], or the non-linear method, The Fitness-Complexity Method (FCM) [31], as well as their derived metrics and modifications that have emerged in recent years.

The methods differ in the accuracy of medium- and long-term forecasts, as well in ranking of products and/or countries. At the same time, according to recent studies [33] the differences are insignificant. Therefore, the authors of the article refined the publicly available basic algorithms of Harvard University based on The Method of Reflections.

The result was the procedure for measuring subnational economic complexity presented in Fig. 1.

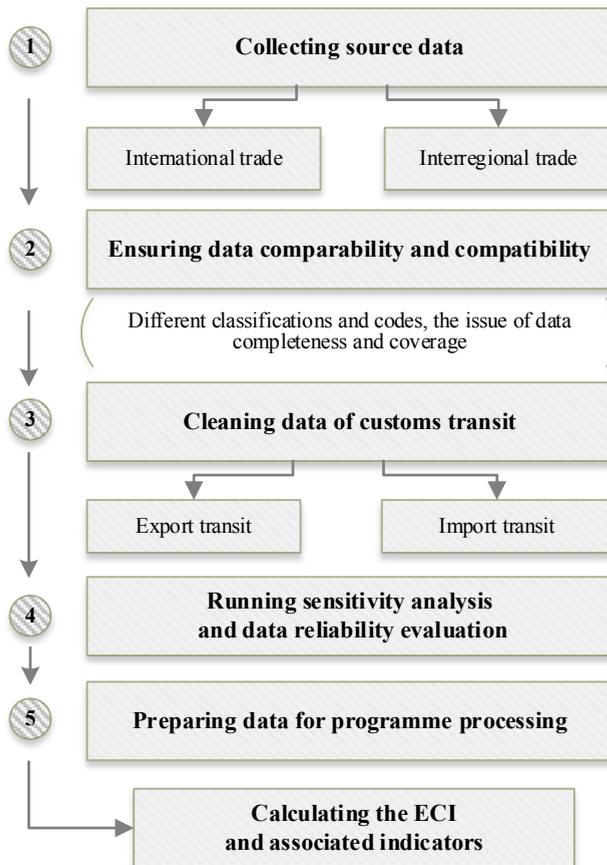


Fig. 1. Algorithm for measuring economic complexity at the regional level

However, methodologically, measuring the economic complexity of the Kaliningrad region needs to reflect the region's trade flows in the global product space. This implies the integration of its international and interregional trade data into the original global trade database (Fig. 2):

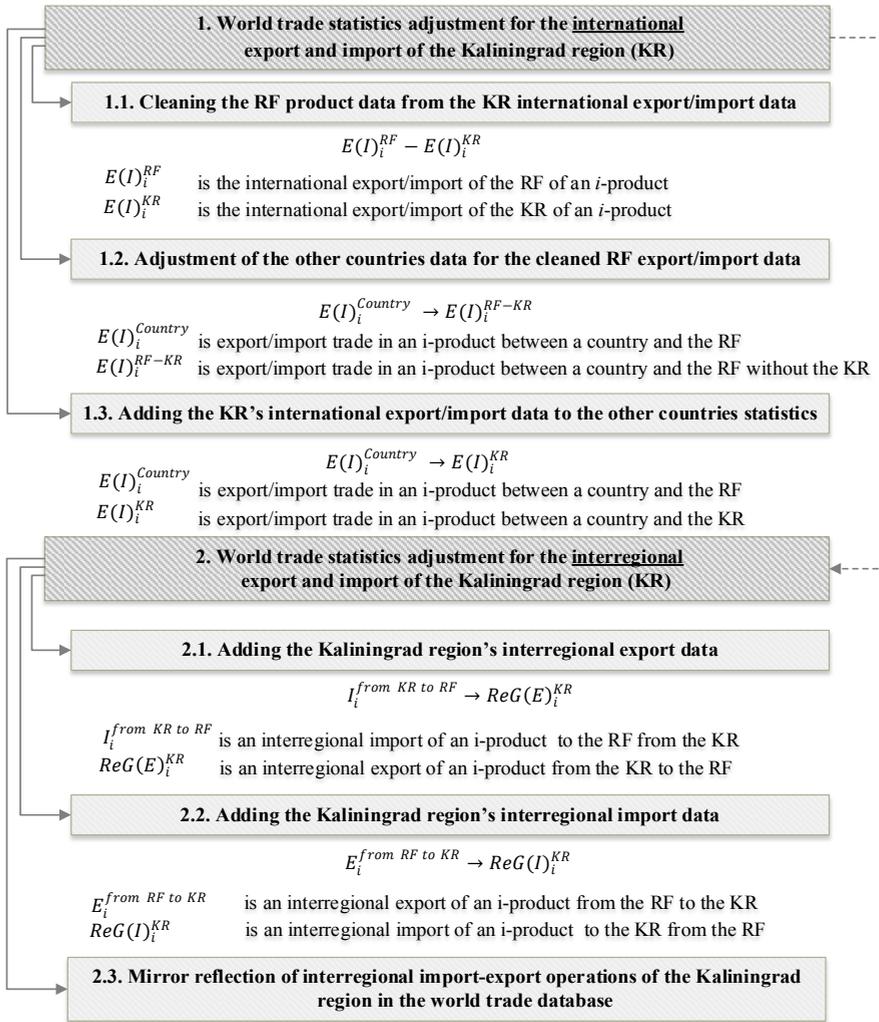


Fig. 2. Algorithm for the inclusion of international and interregional trade flows of the Kaliningrad region into the world trade statistics database

Note: KR — Kaliningrad region.

1. The Kaliningrad region's international trade flows (with every country and on every product) are added to the world trade statistics (at the level of 4 or 6 digits HS-TN FEA). Given that the information is mirrored, the adjustment is carried out both for export and import.

2. Since the region's trade flows were initially included into the RF's export-import operations, it is necessary to "clean" the national data from the Kaliningrad's international export/import volumes (for every country and on every product). In this study, all the product categories for Russia by countries have been adjusted for the Kaliningrad region's import and export volume.

3. The Kaliningrad region's interregional export and import (its trade with the rest of the country, not with its separate regions) are included into the world trade database. This technical solution allows for measuring the prospects of expanding the region's international export portfolio with traded products interregionally.

Special software has been developed to measure the economic complexity at the subnational level. It helped resolve two practical issues: 1) processing of the source export and import databases to measure economic complexity; 2) processing of the auxiliary data on the source export and import databases. There was yet another reason: refinement of Harvard University's downloadable software to correct errors associated with the density calculation.

Codes are open and freely available at: https://github.com/hydrophis-spiralis/regional_economics_complexity.

Analysis of the economic complexity of the Kaliningrad region

The methodology described allowed for analysing the economic complexity of the Kaliningrad region for the period of 2015—2017. The analysed database includes global (1221 product categories), the region's international (743 categories) and region's intranational trade statistics (1028 categories) presented at 4-digit level (HS-code). The calculations are done in volume (tons) and value (US dollars) terms. The results of calculations for 2017 are provided below as an example.

Changing geopolitical situation and growing external threats and risks, as well as the long-term import dependence of the Kaliningrad region's economy determine the relevance of the development of existing and new productive capabilities.

This section presents some results of the analysis of the economic complexity of the Kaliningrad region conducted using the methodology and software developed by a scientific group including the authors of the article. Pilot calculations were carried out for 2017, the period of the latest available global trade statistics.

Figure 3 shows the Product Complexity Index (PCI) for different categories of products (in the HS classification).

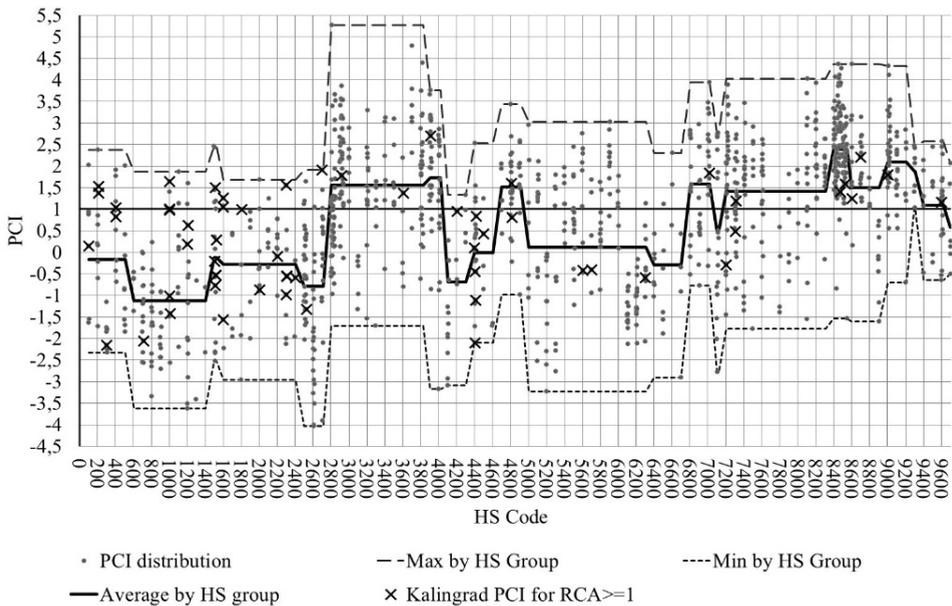


Fig. 3. PCI for each HS product categories in the Kaliningrad region

Note: The letters at the bottom of the graph indicate HS-groups (the codes of the EAEU Commodity Nomenclature of Foreign Economic Activity are indicated in brackets). Groups are delineated by a vertical dashed line as follows: A = live animals; animal products (01–05); B = vegetable products (06–14); C = fats and oils (15); D = prepared foodstuffs and tobacco (16–24); E = mineral products (25–27); F = products of chemical and allied industries (28–38); G = plastics, rubbers (39–40); H = raw hides, skins, leather, and furs (41–43); I = wood, cork, straw (Groups 44–46); J = wood pulp, paper or paperboard (47–49); K = textiles and textile articles (50–63); L = footwear, headgear, umbrellas, sun umbrellas (64–67); M = articles of stone, plaster, cement, asbestos, mica, ceramic products, glass and glassware (68–70); N = natural or cultured pearls, precious or semi-precious stones, precious metals, metals clad with precious metal and articles thereof (71); with the exception of: O = Base metals and products from them (72–83); P = machinery and mechanical appliances, electrical equipment (84–85); Q = vehicles, aircraft, vessels (86–89); R = optical, photographic, cinematographic, measuring, checking, precision, medical or surgical instruments and apparatus (90–92); S = arms and ammunition; parts and accessories thereof (93); T = miscellaneous manufactured articles (94–96); V = works of art, collector's pieces and antiques (97).

It is clear that the region should strive to produce goods in those categories where the average PCI is above 1. These are (in order of decreasing PCI): (1) machinery and mechanical appliances; electrical equipment (group 84–85, average PCI=2.4); (2) optical, photographic, cinematographic, measuring, checking, precision, medical or surgical instruments and apparatus; clocks and watches; musical instruments (group 90–92, average PCI=2.1); (3) plastics and rubber (group 39–40, average PCI=1.7); (4) articles of stone, plaster, cement, asbestos, mica

or similar materials; ceramic products; glass and glassware (group 68–70, average PCI=1.6); (5) products of the chemical or allied industries (group 28–38, average PCI=1.5); (6) pulp of wood or of other fibrous cellulosic material; paper or paperboard (group 47–49, average PCI=1.5); (7) vehicles, aircraft, vessels (group 86–89, average PCI=1.5); (8) base metals and articles thereof (group 72–83, average PCI=1.4); (9) miscellaneous manufactured articles (group 94–96, average PCI=1.1).

The average export volume-weighted PCI for these products (with comparative advantage ($RCA > 1$)) is 1.79, while the export volume-weighted PCI for all Kaliningrad's products is 1.40

Nevertheless, there is no correlation between PCI and export volume ($R^2 = 0.001$). The result is solely due to a very uneven export portfolio with 60% of the export value coming from one product category with the PCI of 2.2: Motor cars and other motor vehicles <...> including station wagons and racing cars. Table 1 shows the categories that make up 80% of Kaliningrad's export portfolio.

Table 1

Products comprising 80% of the Kaliningrad export portfolio

Share of total exports, %	Product Category	Cumulative share of exports, %
59.74	Motor cars and other motor vehicles; principally designed for the transport of persons, including station wagons and racing cars	59.74
5.61	Soya-bean oil and its fractions; whether or not refined, but not chemically modified	65.35
3.84	Prepared or preserved meat, meat offal or blood	69.18
3.18	Prepared or preserved fish; caviar and caviar substitutes prepared from fish eggs	72.36
2.22	Wheat and meslin	74.58
2.14	Monitors and projectors, not incorporating television reception apparatus; reception apparatus for television, whether or not incorporating radio-broadcast receivers or sound or video recording or reproducing apparatus	76.72
2.11	Oil-cake and other solid residues; whether or not ground or in the form of pellets, resulting from the extraction of soya-bean oil	78.83
2.04	Ethyl alcohol, undenatured; of an alcoholic strength by volume of less than 80% volume; spirits, liqueurs and other spirituous beverages	80.87

Looking closer at the product portfolio of Kaliningrad we can identify a set of key product categories. This can be done by finding product groups in which Kaliningrad holds a revealed comparative advantage (RCA) and plotting them

against the share of the implied capability density (ICD)⁷. The higher the capability density, the more opportunities for the production of more complex products. For the Kaliningrad region, the analysis revealed that the minimum level of ICD required to develop successful export products is only 4.6%, this is quite low comparing to the other territories (Fig. 4).

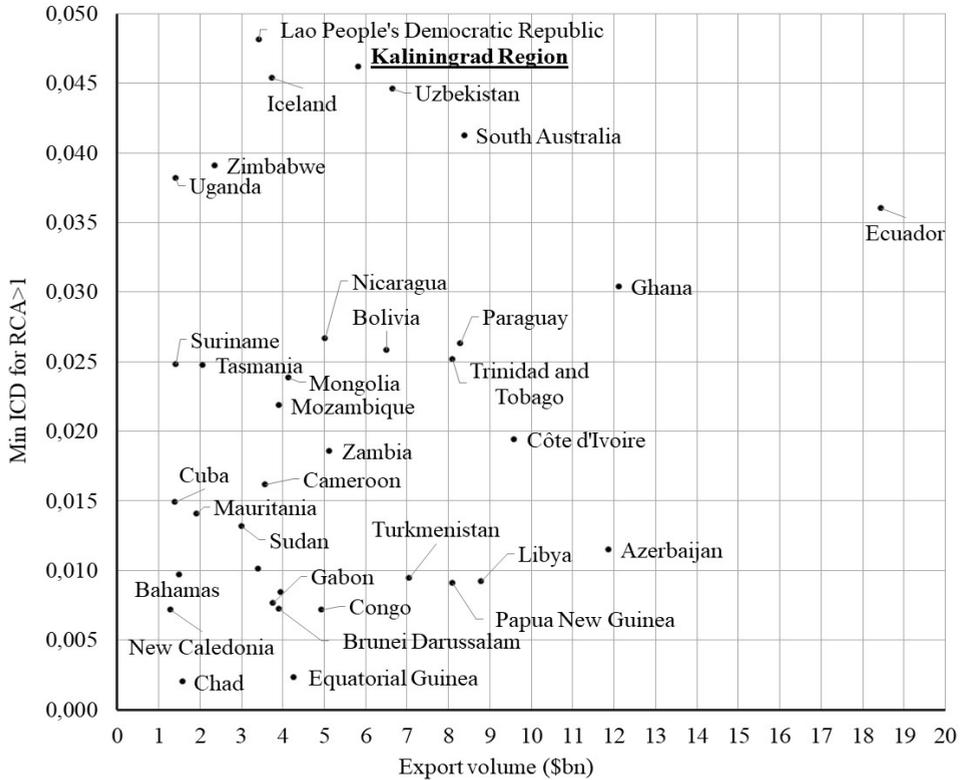


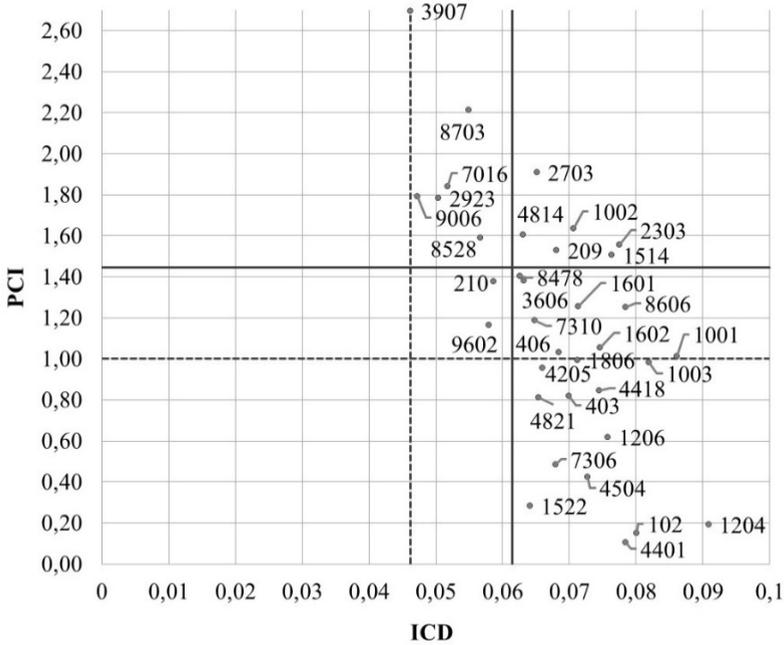
Fig. 4. ICD plotted against total exports for different countries (fragment)

Source: Atlas of economic complexity and authors' calculations

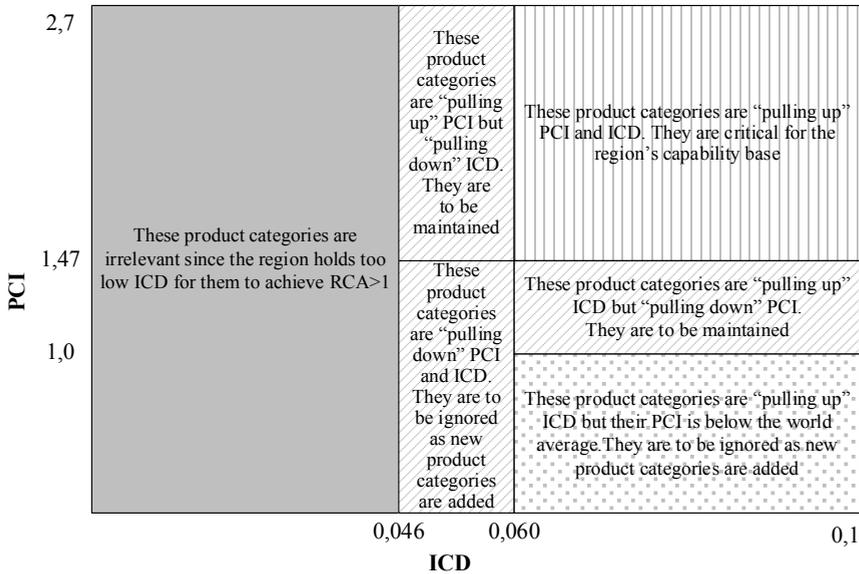
This is an indication that the capability base in the Kaliningrad region is too narrow and too shallow. This means (and empirically confirms) that regional companies operating in higher PCI product categories are dependent on transferred, imported or licensed capabilities from a parent company or from third parties external to the economy.

Another conclusion is that local sub-suppliers to these firms provide non-critical products and services, and are substitutable. The higher the PCI and the lower the ICD (Fig. 5), the larger the risk that the economy will lose this product category, unless it is built around an endowment resource, like a raw material with high transportation costs that is difficult to source on the open market or unless there are inducements provided e. g. tax relief.

⁷ Authors' note: the concept of implied capability density (ICD) is used, since the density is calculated only for products with RCA > 1. The calculation of ICD algebraically corresponds to that of density.



a) calculated values for the Kaliningrad region (part)



b) interpretation of the different spaces

Fig. 5. The part of Kaliningrad's product space with $RCA \geq 1$ plotted on the PCI and ICD dimensions

Note: lines indicate export volume-weighted average PCI and ICD values. HS codes are used to identify product categories⁸.

⁸ See Atlas of Economic Complexity — <https://dataverse.harvard.edu/dataverse/atlas>.

Accordingly, in order to increase the region's competitiveness, the ICD should be approximately twice the current value. To interpret the fragment and product categories in Fig. 5a, it is important to compare them to the zones in Fig. 5b limited by the values on the PCI and ICD scales. Figures 5a and 5b are alike. This paper does not consider the development of specific capabilities required for the production of more complex products, as it is a subject of separate research based on the results of the EC analysis.

The question now becomes if there are any product categories that could be produced in the Kaliningrad region that would increase the average PCI. Fig. 6 shows the result of this analysis. It presents Kaliningrad's product opportunity space plotted on the COG, PCI and ICD dimensions. The dots on the graphs are product categories (HS-4). Quadrants I, II and III differ in the level of complexity of products, the prospects and benefits of increasing their complexity, and priorities for the region.

As Fig. 6 shows, there are no product categories produced in the world that, if produced in Kaliningrad, would have any major positive impact on the absorptive and adaptive capabilities of the Kaliningrad region's existing product space. The main reason for that is the region's narrow and shallow capability base reflected in the low ICD and highly concentrated export portfolio.

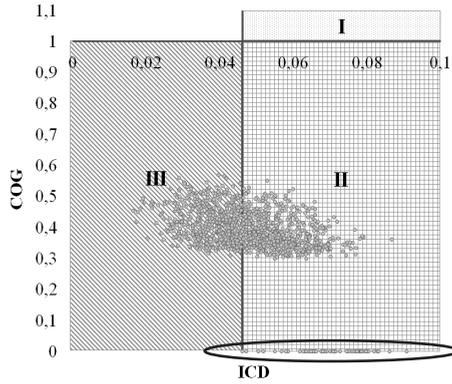
Thus, the results of the study indicate that the current situation in the region in terms of product complexity, as well as its competitiveness and opportunity gain in world trade, is unsatisfactory. Currently, the region produces a limited number of products of low complexity, and the COG is critically low as for all types of products its value is less than 1 (Fig. 6a and b).

However, this does not mean that the desired outcome cannot be achieved, just that it will take time and will require many parallel activity streams.

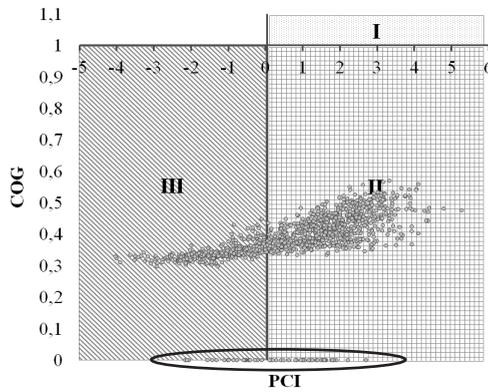
Thus, it is advisable to consider product categories that would provide at least some benefits for the economy if they are successfully (with $RCA > 1$) produced and exported in volume (Table 2).

Based on calculations, Table 2 includes only those groups of international product classification that have $COG > 0.5$, $ICD > 0.046$ and $PCI > 1$. These criteria allow identifying product categories that, if increased, can contribute to the growth of the regional economic complexity, including through the development of related industries (Fig. 5b). Unfortunately, out of the total number of analyzed HS-4 categories, only 14 meet these criteria, and only three of them are presently not produced in the Kaliningrad region.

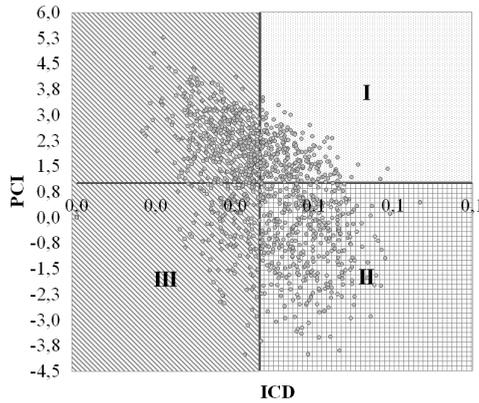
This means that the region would benefit most if, firstly, the competitiveness of the 11 product categories that are already produced is increased so that the corresponding RCA values become larger than one.



a) product opportunity space plotted on the COG and ICD dimensions



b) product opportunity space plotted on the COG and PCI dimensions



c) product opportunity space plotted on the PCI and ICD

Fig. 6. Opportunity space for more complex products

Note: *I* — product categories to focus on; *II* — minor benefits only since COG is less than 1; *III* — there are not enough capabilities for these categories and/or their production will not contribute to the increased absorptive and adaptive capacity of the region. Products in the oval are already produced in the region and their increase in the export portfolio will not affect the absorptive capacity of the economy.

Table 2

**Ranking of the attractiveness of the initial product category focus
for the Kaliningrad region**

Attractiveness*	HS Code	Product Category Product Items	RCA	Export value multiplier to achieve RCA>1
0.7203	8416	Furnace burners for liquid fuel, for pulverised solid fuel or for gas; mechanical grates, mechanical ash dischargers and similar appliances	0.0000	—
0.7177	7326	Iron or steel; articles, n.e.c. in chapter 73	0.0839	12
0.7069	8530	Electrical signalling, safety or traffic control equipment for railways, tramways, roads, inland waterways, parking facilities, port installations or airfields	0.0000	—
0.7046	8607	Railway or tramway locomotives or rolling stock; parts thereof	0.0006	1703
0.7028	8412	Engines and motors; n.e.c. (e.g. reaction engines, hydraulic power engines, pneumatic power engines)	0.8634	1.16
0.6945	8428	Lifting, handling, loading or unloading machinery; n.e.c. in heading no. 8425, 8426 or 8427 (e.g. lifts, escalators, conveyors, teleferics)	0,0004	2406
0.6942	7616	Aluminium; articles n.e.c. in chapter 76	0.1818	5
0.6919	7226	Alloy steel flat-rolled products, of a width of less than 600mm	0.0000	—
0.6858	8516	Electric water, space, soil heaters; electro-thermic hair-dressing apparatus; hand dryers, irons; electro-thermic appliances for domestic purposes; electro heating resistors, not of heading no. 8545>	0.0008	1206
0.6848	9032	Regulating or controlling instruments and apparatus; automatic type	0.0038	263
0.6811	8538	Electrical apparatus; parts suitable for use solely or principally with the apparatus of heading no. 8535, 8536 and 8537	0.0192	52
0.6805	8708	Motor vehicles; parts and accessories, of heading no. 8701 to 8705	0.0010	1036
0.6795	4008	Tubes, pipes and hoses, of vulcanised rubber (other than hard rubber), with or without their fittings (e.g. joints, elbows, flanges)	0.0507	20
0.6640	8441	Machines; for making up paper pulp, paper or paperboard, including cutting machines of all kinds	0.0520	19

Note: * Attractiveness is calculated through the weighted average ratios of PCI, COG and ICD for any product category to their respective maximum value for all products of the Kaliningrad region.

This means that the export value would have to be increased by between 16% for HS category 8412 and a factor of 2406 (!) for HS category 8428. Most of these changes are unrealistic in the short term.

Secondly, the production of HS categories 8416, 8530 and 7226 should be commenced within the region and achieve the $RCA > 1$. This may not be possible in the short term but may be possible in niches within the HS category and over time. It is important to note that before any implementation commences a detailed understanding of the companies active in these sectors must be gained so that appropriate policy interventions and priorities can be identified.

As the economy broadens and deepens its capability base, its absorptive and adaptive capability increases and thereby increases the portfolio of potential product categories that could be produced and exported as well as the benefits that these new products would provide to the economy. The logic is that the more you have the more you can get, and the more you have the easier it is to develop in new products that have not been made elsewhere yet and that are grounded in emerging and converging technologies.

Conclusions

The study allows us to draw several conclusions.

The ongoing structural changes in the economy are the consequence of the value creation paradigm shift resulting from technological development and affecting the micro, meso and macro levels. Economic complexity analysis is becoming increasingly important in identifying key areas for ensuring economic development and future growth, while maintaining and/or increasing the competitiveness of the territory. Assessing local productive capability base of a particular territory allows for selecting industrial strategies according to the criterion of achieving a comparative advantage due to the production of more complex products.

Measuring subnational economic complexity is currently limited due to the underdeveloped methodology. Addressing this issue, the IKBFU research group including the authors of the article, developed methodology and software for economic complexity analysis at the regional level. It was tested on the exclave Kaliningrad region. Specially developed algorithms allowed the authors to create a unified database combining the information (2017) on international and interregional cargo flows from several resources (customs and statistical authorities). It was “cleaned” of transit data, while the Kaliningrad

region's trade data were added to the global trade statistics. The study included the calculation of economic complexity indicators and their subsequent analysis.

It has been established that at the moment, the Kaliningrad region has a narrow and shallow capability base resulting in a limited absorptive and adaptive capacity. The indication of this is the low complexity (PCI) of products already manufactured in the region, as well as the low capability density (ICD). This means that, in the product space, new, more sophisticated products are very distant from those already presented in Kaliningrad's export portfolio. Consequently, the amount of capabilities available in the region is not sufficient to switch to more complex products just now. The transition will take a long time and will require comprehensive measures at different levels. The conclusion stems from the low COI and COG values for new export products, as well as the results of interpretation and analysis of different parts of the product space. There are product categories that would provide minor benefits to the economy of the Kaliningrad region, provided they were successfully produced and exported (with $RCA > 1$). However, their analysis revealed that this will require a dramatic increase in export volume which may only be possible in specific niches within the identified HS groups over time.

The findings of the analysis of the economic complexity of the Kaliningrad region demonstrates its limited absorptive and adaptive capacity leading to the following industrial policy recommendations.

It is imperative that the Kaliningrad region does not lose any of the product categories that make up 80% of the region's export value. This means that there needs to be a continuous dialogue between regional and local government, on the one side, and the companies operating in these product categories, on the other, around how to ensure the continued and strengthened international competitiveness of these companies in a world changing to a more digital and low resource footprint value-creation logic. This dialogue could be informed by technology roadmaps, developed together with the firms, providing a basis for strategic directions in R&D, innovation and consumer/customer acceptance.

Secondly, it is essential to develop and export services linked to these product categories (like intellectual property development sale and licensing, financial services and other business services including architecture, engineering, design, consultancy services etc. as well as software, information & communication technologies). Such services are as, if not more, complex,

as economically complex products and hence are major contributors to the absorptive and adaptive capacity of the economy. There are two aspects to this: the servitization of the manufacturing firm itself and the development of specialized service providers.

Thirdly, a policy of attracting companies whose capability would broaden and deepen the region's capability base should be implemented with vigour. Encouragement of new export- and growth-oriented firms (start-ups or spin-outs) grounded in emerging and converging technologies and bringing customers to the region should be a key policy. This will not only require an efficient start-up system around universities but also the activation of new and related value chains.

The results obtained in the course of this study can be used by the regional government to underpin the development strategy and a system of consistent interrelated actions and decisions. They will also be used in further research on structural holes and technological roadmapping in accordance with sectoral strategies and changes in the production structure of the region.

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MANAGERIAL COMPETENCIES REQUIRED: A COMPARATIVE ANALYSIS OF MOSCOW AND THE KALININGRAD REGION

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In a post-industrial society, social processes are dynamic, complex, and diverse. Social interaction management is turning into a competency in its own right. This competency is shaped by many factors, which are affected by the institutional setup as well as the individual features and localisation of the subject and object of management. Investigating and developing the managerial competencies that are necessary for the successful operation of society is a major trend in contemporary science. Studies in the area require an interdisciplinary approach.

The aim of this research is to identify the managerial competencies that are crucial for the adequate and stable functioning of regional administration systems. An analysis of the components of managerial competencies and their factors is carried out to identify their status in the centre of an exclave region (Kaliningrad) and in Moscow.

The study draws on the authors' frame-based methodology (Rospatent No. 2012660535), which makes it possible to obtain objective empirical information on competency factors and their types.

Sought-after competencies and their indicative structures were identified for each region. The findings are not only of theoretical importance but are well adapted for practical purposes, particularly, for advanced training of managers and teaching related university disciplines.

Keywords:

management, exclave region, administration, leadership, leadership management, managerial competency

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Introduction

In modern society, management, which is the most crucial resource for the comprehensive development of society, is becoming one of the central issues of social knowledge. Nowadays, management science acquires multidisciplinary character — for making the knowledge more objective, applying it more efficiently, there is a need to use achievements obtained in different spheres of knowledge.

In sociology, management has been an object of study for a long time. It is considered in detail within the framework of various schools and directions at multiple levels of social organization (macro-, meso- and micro-level). Nevertheless, the relevance of the study of managerial practices is not only not decreasing, but, on the contrary, continues to grow. The acceleration of the pace of social change, which is characteristic of the post-industrialist, postmodern era [1], and the almost sweeping informatization of society [2], do not reduce the urgent need for an in-depth study of managerial realities and for theoretical efforts to comprehend this sphere of social life. Moreover, the scientific development of managerial practices is not just a kind of tribute to time, or an attempt to pursue fashionable research intentions. With its focus on managerial activity, the whole system of influence on social processes is shaped by the urgent need to strengthen the applied character of modern science.

When studying national management practices, it is essential to understand the specifics of Russia fully. In this case, we are talking not only about the size of the territory, the multi-ethnic and multi-confessional composition of the population, various cultural determinants and mental features but also about its complex regional structure. In particular, we are talking about the exclave of the Kaliningrad region within the Russian Federation.

The location of this westernmost region of Russia is unique not only in terms of its current geo-political position but also in terms of history, culture and the resettlement character of the regional social development. This determines the need for constant monitoring, including the use of empirical sociological research, of all processes occurring in the region, including management practices. This fact is also important because it is possible to record the explicit trends of peculiar managerial multiculturalism, which is conditioned by the traditions of governance characteristic of the Soviet period and the established post-Soviet practices. Another condition is the need to consider their managerial specifics in the interaction with Western partners (Poland, Lithuania).

Although the Kaliningrad region is an exclave territory of the Russian Federation, it has to, like all other regions, implement the standard logic of development and managerial decision-making practices set by the federal authorities. In our opinion, the centre and its management structures have been, and still are, a kind of benchmark for the implementation of the best management solutions. These conditions determined the choice of the above-mentioned subjects in Russia for our study.

This issue belongs to the “managerial competence” sphere. Managerial competence is commonly defined as the level of communicative and cognitive skills and perceptual readiness (perception), availability of specific skills, including attention skills, as well as moral attitudes to the adequate interpretation of semantic information [3, p. 404].

Management competence is a rather capacious concept, which includes a set of social and psychological characteristics of a subject and an object of management. All these characteristics brought together allow us to speak about the correlation of management expectations and, as a consequence, the possibility to build effective management interactions, which to some extent implies the unification of the management process. Unification of the management process contributes to developing a homogeneous management style of thinking, allows optimizing the decision-making process and making these decisions efficient to the final beneficiary. At the same time, the sphere of such unification (state and municipal administration bodies, commercial or educational structures, etc.), in our opinion, is not a determining factor.

Methodology of research

The “Management Decision Support System” methodology was used as a research tool [4]. The research methodology is polyparadigmatic, which makes it possible not only to describe the micro-level of managerial interactions but also to evaluate managerial competences in the areas under research. At the same time, the authors take the following concepts as a background: situational approach [5], symbolic interactivity [6, pp. 89—157], and activity approach [7, pp. 294—306]. The situational approach makes it possible to consider direct contacts between the subject and the object of the managerial activity [8, pp. 22—38]. Symbolic interactionism allows analyzing the content of a managerial interactions situation when it comes to some certain managerial content [9]. The activity approach determines the character of the evaluated cases in the process of interaction of the subject and the object of management, namely, situations of actions of the subject and the object of management, their choice of a solution [10].

The logic of the research set is built upon the frame structure. The frame structure settles knowledge during the analysis, in our case, during the study of management activity. As a result, a complete stereotype of the concept (“managerial competence”) is formed [11] which results in managerial thinking.

The structure of research tools is built on “leadership”, “leadership” and “leadership management” categories, which are described in indicative terms. In this case, each indicator has its own operational scope (see Table 1 [12]).

Table 1

Indicative description of managerial competencies

Managerial competences	Indicators and their operational scope
Management	<p>Self-discipline — the ability to plan your actions to increase efficiency.</p> <p>Discipline — strict adherence to the established rules of organizational interaction.</p> <p>Execution — timely execution of organizational tasks in compliance with regulations and norms.</p> <p>Hard work is a personal characteristic of a manager, indicating his subjective position to work, manifested in the quantity and high quality of results.</p> <p>Fairness — the presence of criteria or a set of values in the personal plan of the manager, which are necessary to ensure mutual informal actions.</p> <p>Ability to innovate — the use in management activities of advanced experience and technologies necessary to achieve organizational goals.</p> <p>Strategic thinking — reflection in the activities of the unit of the objectives of the organization as a whole.</p> <p>Organizational talent — the ability to plan the actions of employees to increase efficiency.</p> <p>Correctness — moderate degree of status differences expressed in the course of organizational interactions in the management process.</p> <p>Requirement — consistent actions aimed at stimulating employees' work activity.</p> <p>Responsibility — the ability to take care of the quality of work results.</p> <p>Perseverance — consistent control of employees' activity in the course of achieving organizational goals.</p> <p>Pragmatism — the ability to appreciate the work qualities of employees above their personal and personal characteristics.</p> <p>Determination — individual quality of the manager, consisting of the ability to perform management actions in a timely and independent manner.</p>

The end of Table 1

Leadership	<p>Discipline — strict adherence to the established rules of organizational interaction.</p> <p>Adaptivity — the ability to relate organizational goals to the group and individual goals.</p> <p>Collectivism — demonstration of belonging to the group norms of realization of interactions.</p> <p>Compatibility — high level of coherence in the implementation of organizational goals.</p> <p>Purposefulness — the ability to achieve organizational goals.</p> <p>Tolerance — a loyal attitude to individual characteristics of group members.</p> <p>Moral stability, including emotional and intellectual abilities — the presence of a socially approved set of norms and values.</p>
Leadership management	<p>Creative approach to work — the ability to find non-standard options that provide the most optimal solution to current organizational challenges.</p> <p>Rhetoricity — the manager has communication skills that allow him to motivate employees.</p> <p>Alertness — versatile control of organizational interactions, which includes attention to the goals of the organization, the goals of the group (informal aspect), the goals of the system as a whole.</p> <p>Vigilance, as a manifestation of emotional intelligence, is an opportunity to find logically connected, emotionally expressed arguments for the formation of managerial decisions.</p> <p>Collectivism is a demonstration of belonging to group norms of interaction.</p>

The sample of the survey was made up of respondents holding managerial and non-managerial positions in the places where the research idea is launched (Kaliningrad and Moscow), working in various organizational structures (state and municipal administration bodies, commercial and educational organizations). The number of respondents is 186 in Kaliningrad and 764 in Moscow. The sample is quota-based, structured by gender, age and status of respondents in the organization (head/subordinate). The quantitative indicators obtained correspond to V.I. Paniotto's tables; the actual error does not exceed 4% [13, pp. 167–181].

Management competence factors, comparison of regional practices

Different methods of mathematical statistics were used to compare regional practices related to specific managerial competencies. The factor analysis allowed studying the aspect of managerial competencies that concentrate around such phenomena as management, leadership and leadership management. The primary component method was used to identify factors [14, p. 82]. At the same time, we took the concept of a simple structure of L. Thurstone as a background for the study, which implies levelling the value of g-factor (leading attribute), proposed by Ch. Spearman, and opens the possibility of comparing empirical information on individual representative features of the structure under study [15, p. 529–554]. H. Kaiser's eigenvalue criterion was used to allocate the dispersion equivalent to the dispersion of one variable [16, pp. 97–106]. The numerical indicators of the analysis are presented in Table 2.

Table 2

**Numerical indicators based on the results of factor analysis
of necessary management competencies in the regions understudy**

Indicator Region	Management	Leadership	Leadership management
Moscow	1,15	1,35	1,24
Kaliningrad	1,43	1,19	1,12

Having analyzed the information received, we believe that all the stated necessary management competencies are significant. However, the specifics of management priorities differ in the regions under study. The central differentiating tendency lies in the leading factor influencing the model of behaviour in subject-object managerial interactions. In Moscow, leadership management is ranked first. This managerial competence, based on its indicative description (Table 1), is filled with characteristics related to social and psychological communication.

Though being inclined to regulations inherent in the subjects of the research, the generalized managerial competence implies conscious goal-setting, both at the level of individual and group attitudes. Also, evaluating the leading trend of managerial competence in the region one can trace the demand for teamwork consistency and achievement of organizational goal as criteria for evaluation of management success, as well as tolerance towards individual features of employees (attention to these features, their study, development of methods for the objective assessment of the individual potential).

Special attention within the framework of priority management competences is paid to the moral and ethical set as a component of management competence, according to the empirically identified central trend. Not only a complex social education requires a special managerial gift to be able to install this category into the internal plan of the subordinate's personality, but it also becomes an indicator of social maturity of the subject of management, their readiness to support and accept the organizational moral and ethical intention [17]. The complexity of this process lies in the fact that moral and ethical regulation is the result of the socialization process. A similar individual set already exists in the personal plan of both the leader and the subordinate.

The cognitive dissonance [18] is highly likely in this case, and the mechanism of accepting the platform is complicated. First, the moral and ethical platform should be actualized by the organizational structure itself. Secondly, it should be accepted by the manager (often in modern organizations, the adoption of moral and ethical corporate norms is a criterion for a successful career). Thirdly, ways must be selected to allow subordinates to understand and accept these moral and ethical attitudes. This work focuses more on a personal approach implemented both at the level of the organization as a whole and the level of peer administrative interaction. And, fourthly, such work requires the methods diagnosing the assimilation process of the system of moral attitudes and behaviour norms. Taken together, all of this requires a high level of organizational level of work with the personnel, which not all institutions can afford and which is undoubtedly an important managerial competence of a modern manager.

Central management competence in the exclave region looks somewhat different. Here the leading managerial competence is leadership [19]. In the system of managerial interactions, management is a basic managerial competence, which serves as the basis for more complex forms, such as leadership or leadership management. Considering leadership as a leading managerial competence, we have to recognize it as an evolutionary form, which, if it has its own indicative constructions, has attributes related to leadership. Among such overlapping elements, it is possible to single out regulation as a factor to encourage organizational efficiency and organizational abilities (though this component reflects the formalized aspect of managerial work). There are characteristics conditionally corresponding to leadership: willingness to maintain informal relations; reduced expression of status differences (it is still not tolerance, but rather an attempt to build comfortable subject-object managerial dialogue); ability to appreciate professional knowledge, skills and expertise of employees more than their personal characteristics (certain administrative pragmatism).

Most of the indicative characteristics of the exclave's management competence focus on the personal qualities of the manager himself, which is a leading distinctive feature of basic management competence. Management uses the potential of the leader's personality as a resource; leadership focuses on the synergy of the subject and the object of management.

The set of personal characteristics of a manager is indicative of the following as well: an individual high work ethics (quantity and quality of work performed); readiness to use innovative approaches (experience and technologies) in one's work to achieve organization's goals; persistence in stimulating employees' work activity; control of employees' activity and results of their work; independence in making managerial decisions (within the limits of their powers).

At the same time, it would be wrong to limit the description of managerial competencies to an independent analysis of the central trends. According to the received empirical information, all three management competencies taken for consideration in the research have their typical indicators (Table 2). It means that they are manifested in the system of real management contacts and, are sure to influence the general model of management competence taken for comparison of the regional management practices.

A stark contrast in managerial prerogatives is manifested in the "management/leadership" dyad. We have considered this pattern above. Such managerial competence as leadership management manifests itself differently in the regions of research. At the same time, if a higher value is observed in Moscow, then in Kaliningrad, this value ranks third. In our case, the very phenomenon of managerial competence "leadership management" is a kind of an acmeological value. It is the most challenging social and psychological entity from the practical point of view, which, along with successful managerial practices of management and leadership, brings a new impulse in the situation of managerial interactions with people.

An indicative description of such management competence as leadership management includes a new level of management culture. Such a managerial phenomenon cannot be put into practice if it is shared, understood and applied only by a manager or a subordinate, or declared by the organization as a particular business processes characteristic. Successful management at the leadership management level is possible only if the manager is mentally and professionally ready for implementing such a complex competence, and his subordinates have enough maturity to perceive it adequately. As for organization in general, it is called to support such interactions by all means of organizational culture (norms, values, behavioural attitudes).

The indicators describing managerial competence "leadership management" are not implemented separately from other managerial competencies described by us and taken as a subject of study. Instead, we can consider adding to the existing successful sets of managerial interactions some new relations between the subject and the object of management.

Another administrative resource is the skill of the leader to actualize non-standard strategy, which provides for efficient tackling the challenges which the organization faces. A new quality control system is also of interest. It is within the "leadership management" competence that the control of interactions inside the organization is not seen in the analysis of the cumulative employees' results, but

as the target set which includes the purposes of the organization, the purposes of a group (division), the purposes of the industrial cluster. An important skill of leader management is the ability to provide a comfortable communication environment. Speech is the primary management tool [20], so communication skills necessary for motivating employees and a logical system of reasoning decisions become an essential element in the indicative construction of such complex managerial competence as “leadership management”.

Thus, if we consider the managerial competences as a managerial evolution of sorts when there is a development from simple managerial actions to more complicated ones, we can state that the exclave region tends to overcome the imbalance in managerial preferences. The tendency of transition to a new management practice is fixed on statistically close values describing both “leadership” and “leadership management” (Table 2). This trend can be assessed as a positive one, because positioning changes in the implemented managerial practices as evolutionary, one should not speak about the nature of these changes as an unambiguously defined sequence proceeding from classical principles of evolutionism [21]. In our case, when considering managerial competences, there is a possibility of transition to managerial expertise of a higher order over intermediate stages.

This fact is empirically proven, first, by leadership management in the management practices of the exclave region, and second, by the proximity of the “leadership” and “leadership management” competencies in absolute values (Table 2). For the practical transition to a new format of managerial paradigm, a trigger is required. In modern practice, it is reasonable to use educational technologies as such a resource. Advanced educational technologies make it possible to overcome the imbalance in managerial thinking. And if the Moscow managerial competence reaches the level of leadership management in the traditional evolutionary format, the Kaliningrad managerial model of competence can achieve the same level due to the educational technologies of advanced development [22, pp. 17–24].

Typological models of managerial competencies

The stated administrative competencies defining a dominating orientation of administrative interactions, in a situation of practical application can interfere with the declared indicative architecture. This interference is connected with the fact that the empirical verification of the performed factor analysis scheme determines the attributes as such. Still, in the real situation, we can observe interpenetration of managerial competences, the presence of a more complex combination of indicative characteristics in the leading plan of management activity. In order to establish such regularities and make a more detailed comparison, it is reasonable to identify the leading types of managerial competences in the places where the research concept is localized.

Typological analysis is the optimal algorithm for the mathematical determination of stable combinations of managerial competence features [23, p. 30–37]. Traditionally, in sociology, the method of typological analysis allows determining stable combinations of properties of studied objects. So that the implementation of the declared method corresponds to the accepted procedure, it is necessary to identify the object of typology initially. In the framework of this research, the object of typologization is the management process, which correlates with specific management competencies and indicators describing them. The basis of typologization is the management competence, which enables to carry out management process effectively and represents a common practice of management interactions in the objects under study (Moscow and Kaliningrad). Theoretical aspects of substantiation of typological analysis are reflected in the indicators, shown in Table 1.

Thus, it is possible to identify the leading type of management competence in accordance with regional practices in direct management activities. Social and demographic characteristics of the respondents (gender, age, organizational status) are the attributes that form the types.

The mathematical design of the process of determining stable typological combinations in the research regions was implemented using the principal component method [24]. Moreover, if in the first case, we used the orthogonal rotation, then in the second one, we used the oblique rotation. And while in the first case of processing empirical data, we used the varimax rotation method, in the second one, we relied on a combined method.

Also, the criterion of the fraction of reproducible dispersion was used to determine the number of types. According to the declared model of data processing, the extracted combinations are ranked by the share of determinable dispersion.

As a result, two typological combinations (one per region of study) were selected among the obtained typological combinations, which produced the maximum number of absolute numerical indicators.

Further interpretation of the empirical information allowed identifying and naming the leading types of management competence.

From the list of management competence components offered to the respondents, i.e. experts in the field of management [25–27, pp. 98–117; 28] and which, in our opinion, most accurately reflected the essence of this phenomenon, the Moscow region turned out to select the following ones as the most common. First of all, it is a creative approach to the performance of the duties; rhetorical abilities and logic at actualization of administrative decisions; compliance with regulations; tolerance to individual qualities of employees; high level of the control over the activity of subordinates; vision of strategic purposes of the organization; acceptance of work as a tool for self-development; increased attention to personal and general labour quality.

Respondents of the exclave region identified the following indicators of leading managerial competence: the need for a creative approach to the management

process; communication skills in motivating team members; attention to individual professional differences of subordinates; individual approach to the distribution of labour duties and compensation for labour; high level of control over the work of subordinates; individual employee incentives.

Thus, when correlating the two leading types of managerial competence, we can conclude that the settings of the management subject both in Moscow and Kaliningrad includes a relatively large number of similarities. This fact suggests, firstly, the significant potential for interfacing management competence systems and the similarity of managerial thinking. Secondly, it indicates that competencies can be formed regardless of the geographical distribution, but due to the function in the organization, which is often the background of many classifications in management.

Conclusions

A study of the demanded managerial competencies and their comparative analysis in the exclave and central regions shows that there is a certain difference in approaches to the managerial interactions. These approaches are mainly expressed in the degree of resources used to optimize management in a situation of direct subject-object management relations.

Management resources expressed in competencies, which are described using indicative constructions with unambiguous operationalization of structural elements, have slight deviations. This imbalance is concentrated in the field of taking higher-order motivators [30] as the basis of managerial behaviour. These include awareness of the strategic goals of the organization (both at the level of the leader and the level of subordinates); communicative skills; recognition of the social significance of labour; work culture; high requirements for their own work; managerial innovation (development of managerial knowledge, skills) and operational innovation (efforts made to improve methods, approaches and methods for solving organizational problems).

We would like to emphasize that managerial competence goes beyond the purely qualitative features of the subject of management. The implementation of such complex formats of managerial interactions cannot be successfully applied in practice, provided that the subject of management (manager) has the necessary knowledge, skills and abilities. Subordinates must have a high level of managerial maturity to adequately respond to socially complex options for interactions offered by the manager. This situation once again proves the relevance of modern approaches to the sociology of management: management in current conditions is considered as a subject-object system [31]. The division of role complexes into subject and control object is somewhat arbitrary and serves to fix the process of studying organizational or group statuses nominally.

The analysis showed that the intersections between approaches to the implementation of managerial interactions in Moscow and Kaliningrad are quite signif-

icant. The differences demonstrated by the empirical material testify rather to the process of evolution of managerial practices taking place in a single trend than to different approaches to understanding the management process. They indicate not only the demand for specific competencies, but also the fact that the understanding of how management should be implemented, and the desire to put these managerial models into practice are becoming more and more prominent.

An important focus in our study is given to its instrumental part. Replacing the classical model of a sociological survey with a frame structure has provided us with several advantages and interpretation of demanded managerial competencies. A complex indicative system with extensive operationalization of the components made it possible to level the problem of objectification of empirical information. Evaluating the proposed compositional forms, respondents associated numerical information with its narrative. Thus, we got a detailed picture of managerial thinking [32], which, using methods of mathematical statistics, has developed into managerial competencies.

As a result of the study, we obtained information about the demanded managerial competencies in the places of their localization, carried out a comparative analysis and identified certain trends. The obtained results are, in our opinion, reflect the scientific interest and can be used in practice, in particular, for improving the qualifications of managerial personnel, in teaching a number of disciplines in higher educational institutions.

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