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COASTAL STUDIES

SUSTAINABLE DEVELOPMENT OF COASTAL REGIONS: GEOGRAPHICAL AND GEOPOLITICAL FACTORS AND LIMITATIONS

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Having formed at the end of the 20th century, the concept of spatial development retains its relevance today. Yet, it is associated with a range of problems with its practical implementation and theoretical vindication, especially at a regional level. Attaining sustainable regional development, understood as a steady progress balanced across the economy, social industries and environmental protection, has been deemed impossible without identifying and considering regional development factors, such as geographical and economic-geographical position, environmental conditions and their geographical diversity, natural resource and their location, spatial features of the economy and the settlement structure. Coastal regions are affected by sundry other factors, such as the presence of a seacoast, viewed as a special resource, access to maritime transport and the availability of marine resources, including renewable ones, which are essential for sustainable development. The geopolitical situation of a region and the components of this situation are considered as geopolitical factors. Other limitations include extreme natural processes and events (large waves, tsunamis, typhoons etc.) The article aims to show that an integral geographical system or a combination thereof covering a region should be considered as the most appropriate object for assessment, planning and management of sustainable development, which is based on regional nature management including water and land resources. It is proposed that sustainable development criteria include economic, social and environmental metrics of regional development. Strategic marine and spatial planning and the monitoring of regional environmental management and development are identified as principal tools for attaining and maintaining sustainable development.

Keywords:
water and land region, integrated geosystem, coastal zone, sustainable development, geographical factors, natural resources, geopolitical situation, strategic planning, monitoring

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Introduction

The substantial development paradigm was propounded in the early 1990s, and it rapidly gained currency across the world. Many countries, including Russia, have adopted legal acts and programme documents to stimulate development based on sustainability principles. Yet, the research component of the problem has received little attention, particularly at a regional level. The principles, mechanisms and indicators of sustainable development require a theoretical underpinning. This also holds for its goals and ways to manage and achieve them. The practical implementation of sustainable development lacks a research rationale as well. It is widely accepted today that sustainable development presupposes steady qualitative and quantitative socio-economic increments, qualitative ecological improvements at a national and regional level and balanced development of territories [1—17]. Despite the applicability of this approach to the sustainable development of regions, there is significant local variance in initial problems, limitations, geographical and other factors and ways to attain sustainable development, observed in continental, coastal and transboundary areas [4; 6; 7; 9—13; 16—18]. Various factors are of equal importance for regions: social (necessary for upholding living standards and maintaining a sufficient size and optimum structure of the population); economic (resources for effective economic growth); innovative (required for a qualitative upgrade of technology, goods and services); environmental (preservation of natural resources and the environment). The geographical factors exhibit spatial variability. Amongst them are the geographical and economic geographical situation, the location and availability of natural resources, environmental conditions, economic and settlement structures. All these factors impinge on the efficiency of the social, economic and environmental components of sustainable development. And in coastal regions, they are even more complex and far less investigated.

This article aims to demonstrate the need for describing an integrated geographical system or a region-wide combination of such systems, which is the most adequate object for assessing, planning, managing, achieving and maintaining sustainable development. At the same time, the ultimate basis for regional sustainable development is regional environmental management, including the mobilisation of water and land resource combinations and the creation of spatial environmental management structures. The latter requires considering the interaction of geographical factors within such an integrated system, these factors having specific features in coastal regions. Geopolitical factors, such as the geopolitical situation and transboundary status, dramatically affect the long-term development of coastal zones. Their effect is more pronounced in the case of coastal regions than inland territories. This difference is also addressed in the article.

State of research, materials and methods

There is ample literature on sustainable development in different countries and regions. Although the general principles and goals of sustainable development, as well as applicable approaches, have received considerable scholarly attention [1—19], some of the studies also stress the importance of a geographical approach and the contribution of geographical sciences [4—7; 9—12; 16; 17; 19]. The central methodological principle of sustainable development — in both national and regional terms — is achieving a balance between economic, social and environmental aspects [4; 6; 7; 10; 11;17]. Yet, the non-linear cyclic character of regional development complicates striking this balance [17; 20]. And it is essential to provide a rationale for different measures, or indices, of sustainable development [5—7; 15; 17; 21; 22]. Researchers have also looked at the character of sustainable development in urban areas distinguished by a dense population and a vigorous economic life [7; 9; 11; 17; 23] and rural areas, where natural resources occupy a decisive role [7; 9; 11; 16; 24]. Another major area of research is the exploration of sustainable development in closed communities of coastal zones [25]. There is a consensus that strategic planning, particularly multi-level spatial planning [7; 17; 27], is the key to achieving and maintaining sustainable development at a national or regional level [26]. Marine planning is of vital importance for coastal regions [28—30]. Regional development modelling, which, among other things, may use the balance sheet approach, has also been described as a pressing need [10, 31]. Despite this, a rationale has not been framed for treating integrated geographical systems as a comprehensive object for the analysis, assessment and calculation of sustainable development scenarios. In the case of coastal regions, such geosystems should include land-sea components. The sustainable development of coastal regions is more susceptible to geopolitical factors than that of inland territories, and this effect remains poorly understood [32].

This article uses the relevant literature and regional development programs, employing the methods of geographical zoning, comparative and geosystem analysis and the geographical forecast approach.

Results and discussion

Studies into the problems of regional sustainable development [4; 7; 9; 11; 13; 14; 15—17; 20 etc.], including those carried out by the author of this contribution [6, 10], demonstrate that attaining sustainable development that is balanced in terms of the economy and the needs of the social sphere and the environment requires that the following conditions be met at the stage of devising long-range programmes.

1. It is necessary to analyse the natural, resource, environmental and socio-economic structures of an integrated geographical system, i. e. to consider the geosystem containing the region of interest in its entirety.

2. There is a need for long-term data on the geosystem, including those for the retrospective and horizon periods.

3. It is also essential to model the structure and dynamics of an integrated geosystem and calculate a balanced scenario for its sustainable development. Then, a model of the sustainable development of a region can be created as a harmonious image of a region's future.

4. Implementing a regional sustainable development model should be a seamless combination of strategic planning and current operations management. At the same time, the object for analysis, modelling, calculations, planning and management should be an integrated geosystem, or a combination of such systems, embracing the whole area of interest, which can be, for example, a Russian region.

5. The analysis, calculations, modelling, planning and management are impossible without vast information, systematised and territory-specific. It could be presented in the form of a regional geographic information system. There is also a need for constant updates obtained by monitoring changes in the geosystem structure and calculating various scenarios.

6. Finally, a sine qua non of sustainable development is a regional monitoring system focused on regional environmental management [33].

The concrete (and interrelated) objects of the monitoring are geographical factors and their development in time. The factors such as geographical position, economic-geographical situation and environmental conditions are relatively stable, changing little over time; yet their effects on regional development are conditional upon other, less stable factors.

The exploitable natural resources of a land or water area are more volatile, affected by natural and anthropogenic processes. The latter include resources extraction and management, as well as industrial impacts. Although generally inert, spatial economic and settlement structures can change substantially as they function and develop.

In coastal regions, all these geographical factors possess specific characteristics influencing the achievement and maintenance of sustainable development (Table 1).

Table 1

Characteristics of enabling and constraining geographical factors in the sustainable development of coastal regions

Geographical factor	Characteristics observed in coastal regions
Region's geographical and economic-geographical position	Unlimited access to the open sea; a vast shoreline and coast as specific natural resources; contact structure and functions in the land-sea zone
Natural conditions and their spatial variability	Marine influence, including extreme natural events and the impact of the monsoon marine climate on coastal areas
Exploitable natural resources, their location and variations	Access to various marine resources, including renewables; possibilities for merging marine and coastal resources
Established spatial economic and settlement structures	The pivotal role of coastal socio-economic centres; possibilities for developing marine industries, including maritime transport and marine recreation

Coastal regions have characteristic contact structures and functions in environmental protection, natural resource management and socio-economic activities. Consequently, land-sea structures emerge in those areas [10; 13; 17; 33]. Therefore, the most comprehensive objects for analysis, modelling, planning and management are sea-land regions comprising coastal areas and 200-nautical-mile exclusive zones. The common geographical space of such a region is considered an integrated geosystem consisting of closely interrelated and interacting land geosystems, land-sea geosystems and marine geosystems.

Table 2 shows factors enabling and constraining the achievement of sustainable development in coastal regions (Table 2).

Table 2

Factors constraining and enabling the sustainable development of coastal regions

Problems and limitations	Benefits and advantages
Negative impacts of extreme marine events (high waves, tsunamis, storms typhoons, etc.)	Availability of various marine resources (biological, recreational, energy), including renewables
The need for coastal reclamation and costly shore protection works; large budgets for deep-water port construction	Cheap maritime transport; access to domestic and international markets bordering on the water area
Hard-to-break sea ice and low temperatures in the Arctic regions	Shorter legs of the Northern Sea Route, which are easier to access from land

Sea-land zones and geosystems, as well as networks of coastal settlements, have a decisive role in sustainable development. On the one hand, they induce the exploration and use of marine resources; on the other, they provide a link between the marine and land geosystems and their structures, including those pertaining to the marine economy [10; 13; 33; 34].

Therefore, I propose distinguishing several spatial levels: zones and districts utilising marine resources and marine economy opportunities to a varying degree (Table 3). The key criterion here is the distance from the seacoast.

Table 3

Parameters for coastal area zoning

Spatial zoning levels	Generalised zone width (distance from the coast)	Factors affecting sustainable development
Coastal zone	The area within 50 km from the sea with coastal centres and settlements	Shoreline features and coastal marine resources; natural resources within the 200-mile zone; the socio-economic capacity of coastal settlements as a foothold for the exploration of marine resources and development of maritime transport
Belt of base-level coastal districts	The area within 100 km from the sea (within the boundaries of coastal municipal districts)	The identification and description of water-land natural resource systems and management structures; integrated geosystems; socio-economic capacity of settlements lying farther from the coast
Belt of meso-districts within federal territorial units of Russia	The area within 300 km of the sea (within the boundaries of coastal regions)	The socio-economic capacity of coastal zones (regions); exploitable natural resources and changes in their availability; capacity for infrastructure development; division (including physiographical) of the region and adjacent water areas; natural resources, environment and geography, socio-economic conditions in base-level districts; analysis of economic priorities of base-level districts and settlements

Regional natural resources management and its spatial structures play an essential role in the sustainable development of coastal regions [33]. The fundamental principle here should be the preservation of sufficient natural resources in both coastal and marine geosystems over as long a period as possible. Thus, the

primary objective of monitoring regional natural resources management should be tracking changes in the availability of natural resources of terrestrial and marine geosystems, exploited to enhance regional socio-economic development.

In earlier works, I demonstrated that coastal and marine natural resources are not isolated but linked by multifarious ties and relationships forming sea-land natural resource combinations and systems [13; 33]. Changes in the availability of one natural resource (for instance, its extraction) within an integrated geosystem affect other related resources, sometimes through interresource connections and mechanisms of the geosystems.

To assess accurately and control the balanced dynamics of the natural resources of a sea-land region in their entirety, it is crucial to cover all possible coastal and water-and-land combinations, interresource connections taken into account. It seems that the close interresource connections existing in integrated geosystems are the objective reason why private ownership of selected natural resources and zones of their occurrence (including marine resources) is incompatible with sustainable development. Therefore, coastal and sea-land natural resource systems should be the principal focus of analysis, planning, and exploration, as well as the object of property relations.

The prime social goal is to reduce income inequality and disparities in the quality of life at a national and regional level. In the context of sustainable development of coastal regions, communal ownership seems to be the most effective, benefitting the extensive exploration of natural resources. This conclusion applies to coastal and marine resources and their various combinations.

Geopolitical factors also have a profound impact on achieving and maintaining sustainable development. The most influential of them is the geopolitical situation [32]. Table 4 shows elements of the geopolitical situation and their features in coastal regions.

Table 4

Elements of the geopolitical situation and their features in coastal regions

Elements of the geopolitical situation	Features characteristic of coastal regions
Neighbourhood with foreign regions	Neighbourhood through water areas; territories may share both land and sea boundaries
Differences and similarities in the geopolitical capacity of neighbouring states	Important components of geopolitical strength are natural resources and possibilities for transport and transit services within the 200-nautical-mile zone (including the untapped potential).

The end of table 4

Membership in an international transboundary region	Inclusion of coastal regions in transboundary sea basins; the need to establish geopolitical relationships regarding joint management of marine resources with countries having access to the sea
Neighbouring states' geopolitical interests and issues in the region	Actual or potential geopolitical interests and issues, usually relating to the management of marine natural resources, transport/transit services and disputed borders

According to combinations of geographical and geopolitical factors in sustainable development, Russian coastal regions can be classified as follows:

1) coastal regions with access to landlocked seas (Caspian regions);

2) coastal regions that are part of transboundary basins of southern seas (the Black and Mediterranean);

3) north-western coastal regions comprising transboundary basins of the Baltic, Barents and White Seas;

4) coastal regions with access to the Arctic seas: the Kara, Laptev, East Siberian and Chukchi;

5) regions of the Russian Far East included in the transboundary basins of the Chukchi, Bering, Okhotsk Seas and the Sea of Japan. These regions benefit from the natural resources and the transport/transit capacity of the North Pacific and access to the Pacific markets; these regions comprise Pacific Russia [13; 29].

The principal tool to attain and maintain sustainable development in coastal regions should be strategic planning covering land and water areas. It is essential to use the already existing approaches and methods of hierarchical spatial planning and adopt new marine spatial planning approaches [28—30]. Particularly, coastal-marine space segments should be treated as the primary object of marine spatial planning [29]. Overall, strategic planning should build on a preparatory description and analysis of various regional development options, from which the most effective should be selected.

It is worth noting that the strategic planning of balanced sustainable development is incompatible with private ownership of large economic objects since private businesses seek to maximise profits. Sometimes capital generated in one district, using its infrastructure, natural, social and R&D resources, is invested in other districts and even countries. Such movement of capital, which is beyond the reach of regional strategic planning, is detrimental to the economic dimension of sustainable development.

I propose to employ indicators of regional economic, social and environmental progress as integrated measures of sustainable development [6; 10]. Qualitative economic and social indicators show qualitative and quantitative increments in regional economies and social industries, whilst the quality of the environment is

a measure of environmental improvement and changes in renewable and non-renewable resources. Such criteria should be applied when considering options for regional strategic planning, including spatial and marine, and choosing the most effective one.

A full account of geographical and geopolitical factors in regional development requires several steps. Those described below were formulated for Pacific Russia but apply to other regions as well.

1. Scenario projections and calculations for long-term development programs and regional strategic planning and management should consider Pacific Russia as a coastal-marine region including the 200-nautical-mile zone and its exploitable natural resources. Long-term regional development documents should take advantage of modern geographical information systems whilst identifying and analysing combinations of geographical and geopolitical factors for selected spatial zones.

2. Long-term development documents consider the region as one of strategic national importance since it is where Russia fronts on to the US, China and Japan — countries of considerable geopolitical power [32].

3. It is advisable to use a range of tools to speed up advanced and sustainable socio-economic and innovative development.

4. There is an urgent need for reliable massive investment in infrastructure, coastal and marine resource processing and the social industry. It may be useful to establish a private-public partnership standard: at least 50 per cent of investment in priority projects and activities on land and water has to be made by the state. This rule seems particularly important for marine resources and the economy.

5. Greater incentives are needed to prevent population decline in the region.

6. Each transboundary region requires international programmes for sustainable development and long-term international agreements on the coordination of efforts towards sustainable development and natural resources management.

7. Another crucial step is monitoring regional natural resources management and sustainable development to ensure social, economic and environmental progress and make an international statement of Russia's high living standards and amicable intentions.

Conclusions

Coastal-marine regions — combinations of integrated land, sea-land and marine geosystems — should be the principal object for assessments, analysis, strategic planning and sustainable development management in coastal regions.

There is a pressing need for simulating regional dynamics to calculate scenarios and choose a model that best ensures sustainable development. Calculations and analysis should be carried out at various hierarchical spatial development levels within selected zones and settlements.

Strategic planning requires vast information on neighbouring regions and geosystems. And it is equally essential to employ geoinformation and digital technology. In coastal areas constituting a transboundary region, for instance, a transboundary-river or marine basin, it is necessary to keep track of different types of information across the transboundary region. This need is explained by the close ties forged during the functioning and development of individual parts of transboundary regions and geosystems [10; 13; 18].

It is recommended that regional monitoring of sustainable development be performed within a digital geographic information framework. Another pressing need is to model scenarios for regional integrated geosystems. Of crucial importance is monitoring regional environmental management, analysing and harnessing geographical and geopolitical factors.

Global climate change poses new challenges to the sustainable development of coastal regions: melting permafrost, coastal flooding, etc. Yet there are beneficial effects too, such as better conditions for navigation. Therefore, the role of geographical factors in the sustainable development of coastal regions is growing.

Overall, the paradigm of national and regional sustainable development, which originated in the 20th century, remains attractive to this day. Its practical implementation, however, is impossible without the political and economic systems of many countries undergoing a substantial transformation.

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THE MARINE COMPONENT OF HUMAN GEOGRAPHY STUDIES IN POST-SOVIET RUSSIA: KEY TRENDS AND DEVELOPMENT PRIORITIES

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Originated in the 1960s, the 'marine branch' of Soviet, and later Russian, economic and social geography contributed to the diversification of geographical science and expanded its scope. The new branch was a product of the rapid growth of the marine economy and the country's military infrastructure and settlement system starting to gravitate towards the world ocean. This article uses bibliographical and scientometric materials to explore the factors, features and priorities of the development of Russian post-Soviet human geography of the world ocean. Special attention is paid to the path dependence in the evolution of this branch of geography (associated with the established professional community, the fundamental research themes and the basic concepts) and the emergence of new growth poles within the scope of marine human geography. Although this subdiscipline showed a high degree of resilience in the first years after the demise of the USSR, it became marginalised from the scientific mainstream. The interest in marine studies revived only in the early 2000s, gaining momentum after a decade of desolation. The renaissance was due to new transboundary marine research, analyses of the geopolitical and geoeconomic aspects of the marine economy and close attention given to coastal border areas (particularly the prospects and risks of their socio-economic development within the continent-ocean dichotomy). The marine focus of Russia's geostrategy will generate steady demand for national human geography of the world ocean, including its inevitable humanities component. Another trend is the involvement of human social geography in cross-branch geographical synthesis. The study also identifies Russian research and publication centre of excellence in marine human geography.

Keywords:
human geography, marine studies, development of science, marine economy, research centres, Russia

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Yulian Saushkin, a prominent theoretician of economic geography, wrote that the history of science is needed more than ever in the turbulent and critical times of its evolution [1, p. 7]. The radical transformation of what once seemed an almost immutable global world order [2; 3] and the revision of prominent research approaches, attitudes and paradigms, are inevitable in this situation. They are accompanied by the feeling of absconding [4, p. 7] typical of times of crises and tribulations; they require assiduous attention to the trends, logic and determinants of development in certain fields of scientific knowledge and their concrete areas. This holds true for Russian *human geography*, which has to respond to the steadily growing range of inherent fundamental and applied problems, one of which is the formation of new areas and subdisciplines.

From the late 1960s and early 1970s, the Soviet professional economic-geographical community paid attention to maritime problems explored within a special kind of institutionalised ***economic (socio-economic) geography of the world ocean.*** Here, it is worth mentioning the works of Aleksandr Alkhimenko, Petr Baklanov, Vladimir Dergachev, Sergey Lavrov, Vadim Pokshishevsky, Sergey Salnikov and Solomon Slevich. This area of geography rapidly developed, growing ever more attractive and receiving recognition and support from leaders in science [5]. In the last three Soviet decades (undoubtedly the brightest and most productive ones in the evolution of Russian geographical thought), the USSR's economy, infrastructure and settlement system made a major 'turn' to the oceans, their resources, and communications [6]. At the same time, the perception of the country as a both 'continental' and 'maritime' power was becoming increasingly entrenched [7]. Our science was responding to the changes, analysing and mapping their trajectory.

The following post-Soviet period was largely transformational for the maritime component of the national socio-economic (human) geography. There were many trends at play: some were negative, some provided additional opportunities, while others brought new challenges and risks. A rediscovery of the water areas and coasts of the world ocean, much needed in the new conditions, has been emphasised in many regulatory documents: from the 1992 programme Russian Merchant Navy Revival 1993—2000 to the new edition of Strategy 2030 for the development of the Russian Federation approved in 2019. Since then, this process has inevitably required socio-geographical 'support', i.e. further development of the earlier established research area. The changing geopolitical and geoeconomic position of Russia in today's Eurasia [8] is adding urgency to the task. This article aims to identify (using bibliographic and sci-

entometric analysis) the main trends and achievements in post-Soviet Russian marine (and coastal) human-geographical studies, name leading experts and established centres in the field and describe the current and long-term theoretical and applied priorities.

'Path dependency' in the dynamics of Russian economic geography of the world ocean in the first post-Soviet years: concrete manifestations

In the post-Soviet period, the marine economic and geographical theme, while remaining an important component of human-geographical knowledge, was no longer mainstream having lost its strong appeal and elitism. Its trajectory in the 1990s-early 2000s was predetermined not so much by a direct 'order from the public' (the Soviet maritime heritage, including its scientific component, fell apart and was in systemic decline [9; 10]) as by the previously established structure of the science, the dual aquatic-terrestrial nature of the discipline [11, p. 500] embedded in its methodology and the momentum of previous years, i. e. by some sort of 'path dependency'. Amid the adjustment of thematic and methodological priorities and the crisis that had hit the science [12], the latter made it possible to continue to explore and popularise 'marine problems' partially adapting them to the new Russian geographical and political-economic realities.

Post-Soviet human-geographical marine studies retained a pronounced 'economic bias', which had emerged in the 1970s and was consonant with the spirit of the time. In other words, most attention concentrated then on economic structures and processes. Running counter to the market metamorphoses, the term 'marine economy complex' (used by Aleksandr Alkhimenko, Galina Baturova, Georgy Gogoberidze, Vladislav Ivchenko, Anatoly Moshkov and others) circulated widely in the scientific discourse. The use of the term was perfectly justified considering the role that complex formation had in the marine economy. By tradition, industry-specific R&D prevailed focusing primarily on the port economy and maritime transport [13], as well as on the fishing industry in the world ocean [14—16]. In the first half of the 1990s, these industries were the first to experience post-crisis recovery, becoming 'growth poles' for the entire national marine economy and the economies of coastal regions. This was especially true of Russia's major seaports.

In line with the basic methodological ideas about the close connection between the aquatic (maritime) and the terrestrial as an imperative for geographical analysis and an essential characteristic of spatial organisation in Russia

and abroad [11], coastal regionalism continued to develop [17], the concepts of coastal zones were proposed [18], and attention was focused on the shift of the economy towards coasts [19]. Many doctoral theses defended in the first post-Soviet years looked into related topics, such as coastal zones in Western Europe and the European part of Russia (Fadeev, 1998), the Sevastopol coastal region and its economic structure [39], zonation of the Russian Black Sea coast for rational nature management (Chukanova, 2004), the Petropavlovsk—Yelizovo agglomeration (Ilyushkina, 2004), the economic port zones of the Russian Azov region (Armageneyan, 2004), cities of the Azov and the Black Sea coasts of the Krasnodar region (Filobok, 2004) and the transport infrastructure of the Azov and the Black Sea coast of Russia (Shesternin, 2005).

The research space of maritime themes preserved, however, its *asymmetric polycentricity* characteristic of coastal cities. In the 1990s, St Petersburg (Leningrad), thanks to its historical path, was the absolute leader in all things marine. Themed collections of articles (including proceedings of congresses of the Russian Geographical Society [20]), monographs and booklets dedicated to marine economic geography were published in the city [21; 22]. Aquatic-terrestrial structures and processes also remained a major theme in the works of leading researchers of the Pacific Institute of Geography of the Far East Branch of the Russian Academy of Sciences (Vladivostok) [23].

In the early 2000s, however, the 'path dependency' effect of Soviet geography was wearing off, and the former leaders and adherents of marine research were passing away (Lavrov died in 2000, Slevich in 2006, and Alkhimenko in 2012). Against this background, in the mid-2000s, Russia's economy and settlement system started to turn towards the world ocean [24], thereby stressing the growing need for greater activity in marine human geography.

A renaissance of Russian marine economic geography studies: factors and lines of research

Since the mid-2000s, the Russian Federation has seen a marked multidimensional surge in interest in maritime issues. New studies continued the established research tradition and adapted it to the new conditions and formats of activity (including spatial ones) in the world ocean and on the coasts fringing the country.

Essentially restorative and unvarying in its themes and tools, *the renaissance of Russian economic geography of the world ocean* in many respects predetermined subsequent scholarly developments through the 'social relay' mecha-

nism. The first decade of the XXI century saw this revival in several lines of research. One of them was summarizing factors and trends in the marine economy and its features in the post-Soviet period. A representative example of this was a themed collection of articles titled *The Marine Economic Complex of Russia*, edited by Alkhimenko and published in St. Petersburg in 2005. There also was an attempt to analyse systematically the current state and priorities of Russian human-geographical research made at Moscow State University's Faculty of Geography under the supervision of Nikolay Mironenko. Focused on the problems of the world ocean, the project was supported by the Russian Foundation for Basic Research [25]. Another landmark development was a theoretical justification for the continental-oceanic dichotomy rooted in Pyotr Savitsky's ideas of Eurasianism formulated in the 1920s. It was presented in the first (and so far the only) post-Soviet doctoral thesis on the 'sea factor' in spatial development. Defended in 2006 by Leonid Bezrukov [26], the work focused on externalities for the inner-continental territories of the country. Finally yet importantly, a new understanding of the world ocean zoning emerged. This new approach, which included terrestrial elements [27] was used by Gogoberidze.

The renaissance of the 'marine component' in public geography was linked to the reconceptualization of large Russian macroregions as aquatic-terrestrial structures or territories with vast, mostly coastal areas with sea-depended settlement and marine economy subsystems (the Arctic and its 'marine façade 30], Russian South, including its Black and Caspian coasts [31], and Russian Northwest [32]). For instance, Baklanov and his colleagues specialising in Far Eastern studies adopted this perspective when exploring the idea of 'Pacific Russia'. The aquatic-terrestrial approach laid the groundwork for further economic and geographical analysis of coastal zones and regions much needed in the face of growing spatial development disparities [33]. The analysis focused on different aspects of the geo-economically induced formation of transport and logistics corridors [34] and port-industrial complexes [35] in those areas.

Due to the overall situation in education and research, as well as the multidimensional revival of attention to the theoretical and methodological aspects, the 2000s saw a considerable number of marine-themed doctoral and postdoctoral theses (Table 1).

Table 1

The number of abstracts of 'marine-themed' doctoral and postdoctoral theses indexed in the electronic database of the Russian State Library*

Dissertations	Period of thesis defence, years				Total 2003—2018
	2003—2007	2008—2012	2013—2017	2018—2019	
Total theses in human geography	310	262	142	33	747
Marine-themed theses	11	5	4	0	20
% of marine-themed theses	3.5	1.9	2.8	0	2.7

* Prepared by the author based on data from the Russian State Library as of November 2021 available at https://sigla.rsl.ru; when compiling the table, all theses on human geography defended in 2003—2019 and available in the database were analysed (the library does not index abstracts beyond this period); a thesis was classified as 'marine-themed' if its title contained a relevant term (marine area, coastal zone) or it had a focus pertaining to the topic (spatial organisation of marine economies, including coastal settlement systems).

Remarkably, when the legacy of Soviet economic geography of the world ocean was still in evidence, most doctoral and postdoctoral theses concentrated on industrial and economic-ecological aspects. This is partially due to the features of the first post-Soviet years. Amongst the topics researched were the oil-and-gas problems of the Caspian region (Zhulinsky, 2006), the comprehensive development of the Black Sea coastal zone (Sychev, 2006), industrial mariculture in the Russian Black Sea region (Eletsky, 2007), environmental management in the seaports of the Baltic region (Shelest, 2007) and the commercial fishing system of the Krasnodar region (Brussel, 2009). Yet, by the end of the 2000s, most theses in human geography, whose number had dwindled, were devoted to tourism and recreation: the role of the Temryuk district in the Azov-Black Sea recreational complex (Veselov, 2007), Gelendzhik in the recreational system of the Black Sea coast (Myslivka, 2011), recreational nature management on the Solovetsky Islands (Polikin, 2011), regional features of recreational development on the Black Sea coast (Fokin, 2012), the place of Sochi

in the recreational system of the Black Sea coast (Butt, 2012), recreational water use in Sevastopol (Lazitskaya, 2014), the tourism industry in Oceania (Gushchina, 2016). This structural change, partly a manifestation of a short-lived scientific trend, reflected the 'sociologicalisation' of the economic geography of the oceans and its transformation into a broad geographical-social subdiscipline (the trend developed 30 years after human geography had established itself). Against this background, opportunities arose for narrowing the conceptual gap between aquatic and terrestrial research in social geography originating in the post-Soviet period. There were instrumental innovations introduced and disseminated at a fast pace, and the 'marine slant' became more pronounced in the professional community.

New stimuli and trends in the marine component of human-geographical studies in modern Russia

From the mid-2010s, the 'marine branch' of Russian economic (and human) geography received a new impetus, and new facets emerged. Further growth of Russia's marine economic activity and its increasingly visible and purposeful presence in the world ocean [36] provided grounds for the diversification of the sub-discipline; the expansion of its scope to the system of marine pipelines [37], shipbuilding [38], etc.; a shift of focus to the infrastructure supporting the maritime interests of Russia and its largest corporations [39]; clustering and complex formation [40; 41].

The nascent positive and productive convergence between marine studies and other areas of human-geographical knowledge encouraged the identification of maritime themes in such dynamic, propulsive areas of human geography as geopolitics and transboundary regional studies focusing on transboundary maritime areas such as the Baltic region [42]. Research on maritime geopolitics tracked global major geostrategic changes. Following the first pioneering works [42], Russian geopolitics continued to reveal its maritime angle [44—46].

The growing geopolitical importance for Russia of the world ocean and the sea areas surrounding the country has created prerequisites for maritime research at the 'interface' with limology, which has gained popularity in recent years. This has attracted attention to *coastal regional studies* (including interregional comparative studies [47]), the typology of coastal territories [48]) and the substantiation of the concept of *Russia's maritime border* as a continuous and discrete socio-geographical feature, which has a special significance for the country's geopolitics and geo-economic interests shaped by the hierarchical co-development of leading marine economy centres, or 'strongholds' [49].

The marked regionalisation of marine human-geographical research, characteristic of the last decade, led to the brisk development of Russian marine research centres in Kaliningrad, Krasnodar, Rostov-on-Don and Simferopol. New national circumstances gave an additional impetus to the socio-economic geography of the oceans. These were the incorporation of the Crimean Peninsula (now a key object of the country's maritime policy [50]); the 'post-Crimean' situation of the Kaliningrad region in the Baltic region (where the significantly increased risks [51] and resource barriers to development are paradoxically combined with the sustainable attractiveness of coastal areas to people [52]); the declared and partly achieved shift in national spatial development priorities towards the east and the Arctic. The latter aspect was explored in a series of pioneering works and analytical reviews [53—56].

Financial support from the Russian Science Foundation provided a strong stimulus for marine geographical research in the country. In 2015—2021, the Southern Federal University ran large interregional network projects: *Transboundary Clustering in the Dynamics of Economic and Residential Systems of Coastal Territories of European Russia* and *Eurasian Trajectories of Russian Marine Economic Activity: Regional Economic Projections*. The Russian Geographical Society also conducted research in the area; its efforts were supported by the grant *The Russian Baltic Sea: State, Problems, Prospects*, which also helped convene the first national research conference *Problems of Marine Spatial Planning* in St Petersburg in November 2017.

As the geostrategic importance of coastal territories and the sea areas gravitating towards them grew, there were various attempts made to describe the socio-geographical elements of coasts, including settlement patterns, migration, innovations, etc. [57—59]). At the same time, the sea factor in spatial development, the sea-orientation of society and its territorial structures, as well as the convergence of the aquatic and the terrestrial in the socio-geographical dynamics, were conceptualised [60].

When tracking the multidimensional manifestations of the development of Russia's human geography of the world ocean, it is essential to capture a combination of the positive trends characteristic of the subdiscipline, on the one hand, and the conservation of its status of a periphery, second-class area of scientific knowledge, which it has had since the Soviet times, on the other. Marine studies suffer from a shortage of experts. No more than 5 % of all Russian human geographers concentrate on marine themes.[1] Another problem is the lack of reliable

[1] The value was calculated using the number of Russian professional geographical community members (established using the Register of the Association of Russian Social Geographers on the organisation' s website https://www.argorussia.ru/ and an earlier estimate by Treyvish), as well as an expert analysis of the number of Russian social geographers with publications focusing on socio-economic geography of the world ocean.

socio-economic and particularly economic information. The presence of marine studies in geographical periodicals is neither strong nor stable (see Table 2 for an annual breakdown).

Table 2

Leading Russian scholarly periodicals that published articles on marine human geography in 2016—2020*

Scientific publication	Number of articles published					
	2016	2017	2018	2019	2020	Total 2016—2020
Baltic Region	5	4	3	3	2	17
Proceedings of the Russian Geographical Society	1	2	2	2	1	8
Bulletin of the Association of Russian Social Geographers	3	—	—	—	3	6
Proceedings of the Russian Academy of Sciences. Geography	1	1	1	1	1	5
Geographical Bulletin	—	2	—	—	3	5
Geography and Natural Resources	1	1	—	—	1	3
Regional Studies	1	1	0	1	0	3
Total across the seven journals	12	11	6	7	11	47

Source: * prepared by the authors based on data from https://www.elibrary.ru; when selecting the sample of periodicals (all of which are in an expert-authorised top ten of Russian geographical journals) and ranking them, the basic criterion of the number of marine-themed publication was used.

The slow development of Russian socio-economic geography of the world ocean (whose position was precarious from the start because of the decline in international and Russian science [61]), is due to the limited innovativeness and applicability. Another problem is the lack of compatibility between marine studies and other areas of human geography. This situation creates discord between the urgent need for marine studies and their practical implementation with the available tools and within the established thematic framework. This conflict has to be resolved.

Priority tasks and promising lines of research in Russian human geography of the world ocean

At the current stage of development of marine studies in Russia as regards social and socio-economic aspects, a systemic *qualitative breakthrough* is needed, just as it was fifty years ago. There is a pressing need for research on the world ocean and its coasts establishing itself as a relatively *independent subdiscipline*, equal to other areas of human geography. It should study extensive and intensive exploitation of the marine branch of geography through unlocking its potential for integration, interdisciplinary and international *cooperation*, and *drawing on* international experience in aquatic-terrestrial structures and processes.

Extensive development means, first of all, the completion of the lengthy transformation of *economic geography of the world ocean*, which was mainstream almost throughout the entire post-Soviet period, *into the 'marine component' of human geography*. It is crucial to further 'humanise' marine research, placing emphasis on the accelerated final formation of its geo-cultural component, which includes maritime culture, maritime identity, the image of sea areas, cross-cultural interaction in coastal zones, etc. And there is also a need to disseminate and embed marine themes beyond the subdiscipline, with a view of giving a *marine slant to human geography* so that all areas of human geography pay attention to marine spatial structures and processes. If successful, these efforts will provide grounds for solving a more general, urgent and basic task — the *marinisation* of the *geographical picture of the world* within the space of the Russian language and Russian culture.

The main trajectory of intensive development is creating tools for considering the marine and the inland in the light of their complex, multi-aspect and often contradictory interconnectedness. The groundwork has been laid by several publications on the hinterlands of large seaports, which like the ports of Novorossiysk, Ust-Luga, Nakhodka and others [62, 63] service most of the Russian space, including areas lying at large distances from the sea. Another significant area of research is studies into the role of global natural and technological changes in the sea factor and how they reflect on the spatial organisation of society, including multi-scale aquatic-territorial system formation. In today's Russia, the latter has to focus on the establishment of centre-periphery structure of 'marine' regions in the context of geopolitical and geo-economic processes.

Moreover, there is a need for the apparatus of Russian human geography of the world ocean to incorporate constantly improving state-of-the-art research technologies for communication, analysis and cognitive operations. Marine studies should benefit from the opportunities presented by AI, big data, etc.

In the 21st century, Russia's marine economy is developing as part of the global structure. Its main components are highly internationalised, and most of the country's coastal regions have been included into transboundary aquatic-terrestrial structures as a double or triple periphery. Embracing this circumstance and the imperative of nationalising and regionalising the positive effects of Russia's national and corporate presence in the world ocean should be a primary task in the context of the emergent *marine component of national spatial development regulation* and the integration of this component (described in the pioneering works on spatial planning [64]) into thee federal, regional, municipal and corporate agenda.

Another urgent task is the *internationalisation of Russian marine research* in human geography, including raising awareness of Russia-oriented marine agenda and, equally important, creating linguistic, tools-related and informational conditions to raise the status and ensure the recognition of Russian marine findings: the perception and critical analysis of major trends, approaches and achievements visible in the global scientific space, as placed in the context of the Russian Federation.

Conclusion

The evolution of science in a national and geocultural format is inextricable from the fates and historical paths of corresponding nations, countries and civilisations. Having become an essential object of Soviet, and later Russian, human geography, problems of the world ocean receded into the background after the collapse of the USSR. Yet, since the mid-2000s, strengthened by the efforts of three generations of geographers, this research area has gained momentum and received new facets. The marine concerns and interests of today's Russia, as well as their clearly defined geostrategic prospects and priorities,[2] are shaping the need for further development of human geography of the world ocean in the country.

[2] Maritime Doctrine of the Russian Federation [e-version]. https://docs.cntd.ru/document/555631869 (accessed 16.11.2021); Strategy for Maritime Development in the Russian Federation 2030 [e-version]. http://government.ru/docs/37755/ (accessed 16.11.2021).

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REGIONAL ECONOMY

ADAPTING REGIONAL STRATEGIES TO THE NEW NON-RESOURCE EXPORT DEVELOPMENT TARGET

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In the radically new economic conditions of 2020, the Government of the Russian Federation selected supporting non-resource and non-energy exports as one of the four factors of sustainable economic growth. Achieving this target is a challenge, but the absence of sufficient conditions for a systemic diversification of Russian exports also poses a substantial problem. This situation lends urgency to developing a methodology for the normative institutional reflection of non-resource non-energy targets in regional legislative acts. This article aims to improve the methods for embedding non-resource non-energy export targets in regional strategies (the targets are expected to serve as an institutional factor prompting economic diversification). This research is exploratory; methodologically, it stands out for using qualitative and quantitative content analysis with elements of computer-assisted frequency analysis of legislative acts and regulations. The study classifies, for the first time, the non-resource non-energy export targets, contributing to the regional export strategy theory. Analysis of strategies for socio-economic development confirmed the hypothesis that, in some north-western Russian regions, the priorities and targets of non-resource non-energy exports are at odds with federal law. The practical implication of this study is recommendations on adapting strategies for regional socio-economic development to the updated non-resource non-energy export targets.

Keywords:
export promotion, regional export programme, resource dependence, diversification, text analysis, content analysis

Introduction

The dependence of the Russian economy on raw materials has been a topical issue in economic theory and practice for decades. The urgency of this problem increased after the update of the national development goals in the summer of 2020. The strategy of sustainable GDP growth at a rate above the global average has become the central idea of Russia's revised economic policy. According

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to First Deputy Prime Minister of the Russian Federation Andrei Belousov, the entire architecture of the updated policy is designed "to take advantage of the factors where there are significant resources for acceleration"[1]. The rationale for this approach, in his words, is a "thorough assessment of the contribution" of the following factors to economic growth:

— expediting investment;
— development of small and medium-sized businesses;
— support for non-resource exports;
— increasing labour productivity.

Without diminishing the importance of other factors, in this study we will focus only on the foreign economic factor. According to the published estimates, "an increase in non-resource non-energy exports" gives about 0.4 % of "additional annual GDP growth". So, this factor is 1 % less than the first two factors (investments and small and medium-sized businesses), and it is by the same percentage more effective than the growth of productivity. The result expected from the implementation of the policy exceeds the expert assessment of researchers from the Institute for Economic Forecasting of the Russian Academy of Sciences. Academician Boris Porfiriev wrote that "the implementation of the entire set of measures within the national projects will accelerate the average annual GDP growth rate in 2020—2024 by no more than 0.6 %" [1, p. 4]. Researchers believe that the favourable impact of national projects on Russia's economic development should not be exaggerated since, over the past decade, the average annual economic growth rate has been less than 0.9 %.

Despite some controversy, additional evidence of the importance of exports has been provided by the Bank of Russia. It provided data on the growth of economic activity during the first two months of 2021, which showed "an active recovery of export and intermediate consumption industries"[2]. This recovery was due to a slower rise in export indicators in the second half of 2020 to the pre-Covid value whereas imports recovered much faster[3]. This presents a separate problem for the development of export in the current situation.

According to the target indicator approved in 2020 in the July Decree of the President of Russia, "by 2030, real growth in exports of non-resource and non-energy goods is to be at least 70 % compared with 2020. Interestingly, the indicator is expressed not in value terms, as in the Decree of 2018, but in relative terms. According to the Russian Export Center (REC), this target indicator amounted

[1] Joint Meeting of the State Council and the Council for Strategic Development and National Projects, 2020, *Kremlin.ru*, available at: http://www.kremlin.ru/events/president/news/64736 (accessed 26.02.2021).

[2] What the trends say. Macroeconomics and Markets. Bulletin of the Research and Forecasting Department, 2021, Bank of Russia. March 2021, available at: https://cbr.ru/Collection/Collection/File/32077/bulletin_21-02.pdf (accessed 03.10.2021).

[3] Less oil, more fabrics, 2021, *Kommersant*, No. 22 of 02.09.2021, available at: https://www-kommersant-ru.cdn.ampproject.org/c/s/www.kommersant.ru/amp/4682353 (accessed 02.06.2021).

to 161.3 billion US dollars[4] in 2020. This means that by 2030 will be 272 billion US dollars excluding inflation. Based on the new calculation method which excludes gold from non-resource and non-energy goods[5], the value of this indicator will be 242.7 billion US dollars. The new values differ significantly from those previously approved (Fig. 1).

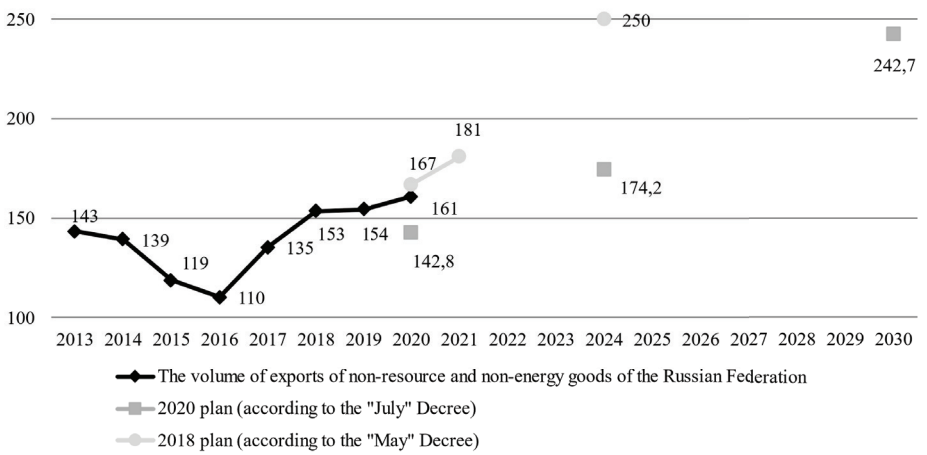

Fig. 1. The volume of exports of non-resource and non-energy goods of the Russian Federation, billion USD

Source: calculated and compiled by the author based on REC data: http://regionstat.exportcenter.ru/regions/list/; Guarantor: https://base.garant.ru/71937200/; https://www.garant.ru/products/ipo/prime/doc/74304210/.

The initial growth rate set by the Russian government was more ambitious. According to the May Decree adopted earlier (in 2018), by 2024 the Russian Federation was to ensure exports of non-energy commodities in the amount of 250 billion US dollars. According to the Decree of 2020, the period for achieving this target was prolonged by six years (until 2030) and the target indicator was decreased from 250 to 242.7 billion US dollars. If this value had not been revised, then by the end of 2020 the planned target of 167 billion US dollars would not have been achieved.

Despite some success, no sustainable growth in non-energy export has been observed. An additional artificial barrier to export demand may be government restrictions on external supplies introduced to control domestic prices for the most important goods. Therefore, the problem of both achieving the target indica-

[4] The volume of exports of non-resource and non-energy goods, 2021, *EMISS*, available at: https://www.fedstat.ru/indicator/59177 (accessed 03.23.2021).

[5] Non-resource exports showed conditional growth, 2021, *Kommersant*, No. 29 of 02.18.2021, available at: https://www.kommersant.ru/doc/4694226?utm_source=-vk&utm_medium=social_vlst_money&utm_campaign=nesyrievoy-neenergeticheskiy-eksport-rf-v (accessed 02.19.2021).

tor for the development of non-resource and non-energy exports and the problem of insufficient systemic diversification of Russian exports have become relevant for economic theory and practice.

Russian regions contribute to export diversification and achieving the new target in different ways. Since comparison in value terms (monetary values) does not take into account the territorial differences and economic potential, for a more objective assessment of regions, we compare the share of the federal district (FD) in non-resource and non-energy exports with its share in the total exports of the Russian Federation (Fig. 2).

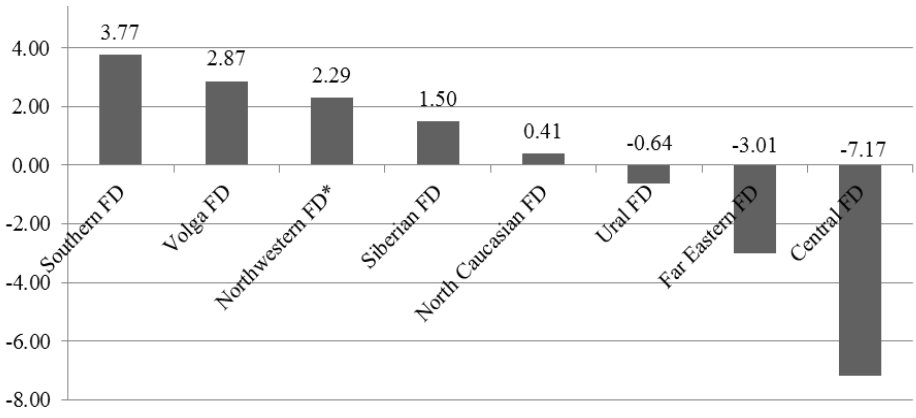

Fig. 2. Excess of the share of the federal district in non-resource and non-energy exports of the Russian Federation over the share of this federal district in the total exports of the Russian Federation in 2020, %

Source: calculated and compiled by the author based on REC data http://regionstat.exportcenter.ru/structure/dynamics.

Comment: * Excluding the Nenets Autonomous Okrug (no data).

As it can be seen from the data, there is high differentiation between the federal districts and regions in terms of their share of non-resource and non-energy export. Taking into account the overall export opportunities, the largest relative contribution to export diversification was made by the regions of the Southern Federal District and the Volga Federal District. The 8.8 % share of Southern Federal District regions in Russia's export of non-resource and non-energy commodities is significantly higher than their share in the total export (5.1 %). The share of the Volga Federal District regions is 12.1 % in non-energy versus 9.2 % in total export.

However, taking into account their smaller absolute share, regions of the Northwestern Federal District (NWFD) are of the greatest interest (second place after the Central Federal District with negative structural indicators: the total

share of 48.3 % exceeds the non-energy share of 41.3 %). At the same time, the regions of the NWFD showed a high relative contribution of 2.3 % (14.8 % in non-energy export against 12.6 % in the total export).

In addition, among all the subjects of the Russian Federation, a specific role in foreign economic activity is played by border regions of the country. Many of these regions are located in the NWFD. The proximity to European countries is also of importance, including their historical and cultural proximity [2—4]. Another problem is the low contribution of border regions to export indicators. In 2002, experts pointed out that "the border regions of the Russian Federation accounted for no more than 15 % of Russian exports" [5, p. 114]. It shows that border regions do not use their geographical advantage and save on transport costs within the country, and the cost of current exports becomes uncompetitive.

The article aims to perfect the methodology of setting targets for the development of non-resource non-energy exports for regional strategies as an institutional factor of economic diversification.

The objectives of this article are the following:

1) to systematize theoretical approaches to the importance of regional strategies being an institutional factor in the development of non-resource exports;

2) to develop a classification of target indicators of non-resource and non-energy export development in the strategies for socio-economic development of NWFD regions based on text analysis;

3) to substantiate practical recommendations for NWFD regional authorities on improving the definition of approved target indicators of non-resource and non-energy export development in the strategies for socio-economic development.

Without excluding other factors relevant for the development of regions' non-energy exports, including support mechanisms, and temporarily abstracting from them, a separate analysis of one of the institutional factors, approved target indicators, is required. For this reason, the object of the study is regional non-resource export strategies, described in the conceptual regulatory documents of Russian regions as an institutional factor in the management of foreign economic activity (FEA).

The novelty of this research lies in employing modern automated methods of analysis of the text of documents, which have not been used for the analysis of export and the solution to the scientific and practical problem of insufficient systematic diversification of export of the Russian regions. The study is primarily aimed at provide detailed content analysis of regulatory documents and regional target indicators being an important institutional factor of export development.

Theoretical approaches to regional strategies as an institutional factor in the development of non-mineral resource exports

The theoretical basis of the article is formed by the traditional approaches in the field of foreign economic activity, including the regional aspect (theories of regional export strategy), the provisions of institutional economics (the institutional significance of legal documents), the systematic approach, as well as related scientific provisions of foreign and domestic researchers who analyze various regional aspects of exports. The analysis of the current state of foreign and domestic research allows summarizing and highlighting the problems of research into the regional strategy for the development of non-resource exports as a system, with the impact of the regional regulation on it being its institutional factor.

Non-resource regional export strategy. A review of the literature showed that there are two unequal approaches to the development of foreign economic activity strategy. The least represented is the approach focused on strategies of foreign economic activity of business entities — exporters [6—8, p. 37; 9, p. 50; 10]. The other approach is based on the assessment of the role of state authorities, including regional ones. The generally recognized need for export diversification of production continues to be explored from various points of view [11—18, p. 6]. Many authors note the instability of Russian exporters' success and the unstable dynamics of non-resource and non-energy products due to the situation on the world market [19, p. 17]. Therefore, addressing the stability of export requires further search.

A number of studies were devoted to assessing the contribution of regions to export diversification. For example, Gulin et al. estimated the share of non-resource exports of regions in the total volume of exports of the Russian Federation. The authors concluded that regions are highly differentiated in terms of non-resource exports: 63 constituent entities of the Russian Federation (72.5 % of the total number) provided only 19.1 % of the country's non-resource exports at the end of 2016 [20, p. 64]. Therefore, it is very important to identify the regions that have significant export potential, which has not been unlocked yet.

Researchers, for example, Titova, note that "the main goal of any export support programme is diversification towards increasing the share of non-resource and non-energy goods" [21, p. 152]. Occasional attempts were made to analyze the presence of strategic elements in regulatory documents. Kovaleva et al. using the example of four regions (Bryansk, Pskov and Smolensk regions and Altai), assessed the indicators of the export environment, including "specific target indicators for the development of export activities in regional state development programmes" [22, p. 42]. However, this assessment was of a formal character (presence vs absence).

2. The role of the regional regulatory framework as an institutional factor of export development. There is a widespread position that the country's foreign trade complex includes a legislative component [23, p. 10; 18, p. 72]. Sometimes it is called the "legal structure of regulation" [8, p. 94—95]. Legal acts in foreign economic activity are an important institutional factor in the development of exports [24].

A series of studies led by Mingaleva substantiates the importance of the regulatory framework for developing regional foreign economic activity. In 2010, the researchers assessed the management of foreign economic activity in Russian regions and concluded that "the regional regulatory framework based on federal laws was not developed (or is poorly coordinated)" [25, p. 83]. It was also emphasized in the studies that for "effective interaction on the global stage" regions need to "develop a specific strategy for market behaviour" [26, p. 61]. Therefore, in the empirical part of the given study, the export strategies of the regions in the field of non-resource and non-energy exports will be evaluated.

Furthermore, the content-related analysis of socio-economic development programmes was carried out by Jeanne Mingaleva. At the beginning of the 2010s, it showed that "the subjects of the federation do not pay due attention to the formation and development of foreign economic activity" [26, p. 62]. The continued interest of researchers in identifying the role of regional regulatory programmes and export development strategies testifies to their importance. However, these studies did not separately assess non-resource and non-energy exports.

Of even greater interest is the "typology of Russian regions according to their foreign economic policy" proposed by Vardomsky et al., which includes more specialized factors, one of them being "the level of development of regional legislation in the foreign economic sphere" [5, p. 107—109]. The typology included four groups:

— regions having a solid regulatory framework for the development of foreign economy, including those surpassing the federal level in other indicators of foreign economic activity (according to the researchers, as of 2002, it included Tatarstan, Moscow, St. Petersburg, etc.);

— regions that are insufficiently successful in foreign economic activity, but have a relatively well-developed legal framework, including programmes for the development of exports and imports, stimulating the creation and development of export-oriented and import-substituting industries (Kaliningrad, Leningrad, Arkhangelsk, Murmansk, Pskov regions, the Republic of Karelia and Komi, etc.);

— regions having a relatively weak regional legal framework (national standards are duplicated). However, regions of this group are successful in socio-economic development and have high export turnover, etc. (Tyumen region, Nenets Autonomous Area, Vologda , Irkutsk and Sverdlovsk regions);

— regions having a poorly developed legal framework regulating foreign economic activity, as well as low l export potential and a middle level of socio-economic development.

On the one hand, this typology seems to be complex enough for the assessment of foreign economic policy. On the other, it does not separately evaluate the development of regional legislation and the analysis of the regulatory framework is based on a simple criterion — the presence or absence of a document. The methodology developed at the turn of the 20th century did not assess the non-resource priorities in the legislation, which at that time were not yet so relevant for either research or managerial agenda.

Thus, a review of the literature showed that on the one hand, there are separate studies of various aspects of the non-resource regional export strategy, confirming its importance. On the other hand, few approaches to quantitative and qualitative assessment of the regional regulatory framework have been developed and there have been no attempts to assess these aspects jointly. The applied and theoretical novelty of the research lies in identifying the diversity and establishing the most successful practices in the formulation of target indicators for the development of non-energy non-resource exports in regional socio-economic strategies. To assess their development we propose to use methods of text analysis of legal documents, which have proven to be effective in fulfilling similar tasks.

Methods and materials for text analysis to assess non-resource and non-energy export development targets in the legislative framework

The task of assessing any legislative framework is interdisciplinary since it requires, firstly, the use of methods of natural and social sciences for automated (intelligent) analysis of texts, and some elements of content analysis. Secondly, it necessitates the adjustment of legal approaches to adapting these methods to the analysis of legal and regulatory documents.

The methodology of content analysis as a scientific method was developed in the works of Mannheim et al. [27], Averyanov [28], Tarshis [29] and others. One of the founders of content analysis Harold Lasswell and his followers wrote, “the main unit of analysis can be a symbol or concept” [30]. In the Russian tradition of content analysis, a different approach has been formed, with the main unit being “a social idea, a certain socially significant topic” [31]. In this study, we will adhere to the definition of content analysis formulated by Kostenko et al., “qualitative-quantitative method of analyzing documents, which is characterized by the objectivity of conclusions and strictness of the procedure and presupposes the quantification of the text with a subsequent interpretation of the results” [32].

Legal science has accumulated a wealth of experience in textual analysis. Initially, the method of qualitative analysis of texts was used. According to Cherdantsev, this is a special linguistic approach, when “the form of legal information is language as a certain sign system” [33, p. 5]. Qualitative analysis contributes to a deeper understanding of the text but often requires considerable effort on the part of the researcher.

The long tradition of analyzing texts allowed researchers to quickly integrate new automated systems of intellectual analysis of normative texts. Alexander Cherdantsev called this phenomenon "the informational approach to law". He contributed to the development of methods for quantitative analysis of texts. In the beginning, these methods were mostly non-automated. Only later, with the development and adaptation of modern information technologies, these methods began to gradually change. The analysis of modern foreign studies shows that more complex automated solutions for processing the natural language of legal texts are being used increasingly [34]. The automation of the analysis is especially important, since as noted by Saveliev, "at present, the volume of legal texts published electronically is increasing significantly as is the potential of modern information technologies and computational linguistics in the processing of texts" [35, p. 41].

Currently, methods of text analysis methods are being introduced to research into foreign economic activity and social sciences in general. Initially, researchers were more interested in the development and application of qualitative content analysis [36; 5, p. 94]. An independent, more established direction is the non-automated content analysis of normative documents regulating international cooperation, in particular, cross-country comparison. Denis Degterev et al. conducted a frequency content analysis of the occurrence of key foreign policy partners in the national security strategies of the CIS states, which made it possible to identify "the country's foreign policy and its strategic priorities" [37, p. 180—181]. However, only the occurrence of the keyword was analyzed, and the meaning of its use was not studied.

Given the objectives of the research, the article aims to demonstrate the benefits of qualitative and quantitative content analysis with elements of automated text frequency analysis of legal texts. The frequency analysis is employed for the following reasons:

— in most cases, it proves to be more thorough when used in the study of legal documents. Keywords of the document can be used as the unit of analysis, since they are more stable in formal texts. Frequency analysis makes it possible to more objectively assess the repetition of phrases in the text;

— additional advantage is the possibility of analyzing documents of various sizes, since the frequency of occurrence of keywords is estimated as a relative value;

— the number of evaluated keywords can be from one to many.

The accuracy of the method is achieved by developing an automated software programme based on methodologically sound content analysis procedures [31; 29]:

1. Determining the purpose and hypothesis of the study. Based on the text analysis of the regional development strategies in the NWFD, to develop a clas-

sification of target indicators for non-resource and non-energy exports development, to assess their compliance with federal legislation and propose recommendations for improvement.

Taking into account the purpose of the study and the analysis, the following hypotheses were formulated:

Hypothesis I. The most developed regions of the NWFD tend to identify their non-resource and non-energy priorities in their socio-economic development policies *before* the relevant federal legislation is approved.

Hypothesis II. The target indicators of non-resource and non-energy exports approved in some NWFD regions do not comply with federal legislation.

2. Document selection. To test the hypotheses, the empirical base of the study was created from an array of regional documents. Texts were selected based on the prevalence of themes of non-resource exports in them. All selected texts were then divided into several groups: 1) narrow-profile documents: a) strategies of foreign economic activity; b) programmes of foreign economic activity; 2) multidisciplinary documents: a) strategies of socio-economic development; b) state programmes of socio-economic (economic) development; c) other government programmes. The analysis showed that there was only one type of legal document, a strategy of socio-economic development, that all regions of the NWFD have elaborated and adopted. Consequently, the empirical base of this study is a collection of full texts of the NWFD Regional Socio-Economic Development Strategies in force at the beginning of 2021 and adopted for the period 2017—2021. If there were editions of documents, the corpus included the texts of the consolidated editions (with amendments and additions valid for each year).

3. Development of a conceptual model. To verify the parameters indicated in the hypotheses, a list of concepts denoted by keywords for non-resource and non-energy exports was compiled.

4. Identification of the unit of assessment. To test the proposed hypotheses, it is necessary to identify what strategies thematically belong to non-resource exports. The ratio of keywords to all the words in the document, expressed as a percentage, was chosen as the unit of assessment. This relationship is also called relevance; it shows how the keyword reflects the content of the whole document. Using this indicator makes it possible to overcome the problem of comparing documents with different word counts.

Results and discussion of the analysis of non-resource and non-energy export indicators in the regional strategies of the Northwestern Federal District

The empirical part of the study was carried out according to the previously developed sequence of stages. Within the framework of each of the hypotheses, the following results were obtained.

Hypothesis I. To test the hypothesis, a further attempt was made to identify the current reflection of non-resource and non-energy priorities and also the evolution of their appearance in different regions. To do this, we analyzed the texts of the strategies that were in force during 2017—2020, preceding the approval of non-resource and non-energy priorities at the federal level (the May Decree, 2018). The hypothesis was tested using the example of the regions which adopted non-resource and non-energy priorities ahead of the regions. It was done with the help of the "Istio"[6] software used by researchers in the frequency analysis of text keywords [38, p. 22]. The service allows you to evaluate the document by the percentage of keywords in the text. That is, the density (frequency) of occurrence of keywords is measured, their percentage ratio to the entire volume of the text. The keyword was "non-energy", found next to the words "non-resource" and / or "export". The analysis took into account all the forms of the word (cases, plural and singular forms of the given word) (Fig. 3).

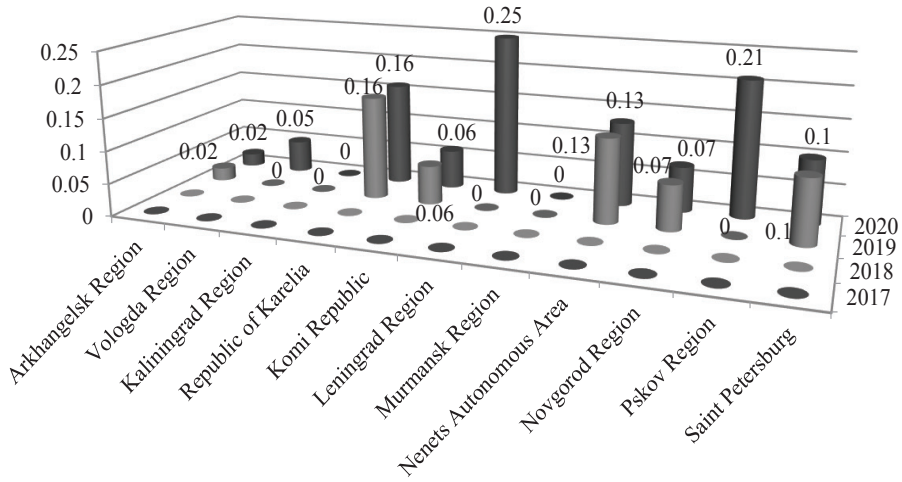

Fig. 3. Relevance of the keyword "non-energy" in the strategies of socio-economic development of the regions in the NWFD for 2017—2020, %

Source: compiled by the author using the service istio.com.

The initial quantitative analysis of the document texts revealed that not all the regions of the NWFD contain the keyword denoting priorities of non-resource and non-energy exports development in their the strategy documents (nine out of eleven regions). The "non-resource and non-energy export" in its various verbal forms and its direct analogues are completely absent in the strategies of the Kaliningrad and Murmansk regions. Despite the absence of the keywords in the strategies, the importance of export orientation is mentioned.

[6] Service of automatic text analysis "Istio", available at: http://istio.com (accessed 02.19.2021).

Thus, hypothesis I was not confirmed since there are no regions in the NWFD whose strategy contains priorities for the development of non-resource and non-energy exports adopted earlier than the federal level documents (earlier than 2018). An assessment of the emergence of the priority under study shows the expected time dependence: in most regions of the NWFD (six out of eleven), they were introduced in 2019 (a year after the federal legislation). In three regions, the strategies were adopted with a delay of another year — in 2020 (Vologda, Leningrad and Pskov regions).

Hypothesis II. To test this hypothesis, a text corpus (181 words) was compiled from the existing texts of the strategies for the socio-economic development of the regions of the NWFD, containing provisions for non-resource and non-energy exports. Frequency analysis required lemmatization of the original corpus, that is, reduction of each word to a simpler form. For this procedure, Russian researchers usually use Yandex "MyStem" software [39, p. 20; 40; 17]. After the lemmatization, the transformed text was further transformed; conjunctions, prepositions, pronouns, punctuation marks and other symbols were removed from the corpus. Using the "Word It Out" service[7] a word cloud was built, reflecting the occurrence of phrases and individual words used with them (Fig. 4).

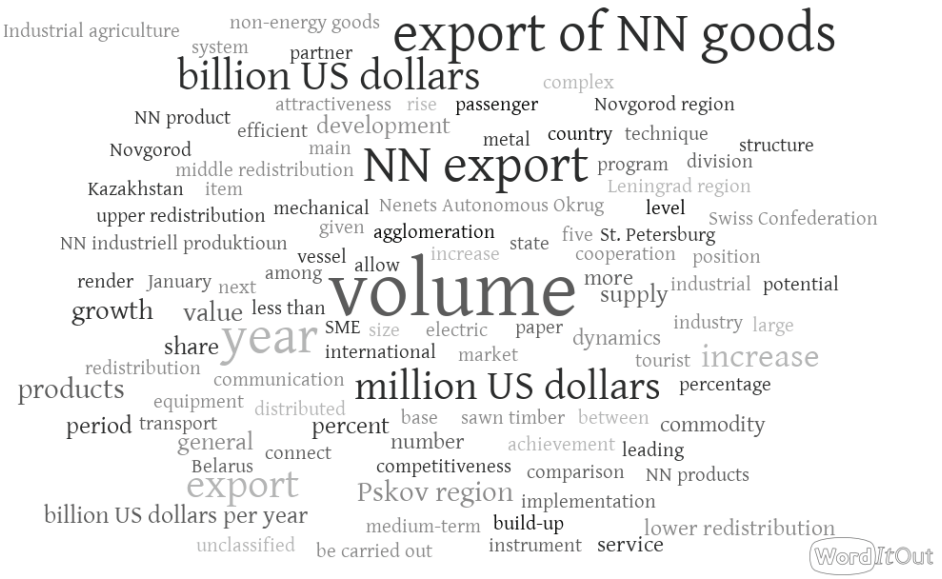

Fig. 4. Word cloud of provisions for non-resource and non-energy exports, contained in the strategies of socio-economic development of the regions in the NWFD*

Comment: NN — non-resource and non-energy; * except for the strategies of the Kaliningrad and Murmansk regions, as they do not contain these provisions.

Source: compiled by the author as of April 2021 using "Word It Out" service.

[7] About build servicecloud of words "Word It Out", 2021, available at: https://worditout.com/word-cloud/create (accessed 02.19.2021).

Fig. 4 shows phrases and words occurring in the papers more than twice. Let us consider a list of the most common phrases in the combined text of the current strategies of the regions of the NWFD. A detailed analysis revealed the following frequency of key phrases (given in a regressive order of frequency):

— export of *non-resource and* non-energy goods — 17;
— *non-resource and* non-energy export — 16;
— billion US dollars — 12;
— million US dollars — 11;
— billion US dollars per year — 4;
— lower redistribution — 3.

The most frequent single word is "volume" and other phrases that are close in meaning to it. The most frequent word combinations are names of indicators. To identify other semantic meanings (approval of a priority or a formalized target indicator, etc.), a classification was developed (Table).

The frequency of keywords in strategies differs significantly from region to region (occurred from one to nine times). In the strategies of the NWFD regions, 44 verbal constructions reflect priorities and/or targets for non-resource and non-energy exports. They vary greatly both from region to region and within the same strategy. Such diversity requires a separate understanding and identification of limitations and opportunities for improvement.

We propose a classification of regional target indicators of non-resource and non-energy exports. The first most significant feature to be taken into account is the degree to which the priority is formalized; a high degree implies that the priority is stated as a specific indicator and a low degree means a non-formalized statement of the priority. For ease of perception, the table indicates only the most significant class of those contained in Strategy 1. The second criterion is the compliance of the indicator with the federal legislation (Decrees of the President of the Russian Federation). Since there are two current indicators (of 2020 and of 2018), the presence of both was assessed. None of the strategies of the NWFD regions has an indicator identical to the federal one (as of 2020): "real growth in exports of non-resource and non-energy goods not less than ... % compared to the indicator for 2020". The closest to this relative type is the indicator in the strategy of St. Petersburg. However, formally, this indicator does not comply with the federal calculation methodology and it does not use the value of 2020 as a baseline.

Five out of nine regional strategies were approved at the federal level in 2018. However, almost all of them differ from it in the degree of the description of the values of indicators. The advantage of some strategies is their having several implementation scenarios (the Republics of Karelia and Komi). Moreover, the first republic has the maximum annual detailing of values until 2030, while the second has a partial one (first annually until 2025, and then by stages until 2035). Strategies without any scenarios also differ: having annual indicator values (Novgorod region) and phased values (Arkhangelsk region, Nenets Autonomous Okrug).

In the remaining three regions, the indicators did not correspond to the federal ones. Close in meaning to the federal indicator of 2018, but not equivalent to it was a relative indicator of the Leningrad region - "the share of non-commodity non-energy exports in total exports".

But this indicator is more dependent on the volume of total exports of the region, and in the absence of a priority for its development can be lowered for the sake of a more significant indicator.

The wording of the target in the strategy of the Vologda Oblast seems alarming ("Growth in non-resource, non-energy exports in 2030 will be at least 70 % compared to 2020"). In terms of the keywords used and their sequence, it is as similar as possible to the more relevant federal indicator for 2020. However, taking into account the comma used between the keywords "non-resource" and "non-energy", the strategy apparently succeeded in approving two atypical indicators "export of non-resource goods" and "export of non-energy goods". According to the generally accepted methodological approaches to the calculation of these indicators, it is unlikely that their values can be close in one region in a given period of time. Therefore, the presence of a comma leads to ambiguity in the understanding of the target indicator. The non-resource component of the Pskov region strategy is controversial as well. On the one hand, the strategy text shows the highest occurrence of keywords (nine times). On the other hand, in all but one case, they are used not to indicate priorities, but to describe the current state of the region. The only indication close to the wording of the priority was not formulated as an indicator; moreover, it was used in a very vague context ("due to non-commodity non-energy exports"). It means that the strategy did not formulate its priorities properly. Experts often point out that the core regional problem is "a vague or ambiguous formulation of goals and indicators" [21, p. 153]. Therefore, achieving such poorly formalized targets does not seem to be obliging. Consequently, the lack of clearly formalized priorities and indicators reduces the likelihood of the development of non-resource non-energy exports in the region.

Thus, the development of the proposed classification made it possible to reveal the fact that none of the strategies for the socio-economic development of the Northwestern Federal District regions includes a target indicator similar to the more relevant federal one (for 2020). Most of the regions (six out of eleven) only meet the 2018 target and to varying degrees. In two regions, the target is significantly different from the federal one. The greatest risk arises in the three Northwestern Federal District regions where no target is stated. Two of the regions do not even define the need to develop non-resource and non-energy exports, although there may be even less specific priorities for non-resource exports.

Hypothesis II was confirmed: not all regions of the NWFD, have target indicators for the development of non-resource non-energy exports, which were approved in the strategies of socio-economic development and corresponded to federal legislation, which can reduce their export potential.

Classification of target indicators for non-resource and non-energy exports development in the strategies of socio-economic development of the NWFD

Target class	Formulating the indicator in the strategy					Region NWFD
1. Priority is formalized into an indicator: 1.1. The indicator corresponds to the federal indicator in the statement of 2020						
1.1.1. Identical indicator						
1.1.2. Same type indicator	Name of indicator, measurement unit	The value of the indicator by years				Saint Petersburg
		21 y.	24 y.	30 y.	35 y.	
	Volume growth rate of non-resource and non-energy exports of goods (total) (annual average for the period), %	107.03	108.01	108.12	105.98	

1.2. The indicator corresponds to the main federal one in the wording of 2018																	
1.2.1. Contains different implementation scenarios: A. Annual values of the indicator	Priority areas and indicators	Scenario	Fact		Forecast			1st stage			2nd stage			3rd stage			Rep. Karelia
			17 y.	18 y.*	19 g.	20 g.	21 g.	22 y.	23 g.	24 y.	25 g.	26 g.	27 g.	28 g.	29 g.	30 g.	
	The volume of exports of non-resource and non-energy goods, mln. US dollars	inertia	473.1	500	520	550	580	620	660	700	729.9	761.2	793.7	827.7	863.1	900	
		target	473.1	500	540	580	620	660	700	790	821.7	854.6	888.8	924.4	961.5	1000	
		forced	473.1	500	566	620	673	730	793	870	904.7	940.8	978.3	1017.3	1057.8	1100	

B. Partially annual indicator values	Target indicator	Scenario	Fact	Fact / Estimation	Stage I — up to 21 y.			Stage II — up to 25 y.				Stage III — up to 30 y.	Stage IV — up to 35 y.	Rep. Komi
			17 y.	18 y.	19 y.	20 y.	21 y.	22 y.	23 y.	24 y.	25 g.	30 y.	35 g.	
	The volume of exports of non-resource and non-energy goods, bln US dollars	Optimistic	0.58	0.59	0.64	0.69	0.73	0.78	0.82	0.88	0.90	0.92	0.94	
		Target	0.58	0.59	0.63	0.68	0.72	0.77	0.81	0.87	0.89	0.91	0.93	
		Inertia.	0.58	0.59	0.61	0.65	0.71	0.75	0.79	0.84	0.85	0.86	0.87	

1.2.2. Indicator values without highlighting implementation scenarios: A. Annual values of the indicator	Name of indicator	16 y.	17 y.	18 y.	19 y.	20 y.	21 y.	22 y.	23 y.	24 y.	25 y .	Novgorod region
	The volume of exports of non-resource and non-energy goods (including exports of services) (mln US dollars)	739.0	1024.5	1129.5	1210.5	1278.0	1392.0	1530.3	1658.5	1794.0	1938.0	

B. Stepwise indicator values	The value of exports of non-resource and non-energy goods, mln US dollars				24 y. 1,509.00	30 y. 1,704.00	35y. 2 319.00	Arkhangelsk region
	Name of indicator	Current values of indicators			Target values of indicators by the stages of strategy implementation			Nenets Autonomous Okrug
		Russia, 17	NWFD, 17	NAO**, 17	I stage, 21g.	Stage II, 24	Stage III, 30g.	
	The value of exports of non-resource and non-energy goods, mln USD	135.1	20.2	0	not less than 0.5	not less than 0.5	Not less than 1.0	

Source: compiled by the author according to reference and legal systems.

The results obtained in the study make it possible to develop practical recommendations for the regional authorities of the NWFD. As part of the national project, federal funding for relevant regional events will depend on the territory's success in achieving the required values of non-resource and non-energy exports. This study made it possible to justify the importance of improving strategies and the need to implement the following proposals for the regional authorities of the NWFD:

1. Recommendations for the Kaliningrad, Murmansk and Pskov regions. The absence of non-resource and non-energy provisions in the current (as of April 2021) regional strategies weakens the institutional condition for the increased contribution of the regions to the corresponding federal target. Statistical data show good progress of these regions in the growth of non-resource and non-energy exports. In 2020, among the regions of the NWFD, the Kaliningrad region showed the best dynamics of the volume of non-resource and non-energy exports of 116.1 % (although there was a significant decline of 75.6 % a year earlier)[8]. In 2020, the Murmansk region occupied the second position with a growth of 115.9 %. These are stable figures for the region — 114.6 % for the period 2018—2020). The Pskov region showed a slight decrease of 98.1 % in 2020. However, taking into account the previous four years, it showed a high growth rate of 110.8 %.

With such good performance, the inclusion in the strategies of the priorities and target indicators already being implemented will not be an additional burden on the regional authorities but will allow them to objectively show the positive results achieved and give an additional impetus to the development of the regions. Therefore, the regions are recommended to amend their strategies and adopt the value of the target indicator, which was approved at the federal level — "by 2030, the growth in exports of non-resource non-energy goods is to be at least 70 % compared to 2020". This approach is in line with the current legislative practice of the regions. This kind of indicator takes into account regional specifics due to its greater universality since it is based on a relative value that better reflects the peculiarity of the region and takes into account its position in the baseline year of 2020.

2. Recommendations for the Leningrad and Vologda regions. It is necessary to replace the existing indicator in the strategies if it does not comply with the federal legislation. It is proposed to introduce and approve a more up-to-date wording of the target indicator (2020) — "real growth in exports of non-resource and non-energy goods of at least 70 % compared to 2020" by 2030. This is especially important if there is a typo in the statement of the target indicator in the text of the strategy of the Vologda region, which greatly distorts its meaning. Since the share of non-resource and non-energy exports in the total export of the

[8] Dynamics of the export structure, 2021, My Expert digital platform, available at: http://regionstat.exportcenter.ru/structure/dynamics (accessed 04.27.2021).

Leningrad Region in 2020 was 49.5 %, and the share of the Vologda Region was even higher — 87.3 %, and they exceed the all-Russian level of diversification (47.7 %), achieving this target in the regions seems possible.

When applying the results obtained, it is important to remember that regional legislation is not the only factor determining the development of non-resource and non-resource exports. However, conceptual documents, as the most important institutional factor, are a productive entry point for analysis. Target indicators and their wordings approved in the regions require further research. It is also planned to assess the relevance of non-resource and non-energy priorities and targets in other types of regional documents.

Conclusion

The analysis of the national economic policy priorities and research shows the importance of developing non-resource and non-energy exports. Researchers have developed only a few theoretical and methodological assumptions about the relevance of regional strategies as an institutional factor in the development of non-resource and non-energy exports. From 2017 to early 2021, more than 35 versions of the NWFD socio-economic development strategies were subjected to qualitative and quantitative content analysis. The scientific importance of the study lies in the author's analysis based on the classification of non-resource and non-energy export targets. The analysis contributes to the development of the theory of regional export strategies by identifying the diversity and best practices for formulating export priorities and target indicators in the regional regulatory framework.

The novelty of the study includes: 1) defining the evolution of non-resource and non-energy priorities in the regional strategies of socio-economic development in the NWFD; 2) identifying the keywords and word combinations that form the provisions on non-resource and non-energy exports of the NWFD; 3) justifying the need to adapt regional strategies to the changed federal system of key performance indicators of non-resource and non-energy exports development.

Of practical significance are the recommendations proposed to the regional authorities of the NWFD on adapting socio-economic development strategies reflecting the updated targets for non-resource exports development. Introducing changes to the regional strategies will help to achieve the national non-resource export development target and will contribute to the systemic diversification of Russian exports. Further research on the topic involves focusing on the economic and statistical evaluation of the significance of non-resource and non-energy exports development, including the analysis of other types of documents and effective mechanisms of supporting non-resource and non-energy exports in the regions.

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STRUCTURAL CHANGES IN THE ECONOMY OF RUSSIAN NORTH-WESTERN REGIONS: INSTITUTIONAL FACTOR

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Balancing out uneven regional development and territorial disparities is an urgent task. Solving it requires considering the geo-economic features of various parts of Russia's spatially structured territory. This study aims to describe trends in the economic space transformation and structural changes in the economies of the North-Western Federal District. Exploring the economic space transformation, the paper draws on economic theory and geography, the concepts of cluster and power generation cycles, regional economics and other theories. It presents the results of the institutional and economic research of income capitalization and the role of the institutional factor, along with regional gross value added (GVA) analysis by activity types. The study investigates the movement of capital (rent) in the economic space. There are several noticeable trends: the Arkhangelsk and Murmansk regions, the Komi and Karelia Republics have diversified their economies by developing manufacturing and mining, while the Murmansk and Pskov regions did that by stimulating agriculture. Regional factors generating rent at significant transaction costs are found to be affected by institutional factors. The paper concludes that structural changes in the economy of the Russian north-west regions are wavelike in nature. The indexes of regional GVA and industrial market development point to the existence of a transition zone between the structural phases of the wave, with the transition mostly taking place in 2014. The trigger for the second phase of the wave, along with new structural changes, was international sanctions and growing confrontation reducing capital outflow and contributing to further structural changes in the regional economy.

Keywords:
economic space, institution, transaction, economic rent, investment

Introduction

The elimination of territorial disparities is perceived as an urgent task. Addressing it requires taking into account geo-economic features of different parts of a country's spatially structured territory [1—4]. Spatial inequality is the difference in the value of indicators (gross value added (GVA), gross regional product (GRP), etc.) among regions [1]. Assessing these differences, researchers assume that economic actions are driven by their context rather than by the idea of

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revenue maximization [3—5]. They tend to focus on organizational procedures considering both local processes [5] and the changing institutional order of interactions between agents in the localization of relationships between specific and general institutions [6—8]. Thus, researchers have directed increasing attention to the role of institutions in territorial development [8—10], as well as to the role of exogenous and endogenous factors in the development of peripheral regions [2; 11; 12]. They consider 'meso-phenomena' distinguishing them from micro- and macro-levels [13; 14]. Thus, within the adopted "meso-approach" to the interactions between general and specific rules in explaining agents' cooperation and coordination, "meso-institutions" come to the forefront. It is a new research category performing an important function of an intermediary between "general" and "specific" rules [8; 15; 16]. The concept of institutions allows studying spatial objects as meso-economic systems focusing on their organizational features. In a broad sense, mesoeconomics explores the evolution of economic groups (clusters, networks, etc.). That is why it is shaped by sectoral, spatial and institutional economics [17, c. 30]. Experts focus on uncertainty and transformations of the institutional order of interactions between agents, the functioning of meso-economic structures and the endogenous formation of agents' coordination mechanisms [7; 14; 16; 18; 19].

The objectives of this study fall within that scope. It aims at identifying trends in the transformation of the economic space and structural changes in the regional economies of the North-Western Federal District (NWFD).

Research methods

Theoretically and methodologically, the economic space of the NWFD is considered through the lens of economic theory and geography, doctrines of territorial-production complexes (TPC) and energy-production cycles (EPC), regional economics and other sciences. The representation of the Northwest of Russia is a model of centre-periphery interactions [2]. In addition to an economic analysis, the research involves an institutional analysis comparing different institutional characteristics of sites to identify general and specific institutions and their impact on the regional economies. The subject of the analysis is a meso-institution (a contractual system established in a sector) and other existing institutions regulating business practices.

The research relies on the data from the Federal State Statistics Service (FSSS) (https://rosstat.gov.ru/folder/10705), including those on nominal GRP and GVA, investment, gross fixed capital formation, population. Statistical analysis has been carried out for individual and aggregated activities by regions (table 1). The criterion for grouping services and management actions into aggregates is the pricing mechanisms, both competitive (market-based) and non-competitive (non-market-based). Regional GVA and industry development indexes by regions of the NWFD were calculated using a well-known formula:

$$\mu_{ij}(t) = \frac{d_{ij}(t)}{D_j(t)} \frac{N(t)}{n_i(t)}, \qquad (1)$$

where d_{ij} is the volume of gross value added of j sector (industry) of i region;

D_j is the volume of gross value added produced of j sector (industry) of Russia, in million rubles;

n_i is the population of i region;

N is the population of Russia;

t is the years of observation (2005—2019).

The index characterizes the degree of development of regional sectors compared to the Russian average. Its excess of 100 % reflects the specialization of the region's economy.

The conducted trend analysis uses a modulated signal extraction method. It aims at identifying fluctuations in values of the information signal, the corresponding statistical indicator. The modulation allows isolating the corresponding useful signal carrying information about structural changes.

Table 1

Grouping of activities by sector

Types of activities (according to FSSS)	Aggregated sectors of the economy
Mining	Mining
Manufacturing industries	Manufacturing industries
Construction	Construction
Wholesale and retail trade; repair of motor vehicles, motorcycles, household goods and personal items	Transactional sector of the economy (market services)
Transportation and storage; Information and communication activities	
Financial and insurance activities	
Real estate transactions, rental and provision of services	
Activities of hotels and catering establishments	
Public administration and military security; social insurance	Transactional sector of the economy (non-market services)
Education	
Activities in the field of culture, sports, leisure and entertainment	
Healthcare and social services provision	
Provision of other types of services	
Production and provision of electric energy, gas and steam; air conditioning. Water supply; sanitation, waste collection and disposal, pollution elimination activities	
Administrative activities and related additional services	
Agriculture, hunting, fishing, fish farming and forestry	Agriculture and forestry, etc.

Results

The earlier paper [2] presents the trends existing in the north-west regions of Russia at the beginning of the 21st century. However, as a result of the recent geopolitical events, the economic space experienced a new wave of structural shifts. The μ_{ij} (t) index time series analysis allows drawing conclusions about the structure of regional economies and their sectoral specialization. Figures 1—4 show the changes in an industry's (aggregate sector's) GVA and the regional GVA index (μ_{ij}). The trend analysis followed the modulation of the relevant GVA signals of the sectors and μ_{ij} (t) regions. Each of the Figures represents different types of structural shifts and corresponding groupings of the regions.

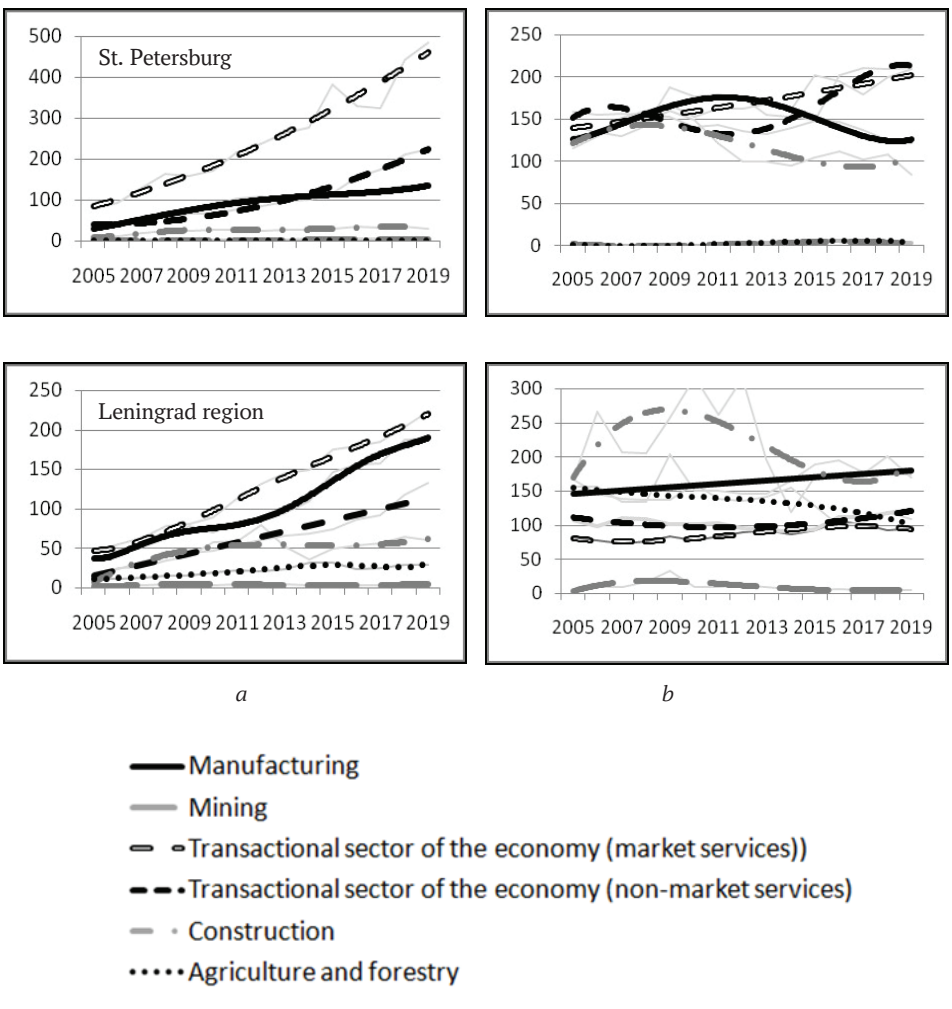
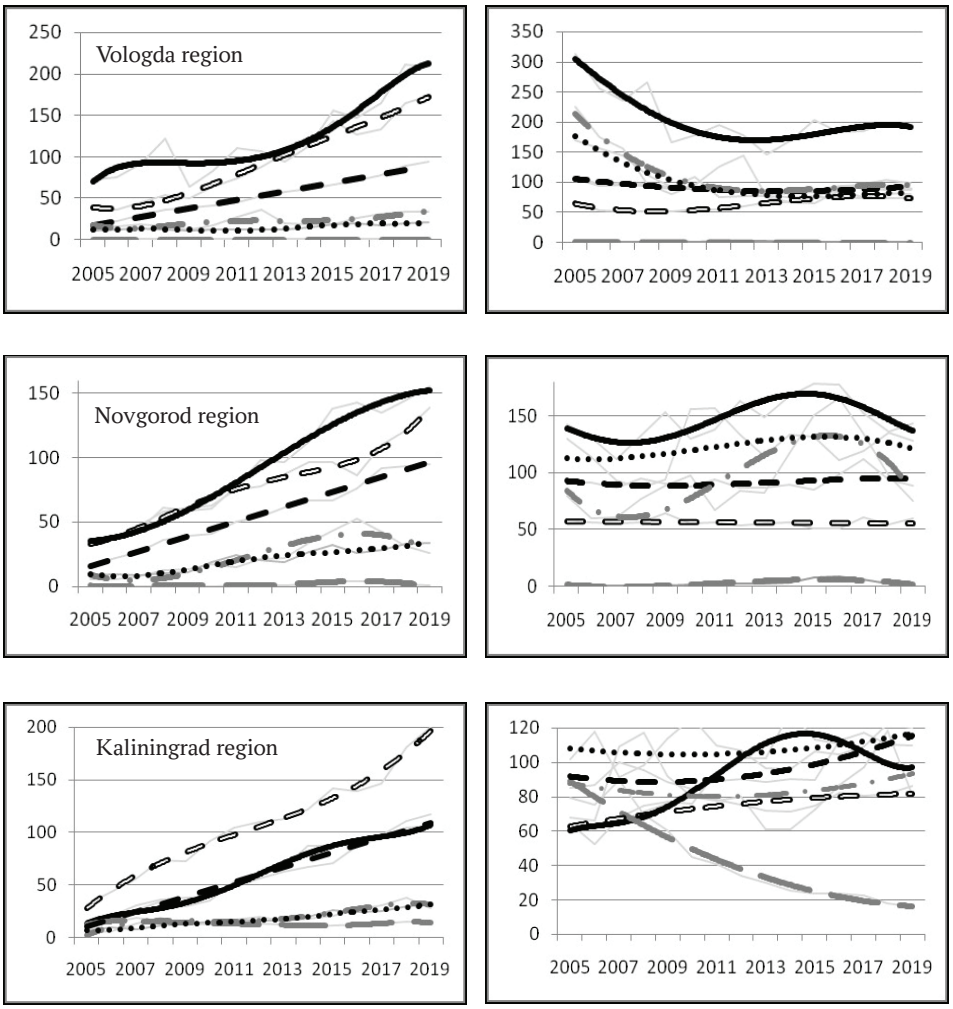


Fig. 1. Changing structure of the regional economies specializing in Transactional economy (market services) and Manufacturing:
a — GVA of the industry (sector) per capita, thousand rubles;
b — Regional GVA index, % of the national average

Source: author's calculations based on the FSSS data.

The data analysis leads to two conclusions. The first one is the division of the observation time interval into two periods with the notional trend break line in 2014. The second conclusion is that the previous trend noted in [2] has reversed in some regions. Some sectors are actively developing, even to the point of shifting specialization (provided that the average Russian level is exceeded) (see Table 2 and Figs. 1—4).

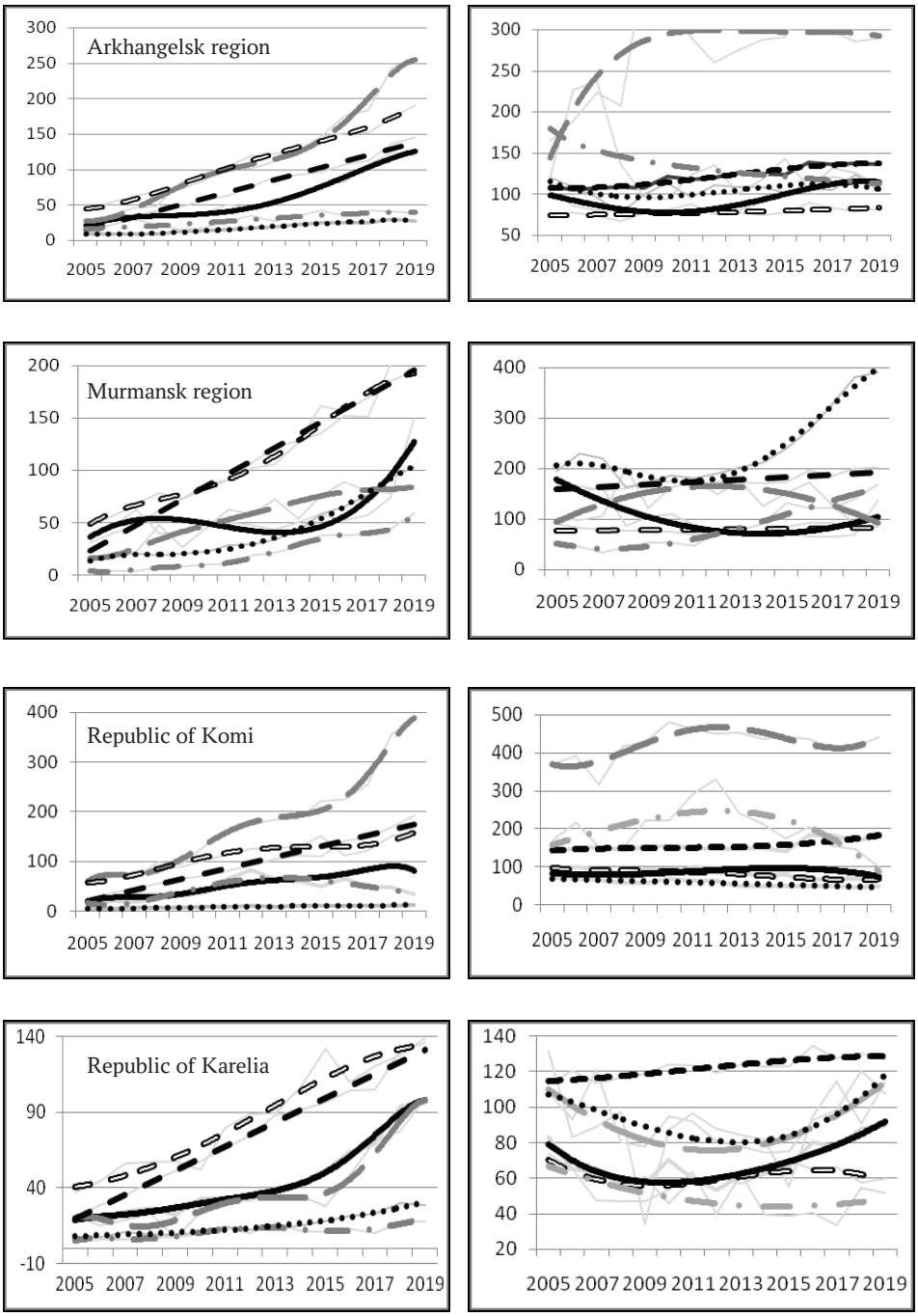


a *b*

Fig. 2. Changing economic structure
of the regions specializing in Manufacturing

Note: notations are the same as in Fig. 1.

The Komi and Karelian Republics, the Arkhangelsk, Murmansk and Kaliningrad regions have diversified their economies by developing manufacturing industries as well as mining.

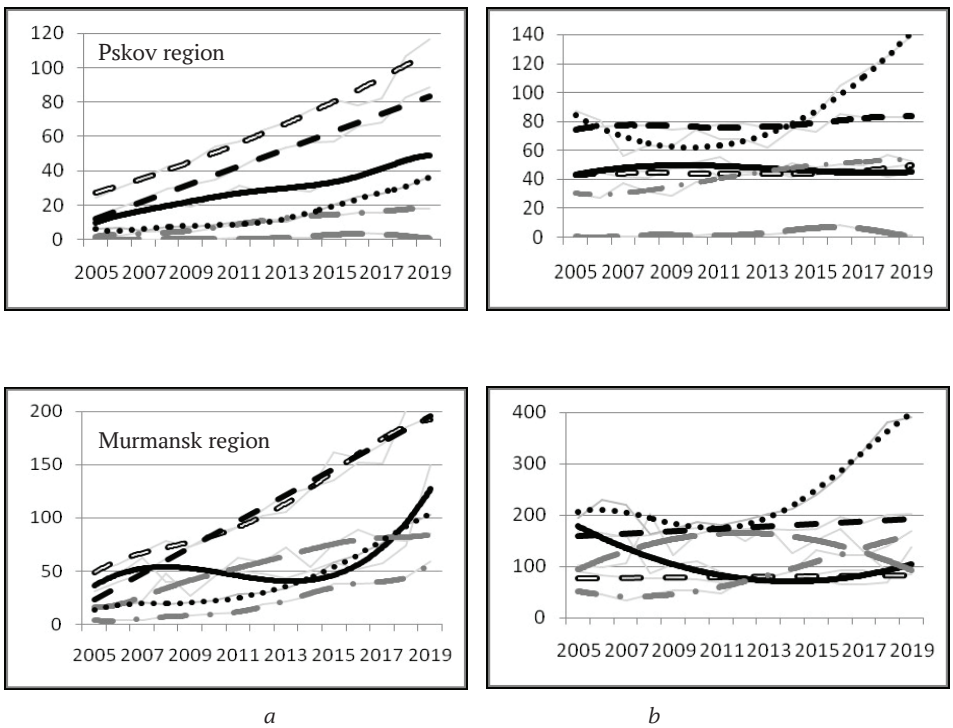


a *b*

Fig. 3. Changing the economic structure of regions specializing or growing in sectors: Mining and Manufacturing

Note: notations are the same as in Fig. 1.

There is an emerging specialization in the Pskov region («Agriculture, etc.») and in the Murmansk region in the same aggregate sector (with a focus on fisheries and fish farming). In addition, the Novgorod and Kaliningrad regions and the Republic of Karelia have shown an increased rate of development in the sector. However, the Murmansk region and the Republic of Karelia are expected to reduce the pace of development of the industry due to the 25 % drop in fish prices on the international market in the second half of the last year.



a *b*

Fig. 4. Changes in the economic structure
of regions with a specialization in Agriculture, Forestry, etc.

Note: notations are the same as in Fig. 1.

The trend analysis (Fig. 1—4) indicates two trends, two phases of the "wave" of shifts in the economic space. Figure 5 shows a diagram of the macro-region and the two phases of the "structural wave" changing trends of regional development measured in GVA of the manufacturing industry. At first, the manufacturing industry is pulled to the centre, while peripheral regions suffer investment famine. That is phase I. Conversely, phase II involves the diffusion of capital to the periphery ensuring a high rate of development of the "manufacturing sector". We believe that TPCs of the periphery have responded positively to new opportunities based on their existing productive and infrastructural capacity and the rise of EPCs.

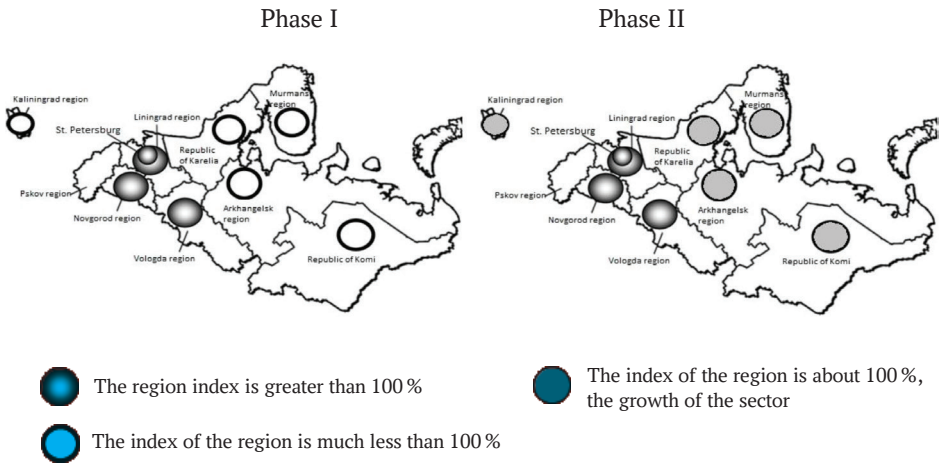


Fig. 5. A structural wave in the NWFD:
phase I — manufacturing was "pulled" into the centre of the macro-region,
phase II — active industry development in the periphery

The above-mentioned paper [2] proposes a classification of regions according to the level of development of particular sectors. However, the current context requires its revision. Therefore, we propose a new classification that takes into account the phasing of structural shifts (Table 2).

Table 2

Grouping of regions by sectoral development

Types of economic activity	Phase I (before 2014)	Phase II (after 2014)
	specialization	specialization industry growth
Market services	St. Petersburg, Leningrad region	St Petersburg Leningrad region
Manufacturing industries	St. Petersburg, Leningrad region, Vologda region, Novgorod region	St. Petersburg, Leningrad region, Vologda region, Novgorod region. Kaliningrad region, Arkhangelsk region, Murmansk region, Komi Republic, Republic of Karelia
Mining	Arkhangelsk region, Murmansk region, Komi Republic	Arkhangelsk region, Murmansk region, Komi Republic Republic of Karelia
Construction	St. Petersburg, Leningrad region, Arkhangelsk region, Komi Republic	St. Petersburg, Leningrad region, Arkhangelsk region, Murmansk region
Agriculture, hunting, fishing, fish farming	Vologda region, Novgorod region, Kaliningrad region	Novgorod region, Kaliningrad region, Murmansk region, Pskov region. Republic of Karelia

Discussion

Major problems of the national industrial development have become increasingly related to investment resources [20]. Thus, Russian companies have fallen on hard times due to sanctions, pressure on stock markets, extensive use of international structures and other factors withdrawing global liquidity. The shortage of long money impedes the periphery's economic development and industrial success.

Let us build a formal model reflecting both endogenous factors and externalities to disentangle the causes of the phase change. The traditional approach considering competitive pricing assumes that externalities do not change the market structure. Yet, we believe that spatial externalities create endogenous mechanisms characteristic of the market structure of the Chamberlain type. Chamberlain's formulation of the market structure that we use originates from the work by Dixit and Stiglitz [21]. We consider a choice-of-alternatives situation in which potential investments in a particular sector of a peripheral region serve as substitutes for each other. However, they are poor substitutes for outwards operations (to the centre). The market decision on the optimum is made taking into account unit intersectoral elasticities, as well as according to both principles existing within the region and principles established by external beneficiaries that underpin the choice of optimal strategies by the periphery's residents.

Next, let us estimate the rent income losses of two beneficiary groups (external and peripheral firms). It is estimated traditionally through the present net value of investments (*NPV*):

$$NVP = \sum_t [S + R\ (1 + r)^{-t}], \quad (1)$$

where R is a rental income excluding inflation;

r this is a discount rate;

S is investment and operational costs (including all costs, both transformational and transactional).

Taking into account the spatio-temporal continuity of economic space, we view economic rent as the potential for an agent's movement in it determined by the initial and final position of the agent and properties of the space. It is evaluated in the system of property and non-property rights through the rent function transformed into the price of production. In line with the ideas of W. Elsner [18], we see the reason for the different efficiency of transactions in the endogenous formation of institutional mechanisms, primarily meso-institutions.

We assume that costs are determined according to average industry standards that are the same for all the regions. Thus, the rent flow is calculated through the GVA of regions' industries. Taking into account the limit of *NPV* function ($\lim_{t\to\tau} NPV = R/r, \tau \gg 0$), and the assumptions made, we estimate the rent loss through R function analysis.

During the first phase, the investment part of the capital moved not only from sector to sector (for instance, to mining in the Komi Republic and the Murmansk region [2]) but also from discriminated regions to other regions, in particular to St. Petersburg and Moscow agglomerations.

Except for projects by large corporations, usually related to the extraction and primary processing of natural resources, the peripheral industry has suffered from widespread liquidity shortages. Given the underutilization of production resources, this led to the stagnation of production, primarily in manufacturing (as one of the most capital-intensive industries) [2; 22].

To explain the mechanism of economic rent withdrawal, according to [4], we introduce a spatial differential economic rent of the first and second kind (R_{1ij} and R_{2ij}):

$$R_{ij} = p_{ij} R_{1ij} + p_{ij} R_{2ij}, \quad (2)$$

where R_{1ij} and R_{2ij} indexes of sectoral (j) and territorial (i) GVA standard (rent function); p_{ij} are sector (j) and territorial (i) price indexes.

In some cases, regional factors (e. g., natural resource endowments) may become major ones in rent-forming. The use of local resources influencing the spatial distribution of value chains can generate positive spatial economic effects [23]. In this case, the R_{1ij} rent is mainly linked to the high economic potential of an area and the associated infrastructure framework.

The second part of the rent, R_{2ij}, also influences the conversion of rent into the price of production. It arises from different productivity of capital investments and other transactions that increase economic rent. At the same time, we no longer consider natural and technological causes as rent generating factors, instead, we consider the monopoly power of affiliated oligopoly groups and other institutional and spatially related factors.

The R_{2ij} rent is allocated according to the market structure, exogenous trading rules shaped by different regulators. Thus, the price and its structure are a result of the institutional arrangement and transaction costs. The latter includes non-production costs, costs associated with securing contracts, and support for the enforceability of claims. Sensitive administrative and economic barriers create additional costs for firms with limited market power and peripheral areas with limited administrative resources. Thus, we consider regulatory factors connected with the nature of collective actions of agents as phenomena of economic space. There are not just firms and markets in the economy but also a dense network of contractual relationships linking them. To take into account the specific law (meso-institution) formed by the contractual system, we shall rewrite formula (2):

$$R_{ij} = a_{ij} p_{ij} R_{1ij} + \beta_{ij} p_{ij} R_{2ij}, \quad (3)$$

where a_{ij} and β_{ij} are normalizing coefficients.

While $a_{ij} \geqslant 0$, β_{ij}, can be either higher than zero or lower depending on the spatio-temporal dimension of the relationship structure. For instance, we should consider the emergence of new industries (including the attraction and retaining of industries and markets from outside the region) and various forms of new economic activities in regions in the context of differences in their spatial development [24]. Moreover, we should view the diversification of development paths in the context of beneficiary competencies, in particular those based on a combination of new analytical knowledge [25]. This is especially relevant in the context of the active digitalization of the economy.

We determine a_{ij} and β_{ij} coefficients using the results of the analysis of contracts and other institutional conditions for the sustainability of the local equilibrium and competencies. We assume that due to the emergence of negative synergies in the economic space ($\beta_{ij} \leqslant 0$), peripheral companies and territories are discriminated against and forced to operate according to external standards as they lack competencies.

An example illustrating this point is the timber market ("balance of birch") with the goods supplied by the resident companies in the Republic of Karelia and the Vologda region to Finland. The case is interesting because it has been the subject of antitrust investigations by Finnish and Russian competition authorities as it has signs of anti-competitive agreement (collusion) in commodity markets.

Based on the author's analysis of contracts, Fig. 6 shows the effects meso-institutions have on the conversion of rents into prices of production. It reflects the average (industry inter-regional market) profit, transformation and transaction costs.

In the price structure, transaction costs are part of operational (internal) costs. They reflect activities aimed to ensure order within the area of competence. At the same time, most of transaction costs (excess over the contract price) are caused by external factors not accounted for in supply contracts. These are certainly losses for the region.

In the diagram, the first and the fourth bars are defined by the average industry transformation costs and the "cost of the timber" on both sides of the border. The second, the third and the fifth bars show the result of different strategies chosen by the firms (with varying market power) under Chamberlin-type market conditions [21]. Increased transaction costs (difference in the height of the bars on both sides of the border) are not taken into account in the basic conditions of supply (EXW, FCA, DAF, etc.).

This conversion of rents into production prices is the result of the institutionalized economic order that weakens firms with limited market power and territories with limited administrative resources. In our opinion, this is the essence of the mechanics of R_{2ij} rent extraction.

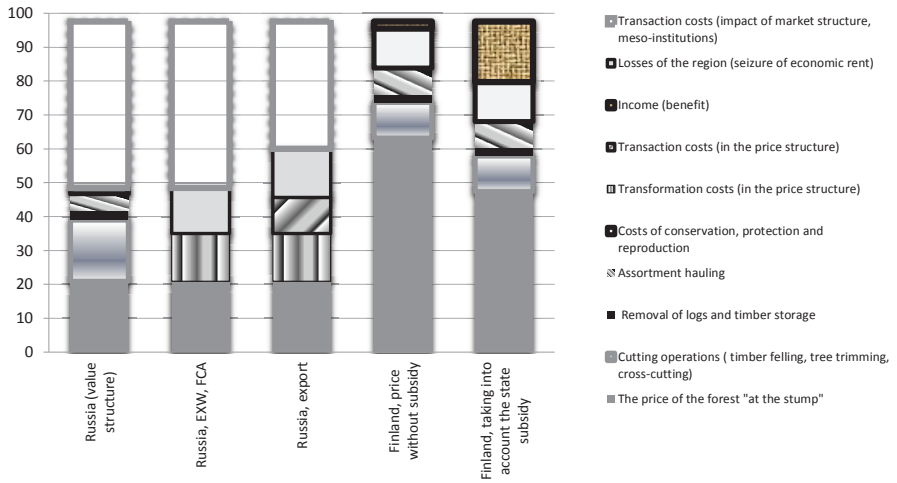


Fig. 6. Influence of meso-institutions on the conversion
of rent into production price using the example
of the contract price structure (pack-sack method) of one cubic metre of birch, Euro

Source: author's elaboration.

It is known that the established economic order is determined by the balance of extractive and inclusive institutions. Extractive institutions contribute to the concentration of power in the centre, while inclusive institutions distribute power to actors in regions [26]. The centre shapes trade and constructs extractive market institutions that enable it to siphon economic rents from the periphery. The situation in Russia is similar to that in the European space (according to [27]). The centre (as a licensor of new technologies and a beneficiary of rents) imposes market openness on the periphery (as a licensee technologically dependent on the centre losing out to it in terms of competencies). It extends to the periphery its legal framework that exclusively supports the competencies of external beneficiaries.

The control authorities on both sides of the border had questions to market participants because they "had noticed" signs of a cartel in the synchronized underpricing of a cubic metre of timber purchased in Russia violating paragraph 6 of the Finnish Antitrust Act prohibiting price fixing, Article 81 of the EU Charter prohibiting cartels, and Article 11 of the Russian Federal Act on Protection of Competition. However, Russian and Finnish competition authorities did not find a cartel agreement, as the whole situation was a result of the synchronized behaviour of the firms involved. We assume optimal strategy (Nash, game theory) was chosen due to the balance of market extractive and inclusive institutions rather than through an illegal agreement.

The institutional factor, which we consider to be the cause of structural shifts in the first phase, leads to an investment famine in the periphery (and low-liquidity sectors). The reason is as follows. ROI is calculated as:

$$ROI = [R - (S^P + S^T)]I^{-1},$$

where I is the volume of investments required for the production and sale of products, ensuring the legal protection of the contract network; R is income; S is current expenses.

Index "P" is transformational costs, index "T" is transaction costs associated with the enforcement of claims.

In addition, all other things being equal ($R_a = R_b$, $S_a^P = S_b^P$), transaction costs of an entity affiliated with an external beneficiary (index "a") become less than those of other entities (index "b"): $S_a^T \ll S_b^T$. Thus, $ROI_a \gg ROI_b$.

Given the existing institutional order, the distribution of income within the framework of the "centre-periphery" model shall correspond to the formula (1). A spatial externality results in the return on investment with a much greater increase in the liquidity of assets in an affiliated entity. However, in this case, the territory loses a part of the economic rent generated within it. On the one hand, the rent facilitates the intensification of production. On the other hand, affiliated agents take away the rent increment through extractive institutions (a potential pool of investments).

This situation certainly affects investment decisions. Thus, investments of the "centre" stimulate exclusively the flow of natural resources to manufacturing industries gradually concentrating closer to the centre, whether it is an EU country bordering on a Russian peripheral region or a Russian metropolis. When comparing contracts for the supply of crushed stone from the periphery to Moscow, a similar situation is observed. Developers use market power to dictate contract terms.

Figure 7 shows the volume of investment in actual prices in 2005—2020. It demonstrates a clear advantage of the centre over the industrial periphery. Data for Moscow and the Moscow region are added for comparison.

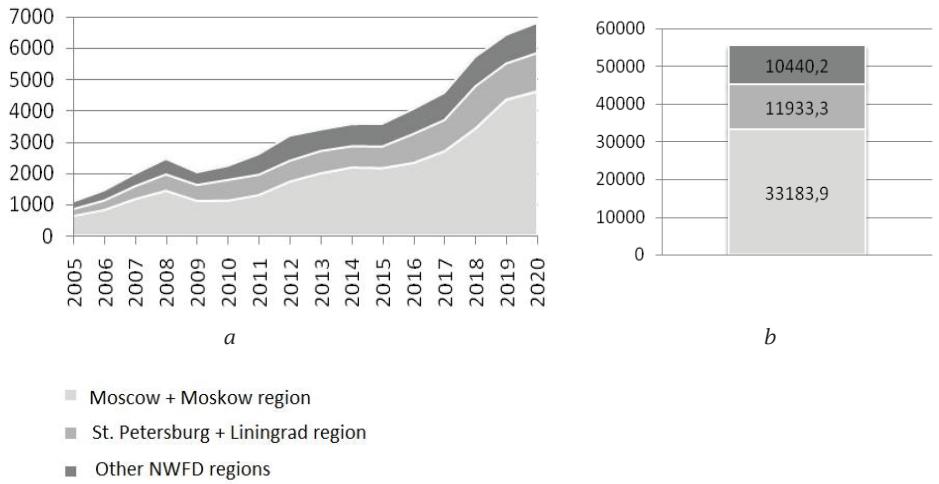


Fig. 7. *a* — Fixed capital investment in NWFD and Moscow agglomeration regions, in actual prices, rub bn. 2005—2020; *b* — total investment

Source: FSSS data.

The trigger for the second phase of the wave and the new structural changes was, in our view, the geopolitical crisis. The subsequent sanctions and increased confrontation had a significant impact on the following structural changes in the economy of the studied regions. A tipping trend has emerged. In fact, the trend in capital outflows has reversed since 2014 (Fig. 8). At least until 2019, there was a decline in capital outflows from Russia, with a simultaneous increase in the money supply and a decline in direct investment from Russia.

During the second phase, the sanctions on the one hand and the Russian government on the other forced a larger scale move of capital to the periphery. Both credit incentives and the willingness of regional authorities and regional households in general to invest have contributed to this spillover. Furthermore, in our view, this period generally coincided with the start of fixed capital renewal in TPC-dominated regions with their characteristic EPCs.

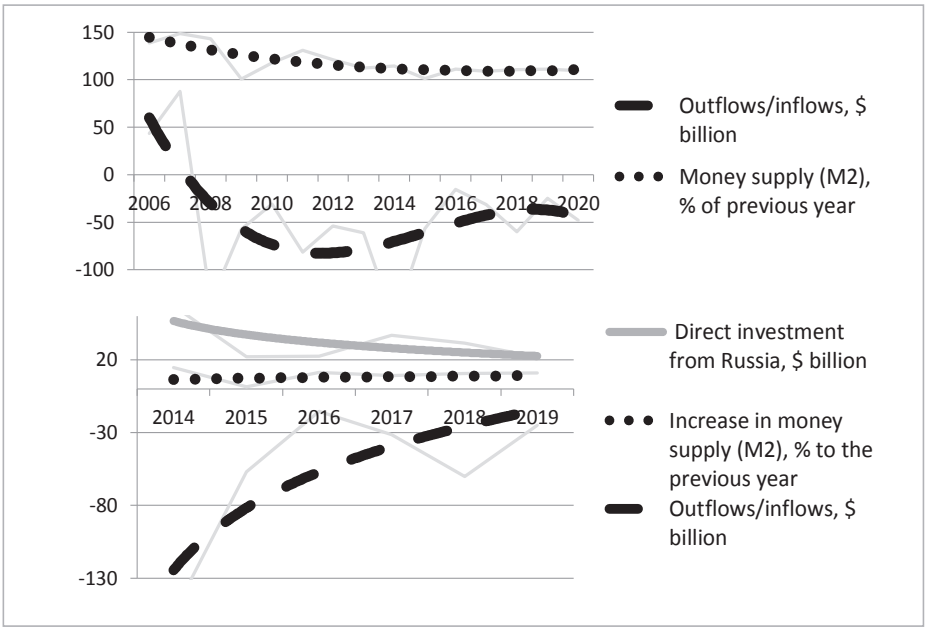


Fig. 8. Trends in the Russian financial policy outcomes

Source: author's calculations based on the FSSS data.

This renewal manifests in the changes in the consumption-accumulation ratio in GRP and trends in the development of sectoral markets characterising the structural deformation of regional economies. Gross fixed capital formation, as an investment component of GRP, reflects the nature and direction of generalized (within a region) business cycles.

Figure 9 shows generalized business cycles in the NWFD regions as a modulated signal induced by fluctuating values of the information signal. This signal is the indicator called "gross fixed capital formation, as a percentage of total GRP". Obviously, these macrostructural changes may not coincide in the phase. At the same time, we assume that the exogenous factor as a trigger has started to adjust the rhythm of business cycles.

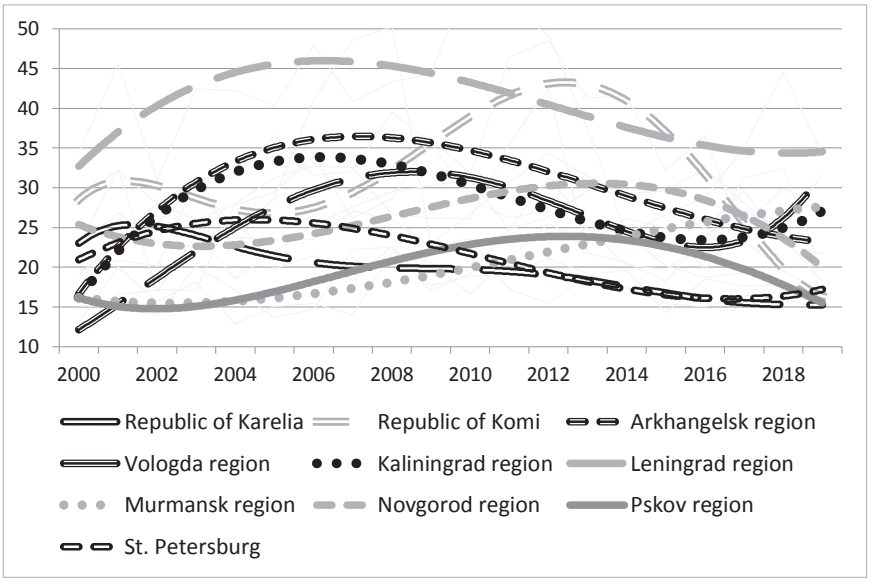


Fig. 9. Modulation of gross fixed capital formation,
as a % of total by the NWFD regions

Source: author's calculations based on the FSSS data.

Based on the above, we conclude that the combined impact of financial and institutional factors produces various structural shifts in the economic space. At the same time, after 2014, excessive liquidity in the centre, along with increased external sanctions and the determination of the government, caused the diffusion of capital to the periphery (the dominance of R_1 in the formula (1)), while the previous phase of the structural wave was dominated by the R_2 element.

Conclusion

Geography, namely the central-peripheral configuration of space, has a profound impact on inter-regional disparity and economic growth in the regions [2—4; 28]. Forces that lead to the agglomeration of economic activity and aggregate growth are similar across the board [28; 29]. They lead to the differentiation of regions, which manifests itself not only in the differences in their GVA and

GRP but also in the different focus and pace of development and transactional efficiency. We agree with [18] that the reason is the endogenous formation of institutional mechanisms that coordinate actions of agents in uncertain collaborations and stable oligopolistic groups. The conjunction of general and specific rules is carried out through the contractual system as a meso-institution.

The negative synergy of the economic space (shown in this research and in earlier works [2; 4]) gives us grounds to conclude within the centre-periphery model that spatial inequalities are reproduced. This can be explained by objective reasons, including the established balance of extractive and inclusive institutions, the Chamberlain-type market structure, institutional and social embeddedness (the term is used in the sense of [30]). They all contribute to the gap between rents received by the centre and rents received by the periphery, determine a rent gradient and a corresponding decrease in the development potential of the periphery.

Therefore, it is necessary to increase the agency of regional authorities and to strengthen their competencies both through the use of local resources and through effective mechanisms to regulate the institutional structure of relations. This can be done through institutional engineering, adjusting the balance of extractive and inclusive institutions and regulating the legal order through networking and contractual interactions. In particular, the administration of a peripheral territory should provide protectionist support to its resident companies not affiliated with external beneficiaries. These companies are advised measures to reduce their reputational costs. Such a set of measures shall not be considered a violation of antimonopoly legislation, since it is to equalize conditions of competition and facilitate mutually beneficial cooperation.

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THE DEVELOPMENT OF BORDER REGIONS

TOWARDS A CLASSIFICATION OF TRANSBOUNDARY TOURIST AND RECREATION MESOREGIONS IN THE BALTIC REGION

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In the wake of the Covid-10 pandemic, the Baltic region saw a dramatic reduction in tourist flows in 2000—2021; the decrease was as much as tenfold in some destinations. This study aims to classify the 16 transboundary tourist and recreational mesoregions of the Baltic region according to 2019 tourist flows. The research evaluates, for the first time, the 2020—2021 decline in tourist flows across these regions. The main outcome of this study is grouping the mesoregions into three orders according to the size of 2019 tourist flows. Four mesoregions were assigned to the first order (with over 500,000 arrivals), three of them located in the southwest Baltic region; nine, the second order (from 100,000 to 500,000 arrivals); three, the third order (from 50,000 to 100,000 arrivals). The most substantial fall in tourist flows occurred in 2020—2021 in the mesoregins including Sweden and Russia and the least marked in those involving Denmark, Germany, Finland, Estonia and Latvia. The findings may help track the future restoration of transboundary tourist flows in the countries of the Baltic region.

Keywords:
cross-border region, hierarchy of regions, tourist flow, tourist overnight stays, COVID-19

Introduction

Cross-border tourism, like other types of tourism, faced a severe crisis in 2000—2021 when cross-border travel restrictions were in place to keep the Covid-19 pandemic at bay. In all the cross-border tourism-and-recreation regions

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girdling the Baltic Sea, tourist flows decreased dramatically, probably tens of times. Today, it is difficult to answer the question as to how much time will be needed for the cross-border tourism and recreation regions to return to the peak values hit in 2019.

The study region covers, in whole or in part, territories of 11 countries, nine of which border the Baltic Sea directly. Norway and Belarus are also often included in the Baltic region [1, p. 68]. In our case, this addition is called-for because these two states and the 'Baltic region proper' share a border of considerable length [1, p. 74]. Thus, this study looks at the mesolevel cross-border tourism-and-recreation regions (CBTRR) found in the adjacent territories of the nine main countries of the Baltic region and along the external borders of the 'region proper'.

The focus of the study is the size of tourist flows in the Baltic CBTRRs in 2019—2021.

The research aims to produce quantitative criteria for classifying mesolevel CBTRRs in the Baltic region according to the 2019 tourist flow size, as well as to estimate the 2000—2021 tourist flow reduction caused by the Covid-19 pandemic.

To this end, the study achieves several objectives:

— identifying and delineating the borders of the Baltic region; classifying them according to the size of the 2019 tourist flow;

— evaluating cross-border tourism within the mesolevel CBTRRs from mid-2020 to mid-2021;

— grouping CBTRRs according to changes in tourism in 2020—2021 compared to 2019.

The study uses open-access data from the statistical services of the 11 countries (Norway[1], Sweden[2], Finland[3], Denmark[4], Germany[5], Poland[6], Belarus[7], Rus-

[1] *StatBank Norway*, 2021, available at: https://www.ssb.no/en/statbank/ (accessed 14.08.2021).

[2] Statistical database, 2021, *Statistics Sweden*, available at: http://www.statistikdatabasen.scb.se/pxweb/en/ssd/ (accessed 14.08.2021).

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sia[8], Lithuania[9], Latvia[10] and Estonia[11]) and the statistical services of three states of Germany: Schleswig—Holstein—Hamburg[12], Mecklenburg-Vorpommern[13] and Brandenburg—Berlin[14]. We analysed regional monthly and quarterly data on international overnight stays or, if none, changes in monthly overnight stays in the country in general. For Belarus, yearly data for 2020 were used since the monthly data were not available.

State of research

An important factor in the integration of regions divided by a state border, cross-border tourism has been extensively studied over the past two decades [2; 3]. Researchers have explored this phenomenon in different parts of the Baltic region. Tourism at the Russian-Finnish border was examined by Antti Honkanen, Kati Pitkänen, Michael C. Hall [4], Svetlana Kondratyeva (née Stepanova) [5—7] and others; at the Finnish-Swedish border, by Eeva—Kaisa Prokkola [8; 9]; in the bordering areas of the Scandinavian countries (Norway, Sweden and Denmark) and Germany, by Leiv Opstad, Randi Hammervold, Johannes Idsø [10], Juliane Große, Christian Fertner and Trine Agervig Carstensen [11]; at the German—Polish border, by Marek Więckowskiand Dallen J.Timothy [12]; at the Polish—Belarusian border, by Aliaksandr Cyargeenka [13], at the Polish—Russian border, by Renata Anisiewicz Tadeusz Palmowski [14], Tomasz Studzieniecki, Valentin Korneevets [15] and others.

Many Russian scholars have sought to delimit and investigate from different perspectives CBTRRs located at Russia's borders with Finland [16], Estonia, Latvia [17—19], Belarus [20], Lithuania and Poland [21]. Finally, one cannot

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[14] *Statistik Berlin Brandenburg*, 2021, available at: https://www.statistik-berlin-brandenburg.de/archiv/g-iv-1-m (accessed 14.08.2021).

but mention the works of Elena Kropinova [22; 23], who described mesolevel CBTRRs throughout the Baltic region. She identified the characteristics of CBTRR formation that this study builds on.

Earlier, we classified mesolevel CBTRRs according to the amount of travel. The classification was tested in the south-eastern Baltic region [24] and the CBTRRs involving Sweden [25]. When exploring the tourist flow geography in Sweden, we investigated the influence of the Covid-19 pandemic on tourism numbers in 2020. A more in-depth analysis of that impact, along with a study of changes in the spatial structure of the tourist flow, was carried out for Finland and Estonia [26].

Works examining the effect of the Covid-19 pandemic on an individual country or region are few (such a study was carried out in Poland in 2020, immediately after the coronavirus outbreak had been confirmed as a pandemic [28]). Therefore, this contribution classifies, for the first time, the mesolevel CBTRRs in the Baltic region according to the tourist flow size and examines the effect of the Covid-19 pandemic on the amount of travel in the CBTRRs in 2020—2021.

Results and discussion

Kropinova [23] proposed a CBTRR hierarchy consisting of three main levels: macro- (the Baltic macroregion), meso- and micro-. Earlier, we proposed a classification of mesolevel CBTRRs according to their maturity measured as a function of the number of border crossings within a CBTRR [24]. The classification employed quantitative criteria: a mesolvel CBTRR with over 500,000 border crossings was considered fully mature, with 100,000—500,000 crossings of above-average maturity and 50,000—100,000 crossings of average maturity. CBTRRs with below 50,000 crossings were assigned to the microlevel category. Overall, we identified six mesolevel CBTRRs [24]. Another six mesoregions identified at Sweden's borders with the other Baltic region states [25] were divided into three levels, or orders, depending on the amount of travel in 2019.

This study focuses on 16 mesolevel CBTRRs in the Baltic region (Table 1). The earlier described 12 mesolevel CBTRRs [24; 25] were supplemented with another two situated at the Russian—Finnish border [16]. A separate Swedish—Norwegian mesoregion was identified within the German—Danish—Swedish CBTRR, and a German—Polish region, not considered before, was added. To compare, Korneevets distinguishes 17 cross-border mesoregions in the Baltic region [29, p. 19], albeit of a very different composition. And Kropinova identifies only eight mesolevel CBTRRs [23, p. 120]. It is worth noting, however, that she concentrated on the eastern part of the Baltic region, describing only one mesolevel CBTRR with Swedish participation.

Table 1

The number of international overnight stays from mid–2020 to mid–2021 in a CBTRR; changes in the number of overnight stays from 2019 to 2020/2021; the order of a mesolevel CBTRR according to the tourist flow size in 2019

Name of a mesolevel CBTRR	International overnight stays, 1,000		Changes in the number of overnight stays from 2019 to 2020—2021, %	Arrivals in 2019 (estimate)	CBTRR; order according to 2019 tourist flow size
	2019	mid–2020 — mid–2021			
Swedish—Norwegian—Finnish	786.5	178.9	–77.2	391.7	2nd
Middle Swedish—Finnish	100.3	23.8	–76.3	50.5	3rd
Middle Swedish—Norwegian	376.3	22.1	–94.1	184.8	2nd
Southern Swedish—Norwegian	764.7	68.1	–91.1	378.3	2nd
South Sweden—Finnish	454.8	45.3	–90.0	214.8	2nd
Swedish—Norwegian—Danish	3383.4	590.0	–82.6	1439.1	1st
German—Danish—Swedish	6386.0	2688.6	–57.9	2089.5	1st
German—Polish	4220.5	1609.6	–61.9	1711.9	1st
Russian—Polish—Lithuanian	291.6	20.5	–93.0	121.1	2nd
Polish—Lithuanian—Belarusian	799.7	98.2	–87.7	356.3	2nd
Estonian—Latvian	318.3	154.0	–51.6	161.6	2nd
Russian—Estonian—Latvian	146.7	28.6	–80.5	70.7	3rd
Estonian—Finnish	1430.9	368.0	–74.3	732	1st
Russian—Estonian	459.5	20.1	–95.6	232.3	2nd
Russian—Finnish Northern	541.5	12.2	–97.7	242.7	2nd
Russian—Finnish Northern	147.1	1.9	–98.7	64.2	3rd

Source: prepared by the authors.

The 2019 tourist flow statistics for neighbouring countries were used to draw up a list of administrative units comprising the CBTRRs. After delineating the borders of the CBTRRs, we calculated the amount of cross-border travel within the confines of the region. The computation, however, was complicated by variance in the measures used in the tourist statistics of different countries. Not all

states keep track of arrivals by region, country of origin and month. Thus, statistics from different countries were compared based on data on overnight stays, which is more consistent. To put these measures on a single scale, we empirically calculated the factor of conversion of overnight stays into arrivals. There are enormous national differences (Table 2), but the average for the Baltic region was 2.65.

Table 2

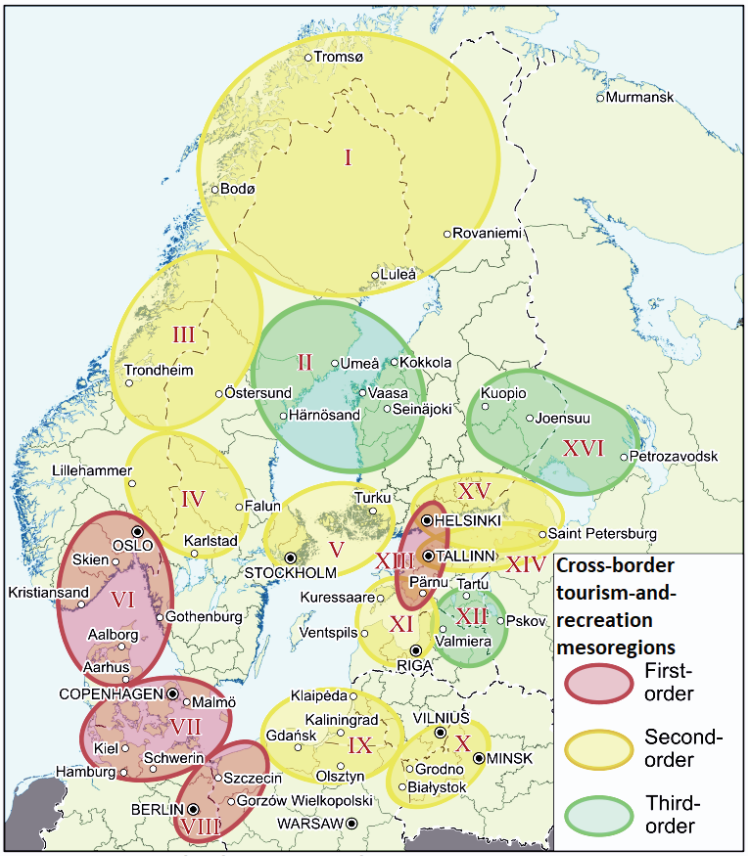
Factor of conversion of international overnight stays into arrivals for Baltic region states

Baltic region states	Factor of conversion of international overnight stays into arrivals
Estonia	1.94
Latvia	1.98
Lithuania	2.14
Poland	2.5
Germany	2.27
Denmark	4.04
Sweden	2.3
Norway	1.82
Finland	2.14
Russia	3.72
Belarus	4.33
Average for the Baltic region	2.65

Some countries do not publish sufficient statistics on overnight stays. Polish and Lithuanian regional statistics lack data on monthly changes in overnight stays and arrivals by country of origin (only the total number of international tourists is available). And the number of overnight stays was calculated for these two states, using relevant national monthly data. Since no monthly statistics were available for Belarus, the 2020 data were used instead for July 2020—2021. Nevertheless, the insignificant number of arrivals from Poland and Latvia makes this inaccuracy non-critical. Russian statistics on tourist accommodations do not differentiate according to country of origin, and only the total number of international tourists is available. The contributions of countries were computed using the measure 'the number of tourists received'. The data on international tourist arrivals from the second quarter of 2020 suggest that the tourist flow from the study countries was next to zero at the time: the pandemic-related international entry restrictions were in place, and entry for tourism was forbidden altogether. Thus, the tourist flow to Russia in the study period is assumed to be zero.

This way, we estimated the number of arrivals for each of the 16 CBTRRs, using the 2019 data. Based on the estimate, the CBTRRs were assigned to three orders according to the above criteria: 1) first-order mesoregions with over 500,000 arrivals; 2) second-order mesoregions with 100,000—500,000 arrivals;

3) third-order mesoregions with 50,000—100,000 arrivals. The first-order category of mesoregions included four CBTRRs, three in the south-west of the Baltic region (with Danish and German participation) and one in the east (the Estonian—Finnish CBTRR). Three CBTRRs with a relatively low number of arrivals (Middle Swedish—Finnish, Russian—Finnish northern and Russian—Estonian—Latvian) were classified as third-order mesoregions. All the other CBTRRs were assigned to the second-order category (Fig. 1).



Cross-border tourism-and-recreation mesoregions

I Swedish-Norwegian-Finnish
II Middle Swedish-Finnish
III Middle Swedish-Norwegian
IV Southern Swedish-Norwegian
V Southern Swedish-Finnish
VI Swedish-Norwegian-Danish
VII German-Danish-Swedish
VIII German-Polish
IX Russian-Polish-Lithuanian
X Polish-Lithuanian-Belarusian
XI Estonian-Latvian
XII Russian-Estonian-Latvian
XIII Estonian-Finnish
XIV Russian-Estonian
XV Russian-Finnish southern
XVI Russian-Finnish northern

Fig. 1. Classification of mesolevel CBTRRs according to 2019 tourist flows

Source: prepared by I. A. Ivanov.

According to arrivals, the most numerous second-order category of mesoregions can be divided into two groups: 1) from 300,000 to 500,000 arrivals; 2) from 100,000 to 300,000. The first one includes three CBTRRs: Swedish—Norwegian—Finnish, Southern Swedish—Norwegian and Polish—Lithuanian—Belarusian. The two former are located westward of the Baltic Sea, the latter eastward. In all of them, tourism transpires only across the land borders. And the second group brings together the other six second-order CBTRRs.

All the 16 mesolevel CBTRRs within the Baltic region will be characterised below.

I. The Swedish—Norwegian—Finnish second-order mesoregion (390,000 in 2019) includes Norrbotten (Sweden), Lapland (Finland), Troms and Finnmark (Norway) and the northern part of Nordland (Norway). In the structure of the cross-border tourist flow, Norwegians account for 56 per cent of arrivals, Swedes and Finns 22 per cent each. Most visitors travel from Norway to Sweden (Norwegians account for 47 per cent of all overnight stays in Sweden's Norrbotten). The CBTRR is the northernmost and the largest by area in the Baltic region. It specialises in shopping tourism (prices in Norway are higher than in Sweden and Finland), cultural and educational travel and sports tourism (ski resorts in Lapland).

II. The Middle Swedish—Finnish third-order mesoregion (50,000 arrivals in 2019) consists of the eastern part of Sweden's Westerbotten and the Finnish provinces of Ostrobothnia, Central Ostrobothnia, South Ostrobothnia and Satakunta. Finns account for 58 per cent of the cross-border tourist flow, Swedes for 42 per cent. The region is divided by the Kvarken Strait in the Gulf of Bothnia; there are many ferry connections. Swedish is widely spoken in the Finnish part of the region. The specialisation of the CBTRR is cultural and educational tourism.

III. The Middle Swedish—Norwegian second-order mesoregion (185,000 arrivals in 2019) includes Sweden's Jämtland and western Västerbotten (Sweden) and Norway's Tryndelag and southern Nordland. Norwegians comprise 80 per cent of the cross-border tourism, Swedes 20 per cent. The specialisation of the region is shopping tourism.

IV. The Southern Swedish—Norwegian second-order mesoregion (about 380,000 arrivals in 2019) consists of Dalarna, Värmland (Sweden) and the eastern part of Inlandet (Norway). Norwegians account for 75 per cent of the travel in the CBTRR, Swedes for 25 per cent. The region specialises in shopping tourism.

V. The Southern Swedish—Finnish second-order mesoregion (215,000 arrivals in 2019) brings together Stockholm and Uppsala Counties (Sweden), as well as the provinces of Åland and Varsinais—Suomi (Finland). Finns account for 55 per cent of the cross-border travel, Swedes for 45 per cent. The region, whose constituents of the CBTRR are linked by ferry, specialises in cultural and educational travel and cruises.

VI. The Swedish—Norwegian—Danish first-order mesoregion (over 1.4m arrivals) includes Västra Götaland (Sweden), North Jutland, Central Jutland (Denmark), Oslo County, Vestfold and Telemark, Agder and the eastern part of Viken County (Norway). Norwegians comprise 60 per cent of the tourism flow, Swedes 24 per cent and Danes 16 per cent. The visitors travel across the Kattegat and Skagerrak by ferry. The specialisations of the region are cultural and educational travel, cruises and beach tourism.

VII. The German—Danish—Swedish first-order mesoregion (over 2m arrivals) consists of Hovenstaden (the Capital Region), Zealand, Southern Denmark (Denmark), Skåne County (Sweden), Schleswig—Holstein, Hamburg and Mecklenburg—Vorpommern (Germany). Germans comprise 49 per cent of the cross-border travel, Swedes 26 per cent, Danes 25 per cent. The CBTRR specialises in cultural and educational, as well as beach, tourism.

VIII. The German—Polish first-order mesoregion (above 1.7m arrivals) consists of the German states of Berlin and Brandenburg and Poland's Western Pomerania and Lubusz. Germans account for 86 per cent of the tourist flow, Poles for 14 per cent. The specialisations of the region are cultural and educational travel and beach tourism.

IX. The Russian—Polish—Lithuanian second-order mesoregion 'South-eastern Baltic' (120,000 arrivals) consists of Russia's Kalinigrad region, Poland's Pomeranian and Warmian—Masurian Voivodeships and Lithuania's Klaipėda, Tauragė and Marijampolė Counties. In the CBTRR, Russians account for 68 per cent of the travel, Lithuanians for 18 per cent, Poles for 14 per cent. The region specialises in shopping tourism, as well as cultural and educational travel.

X. The Polish—Lithuanian—Belarusian second-order mesoregion (over 350,000 arrivals) includes Podlasie Voivodship (Poland), Grodno, Minsk, parts of the Minsk and Brest regions (Belarus) and Vilnius and Alytus Counties (Lithuania). Belarusians account for 57 per cent of the tourist flow, Poles for 36 per cent, Lithuanians for 7 per cent. The CBTRR specialises in shopping tourism and cultural and educational travel.

XI. The Estonian—Latvian second-order mesoregion (160,000 arrivals) includes Latvia's Riga, Riga region and Ventspils, Estonia's Saaremaa and Pärnumaa Counties. Estonians account for 73 per cent of the cross-border travel, Latvians for 27 per cent. The island of Saaremaa is linked to mainland Estonia by ferry. The Venstpils—Saaremaa ferry line operated until 2008. The region specialises in cultural and educational travel, as well as beach tourism.

XII. The Russian—Estonian—Latvian third-order mesoregion (70,000 arrivals) comprises the Pskov region (Russia), the Vidzeme region, the town of Sigulda (Latvia) and Tartumaa, Põlva, Võru and Valga Counties (Estonia). Latvians account for 46 per cent of the tourist flow, Russians for 44 per cent, Estonians for 10 per cent. The specialisations of the region are cultural and educational tourism.

XIII. The Estonian—Finnish first-order mesoregion (730,000 arrivals) includes Finland's Uusimaa and Estonia's Harju, Lääne, Rapla and Pärnu Counties. Finns comprise 92 per cent of the tourist flow, Estonians 8 per cent. The Estonian and Finnish parts of the CBTRR are connected by air and ferry services. The specialisations of the region are cultural and educational travel and shopping tourism.

XIV. The Russian—Estonian second-order mesoregion (230,000 arrivals) consists of St Petersburg, part of the Leningrad region (Russia), Ida—Viru, Lääne—Viru and Harju Counties (Estonia). Russians account for 96 per cent of the tourist flow, Estonians for 4 per cent. The region specialises in cultural and educational travel, as well shopping tourism.

XV. The Russian—Finnish southern second-order mesoregion (240,000 arrivals) includes St Petersburg, part of the Leningrad region (Russia), South Karelia, Kymenlaakso, Päijät—Häme, Uusimaa and South Savo (Finland). Russians comprise 90 per cent of the tourist flow, Finns 10 per cent. The specialisations of the region are cultural and educational travel and shopping tourism.

XVI. The Russian—Finnish northern third-order mesoregion (about 65,000 arrivals) comprises the southern part of the Republic of Karelia (Russia), North Karelia, Northern Savo and the northern part of Southern Savo (Finland). Russians account for 84 per cent of the tourist flow, Finns for 16 per cent. The specialisations of the region are shopping tourism and cultural and educational travel.

These characteristics illuminate a striking feature of mesolevel CBTRRs — the asymmetry in arrivals from the neighbouring country. This disparity is often due to differences in the populations of countries comprising a CBTRR. Almost all CBTRRs are asymmetric to a degree, but, in some areas, the imbalance is extravagant. These are the Russian—Estonian and Russian—Finnish southern second-order and the Estonian—Finnish first-order mesoregion. In the former, the balance is tilted towards Finland; in the latter two, towards Russia.

To quantify the effect of the Covid-19 pandemic on the tourist flows in the CBTRRs, we compared changes in travel in the Baltic region in January—December 2019 and July 2020—June 2021. These intervals were selected because of the trends in 2020 tourist flows and their structure: from January to March, the values were very similar to 2019 (although travel declined as early as March 2020, its structure remained almost the same as before); from April to June, lockdowns were in effect in most countries; only in June 2020, some of the restrictions were lifted to allow travel from selected states at the discretion of the authorities of the country of destination.

The most precipitous decline was observed in the CBTRRs with Swedish and Russian participation (Fig. 2). Russians could not enter the EU freely, particularly for tourism, whilst the entry of Swedish citizens to many parts of the Union was restricted because of the Nordic state's refusal to impose a lockdown and a high morbidity rate in that country. The mesolevel regions with the highest rate of

tourist flow decline (above 95 per cent) in 2020—2021 compared to 2019 were the Russian—Estonian and two Russian—Finnish CBTRRs. A 90—95 per cent reduction was observed in the Russian—Polish—Lithuanian, Southern Swedish—Finnish, the Middle and Southern Swedish—Norwegian CBTRRs. The decrease ranged from 80 to 90 per cent in the Swedish—Norwegian—Danish, Polish—Lithuanian—Belarusian and Russian—Estonian—Latvian CBTRRs.

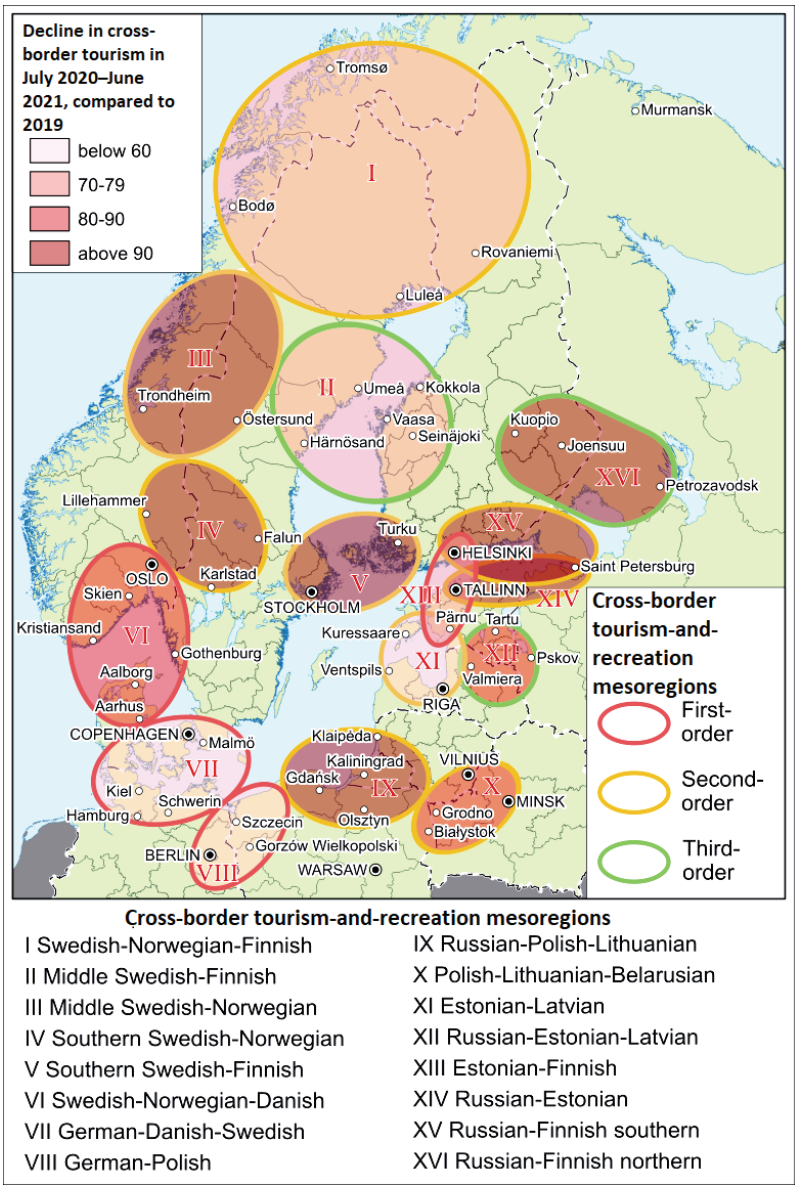


Fig. 2. Mesolevel CBTRRs grouped according
to the tourist flow decline in July 2020—June 2021, compared to 2019

Source: prepared by I. A. Ivanov.

During the COVID-19 pandemic, the travel in the Estonian—Finnish, Swedish—Norwegian—Finnish and Middle Swedish—Finnish CBTRRs fell by about three-thirds. The Estonian—Latvian and German—Danish—Swedish CBTRRs saw a one-third reduction on the normal travel.

The tourist flow decline was the gentlest in the CBTRRs involving Denmark, Germany, Latvia, Estonia and Finland. The latter three countries participated in the experiment dubbed the Baltic Bubble, which allowed free travel across several states without the need to self-isolate. At first, the Bubble involved only the Baltics, joined later by Finland and Poland.

Conclusion

The study has described 16 cross-border tourism-and-recreation mesoregions in the Baltic region and, using the 2019 data, estimated the number of arrivals from the neighbouring countries. The mesolevel CBTRRs were assigned to three orders based on the results obtained. The first-order category of mesoregions with over 500,000 arrivals includes four CBTRRs, three in the south-west of the Baltic region (with Danish and German participation) and one in the east (the Estonian—Finnish CBTRR). The most numerous category comprises second-order mesoregions with 100,000—500,000 arrivals. It consists of nine CBTRRs. Three CBTRRs (Middle Swedish—Finnish, Russian—Finnish northern and Russian—Estonian—Latvian) make up the third-order category (50,000—100,000 arrivals). Changes in tourism within the CBTRRs between January—December 2019 and July 2020—June 2021 were analysed to quantify the effect of the Covid-19 pandemic on travel in the regions. The CBTRRs involving Sweden and Russia saw the most precipitous decline, whilst the decrease was the slightest in the CBTRRS with Danish, German, Latvian, Estonian and Finnish participation. The latter three countries, Lithuania and Poland, joined the Baltic Bubble experiment, which allowed free travel across the five states without self-isolating

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CROSS-BORDER DIGITALIZATION OF THE WESTERN BORDER OF RUSSIA: POTENTIAL AND PROSPECTS

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Border regions are significant geostrategic territories, which long-term sustainable development is one of the priorities of Russia's national security. The specificity of their economic-geographical position necessitates the development and implementation by the authorities of special governance approaches aimed at finding a balance between the openness and barrier function of the state border. One of the most common tools for the spatial development of border areas is the sustainable cross-border cooperation with the regions of neighboring countries using various froms of cross-border cooperation, incl. focused on the generation and diffusion of innovations. The covid-19 coronavirus pandemic, having become a truly global challenge of our time, has made significant changes not only in the policies of many countries regarding the border, but also in the functioning of already established cross-border regions. The impossibility of fully implementing the previous formats of interethnic and interregional interaction has necessitated the search for new forms of cooperation, primarily based on the use of rapidly developing digital technologies. This led to the growth of academic and practical interest in substantiating the mutual effects of digitalization, innovation and internationalization for the regions. This article is devoted to assessing the potential and prospects of cross-border digitalization of the Western borderland of Russia. The objectives of the study were to identify the gap between border regions in the level of accessibility and penetration of digital technologies, as a significant condition for the formation of cross-border digital connections. The object of study is 15 subjects of the Russian Federation and 17 regions of NUTS 2 neighboring states. Using geoinformation and statistical methods of analysis, a typology of regions by the value of the digitalization index is proposed, with the allocation of leaders, moderate and lagging regions, and an assessment of their spatial location relative to the state border. Possible reasons for the current digital inequality, primarily of a socio-economic nature, are discussed. The determining role of the institutional factor in realizing the potential of cross-border digitalization has been substantiated. It is concluded that political efforts for digital convergence in the western direction are being undertaken only between Russia and Belarus, although further intensification is required.

Keywords:
border region, digital divide, cross-border digital space, internationalization, innovation, digital transformation, Internet coverage

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Introduction and problem setting

The rapid development of ICT innovations has had a positive impact on revamping both high-tech and traditional areas of the economy, triggering the process of digitalization. Some countries have already launched initiatives to implement a digital transformation model based on the Fourth Industrial Revolution technologies as a driver of socio-economic development. These are Industrial Internet (US), Industry 4.0 (Germany), Internet+ (China), etc. [1]. In the debate on globalization and digitalization, Russian and international researchers [2; 3] have identified digital data and information as the principal resources for economic growth in the 21st century, calling them 'new oil'.

The digital agenda is seen as a priority by major supranational associations.[1] At the forefront are digital inclusion and universal Internet access; stronger international digital cooperation based on the principles of digital trust and security; cybersecurity and the protection of human rights in the global digital space; the introduction of legislation in the area; AI development[2] [4; 5].

The outbreak of the coronavirus pandemic in 2020 fueled the debate on digital transformation at various governance levels and gave impetus to national and international initiatives on e-government, digital economy, online communications and secure data sharing [6]. Restrictions imposed by many governments to prevent the spread of Covid-19 and mitigate its consequences contributed significantly to the process. In the new environment, sustainable economic development strategies are increasingly based on combining the approaches of internationalization, innovation and digitalization [7]. This creates the need for new forms and tools of cooperation.

The problem of digital transformation is particularly acute in the border regions [8] involved in cross-border regionalization. The closure of national borders as the Covid-19 infection rate started to grow undermined the socio-economic and political sustainability of some long-established cross-border regions. A study [9] of two cross-border regions in Northern Europe notes that the asymmetry of regional policies implemented by the national authorities on both sides of the border in the early months of the pandemic created tension in local border communities, corroding trust between actors amid growing nationalist sentiment.

[1] Such as the United Nations (UN), the Eurasian Economic Union (EAEU), the Organisation of Economic Co-operation and Development (OECD), the European Union (EU), the Group of Twenty (G20), BRICS, Association of South East Asian Nations (ASEAN), etc.
[2] Roadmap for Digital Cooperation: recommendations of the High-level Panel on Digital Cooperation, 2020, Report of the Secretary-General No. A/74/821, UN General Assembly. URL: https://documents-dds-ny.un.org/doc/UNDOC/GEN/N20/102/53/PDF/N2010253.pdf (accessed: 07.08.2021).

Polish-German border regions [10] also showed a lack of coherence in multi-level cross-border crisis response management. The authors of the study emphasize the role of cross-border digital initiatives, which, along with civil society actors, made it possible to preserve the existing bilateral ties, especially those in culture and education.

Much of the current research on digital globalization and integration assesses the economic effect of these processes [3]. However, the spatial and institutional features of digitalization in border regions remain poorly understood. There are few studies into inter-regional digital disparities and their impact on socio-economic dynamics in border regions.

Focused on the formation of unified transboundary digital spaces across Russian borders, this study aims to contribute to the concept of digital cross-border cooperation by describing the conditions necessary for its development. The article evaluates digital disparities between the border regions of European Russia and the neighbouring states and how they unlock their potential for westward cross-border digitalization. This hypothesis is based on the assumption that the huge gap between border regions in the availability and penetration of digital technologies will stymie the intensification of cross-border digital connections and, eventually, the formation of a common digital space.

Methods

The study used data on 15 border territories of the Russian Federation (the Murmansk, Leningrad, Pskov, Kaliningrad, Smolensk, Bryansk, Kursk, Belgorod, Voronezh, Rostov regions, the Republics of Karelia and Crimea, the Krasnodar region, the cities of St Petersburg and Sevastopol) and 17 NUTS 2 regions of the neighbouring states: Norway (Northern Norway), Finland (Northern and Eastern Finland, Southern Finland), Estonia, Latvia, Lithuania (Central and Western Lithuania), Poland (Warmińsko-Mazurskie and Pomorskie Voivodeships), Belarus (the Vitebsk, Mogilev and Gomel regions), Ukraine (the Chernihiv, Sumy, Kharkiv, Lugansk, Donetsk and Kherson regions) (see Fig. 1).

A comparative assessment of digital disparities between these regions was carried out by analyzing two groups of indicators:

— digital infrastructure development: I1 is mobile network coverage, %; I2 network coverage for 4G, %; I3 the share of households with access to the Internet from home, %; I4 the share of households with broadband Internet access, %;

— Internet penetration rate: I5 is the share of regular Internet users, %; I6, the share of people making online purchases of goods and services for personal use, %.

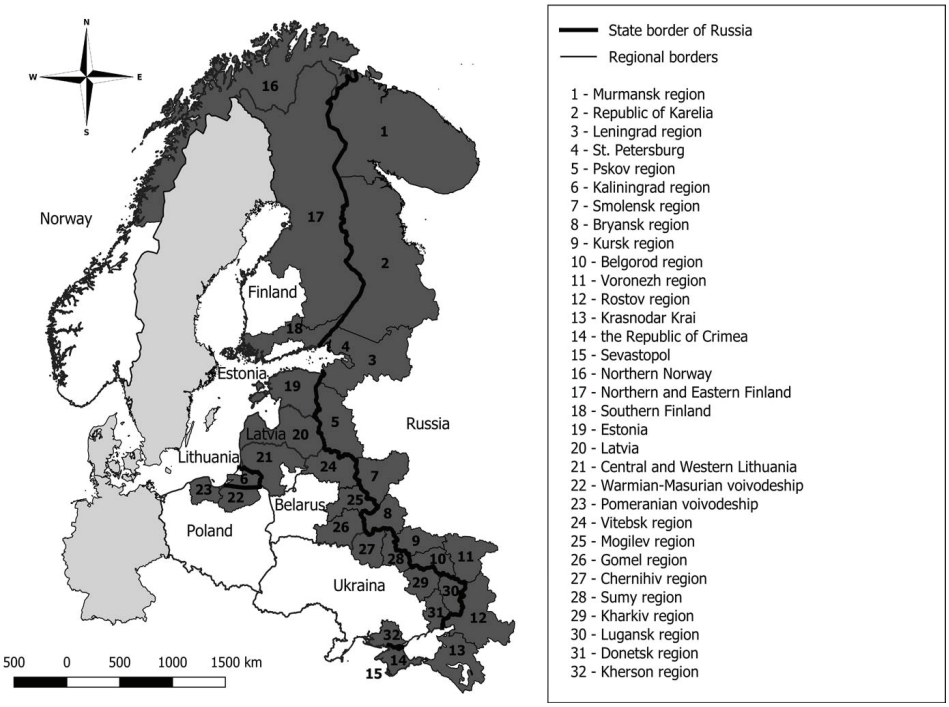

Fig. 1. Border regions of European Russia
and the neighbouring countries as from 26.10.21

Source: prepared by the author.

Those measures were chosen that were regularly applied in assessing the digital divide between regions (used in 164 regions of 27 EU countries [11]). Another selection criterion was the applicability of the indicators in evaluating the potential for digital transformation and transboundary digitalization of border regions, as reported in earlier studies into the problem.

Firstly, the availability of modern digital infrastructure in a region is considered a major transformational factor [12]. The development of ICT has a positive impact on employment, per capita gross domestic product (GDP) and innovations in the economy [13; 14]. An analysis of data from 135 countries shows [15] that a 10 per cent increase in mobile broadband penetration leads to a 0.8 per cent GDP growth slowing down over time. The penetration of fixed broadband goes hand in hand with that of mobile Internet, ushering in an information society [16; 17]. Modern Internet standards have a stimulating effect on business due to higher speeds, affordability, better connectivity and reduced time costs. This effect was

described in a study focusing on the growth dynamics of Bangladeshi companies when switching from the 3G to 4G standard. It seems possible to extrapolate these findings to developed countries embracing 5G technology [18].

Secondly, an important factor in transboundary digitalization is the efficiency and frequency of digital technology use in border regions, reflecting the level of Internet penetration. Increased public access to information and communication technologies, combined with improved digital skills and competencies, create a sustainable user community, which ultimately benefits the competitiveness of businesses and public institutions [19]. The results of a study [20] conducted in Russia's Vologda region show that permanent Internet users participate more actively in the digital economy than other population groups do because of their greater confidence in digital literacy and trust in the virtual space. A similar trend is observed among business entities. It has been noted [21] that the export activity of firms increasingly depends on both the adoption of digital technology (Internet, wireless communications, mobile technology, etc.) and digital capabilities, including the accumulated digital experience.

Table 1 presents a calculation methodology and data sources for the indicators analyzed.

Table 1

Digital disparity indicators in the border regions of European Russia and neighbouring countries

Indicator	Calculation methodology	Data source
I1	Percentage of the territory covered by at least one wireless cellular standard from major operators as of September 2021	Calculated using QGIS tools based on data from the websites of major providers Finland: DNA (www.dna.fi), Elisa (elisa.fi/kuuluvuus/) Norway: Telia Norge (www.telia.no), Teienor (www.telenor.no), Ice (www.ice.no) Estonia: Tele2 (tele2.ee) Latvia: LMT (karte.lmt.lv) Lithuania: Telia Lietuva (www.telia.lt) Poland: Orange Polska (www.orange.pl) Belarus: A1 (www.a1.by), MTC (www.mts.by), Life (life.com.by) Ukraine: Lifecell (www.lifecell.ua), Vodafone (www.vodafone.ua) Russia: Tele2 (tele2-online.com), Beeline (beeline.ru), MTS (mtsru.ru), Megafon (megafon.ru), Volna Mibile (volnamobile.ru), the latter operating in the Republic of Crimea and Sevastopol

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I2	Territories covered by 4G from major operators, percentage of a region's total area as of September 2021	For the regions of Norway, Finland, Lithuania, Latvia, Estonia: Eurostat [3] Russia: Rosstat [4] Ukraine: State Statistics Service of Ukraine [5]; Ukrainian Internet Association [6]; Growth from Knowledge analytical company [7] Poland: Statistics Poland [8], Eurostat [9] Belarus: National Statistics Committee of the Republic of Belarus [10]
I3	Regional data are from 2020 (the data for Ukraine are based on 2018 Internet subscriber figures).	
I4	Regional data are from 2020 (for Belarus, the national average is used; the data for Ukraine are based on 2018 Internet subscriber figures)	
I5	Regional data are from 2020 (for Belarus, the national average is used; the data for Ukraine are based on 2018 Internet subscriber figures)	

[3] Regional digital economy and society. Database: General and regional statistics, 2021, *Eurostat*. URL: https://ec.europa.eu/eurostat/data/database (accessed 02.09.2021).

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I6	Regional data are from 2020 (for Belarus, the national average is used; the data for Ukraine are based on 2018 Internet subscriber figures).	

Source: prepared by the author.

Table 2 shows the values of pairwise correlation coefficients between indicators I1—I6.

Table 2

A matrix of pairwise correlation coefficients between significant indicators of digital disparities between border regions

Indicator	I1	I2	I3	I4	I5	I6
I1	1	—	—	—	—	—
I2	0.819	1	—	—	—	—
I3	0.464	0.352	1	—	—	—
I4	0.124	0.270	0.517	1	—	—
I5	0.115	0.209	0.672	0.856	1	—
I6	–0.049	0.032	0.385	0.761	0.850	1

Source: prepared by the author.

To calculate the total index of border region digitalization for assessing digital disparities and potential for transboundary digitalization, indicators I2, I3 and I6 were selected, whose pairwise correlation coefficients are insignificant. The normalized values of the selected indicators were obtained for each region:

$$\overline{\Pi i} = \frac{\Pi_i - \Pi_{imin}}{\Pi_{imax} - \Pi_{imin}} \cdot$$

The overall index value was computed as the arithmetic mean of the normalized values of I2, I3 and I6.

Results

The results of a geoinformation analysis (Fig. 2) revealed digital disparities between the border regions of European Russia and its neighbouring countries.

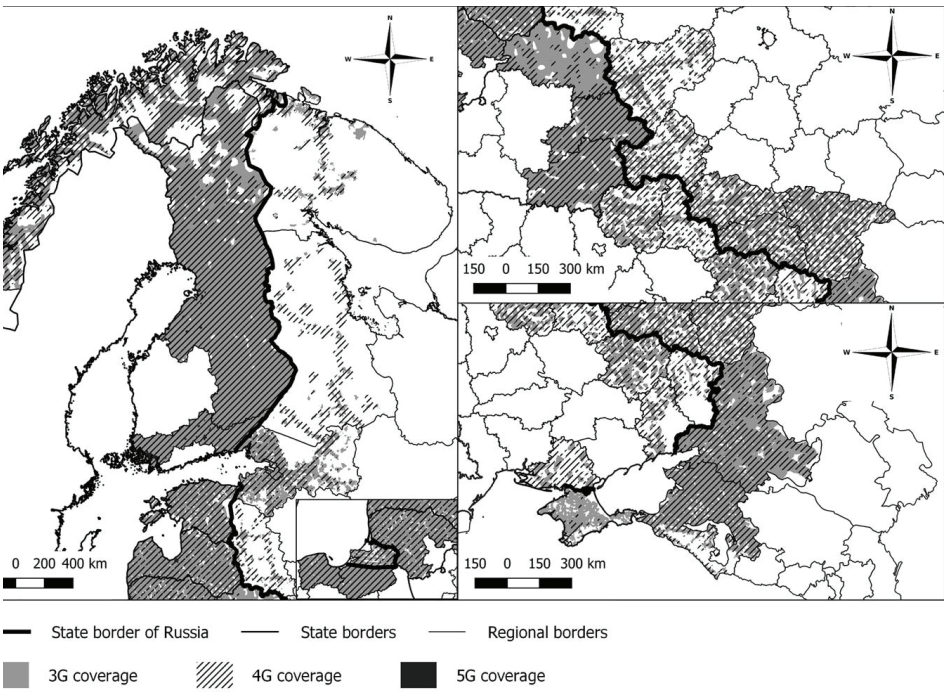

Fig. 2. Internet coverage of Russia's western borderlands and the neighbouring countries, 2021

Source: prepared by the author (for the data sources, see Table 1).

Of the 32 study regions, 13 had over 90 per cent network coverage; 15, between 50 and 90; four, below 50. The leaders were the Polish regions (Warmińsko-Mazurskie and Pomorskie Voivodeships), Russia (St Petersburg) and Finland (Southern Finland), with over 98 per cent coverage. Internet accessibility was the lowest in the north-western border regions of Russia (the Republic of Karelia, the Murmansk and Pskov regions) and Ukraine (the Donetsk and Lugansk regions). 3G and 4G standards were available in all the study regions, whilst 5G was only present in Finland (Oulu region) and Lithuania (Klaipeda region). 4G was the dominant cellular standard in all the areas, except for Belarus' Vitebsk region and Russia's Republic of Crimea.

Mobile Internet coverage density in the border regions had a significant impact on the Internet penetration of households; the correlation coefficient between I1 and I3 was 0.464. The study regions of Norway, Finland, Poland, Estonia,

Latvia, Lithuania and Russia's St Petersburg had relatively high rates of household access to the Internet from a home computer, with 80 per cent enjoying a broadband connection (Fig. 3). The border regions of Ukraine (Kherson, Sumy, Donetsk and Luhansk) lagged far behind the leaders in terms of household Internet access.

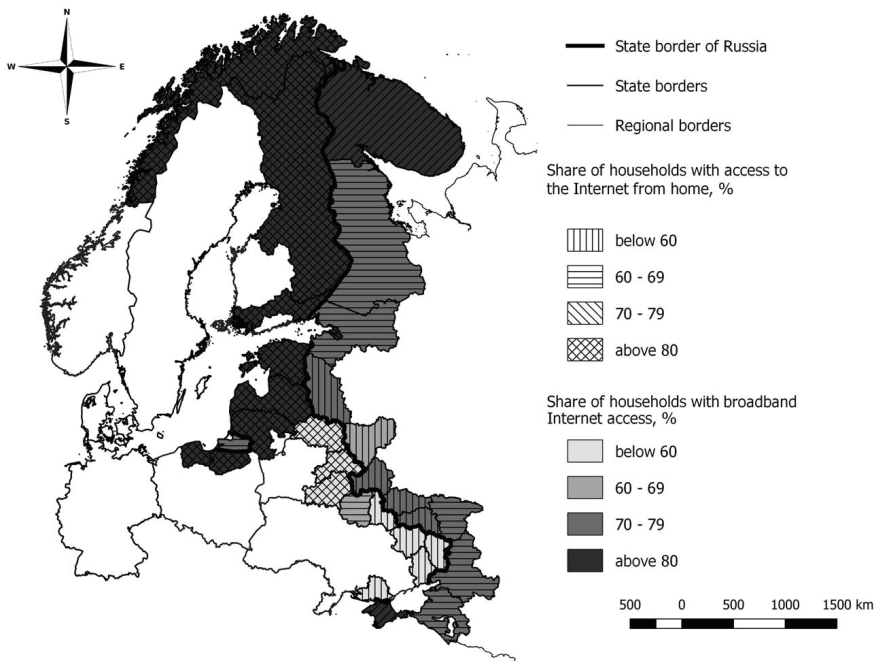

Fig. 3. Digital infrastructure development in border regions of European Russia and the neighbouring countries, as from 26.10.21

Source: prepared by the author (for the data sources, see Table 1).

The level of digital penetration reflects the readiness of the population to settle into a wide range of digital routines, including online interactions with public institutions, which are crucial for the formation of a common cross-border digital space. Stable Internet access stimulates the frequent use of online tools by the population of border regions (the correlation between I3 and I5 is 0.672 and between I4 and I5 is 0.856). The most active Internet users were in Northern Norway (95 per cent), Southern (95 per cent), Northern and Eastern Finland (92 per cent), and the least active (below 70 per cent) in the Ukrainian regions (Fig. 4). The leaders in the percentage of uses ordering goods or services online for personal use were the Russian regions (St Petersburg, the Murmansk region, the Republic of Crimea, Sevastopol) and Northern Norway.

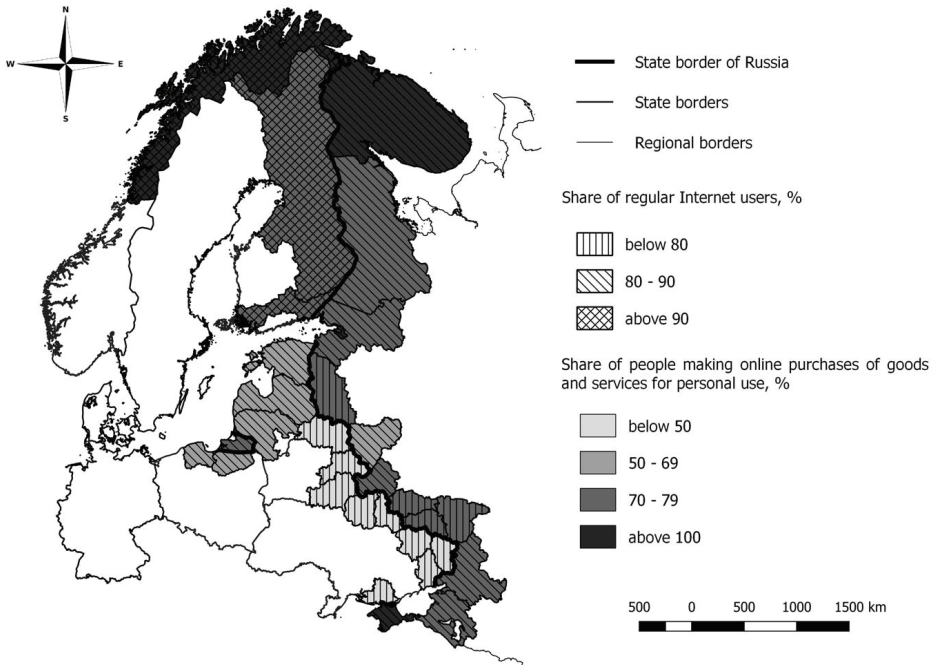

Fig. 4. Internet penetration in the border regions
of European Russia and the neighbouring states

Source: prepared by the author (for the data sources, see Table 1).

Table 3 and Figure 5 show the distribution of border regions of European Russia and its neighbouring countries based on the selected indicators and the overall digitalization index.

The first group, Leaders, included nine regions with an overall index value above 0.7: Southern, Northern and Eastern Finland; Northern Norway; Estonia; Latvia; Russia's St. Petersburg and Voronezh regions; Poland's Pomeranian and Warmian-Masurian voivodeships. These territories, including Norway's and Finland's far north, had a rather developed digital infrastructure and a high Internet penetration rate. This group was the most homogeneous: the interregional gap as regards the study indicators ranged from 1.2 to 1.6. Three regions ranked high for all the indicators; six had above-median values of most of the indicators (I2 77.7 per cent; I3 69.8 per cent; I6 70.6 per cent). Eight out of the nine regions ranked above average for I2 and I3; five regions of the first group, for I6.

Table 3

Differentiation of the values of indicators comprising the overall digitalization index, by border region groups

Group (index value range)	Number of regions	I2			I3			I6		
		maximum	average	minimum	maximum	average	minimum	maximum	average	minimum
Leaders (0.7-1)	9	99.0	92.1	76.4	100.0	89.2	68.5	87.0	71.6	56.0
Average performers (0.5—0.69)	14	92.1	68.9	8.7*	86.1	69.1	47.8	84.2	69.1	42.2
Underperformers (0-0.49)	9	69.7	48.4	20.4	85.2	54.2	38.1	76.5	43.9	34.0

Comment: I2 is network coverage for 4G; I3, the percentage of households with access to the Internet from a home computer; I6, the percentage of people making online purchases of goods and services for personal use. The 'average' is calculated as the average median value. *The value for Russia's Murmansk region having areal Internet coverage in the most urbanized territories.

Source: prepared by the author.

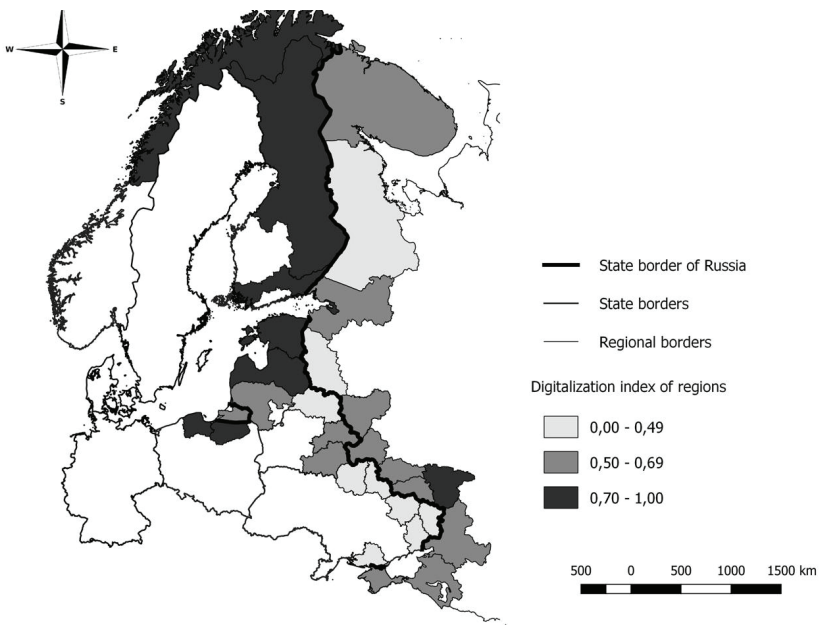

Fig. 5. A typology of border regions at Russia's western borders according to digitalization index values, as from 26.10.21

Source: prepared by the author.

The first group, Leaders, included nine regions with an overall index value above 0.7: Southern, Northern and Eastern Finland; Northern Norway; Estonia; Latvia; Russia's St. Petersburg and Voronezh regions; Poland's Pomeranian and Warmian-Masurian voivodeships. These territories, including Norway's and Finland's far north, had a rather developed digital infrastructure and a high Internet penetration rate. This group was the most homogeneous: the interregional gap as regards the study indicators ranged from 1.2 to 1.6. Three regions ranked high for all the indicators; six had above-median values of most of the indicators (I2 77.7 per cent; I3 69.8 per cent; I6 70.6 per cent). Eight out of the nine regions ranked above average for I2 and I3; five regions of the first group, for I6.

The second group, Average Performers, comprised 14 border regions with overall index values between 0.5 and 0.69: Central and Western Lithuania, most of Russia's western borderlands (the Rostov, Belgorod, Bryansk, Kursk, Leningrad, Smolensk, Murmansk, Kaliningrad regions, Krasnodar Krai, the Republic of Crimea and Sevastopol) and Belarus's Gomel and Mogilev regions. This group was more heterogeneous than the first one. There is wide variation in the Internet coverage density. The Murmansk region ranked the lowest at 0.8 per cent: there was 4G coverage only along major roads and larger settlements, due to patchy industrial development and settlement patterns. A considerable degree of urbanization translates into a high Internet penetration rate. Thus, the Murmansk region was classified as an Average Performer. Overall, the regions in the second group lagged behind in the spatial development of digital infrastructure, yet the availability of the latter in the most densely populated areas ensured relatively high Internet usage figures.

The group of Underperformers included nine border regions with overall index values below 0.5. These unimpressive results stemmed from a combination of a low Internet coverage density and an insufficient Internet penetration rate. This group comprised the Ukrainian regions (Chernihiv, Kharkiv, Kherson, Sumy, Donetsk and Luhansk), Belarus' Vitebsk region and Russia's Republic of Karelia and Pskov region.

Discussion

The difference in integrated digitalization index values of the study regions of Russia and the neighbouring states was computed using the above typology of regions to evaluate the potential for transboundary digitalization in Russia's western borderlands (Table 4).

Table 4

Digital disparities between the border regions of European Russia and the neighbouring states, as from 26.10.21

Russian region	ODI	Border regions of the neighbouring countries / ODI	Average ODI variation, factor*
Murmansk region	0.53	Northern Norway: 0.91 Northern and Eastern Finland: 0.83	1.64
Republic of Karelia	0.45	Northern and Eastern Finland: 0.83 Southern Finland: 0.89	1.88
Leningrad region	0.61	Southern Finland: 0.89	1.38
St Petersburg	0.92	Estonia: 0.79	1.09
Pskov region	0.43	Estonia: 0.79 Latvia: 0.72 Belarus' Vitebsk region: 0.38	1.75 1.12
Kaliningrad region	0.68	Poland's Warmian-Masurian Voivodeship 0.78 Poland's Pomeranian Voivodeship: 0.79 Central and Western Lithuania : 0.60	1.15
Smolensk region	0.56	Belarus' Vitebsk region: 0.38 Belarus' Mogilev region: 0.60	1.26
Bryansk region	0.60	Belarus' Mogilev region: 0.60 Belarus' Gomel region: 0.59 Ukraine's Chernihiv region: 0.35 Ukraine's Sumy region: 0.10	1.02 3.84
Kursk region	0.58	Ukraine's Sumy region: 0.10	5.78
Belgorod region	0.63	Ukraine's Sumy region: 0.10 Ukraine's Kharkiv region: 0.27 Ukraine's Luhansk region: 0.10	4.90
Voronezh region	0.76	Ukraine's Luhansk region: 0.10	6.20
Rostov region	0.69	Ukraine's Luhansk region: 0.10 Ukraine's Donetsk region: 0.10: 0.14	5.81
Krasnodar Krai	0.63	Ukraine's Donetsk region: 0.14	4.37
Republic of Crimea	0.54	Ukraine's Kherson region: 0.27	2.02
Sevastopol	0.69		2.59

Comment: ODI stands for the overall digitalization index. *The average ODI difference reflects the total digital disparity between the bordering region at the stretch of the national border belonging to the given Russian region.

Source: prepared by the author.

The above findings made it possible to distinguish three types of border territories in Russia's western borderlands according to the level of digital disparities.

The characteristic of the *first* type was a rather insignificant (less than twofold) disparity between the border areas, with the Russian regions lagging behind. These were the border territories in the North-West of Russia, including the Republic of Karelia, the Murmansk, Leningrad, Pskov and Kaliningrad regions and the neighbouring territories of Norway, Finland, Estonia, Latvia, Lithuania and Poland.

Similarly, the *second* type included border regions with less than a twofold variation but with Russian regions showing stronger performance. These were the Russian-Belarusian borderlands (Russia's Smolensk, Pskov, Bryansk and Belarus' Gomel, Vitebsk, Mogilev regions) and St Petersburg, which were more digitalized than the neighbouring regions of Southern Finland and Estonia.

The *third* type comprised the Russian-Ukrainian borderlands showing a more than twofold disparity in digitalization, with the Russian territories having the edge over the neighbours. The most complex situation was in Ukraine's Luhansk and Donetsk regions.

An analysis of earlier studies into the causes of the digital divide (see [11]) points to the paramount importance of the socio-economic factor of economic well-being. A high per capita income means rapid deployment of ICT infrastructure and the development of human capital necessary to create demand for digital technologies. Asymmetry in the population distribution by size, education level and socio-demographic characteristics (age, gender, nationality, etc.) is somewhat less influential. Thus, one might conclude that the digital divide in the European part of Russia's borderlands essentially reflected the existing socio-economic disparity between the border regions.

When assessing the potential for the formation of transboundary links, socio-economic disparities between regions turn out to be a positive factor; this has been confirmed by research into what makes cross-border cooperation and mobility sustainable [22; 23]. Since interactions at a cross-border level are more complex than at a national level, their long-term viability is a result of natural internal stimuli reinforced by the comparative advantages of the other party. External factors, such as funding through intergovernmental programs, can also act as drivers of cross-border cooperation. But when their influence stops, cross-border ties tend to weaken [22]. This raises the question about the degree of digital proximity between border regions requisite for strong cross-border digital links. This holds for the economy, public administration and social life.

Since a favourable legal environment is a crucial factor in digital transformation in developed and developing countries [11; 24], and strong good-neighbourly ties between states are of paramount importance for closer integration between border communities, the cross-border digitalization of Russia's borderlands would be impossible without reducing inter-country institutional disparities. The pronounced barrier function of the state border and the lack of dialogue on a common digital space make cross-border cooperation less attractive; the interest in its implementation flags, and the focus shifts towards strengthening intra-country ties.

A lack of political agreement in managing cross-border territories in the face of increasing national cohesion through digitalization can negatively affect cross-border cooperation, as was demonstrated by the Norwegian-Swedish and Finnish-Swedish regions during the pandemic [9]. Yet, transnational openness in managing border regions within the model of open, digitally empowered government is seen as an effective mechanism for promoting cross-border cooperation and unlocking its digital potential [25].

Although efforts to converge national digital spaces are underway between Russia and the EAEU countries as part of the Digital Agenda 2025,[11] their pace is slow.[12] Moreover, there have been difficulties in harmonizing legal systems in other areas as well [26]. At Russia's western frontiers, Belarus is the principal digital partner. A study of socio-economic dynamics in the Dnieper-Dvina transboundary region [27] points to a failure to see digitalization as a tool to improve the cohesion of the border territories and exploit their economic potential as regards information exchange and cross-border contacts in the B2C and B2B areas. The authors of the research conclude that, in the existing framework conditions, the development of the Internet and digital technologies slows down entrepreneurial and consumer activity. Another unwanted consequence is labour migration between the Smolensk, Vitebsk and Mogilev regions as access to the more attractive metropolitan markets of Moscow and Minsk becomes easier.

[11] On the key issues on the EAEU agenda 2025, 2017, Decision of the Superme Eurasian Economic Council. No. 12 of 11 October 2017. URL: http://www.eurasiancommission.org/ru/act/dmi/workgroup/Documents/Основные%20документы/Решение%20ВЕЭС%20№12_Основные%20направления%20реализации%20цифровой%20повестки%20ЕАЭС.pdf (accessed 29.08.2021).

[12] Mishustin warns of the consequences of holding up digitalisation in EAEU, 2021, *TASS*, Alma-Ata, 5.02.2021. URL: https://tass.ru/ekonomika/10629905 (accessed 05.08.2021).

Some European countries bordering on Russia, including Belarus and Ukraine, take part in the EU4Digital initiative[13] launched by the EU in 2016 to harmonize and integrate its digital markets with those of the Eastern Partnership countries. The cooperation extended to legislation, digital data collection, public administration, the regulation of electronic communication networks and services, cybersecurity, the creation of scientific and educational communities. Ukraine was involved in five projects of the Initiative with a total funding of over 28m euros. Belarus participated in three projects worth 2.8m euros. These digital integration processes at Russia's borders raise concerns as the initiatives involving the country are rather weak. Firstly, this situation desynchronizes the digital agendas of Russia and its neighbours. Secondly, it creates conditions in which Russia may be excluded from the wide spectrum of international digital cooperation due to significant differences in national digital ecosystems. Thirdly, there are tensions regarding economic, political, social, cultural and other aspects of digitalization.

Main conclusions

Digital regionalization is the burgeoning process of convergence between digital spaces of border regions, followed by the formation of unified digital transboundary regions. The latter, while inextricably linked to traditional forms of cross-border interactions, has specific organizational features, which call for additional political efforts on the part of the national governments of neighbouring states to elaborate a joint digitalization program. A necessary priority is creating favourable framework conditions for digitally empowered cross-border cooperation, namely the harmonization of laws [28], lowering tariff and non-tariff barriers to digital trade [29] and increasing the accessibility of the Internet and digital technologies for border communities, particularly through the development of ICT infrastructure and the promotion of digital literacy.

This study revealed disparities between the border regions of Western Russia and the neighbouring countries as regards the proposed digitalization index. However, for many regions, this variation was less than twofold. One can conclude that these territories have the infrastructure and human resources necessary for transboundary digitalization. Yet, the existing framework conditions pose an obstacle to unlocking the digital potential of the borderlands. Political support for digitally transforming transboundary cooperation in Russia's western borderlands has been provided only along the Russian-Belarusian stretch of the border

[13] EU4Digital comprises four programmes (EU4Digital, EU4Digital Broadband, EU4Digital Cyber and EaPConnect) and a number of other projects, 2022, EU4Digital. URL: https://eufordigital.eu/ru/discover-eu/the-eu4digital-initiative/ (accessed 27.01.2022).

as part of the EAEU digital development agenda. I believe that the intensification of institutional process in this direction is promising; it can provide a solid base for the formation of digital transboundary regions between Russia and Belarus. At the same time, the trend towards the convergence of the digital spaces of Ukraine, Belarus and the EU poses a potential threat against the background of the anti-Russia agenda promoted by the West.

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NEW OPPORTUNITIES FOR THE RUSSIAN BALTIC EXCLAVE IN THE CONTEXT OF CHANGES IN THE COUNTRY'S GEOPOLITICAL SITUATION

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Current geopolitical and geoeconomic changes require a reconsideration of the role of the Kaliningrad region in the Baltic region. This study aims to demonstrate the possible effect of some trends in the development of the neighbouring countries on the future of the Kaliningrad region and make recommendations on the territory's macrospecialisation. Amid the erosion of the world order, Sergey A. Karaganov calls for moderate isolationism. The Kaliningrad region is an incredibly interesting historical experiment bound to produce unexpected results. The strengthening of Russia, which coincided with the termination of 300 years of attempts to become part of Europe in some capacity, radically affects the functions of the Kaliningrad region. Its unique geographical position and caring attitude to the historical heritage make it a likely outpost of Russia's soft power. Developing the region as a laboratory of the future, which builds models for the domestic market and exports, will allow the country to benefit from scale, taking advantage of its larger and smaller territories. Higher education may play a leading part in the process. In particular, as conservatism revives, it is time to take another look at the ideas and approaches used when creating Akademgorodok in Novosibirsk.

Keywords:
Kaliningrad region, Poland, Lithuania, Big Eurasia, conservatism, intellectual emancipation

The ongoing rapid changes in the balance of power lead to a radical restructuring of the entire system of international relations. Countries and regions have to respond to fundamental geopolitical and geo-economic shifts; they proactively look for ways of turning these shifts to their advantage, minimizing inevitable losses and deriving maximum benefits from the current situation. The article attempts to redefine the role of the Kaliningrad region given its unique geographical position, as well as the region's intellectual and cultural potential for achieving the primary objectives of the country's development. Both geo-economic

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and geopolitical situations call for Russia's turn to the East, for strengthening its ties with Asia while still maintaining tolerable, to a degree, relations with Europe. This change is necessitated by the need to ensure the country's economic development and, simultaneously, avoid its unilateral dependence on China. The national geopolitical strategy is aimed at accelerating the development of Siberia and the Far East. However, accomplishing this mission requires the most profound changes in society. Rising to these considerable challenges will become a catalyst for these changes. There will be a need for bold experiments not only in the areas of new development but also in the western direction. To play an active role in Europe, Russia will have to use its Baltic frontier region not only as a receptacle for capital and innovation but also as a projector of its soft power. The geographical location of the Kaliningrad region in the west of Russia, its exclave status along with other factors, create extremely favourable conditions for conducting pilot experiments here. This polemical paper is a humble contribution to the discussion.

Distribution of power in the emerging world order

The current profound global geopolitical transformation requires a reconsideration of seemingly sacrosanct concepts. According to Bordachev, "it would be strange to think that the emerging reality will only be the repetition of the past adapted to the new international equilibrium" [4]. We cannot expect that in the future world order the balance-of-power scales will only use different weights in essence remaining the same. We can reasonably assume that the design of the scales will also change.

Researchers with a natural-scientific style of thinking are doomed to be torn between their desire to formulate objective laws of social development and their utter unwillingness to take up the position of historical materialism or "the end of history". Events, perceived as inevitable in hindsight, actually may not have been such. Reflecting on the origins of the current confrontation, Sarott writes, "Later, German Foreign Minister Hans-Dietrich Genscher proposed another option: to integrate NATO and the Warsaw Pact into an "interlocking system of mutual collective security", within which "both alliances will eventually dissolve". Former dissidents from Central Europe were ready to go even further, proposing a complete demilitarization of the region" [17]. However, Europe's political development did not follow this path. Nowadays, it obeys, alas, quite different while still objective laws. In both Russian and Western experts, consensus exists not only on the duration of sanctions but also on their increasing severity over the next 10—15 years [23].

The era of strong, securely cemented alliances is ending. The emerging world order is a stage for interaction between coalitions of convenience. The bipolar world based on the confrontation of the blocks made any country, even a smaller one, a valuable asset for bigger players. This is convenient for both accomplishing military-strategic tasks and increasing political influence; a country is a vote

in international organisations. It is difficult to say now whether the world has become truly multipolar. Nevertheless, it has turned into a new structure having fuzzy rather than clearly defined boundaries between the blocs [2].

The current, second cycle of global disintegration began in 2008, when the last economic crisis reached its climax, and it continued for another 15 years, after which the third globalisation will begin. The contours of it are still completely unclear. The first globalisation (mid-19th century — 1914) went down in history as *Pax Britannica* [18], the second one (1945—2008) as *Pax Americana* with some reservations about the US-USSR rivalry. It would be extremely imprudent to herald the coming of *Pax Sinensis*. "The age of Europe ended in 1914, the age of America is ending now, and the age of China will not come since all countries will be trying to prevent it. The 21st century will be the age of Asia, and the main systemic conflicts will take place in the most populous part of the globe" [3]. Multipolarity and even bipolarity hardly allow for the leadership of individual countries. Drastic changes in the "design of the scales" have already resulted in an attempt of the leading players to ensure their security on their own; they are not inclined to intervene in conflicts between or within smaller countries unless they believe that these conflicts pose a significant threat [2]. A typical example of this approach is Russia's stand in the 2020 armed conflict between Azerbaijan and Armenia.

This new development could eventually become of great importance for the Kaliningrad region squeezed between Poland and Lithuania, the countries having a very unamicable policy towards Russia even compared with other EU countries. While the relations with Poland with its dynamic economy and growing population are unlikely to improve in the near future, the prognosis for Lithuania may be slightly more optimistic. Unlike largely self-sufficient and, therefore, economically independent Poland, Lithuania is a small country whose economy has not demonstrated high growth rates recently. Over the years of its independence, this country has lost a quarter of its population. The confrontation with Russia, chosen as *raison d'être*, is becoming increasingly unprofitable as the US geostrategic interests now focus on the Asia-Pacific region and Germany has become the EU's sole leader. It is unlikely that Berlin's willingness to generously sponsor Lithuania's anti-Russian policy, as well as that of Latvia or Estonia, will grow. Therefore, it is most probable that in the coming years, Lithuanian leaders will show an increasing tendency to derive maximum benefit from the country's geographical position within the framework of the emerging Greater Eurasia.

Neo-isolationism as a condition for experiments

Given the ongoing disintegration, the "fall" of the world order [1] Karaganov calls for moderate isolationism, "Russia must become a strong and powerful fortress; this is the main objective in this dangerous and unpredictable world. The more intertwined we are with the world that is about to shatter, the more vulnerable we become. Any gain in such a turbulent situation is transient, and any

loss is a loss of time, money and everything else" [7]. Nevertheless, moderate isolationism, with an emphasis on the word *moderate*, is compatible with an active foreign policy, whether in Syria or Transcaucasia, provided limited means and efforts are sufficient to achieve desired results. He states the priority of internal geopolitics and geoeconomy, implying that solutions to foreign policy challenges would facilitate national development. He sees it as a geopolitical projection of moderate conservatism discussed by President Putin at the XVIII meeting of the Valdai International Discussion Club on October 21, 2021 [5].

Suchentsov wrote that "each state is an open-ended experiment" [19]. In many ways, this is also true for regions, especially for the Kaliningrad region. The experiment brings success if it is bold and well-designed. Joliot-Curie (1900—1958) wrote that the farther an experiment is from theory, the closer it is to the Nobel Prize. The region can play an outstanding role in the formation of Greater Eurasia, being the western extremity of the axis that begins off the coast of the East China and South China Seas. With Russia's turn to Asia, its expanding economic interaction with China and other oriental countries, the geopolitical and geo-economic importance of the Kaliningrad region will not diminish. On the contrary, it will increase due to the general strengthening of the country's position. Geographers should not forget about the "scale game" taught by Maergoiz (1908—1975) [11]. "Having started turning to the East, we have significantly changed the balance of power in our relations with the West, especially with Europe, in our favour. From its periphery, aspiring to become a more central player and willing to pay for it, we are now growing into the centre of a new and large Eurasian space, bringing back Russian-Eurasian identity, which is particularly important given the rise of Asia. Naturally, we are doing this without abandoning our largely European culture" [6].

For two and a half centuries with a short (by historical standards) interval between the two world wars, the Baltic States have been playing the role of a sea gate to Russia. Now St. Petersburg, Leningrad and Kaliningrad regions remain Russia's window to Europe. The Kaliningrad region has an advantageous geographical position compared with the other two regions. Coupled with the abandonment of three-hundred-year attempts to fit into Europe in one capacity or another climaxing in the first 15 post-Soviet years [12], the strengthening of the country leads to considerable changes in the functions performed by the three regions. Given the changing balance of political power in Europe and the enhanced standing of Russia in Asia, they are to perform both transport and logistics functions, as well as the function of a receptacle of capital and innovation and a strategically important place for Russia's economic and cultural expansion to Europe, the trend, which should reinforce in the future.

Unlike China, Russia cannot beat the West by playing according to western rules. China's success led to a revision of the principles of globalisation, which was especially extensive during Trump's presidency. Russia has just started acting symmetrically by launching *Russia Today* and *Sputnik*. These advances

caused an outburst of arbitrariness and even hatred in many democratic countries. This was the best evidence of success. Likewise, the Soviet's jamming of Western radio broadcasts in Russian on the territory of the USSR was an undeniable proof of the high demand for them.

The unique geographical position of the Kaliningrad region combined with its rich historical heritage makes the region a convenient platform for the projection of soft power. A constant heightening of its cultural and recreational potential, infrastructure and urban development increases the region's attractiveness to the neighbouring countries' residents. Higher education has a crucial role here since it is in this area that it is possible to compete with and outpace the West. However, this calls for drawing on the Soviet experience, getting rid of the existing inconsistencies and flaws in education, and moving forward instead of repeating patterns developed by other countries. In this case, as in some others, having conservative Poland as a neighbour is undoubtedly a considerable advantage.

Ratzel's paradox, big and small countries

A breakthrough always requires courage and talent. Karaganov notes that Siberia historically developed as an area of economic freedom. The new turn to the East cannot be successful unless Siberia becomes a giant laboratory of the future since the pioneering development of the territory is a venture [14]. Its success requires the frontier spirit, courage and positive adventurism of pioneers. However, along with its eastern laboratory, the country needs a smaller, although ultra-modern one in its western part. At the beginning of the intellectual emancipation of Russia, the transition from replicating American and European ideas to independent creative research combined with the westernmost geographical location and the exclave status, create objective prerequisites for this macro-specialization of the Kaliningrad region. After all, rivalry contributes to creativity. Cooperation allows for adopting patterns and ideas and then adjusting them to local conditions, which does not require first-class research facilities. Meanwhile, Ortega y Gasset (1883—1955) urged us to borrow material, not items, in no way relieving ourselves of strenuous creative work [13].

The biggest internal and external geopolitical challenges associated with the turn to the East and the growing role of big nations in international relations combined with a relative reduction in the importance of small ones [2] naturally require a much greater focus on large spaces. According to Ratzel (1844—1904), the father of human geography and the forerunner of geopolitics, rapid development is impossible without high population density. Produced in the 19th century, this famous idea seems so intuitively correct that it does not require any proof. Thus, it still lies at the heart of almost all research on the spread of innovation. Meanwhile, Ratzel, who was much deeper than he might have seemed to his contemporaries and descendants, left us the following idea to contemplate on, "the broader and clearer the geographical horizon, the more ambitious the political plans and the greater the measure. This leads to growing states and peoples.

A nation working in a large space wins in power, the breadth of worldview and freedom; this is the reward for its selfless work" [16, p. 31]. This apparent contradiction deserves to enter science as *the Ratzel paradox*. Its analysis is beyond the scope of this article, but it is necessary to relate it to other theoretical constructs to solve the problems posed here.

The problem of comparative competitive advantages of large and small nations is not new. Zimin (1929—1995) worked on it when he was working on the theory of small highly developed countries at the turn of the 70s and 80s [15]. According to his definition, a small country has less than one standard economic area (which he also defined). The main advantages of small highly developed countries come from a higher level of social infrastructure, which Zimin interpreted not only in the traditional sense but, first and foremost, as labour thinking. The basis of the competitive advantage is the so-called direct perception pyramid: all residents of a small and highly developed country know each other personally or through mutual acquaintances. The result is a shorter distance between authorities and people, less waste of human resources on bureaucracy, lower crime rates, as well as higher levels of education and innovation. Zimin often emphasized that in some Scandinavian countries higher education became free at the beginning of the twentieth century, even earlier than in Soviet Russia. With considerably limited human resources, small countries had to work tirelessly to use them as efficiently as possible. It was a question of their survival in their fierce competition with bigger countries having large markets and abundant human resources.

Regional macro-specialization

The development of the Kaliningrad region as the country's westernmost laboratory of the future, which designs and tests models not only for domestic use but also for export, will allow Russia to confidently play the scale game and exploit the competitive advantages of both a large and a small country. In the face of the inevitable revival of conservatism, the country's intellectual potential should be exploited to the full. The situation was quite different during the modernisation period based on borrowing understood broadly. We should adopt ideas and approaches behind the Novosibirsk Academgorodok project, including those that could not be fully implemented at the time of its creation due to political constraints and ideological biases.

We are still far from being fully aware of the fact that we have become (or rather, have remained) one of the freest countries intellectually, and all the limitations in this field, to a considerable degree though not completely, result from the borrowing of Western models [10]. The limitations include, first of all, a lack of academic discussions and the death of seminars making not only the development of science and higher education but also a normal democratic process inconceivable. At the same time, attempts to present our country as an abhorrent totalitarian state will continue and intensify since they have no connection with the actual level of political freedoms and civil rights guarantees being rooted solely in geopolitical confrontation.

According to Laruelle, the prospects for a mutual understanding between the West and Russia are by no means encouraging. For the West "normality" refers to the short period when Russia almost unconditionally accepted the principles and rules of conduct imposed on it in the international arena, whereas for Russia "normality" is the status of the great power it used to have during the Cold War, which the country eventually lost. The lack of uniform understanding of "normality" leads to numerous interpretations of the future of Europe and the resulting division into friends and enemies. The dismantling of both the Yalta world order and the foundations of classical European civilization with postmodern theories denying traditional values, national identity and state sovereignty is unacceptable to conservative Russia [24].

The ideological war has been imposed on us. We must vigorously defend what we hold dear. However, defense is not the way to win a war. The Kaliningrad region seems the most suitable launching ground for the forthcoming counter-offensive. In the Soviet period, the existence of the developed countries of the West as an alternative to the situation in our country greatly contributed to the critical attitude to domestic realities and critical thinking in general. Now we should rely only on ourselves, our understanding of what both Russian and international history can teach us. That should be the basis for our ideology and our strategy in the outer world.

The development of the Kaliningrad region should involve, first of all, its positioning in the intellectual space of Europe as a platform for the free exchange of opinions on the most burning issues. International forums of different scales ranging from research seminars to congresses can facilitate free exchange of opinions, free discussions between advocates of different viewpoints. Recently, there have been no similar events both in our country and beyond. Open discussions on acute themes will certainly attract many participants. The decline of debates in the West is not a result of some misconception or ridiculous intellectual fad. Rather it is the evidence of a deep systemic crisis. The more vulnerable the existing order to criticism is, the more it must be avoided. In these terms, the West has become a mirror image of the USSR.

Open multilingual scientific, socio-political journals, popular science magazines should also become a permanent platform for free discussions. They will be a powerful manifestation of soft power, free from the negative propaganda and counter-propaganda we discussed previously [21]. Competitive success, including that at the regional level, requires proper consideration of our strengths and weaknesses. We should neither despise nor idealize ourselves, although historically we are strongly inclined to fall into one of these extremes. We are people of impulse rather than discipline and method. It would be nice to have a bit of a German in ourselves, as we have long been advised by Kuzminov, but this will hardly help us bypass Germany in any way. We need to learn to turn our weaknesses into competitive advantages. If our weaknesses are a continuation of our virtues, then the opposite is also true. We love arguing, and quite often all the

steam is used on the whistle. Why do not we use the long-standing passion of ours for the development of international journals ensuring a high level of intellectual and moral debate on their pages?

Experiments in science and higher education

Reasonable, healthy and moderate conservatism President Putin spoke about [5] clearly implies benefiting from our lag behind the West in many spheres of education, science and socio-political life. Unfortunately, it is in these areas that the gap is being bridged especially zealously. Having restored independent goal-setting in foreign policy, having sharply increased military efficiency, the country still depends on the West in education and science. How could the assessment of the qualifications of researchers and academics, research organizations and universities have been outsourced to our political geopolitical rivals?!

A renowned epistemologist and philosopher of science Rozov (1930—2011) introduced the *telling fact* concept, which means a fact that helps reveal a relevant feature or regularity. The recent experience of the Institute of Geography of the Russian Academy of Sciences (IGRAS) illustrates the conceptual content of this notion. In July 2021, the Institute of Water Problems of the Russian Academy of Sciences offered to join a consortium to study the water resources of Crimea. The idea was wholeheartedly supported by the IGRAS Hydrology Laboratory. Participation in any consortium has to be approved by a decision of the scientific council. The issue seemed to be purely technical. However, during the remote voting, a serious and heated discussion broke out. It turned out that many members of the scientific council, including heads of departments and some very reputable researchers, either strongly opposed the initiative or did not support it since any associations of the IGRAS with Crimea would damage their international links. To repeat, it was the question of the IGRAS's participation rather than their personal participation in the project. Everybody was free to choose the level of involvement. Only a long and heartfelt letter from the acting director helped gain the necessary 2/3 of the votes. It is not always easy to identify and assess the prevailing mood and trends in the corridors of power. Nevertheless, a question arises — why the country would need scientists who look in the wrong direction even at important moments? How can one change their motivation and make them think of their own country first?

"The problem is that presidential decrees are elements of planned economy (the goal is to raise the prestige of the scientist), while the Ministry of Science and Higher Education of the Russian Federation wants to implement them with strictly market methods", writes the director of INION RAS Kuznetsov [9]. A bigger problem is that the current officials simply do not know other methods. They never lived in the USSR where the level and the quality of science were outstanding. There was no bibliometrics. Regardless of some flaws, science developed much more efficiently than today. In the near future, our country will not be able to approach the United States or any other leading Western country in terms of funding

education and science. Therefore, it is necessary to focus on cost-efficiency. It requires bold experiments, and the Kaliningrad region could be a suitable testing ground. "Catch up and overtake", the romantic slogan of the 1930s, may prove to be an old but potent weapon. Science in the West may not be as efficient as it may seem which was apparent during the COVID-19 pandemic, although there had been some evidence of it in the past.

The quality of higher education is even more astonishing. We are used to speaking reverently of the Ivy League. However, a graduate of Harvard George W. Bush, Jr., confused Austria and Australia, the U.S. state of Georgia and Georgia as a country. The graduate of Brown University Nuland was ready to send the American fleet to the coast of Belarus. The strength of these universities (and many others) lies in their rankings. Their high reputation provides them with abundant funding; the latter allows attracting top scientists. These world-class academics, in turn, provide for high ratings. Nevertheless, the quality of research conducted at universities does not necessarily translate into the quality of their graduates, most of whom do not aspire to an academic career. At the same time, major scientists invest their effort and time in working with students only if they need to prepare substitutes. Most students can only contemplate their pictures. Harvard students privately say that representing their *alma mater* in sports competitions contributes as much to academic success as poring over books until early hours. The situation we observe in Russian universities is surreal: the publish-or-perish requirement is accompanied by an equally steady decrease in the requirements for students' knowledge. This is a result of the ridiculous race over time for rankings, where the mere fact of our participation will surely lead to our failure.

Meanwhile, in the West, there are clear-headed people, who are aware of the mission of university education, which Ortega i Gasset formulated 90 years ago — to train professionals having a broad scientific and cultural outlook rather than single-discipline specialists, at best, knowledgeable in their narrow field while remaining barbarians in everything else. He attributed the victorious march of fascism to the catastrophic fall of the cultural level of the educated strata of society [13]. The Leuphana University of Lüneburg, established by the Landtag of Lower Saxony in 1989 (founded in 1946 as a teacher training college), hardly cares about its rankings. It makes its own decisions on what to teach. The university focuses on the disciplines that form a humanistic and scientific worldview and disapproves the idea of narrow specialisation. Every year the university has many applicants. "Smart companies know that good graduates look beyond the horizon of their specialisation and are concerned about key public problems. That is why our graduates find their first job easily", says the university rector [22]. Answering the question "Is your model of education more expensive than the traditional one?" he says, "Our model is more complex because both students and professors have to work harder. However, it does not necessarily have to be more expensive compared with the traditional one" (ibid.).

We should stop worshipping rankings as pagan gods; we should draw on the best practices of the Soviet tertiary education (which was not bad, especially by today's standards). It is particularly important to bring the faculty back to teaching since their main function is to give knowledge and share skills whereas doing research is an additional asset. There is no need for *WoS* publications, especially in its upper quartiles, to teach students the fundamentals of their profession. A possible decrease in the number of students (dropouts) should not affect the salaries of faculty or administration. This is the only way to make students learn rather than pretend to do it.

It seems that the Russian outpost in Europe, the Kaliningrad region, has the most favourable conditions for this excitingly bold and very realistic experiment. Within a few years, the level of higher education is bound to rise; it will make the region even more attractive and authoritative at least among the Baltic countries. At the same time, it will significantly contribute to Russia's soft power. Surely, we have enough intelligence, talent and funds for it. The only thing lacking is political will.

Fedortsev wrote that ever since 1973, after the first energy crisis, the Germans have been investing in RES, and now they believe that it is their time to become an energy superpower since almost all resources are commonly available, and they are the ones having the technology [20]. The Germans will clearly pay any price. They are abandoning coal and, most probably, will abandon gas in the future. Almost all nuclear power plants are closed, though it did not affect the carbon footprint. There is no way Germany would assume nuclear leadership. It is high time we came to our senses, returned to sound conservatism, and reassessed the Soviet legacy (while there is still something left) created by enormous efforts and sacrifice to make Russia an integral part of the world.

We will need much less funding than Germany, but much more courage and intellectual honesty to restore the sovereign independent goal-setting, the skill we lost in the post-Soviet period. That is largely a task we have to solve in designing a world where independent goal-setting is a norm. We should put all our intellectual strength into designing a world order, in which the country will be one of the key players. We may not be as efficient as Germany yet. However, we will have to be just as successful in implementing our project.

* * *

Speaking at the meeting of the Valdai Club, Vladimir Putin answered the question of how to ensure the effectiveness of Russia's soft power, "The most important thing is to have self-respect. You do not have to prove to someone that you are good. We should not do that. That is the most important thing. Respect yourself, your history and culture, and people will reach out to you"[5]. We do have a lot to think about if we want to set great goals for a great country rather than live for the day. By restoring respect for ourselves, we will gain the confidence, which is much-needed for large-scale and bold experiments. Without them, it is impossible to ensure a future worth living for the country in this highly turbulent

and constantly changing world. The contours of the new world order will begin to emerge only in a few years, but we need to act now. "Societies and states have an inalienable right, even an obligation to experiment with their national political and social development paths. Every experiment, whether successful or not, contributes to the common social experience of humanity. History will judge which models will ultimately prove effective, efficient, fair and successful, and which will find their place in the vast and constantly growing graveyard of human misconceptions" [8].

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EU COUNTRIES IN THE BALTIC REGION

NEW PRINCIPLES OF RESOURCE DISTRIBUTION IN THE EU AND THEIR IMPACT ON THE COUNTRIES OF THE BALTIC REGION

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The Multiannual Financial Framework for 2021—2027 was adopted during the severe crisis caused by the ongoing coronavirus pandemic. In the face of a rapidly deteriorating economic situation, EU countries took unprecedented steps radically changing the principles of resource allocation in the Union. These included the recovery plan for Europe, making the EU budget conditional on respect for the rule of law and the new EU resources system. This article seeks to identify the essential characteristics of the decisions made within the Multiannual Financial Framework and define their significance for advancing integration. The study attempts to answer two questions: do these decisions mark the transition to a new stage of integration and to what extent do they comply with the law of the Union. Several EU initiatives related to debt redistribution are analysed, along with the impact of these initiatives on Eastern European countries, particularly those of the Baltic Sea region. The research explores the decisions from the standpoint of legal and political science. In particular, it is stressed that, when reaching a compromise on making the budget conditional on respect for the rule of law, the EU and its member states had to use a mechanism for postponing the execution of an act of the Union, which contradicts the basic principles of EU law. From a political

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point of view, the adoption of a package of legislative acts within the Multiannual Financial Framework means growing dependence of the member states and an increase in solidarity and loyalty within the Union.

Keywords:
European Union, debt socialisation, Multiannual Financial Framework, solidarity, conditionality, coronavirus, EU recovery plan

On 16 December 2020, the EU adopted a range of legislative measures within the 2021—2027 Multiannual Financial Framework. Apart from the regulation laying down the multiannual financial framework,[1] the measures included a regulation establishing an instrument to support the recovery in the aftermath of the COVID-19 crisis,[2]a regulation on conditionality for the protection of the Union budget[3] and the Council decision on the Union's own resources.[4]

Compared to previous financial plans, this document introduced more radical changes to the further development of the EU. The Covid-19 outbreak contributed enormously to this. The pandemic, the member states' uncoordinated and often misguided response, the sluggishness and irresolution of the EU institutions at the early outbreak stage put the Union in a precarious position [1, p. 25]. The EU had to resort to radical non-conventional solutions, which, on the one hand, had to demonstrate solidarity within the EU and, on the other, respond to the arising challenges.

The consensus was not overwhelming: discontent of the member states was growing along with intra-Union discord. The pandemic's repercussions aggravated the long-standing problems caused by incongruities in the growth model and institutional architecture of the EU [2, p. 411]. A means to solve those problems was the mechanism for redistributing EU resources.

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[1] Council Regulation (EU, Euratom) 2020/2093 of 17 December 2020 laying down the multiannual financial framework for the years 2021 to 2027, 2020, *OJ L,* 433I, 22.12.2020, p. 11—22.

[2] Council Regulation (EU) 2020/2094 of 14 December 2020 establishing a European Union Recovery Instrument to support the recovery in the aftermath of the COVID-19 crisis, 2020, *OJ L,* 433I , 22.12.2020, p. 23—27.

[3] Regulation (EU, Euratom) 2020/2092 of the European Parliament and of the Council of 16 December 2020 on a general regime of conditionality for the protection of the Union budget, 2020, *OJ L*, 433I , 22.12.2020, p. 1—10.

[4] Council Decision (EU, Euratom) 2020/2053 of 14 December 2020 on the system of own resources of the European Union and repealing Decision 2014/335/EU, Euratom, 2020, *OJ L,* 424, 15.12.2020, p. 1—10.

Debt mutualisation

The Economic and Monetary Union (EMU) is a notable achievement of the EU, but problems such as asymmetry [3—4] and incompleteness [5—6] came to the fore in the course of its creation.

Article 123 of the Treaty on the Functioning of the EU (TFEU) prohibits overdraft or any other type of credit facility with the European Central Bank or with the central banks of the member states in favour of Union institutions, bodies, fices or agencies, central governments, regional, local or other public authorities, other bodies governed by public law, or public undertakings of the member states. Yet, according to Article 125 of the treaty, the Union is not liable for undertakings of any member state, nor does it assume these commitments. Thus, the founding treaties lay down the principle of the financial and credit autonomy of the Union and its member states.

The pandemic, however, forced the EU to change its approach and take the unprecedented decision on debt mutualisation, having launched a mechanism whereby the EU assumes the debt obligations of its member states. The EU institutions used a similar practice before the pandemic, albeit on a much smaller scale [7, p. 259].

Wealthier countries did not support the idea of debt mutualisation, considering it harmful and highly undesirable since it could undermine the attractiveness of the EU to investors as a reliable financial and economic system. The opponents of debt mutualisation had to change their position later, making consensus possible [8].

Spain was behind the idea of debt mutualisation. The country sought to create a special EU fund of up to 1.5tn euros to help the most affected countries of the Union by providing them with non-refundable grants to overcome the consequences of the pandemic. These grants were to be financed through the so-called 'perpetual' debt of the European Union.[5]

In response to the Spanish initiative, France and Germany proposed to create a recovery fund within the multiannual financial framework to supplement

[5] Spain proposes a €1.5 trillion coronavirus recovery fund financed through perpetual EU debt, 2020, *El Pais,* available at: https://english.elpais.com/politics/2020-04-20/spain-proposes-a-15-trillion-coronavirus-recovery-fund-financed-through-perpetual-eu-debt.html (accessed 21.04.2021).

the latter.[6] The fund had to be large enough to finance the restoration of the region's economy, used for its intended purpose only and exist as long as was needed to achieve its objectives. The French-German initiative was a symbiosis of earlier divergent demands.

The initiative was at the core of the EU economic recovery plan, drawn up by the European Commission shortly after [9]. The Commission gave the document the pretentious name Next Generation EU.[7]President of the European Commission Ursula von der Leyen presented this plan at the European Parliament on 27 May 2020.[8]

Simultaneously with the economic recovery plan for the region, the European Commission put forward a new version of the multiannual financial framework for 2021—2027 worth 1,074.3 billion euros (because the recovery plan could only be implemented within a budgetary framework). Moreover, budget funds and borrowing from financial markets should pursue common goals and complement each other. This principle has been consistently embedded in the new version of the multiannual financial framework,[9] whose expenditures seek to produce a synergistic effect in terms of the recovery and Next Generation EU plans. Overall, the spending adds up to 1.850 billion euros.

Digitalisation and transition to climate-neutral energy, including the decarbonisation of the economy, have been proclaimed a central element of the European economic recovery plan. But it remains unclear to what extent climate

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[6] European Union — French-German initiative for the European recovery from the coronavirus crisis (Paris, 18 May 20), 2020, France Diplomacy, 18.05.2020, available at: https://www.diplomatie.gouv.fr/en/coming-to-france/coronavirus-advice-for-foreign-nationals-in-france/coronavirus-statements/article/european-union-french-german-initiative-for-the-european-recovery-from-the (accessed 21.04.2021).

[7] Communication from the Commission to the European Parliament, the European Council, the Council, the European Economic and Social Committee and the Committee of the Regions "Europe's moment: Repair and Prepare for the Next Generation, 2020, COM, 456 final, Brussels, 27.05.2020, available at: https://eur-lex.europa.eu/legal-content/EN/TXT/?qid=1590732521013&uri=COM:2020:456:FIN (accessed 11.04.2021).

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neutrality is requisite or whether these efforts may result in a waste of money. The EU's plan prioritises the construction of a green economy: the Union is to spend up to 30 per cent of its total budget on achieving climate neutrality.

The economic recovery plan should be flexible so as to allow the reallocation of funds to tackle urgent problems whenever they may arise. A major proactive reallocation of funds to finance priorities similar to those in the recovery plan was carried out by the Commission in the submitted version of the multi-annual financial framework plan for 2021—2027.[10]

A special meeting of the European Council on 17—21 July 2020,[11] with great difficulty and at the cost of an uneasy compromise [10], reached the political decision to approve a 750bn euro economic recovery plan. The funds are to be borrowed by the European Commission and distributed among the member states most severely affected by the pandemic.

The usual seven-year budget of 1,074.3 bn euros is supplemented with additional 750bn (at 2018 prices), which the European Commission will borrow on behalf of the EU in financial markets. The funds will be distributed among the member states: 360bn euros in loans and 390bn in grants and budget guarantees.

The decision on debt mutualisation changes the very nature of the EU: it takes the Union to an entirely new level of integration, turning it into a fiscal federation [11] with common binding rules for fiscal and macroeconomic regulation [12, p. 38].

The reason for this transformation of the Union is twofold: firstly, the change was prompted by the very nature of the shock caused not by the behaviour of member states but by exceptional objective and universal circumstances; secondly, the crisis had anomalous and dramatic consequences for healthcare, economy and society [13, p. 2]. The solution was purely pragmatic, just as in the previous crises [14], the aim was not so much to save the affected countries as to ensure the preservation of the Economic and Monetary Union.

The financial and economic space of the EU is becoming more integrated by narrowing the gap between the wealthier and poorer countries of the EU. And this is done at the expense of more successful countries, not underperforming ones.

[10] The EU budget powering the recovery plan for Europe, 2020, European Commission, 27.05.2020, available at: https://ec.europa.eu/info/sites/info/files/factsheet_1_en.pdf (accessed 01.04.2021).

[11] Conclusions. Special meeting of the European Council (17, 18, 19, 20 and 21 July 2020), 2020, European Council, Brussels, 21 July 2020, available at: https://www.consilium.europa.eu/media/45109/210720-euco-final-conclusions-en.pdf (accessed 11.04.2021).

Compared to the initial proposals, the final decision was a compromise: the funds earmarked for grants were reduced from 500 to 390bn euros at the insistence of Austria, the Netherlands, Germany and Sweden, among others [15, p. 20].

The agreement reached by the European Council has been welcomed everywhere. Finally, after a long break, EU member states have a strong joint action programme and the financial capacity to implement it. Next Generation EU is an ambitious vision for renewal that should be reckoned with.[12] Commentaries point to the EU having managed to show wisdom and the spirit of solidarity, look for and find common interests, move forward despite all the obstacles and challenges [16]. In this respect, this decision is a landmark in the development of the Union.

The EU and Germany decided to move towards fiscal integration, which largely affects the effectiveness of the Economic and Monetary Union.

Along with the political decision on the multi-annual fiscal framework and economic recovery plan, the European Council consented to boost its own resources. The European Council's conclusions set out a reform of its resource system. As its first step, the EU has levied a tax on non-degradable and non-recyclable plastic waste since 1 January 2021. A carbon border adjustment mechanism (a tariff on carbon-intensive products) will be introduced along with a digital tax no later than the beginning of 2023. The EU emissions trading scheme will also undergo modification, with possible extension to aviation and maritime transport. In addition, the member states will try to create new sources of revenue for the EU, such as a tax on financial transactions [17].

Rule of law vs rule of money. A mechanism to control respectfor the rule of law

The debt mutualisation project naturally affects the interests of all the member states, and even more so those with economies dependent on EU subsidies.

While discussing Next Generation EU, the European Commission revisited the idea of an EU budget conditional on respect for the rule of law.

The mechanism vests in the Commission the right to suspend payments to member states violating the rule of law. The conditionality principle establishes, in other words, a direct dependence between the payment to a state of funds from

[12] Primakov Readings: New Generation EU, 2020, Interfax, 19.06.2020, available at: https://www.interfax.ru/russia/713768 (accessed 11.04.2021).

the EU budget and the said state's commitment to the core values of the EU, such as the rule of law. The draft regulation was prepared by the Commission as early as 2018.[13] The draft law received a mixed reaction among politicians and experts alike. Blauberger and Hüllen believed that it was a step forward [18, p. 2, 12] as it was, in any case, an improvement on the dysfunctional mechanism [19] under Article 7 of the TEU. Bachmaier stresses the need to protect the rule of law as a dominant value of the EU but doubts that the proposed mechanism will be an effective and appropriate remedy, as it could damage other equally important values of the Union [20, p. 124].

Poland and Hungary, quite predictably, expressed their opposition to the mechanism, threatening to block the adoption of the EU's multiannual financial framework.

The mechanism jeopardised the position of Poland and Hungary since Article 7 procedures had already been launched against both states due to the serious risk of the two countries' authorities violating the rule of law and other fundamental values of the EU [21].

Brussels claims that Poland and Hungary are pursuing nationalistic and authoritarian policies [22, p. 381] running counter to the rule of law [23]. The countries have been condemned for partial destruction of the checks and balances system in their political systems, the concentration of power in the hands of the ruling party and its leaders, undermining the independence of the judicial system, etc. [24—25]. The EU is not satisfied with the ostensible autonomy of the Visegrad Group members, their cohesion, mutual support [26, p. 89] and ability to resist pressure.

The Commission and other EU institutions have been unable to influence these countries since the substantial financial assistance from the EU allows Poland and Hungary to feel economically confident [27].

The EU could have adopted the conditionality regulation without consent from Poland and Hungary since a regular legislative procedure based on a qualified majority in the Council is requisite in this case (Article 322 of the TFEU). But the adoption of a multi-annual financial framework and the decision on the Union's own resources require unanimity of all Council members. At the

[13] Proposal for a Regulation of the European Parliament and of the Council on the protection of the Union's budget in case of generalised deficiencies as regards the rule of law in the Member States, 2018, COM, no. 324 final — 2018/0136 (COD), available at: https://eur-lex.europa.eu/legal-content/EN/ALL/?uri=CELEX:52018PC0324 (accessed 27.03.2021).

EU summit held on 10—11 December 2020,[14] the member states worked out a compromise: in exchange for a range of concessions, Poland and Hungary agreed to withdraw their objections to the multiannual financial framework, including Next Generation EU.

Parameters of the conditionality mechanism were set out in line with the conclusions of the European Council, and guarantees for the states objecting to the mechanism were provided. It was concluded, among other things, that no action could be taken under the regulation until the Commission finalised guidelines for its application. Furthermore, the European Council specifically granted the concerned member states the right to challenge the mechanism under Article 263 of the TFEU. Poland and Hungary exercised this right by challenging the regulation in the Court of Justice of the EU on 11 March 2021 [28]. The guidelines will not be completed until the court has ruled on the legal action against the conditionality mechanism.

The authors of the draft law see the conditionality rule not as punishment for violating the rule of law principle but as protection of the Union budget from fraud, corruption and conflict of interest. After all, it is in countries where the rule of law is not respected that these wrongful phenomena occur. And the access of such countries to EU financial resources should be restricted to avoid the risk of funds misuse. The conditionality mechanism aims to counter corruption rather than support the fundamental principle of the rule of law.

Based on this consensus, the Council and the Parliament adopted Regulation 2020/2092[15] on the conditionality mechanism for the protection of the Union budget. This regulation of 16 December 2020 was based on a project prepared by the Commission in 2018.

The regulation holds that the Council, acting on a proposal from the Commission, may apply measures to protect the financial interests of the Union by restricting member states' access to EU funds when the rule-of-law principle is violated or such violation affects or may affect reasonable financial management of the Union budget.

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[14] European Council meeting (10 and 11 December 2020). Conclusions, 2020, European Council, available at: https://www.consilium.europa.eu/media/47296/1011-12-20-euco-conclusions-en.pdf (accessed 27.03.2021).

[15] Regulation (EU, Euratom) 2020/2092 of the European Parliament and of the Council of 16 December 2020 on a general regime of conditionality for the protection of the Union budget, 2020, OJ L, 433I , 22.12.2020, p. 1—10.

The regulation describes elements of the breach of the rule of law by the member states, as well as the conditions for applying the conditionality mechanism and its procedure.

Article 10 of Regulation No. 2020/2092 states that it shall be applicable from 1 January 2021 when the multi-year financial framework comes into effect. The members of the European Council, however, have agreed that the mechanism will not be applied until the guidelines have been drawn up, i. e. until the Court of Justice has ruled on the legal action against the regulation.

There is a significant contradiction here as the regulation is a direct and binding legal act. But the European Council's conclusions are different purely political documents, essentially acts of soft law. This circumstance creates a situation where a regulatory act is suspended based on an act of soft law. And this is inconsistent with the tenets of EU law, the principle of the rule of law amongst others. In other words, the non-binding conclusions of the European Council make the regulation virtually unenforceable [29, p. 176].

The compromise reached by the European Council and the subsequent adoption of Regulation 2020/2092 establishing a conditionality mechanism is somewhat controversial. This mechanism, albeit difficult to implement, is preventive. There has been a lack of solidarity within the EU in recent years, and the EU institutions have few means of coercing 'opposition countries' into complying with common interests [30]. But now, the Commission has been formally equipped with an instrument comparable to a non-combatant firearm. And this is the downside of the compromise. Firstly, as noted above, the very mechanism of the rule of law conditionality undermines the rule of law itself. Secondly, virtually frozen and linked to bylaw guidelines, the new instrument is becoming less effective, becoming a political rather than legal instrument.

Thus, the adoption of the conditionality mechanism cannot be regarded as a triumph of the rule of law; it is just a temporary deal that does not resolve existing contradictions between the states but merely masks the discord.

Rail Baltica: the terminus station?

The implementation of the legal acts adopted within the multiannual financial framework was once again put in jeopardy. But this time, the threat came from the 'obedient' Baltic States.

Under Article 311 of the TFEU, the decision on the own resources of the Union should be adopted unanimously by the Council; this decision comes into

force only when approved by the member states in line with national constitutional rules. Thus, the corresponding decision of the Council, No. 2020/2053,[16] of 14 December 2020, must be approved at the national level. Otherwise, the multiannual financial framework and the recovery and Next Generation EU plans lose any sense.

In January 2021, the Lithuanian, Latvian, and Estonian leaders sent a letter to the Prime Minister of Portugal, the country holding the presidency of the EU Council, in which they threatened to block approval of the Council's decision on its own resources unless funding for the railway is guaranteed [31].

The ambitious Rail Baltica project is a high-speed railway line of the 1435 mm standard European gauge, connecting Tallinn, Riga, Kaunas, Warsaw and Berlin. There are also plans to build a railway tunnel between Tallinn and Helsinki or launch a ferry linking the cities.

The project has long been a priority for the Baltic States, as it would connect the three countries to Western Europe and provide a rail link between the Baltic, which was interrupted when the Soviet Union collapsed.

The economic situation of the Baltic States is not such that they can run this large-scale project on their own, so they are counting on financial support from the EU.

Paragraph 32 of the Conclusions of the European Union of 17—21 July 2020[17] states that the heads of state and government agree to allocate 1.384 bn euros under the Connecting Europe Facility to connect the countries by rail. Although paragraph 31 of the Conclusions names Rail Baltica a principal cross-border project, there is no indication in the document that the funds were earmarked for this project specifically.

Nevertheless, the Baltic leaders construed these provisions as a political decision to allocate money for Rail Baltica. But members of the European Parliament thought differently since financing under the Connecting Europe fund should be done on a competitive basis rather than following a political decision.

It was announced in mid-March that representatives of the Council and the Parliament had reached a compromise on the approval of the Connecting Eu-

[16] Council Decision (EU, Euratom) 2020/2053 of 14 December 2020 on the system of own re-sources of the European Union and repealing Decision 2014/335/EU, Euratom, 2002, OJ L, 424, 15.12.2020, p. 1—10.

[17] Conclusions. Special meeting of the European Council (17, 18, 19, 20 and 21 July 2020), 2020, European Council, Brussels, 21 July 2020, available at: https://www.consilium.europa.eu/media/45109/210720-euco-final-conclusions-en.pdf (accessed 29.03.2021).

rope fund budget. Priority will be given to railway projects, and the Baltic states can also expect funding for the Rail Baltica project. Still, the distribution of funds will follow the standard procedure, with no targeted funding [32].

Although this compromise, which is yet to be legislated upon, is generally acceptable to the Baltic States, it is not what they hoped for. Nonetheless, the Baltic leadership is no longer threatening to sabotage the Council's decision on own resources.

Despite its political and economic significance for the Baltic States, the Rail Baltica project has raised serious doubts about its economic and technical feasibility. Given the declining population of the Baltic states, a decrease in freight traffic and the lack of major production facilities, it is not clear what and who will be carried on this railway.

The construction of the railway alone will not solve the problems of the Baltic States. The EU political elites are convinced that all the problems of the Union's periphery are due to the member states shirking or delaying the necessary socio-economic reforms.

Moreover, the budget funds provided by the EU to complete the cross-border railway project accounts for only one-fifth of the total cost of Rail Baltica, and the Baltic States have few arguments to convince the European Commission that their project deserves EU funding.

This situation, once again, points to growing contradictions between the Western and Eastern European countries. The Visegrad Group used to be the troublemakers earlier, but now they have been joined by the Baltics, which were always loyal to the EU's common policy. Nevertheless, the resistance of the newly joined countries has not been effective so far.

Obviously, this situation is beginning to irritate Brussels, and this could eventually lead to a revision of the decision-making system to adapt it to such challenges.

Conclusion

The EU countries have come a long way within a few months. The action plan for recovery and a qualitative transformation has opened up new avenues for the EU. Huge funds have been allocated to press ahead with this plan, paving the way for even greater investments. If implemented pragmatically and effectively, these measures will speed up the integration of the EU. They will

further unlock the Union's industrial and technological potential. The EU will gain greater autonomy, become more competitive and have more reasons to claim global leadership.

Brussels succeeded in introducing the rule of law conditionality mechanism. Yet, the victory was at the cost of concessions to the mechanism's opponents, and this circumstance reduces the effectiveness of the instrument. Moreover, there is still a certain ambiguity about the rule of law, leaving considerable room for interpretation.

On the one hand, adopting the legislative package as part of the multiannual financial framework will open up new economic recovery opportunities for the periphery. On the other hand, the EU demands loyalty, solidarity and obedience, whose deficit has recently been conspicuous — all in exchange for financial aid. Deeper economic integration presupposes a closer political union, causing resentment among some of the member states, which have increasingly few tools for resistance.

The EU is becoming a growingly centralised organisation, with the countries of Eastern Europe losing their economic and political autonomy. At the same time, the new principles of resource allocation are affecting the Baltic Sea region very differently. Poland and the other Visegrad Group states have been able to defend their interests, whilst the Baltic States have had to be almost completely obedient to Brussels.

Consensus on an anti-crisis package does not mean that all the differences have been reconciled. There is still a long way to go in approving national spending programmes and financing decisions to be taken by EU institutions. The implementation of the economic recovery plan will be lengthy, complex and unpredictable. Drawing an analogy with the 1790 events when, following Alexander Hamilton's proposal, the debts of American states were transferred to the federal government, experts refer to debt mutualisation in the EU as 'Europe's Hamiltonian moment' [33], emphasising the possibility of far-reaching federalisation. Although it is difficult to foresee the consequences, these decisions give the Union a chance to build a next-generation EU.

Moreover, the EU's experience in debt mutualisation will be of interest to the EEU, which may also face the same challenge in a longer-term perspective. How the EU goes about this phase will largely determine whether other integration organisations can benefit from borrowing this mechanism.

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REGIONAL TRENDS IN ELECTORAL SUPPORT FOR LATVIAN PARTIES: THE NEIGHBOURHOOD EFFECT

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The article analyses the neighbourhood effect in the voting behaviour of the Latvians at the four recent parliamentary elections, the ethnic and national leaning of parties considered. The study expands a set of electoral geography tools by adding modern techniques of spatial analysis as well as by increasing the knowledge on the position of the Russian speakers within Latvia's political party landscape. The research aims to evaluate the role of the neighbourhood effect at Latvian elections and identify stable spatial voting clusters. The degree of spatial autocorrelation and changes in it were analysed for each parliamentary party and the non-parliamentary but still influential Latvian Russian Union (LRU). Statistically significant spatial clusters of high and low support were identified and compared; their steadiness over the study period was examined. The structure of these clusters is generally the same for the 'Russian' parties (Harmony and the LRU), whilst the 'Latvian' parties are characterized by greater spatial diversity. The analysis shows that regions bordering on Russia have clear spatial clusters where election results correspond to the parties' attitudes towards Russian speakers and the Russian Federation. The 'Russian' parties and those more or less favourably disposed to Russian speakers (For a Good Latvia, For Latvia from the Heart) have clusters of high support in the area and the 'Latvian' parties of low. This pattern, however, may be due to the high proportion of the non-Latvian population in Latgale (a region with strong historical connections with Russia) and the character of the development of the border area, rather than to the proximity to the Russian border.

Keywords:
spatial analysis, electoral geography, Latvia, Latgale, Russians parties, ethnolinguistic cleavage, election

The ethnolinguistic cleavage in Latvian electoral politics has repeatedly drawn the attention of researchers from various countries. At the same time, modern spatial analysis methods offer a new approach to this issue based on relatively large amounts of data and visually compelling cartographic representation.

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The article is topical as it enlarges the set of tools of electoral geography. Moreover, it focuses on the political landscape of a foreign country with a considerable Russian-speaking population. Thus, the issue is highly relevant for Russian foreign policy prioritizing the support for the compatriots abroad. The study analyses the neighbourhood effect in the last four parliamentary elections employing the methods of spatial analysis that are not so widespread in Russian political science.

The research aims at identifying the spatial structure of the ethnolinguistic cleavage in Latvian elections. To achieve this, the study evaluates the neighbourhood effect in voting for Latvian parties, highlights neighbourhood clusters for each party and tests their sustainability, as well as defines to which extent these clusters reflect the ethnolinguistic cleavage in voting.

A reasonable hypothesis is that the election performance of the so-called "Russian" parties, i. e. Harmony and the Latvian Russian Union, will form sustainable clusters of high support in Latgale and clusters of low support in other regions of Latvia. However, it is interesting to evaluate the success of the attempts of certain "Latvian" parties to overcome the ethnolinguistic fault lines of the political space and gather votes in the regional clusters usually secured by the "Russian" political forces.

Research methods

To evaluate election results, the study employs spatial statistical analysis methods allowing a more thorough cartographic representation of the spatial structure of socio-political processes [1, p. 9] and, in this case, to deepen the understanding of spatial aspects of the ethnolinguistic cleavage in Latvian politics. Back in the 1970s, P. Taylor and R. Johnston [2, p. 265] analysed the neighbourhood effect in electoral behaviour noting that it can play a decisive role in the voting outcome. Modern development of geographic information systems allows testing these suppositions on large amounts of data.

Moran's I index of spatial autocorrelation showing to what extent the results in a region correlate with the results in its neighbouring regions has been computed for each party. The study has employed the method of local indicators of spatial association (LISA) to define statistically significant clusters where high or low electoral support of a party in a region correlates with that in its neighbours [3, p. 94—95]. LISA maps also show "mistakes" where the predictions based on the neighbourhood effect do not coincide with reality. These cases are also relevant for analysis [4, p. 161—163, 166—168].

The division into five electoral districts (Riga, Vidzeme, Zemgale, Kurzeme and Latgale) does not suit the purposes of the spatial analysis, so the study considers the municipal level with 119 elements. The electoral statistics have been attached to the cartographic base for further analysis using geographic information systems QGIS and GeoDa. We have produced a cartographic base with 119 municipalities, as there was no suitable one available in the open access.

Consequences of the ethnolinguistic cleavage

For more than three decades since the restoration of independence the main feature of the social structure and political landscape in Latvia has been the acute ethnolinguistic cleavage between the Latvian majority and the Russian-speaking minority[1]. Although more than one third of the population is Russian-speaking, the parties that represent this group are kept off from forming the government even when they get more votes than all the other political forces.

It is worth noting that not all the Russian-speaking are eligible for political participation as many of them remain aliens (*nepilsoņi*), which is a special status of permanent residents who do not have access to a wide range of rights including the basic political right to vote and be elected. In the early 1990s, the ruling elite of independent Latvia decided to restore the Constitution of 1922 and provide citizenship automatically only for those who had been the citizens of the first Latvian Republic before June 17, 1940, and their descendants. Others, about a third of the permanent population, became aliens. Originally, the status was deemed temporary, however, almost thirty years later every tenth Latvian is an alien[2].

As a result, the Russian-speaking account for around 36 %[3] of the total population and only for around 27 % of the citizens of Latvia. Consequently, the electorate of parties relying on this ethnolinguistic minority is artificially restricted. At the same time, although these aliens can neither run for electoral office nor vote at any level (in contrast with the non-citizens of Estonia who can vote in local elections), the issue of aliens remains a crucial fault line for Latvian politics.

However, the "red lines" of the Latvian elite that avoids cooperation with "Russian" parties (at least at the national level) wields more influence on the political structure. As a result, after every parliamentary election the will of around a quarter of voters, who repeatedly secure the first place for the Harmony party, is ignored. The situation is aggravated by the convention established over the past twenty years, according to which the ruling majority does not let the opposition considerably influence law-making and policy-making [5, p. 120].

Such a situation has a whole range of negative consequences. Firstly, the marginalized status prevents Russian-speaking political powers from consolidating. It is worth noting that the ambitions of their leaders also play an important role.

[1] While we refer to the contradictions between two ethnolinguistic communities, the Russian-speaking and the Latvian-speaking, the use of the latter term in the case of Latvia appears to be excessive as the Latvian-speaking community is comprised almost exceptionally of Latvians, whereas the Russian-speaking are much more ethnically diverse.

[2] Iedzīvotāju skaits un īpatsvars pēc tautības un valstiskās piederības gada sākumā // Centrālā statistikas pārvalde. URL: https://stat.gov.lv/lv/statistikas-temas/iedzivotaji/iedzivotaju-skaits/tabulas/ire060-iedzivotaju-skaits-un-ipatsvars-pec (accessed 30.09.2021) (in Lat.).

[3] 60,8 % Latvijas iedzīvotāju dzimtā valoda ir latviešu // Centrālā statistikas pārvalde [Электронный ресурс] URL: https://www.csb.gov.lv/lv/statistika/statistikas-temas/iedzivotaji/meklet-tema/2747-608-latvijas-iedzivotaju-dzimta-valoda-ir-latviesu (accessed 30.09.2021) (in Lat.).

As Ikstens noted [6, p. 51], the situation is aggravated by the fact that these parties will not get a chance to become part of the government until the value gap between Latvians and the Russian-speaking is bridged. Fifteen years later, no significant progress in this regard can be seen.

Secondly, the fact that such a considerable part of the electorate is alienated undermines the stance of Latvian mainstream parties that are forced to resort to serious compromises and form unstable coalitions [7, c. 87]. Over the thirty years of independence, Latvia saw nine parliamentary elections and more than twenty governments. Still, no trend towards stabilization can be seen. After the 2018 elections, the government was formed by five diverse parties united first and foremost by the wish to keep away from the government the unwanted winner of the elections — the Harmony party that relies on the Russian-speaking electorate. It is hardly surprising that two and a half years later half of the cabinet ministers have changed, the coalition expelled one of its partners and was gravely weakened by internal differences. The efficiency of such a government is considerably limited, whereas in times of the pandemic the country needs clear and consistent management.

Thirdly, the trust of people in the political system is gradually eroded by the persistent disregard for the will of around a quarter of voters, when the winner of the elections is repeatedly kept away from the government. Assembling ideological rivals inside of one government, thus preventing them from fulfilling their election programme, has the same effect. As Vorotnikov points out [8, p. 85], the discontent with ruling politicians fosters political apathy that manifests itself in the gradual decrease of the turnout: from 91.2 % in 1993 to 63.12 % in 2010 and 54.6 % in 2018 (Fig. 1).

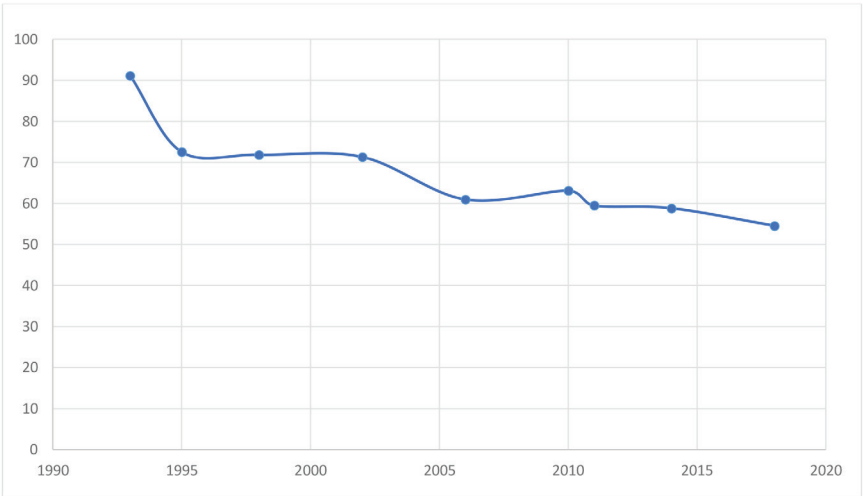

Fig. 1. Parliamentary election turnout in Latvia, % [4]

[4] Saeimas vēlēšanas / Centrālā vēlēšanu komisija URL: https://www.cvk.lv/lv/velesanas/saeimas-velesanas (Accessed 30.09.2021) (in Lat.).

Distrust of the political system fuels new, primarily populist, party projects and aggravates the fragmentation of the political field. However, as Auers states [9], there are other important factors including low requirements for the number of party members and relatively late introduction of state financing for parties in comparison with, for instance, neighbouring Estonia where the extent of institutionalization of the party system is much higher and the field for populist projects is much more limited.

By the classification of Sartori [10, p. 111—112], the Latvian party system is a moderately pluralistic one with increasing fragmentation. Suffice it to say that at the moment there are seven parties with four of them forming the government. Moreover, 2021 saw the emergence of a few more party projects that will lay claim to the seats in the Saeima after the elections in 2022.

A high level of fragmentation is reflected in the indexes of the effective number of parties by Laakso and Taagepera (8,4) and Golosov (5,8) (by the results of the 2018 elections) [11, p. 188]. The Golosov index is lower because it allocates less weight to the parties getting considerably fewer votes than the winner of the elections, which is highly topical for Latvia where "Harmony" wins the election by a large margin.

Research overview

Electoral studies are rather popular in political science due to their high practical importance in explaining voting behaviour and predicting the outcome of the elections in future [12, c. 187]. Spatial factors of electoral behaviour have also attracted the attention of researchers. In the early 20th century, one of the founders of political geography A. Siegfried [13] studied the effect of geographic variables on the voting outcome along with economic and socio-cultural factors. The ideas of Lipset and Rokkan [14] about the effect of social group conflicts on the political system are key to electoral studies. The researchers distinguished three types of such cleavages: among classes, among religious groups and between the centre and the periphery.

In their book "The Geography of Elections" Taylor and Johnston [2] set out the theory of social cleavages reflecting the territorial structure of society. The authors pointed out that the neighbourhood effect can significantly influence the voting outcome, however, they could not give a precise measurement of this effect by the instruments available at that time. As Johnston and Pattie wrote later [15, p. 396], it would be an overstatement to say that local context defines the election outcome, but parties can considerably benefit from taking it into account.

Russian researchers have also studied spatial patterns in electoral behaviour. For instance, Turovskii examined different levels of support of left and right parties in urban and rural electoral districts [16]. Akhremenko [17] considered the potential of spatial electoral analysis as a method of political geography. The project of Sidorenko "Electoral Geography 2.0" is worth mentioning as it studies spatial effects in voting in Russia and other countries [18].

Latvian elections and the country's party system regularly attract the attention of Latvian and Russian researchers, with the ethnolinguistic cleavage usually becoming the focus of studies. The novelty of this article lies in using the methods of spatial analysis for studying this issue based on relatively large amounts of data. These methods allow to identify sustainable spatial patterns in voting and enlarge the existing knowledge of electoral behaviour of Latvians in general and of Russian-speaking Latvians in particular.

The abovementioned Ikstens and Balcere [19, p. 258] highlight the fact that in the Latvian socio-political discourse the traditional division into left and right parties usually differs from that in the Western countries as it is defined primarily by the division into so-called "Russian" and "Latvian" parties. "Russian" parties are defined as left or centre-left, whereas "Latvian" ones as right or centre-right.

The same point is made by Vorotnikov [8, p. 85]. He writes that centre-left parties that have stayed in the opposition ever since the independence in Latvia are primarily associated with the pro-Russian orientation (meaning Russia, not the Russian minority), rather than with the alternative socio-economic programme.

It is worth mentioning that it is not only the ethnolinguistic cleavage that defines the division of parties by this principle. Party elites are eager to employ ethnic mottos in the political struggle. As Zepa and Šūpule show [20, p. 36], the active usage of such rhetoric by politicians remains one of the main catalysts of ethnic tensions in society. The decades that have passed have not changed much in this regard.

Moreover, as the research by Nakai proves [21, p. 214], it is exactly in the run-up to the elections when the nationalist sentiment grows both among the representatives of the ethnic minorities and majority, so the ethnic cleavage is aggravated. As Nakai notes in another article written together with Higashijima [22], as the political system develops, ethnic parties further enhance ethnic identification not only of their voters, but also of other groups that feel threatened by them. Therefore, the researchers believe there is a need for legislature limiting the ability of parties to appeal to concrete ethnic interests, otherwise, ethnic antagonism will only increase and may lead to violent conflicts.

Bennich-Björkman and Johansson [23] also explain the persistence of the intense ethnic stand-off in the political system by the inner logic of party interaction. They note that outside politics Latvians and non-Latvians coexist much more peacefully and have many horizontal ties. An opposite example is Estonia where ethnolinguistic communities are more detached, whereas politics are less and less driven by ethnic motives.

Bloom [24, p. 175—176] makes an interesting point proving that the attempts by Latvian nationalists to blame the Russian-speaking for the economic crises of 2008—2009 failed. The parties dwelling upon the economic agenda without any ethnic claims secured more votes in the subsequent elections.

In the early 2010s, Rozenvalds [25, p. 160] captured a trend towards the "de-sealing" of the Latvian ruling elite and anticipated more access to state power for ethnic minorities, especially taking into account certain distancing of the parties relying on minority votes from Moscow. However, as Ijabs states

[26, p. 308—309], after the referendum on the status of the Russian language in 2012, it became clear that these expectations were over-optimistic, as ethnolinguistic fault lines became more evident, and the dominance of the Latvian language and culture was enshrined in the constitution. As geopolitical tensions between Russia and the West escalated over the previous electoral cycles, Latvian political powers continued proving the essential character of the "red lines" against letting Harmony participate in the government, so any "de-sealing" is rather unlikely in the foreseeable future.

As Commercio [27] notes, the Russian-speaking who want to join the Latvian ruling elite can do so only under the conditions defined by the ethnically Latvian establishment. This means that not only do they have to be citizens and master the Latvian language, but they also have to deeply integrate into the Latvian (ethnic) community. For many representatives of the Russian-speaking minority, it is easier to emigrate with a view to finding better labour market conditions. As Ivlev [28] proves, they are much more prone to leaving the country than ethnic Latvians.

Taking into account the previous experience, it is hard to expect that any international institutions will pressure Latvia to ensure the rights of the Russian-speaking population. As Duina and Miani [29] state, Latvia has managed to become a member of the European Union despite the fact that the country has not fully implemented the European legal requirements concerning minority rights protection, even afterwards Brussels did not appear to be particularly eager to pressure the Latvian authorities into fulfilling these obligations.

As consequently "Russian" political forces are kept off the power, and the institution of aliens is preserved, some researchers and Russian-speaking human rights activists believe that in cases of both Latvia and Estonia one can speak of an ethnocracy [30]. However, a more plausible explanation is the late emergence of a nation-state, as this concept of state-building is becoming a thing of the past [31, p. 194]. This view is shared by Oskolkov. He notes that Estonia has to some extent succeeded in moving forward to overcoming the ethnolinguistic cleavage [32, p. 13], in contrast with Latvia where ethnic contradictions remain the major driving force in politics.

Solopenko [33, p. 30] highlights another characteristic of the Latvian political landscape: the ethnolinguistic factor in voting overlaps with the territorial, as the Russian-speaking are settled unevenly around the country and concentrate in large cities whereas Latvians live both in cities and in rural areas (Fig. 1). The exception is rural areas in Latgale next to the borders with Russia and Belarus, where the proportion of the non-Latvian population is traditionally high.

At the same time, as Németh and Dövényi state [34, p. 798], the National Alliance party promoting the idea of a "Latvian Latvia" is more popular in ethnically heterogeneous cities with a high proportion of non-Latvian population rather than in ethnically homogenous municipalities with primarily Latvian population. Ethnic Latvians are inclined to support the ethno-nationalist project of the National Alliance instead of more moderate parties in cities. Rural areas witness less ethnic polarization and less support of the idea of a "Latvian Latvia".

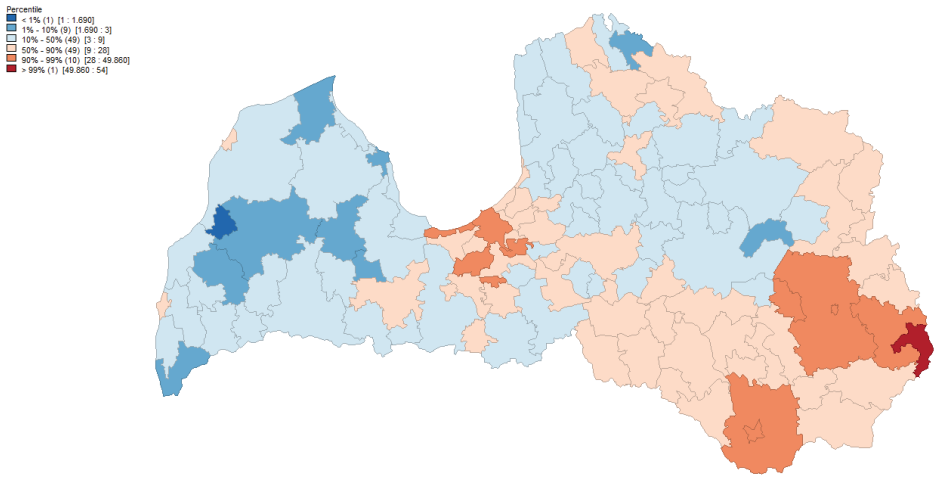

Fig. 2. Percentile map of the share of the Russian population in Latvia, 2020[5]

Analysing the electoral geography of Latvia, Lithuania, Estonia, Russia and Ukraine, Meleshevich [35, p. 119] pointed out the regions with a persistent trend towards voting differing from national results. In Latvia, such a region is Latgale, the region next to the border with Russia and Belarus with the prevalence of the Russian-speaking population. Naturally, parties advocating for the rights of the Russian-speaking received most votes here.

At the same time, Jānis and Juris Paiders [36] have not managed to find any considerable influence of the closeness of the Russian and the Belorussian border at the 2010 parliamentary elections in Latgale. According to them, the second major factor of the voting behaviour was personal, as certain bright candidates managed to gather substantial support. Another study of these researchers [37] proves that in rural areas the ethnolinguistic composition of the electorate has more influence on voting than in major cities.

Electoral cycles

Over the last four electoral cycles, the number of parties getting into the parliament has grown. After the 2010 and 2011 elections, five parties gained the seats in the Saeima, in 2014 — six parties, in 2018 — seven parties. The number of parties running for the parliament has also increased from 13 in 2010, 2011 and 2014 to 16 in 2018.

The 2010 elections of the 10th Saeima were preceded by the consolidation of the conservative right triggered by the growing popularity of Harmony Centre supported by the Russian-speaking electorate. Three political powers (The New

[5] Iedzīvotāju skaits un īpatsvars pēc tautības un valstiskās piederības gada sākumā // Centrālā statistikas pārvalde URL: https://stat.gov.lv/lv/statistikas-temas/iedzivotaji/iedzivotaju-skaits/tabulas/ire060-iedzivotaju-skaits-un-ipatsvars-pec (accessed 30.09.2021) (in Lat.).

Era, The Civic Union and The Society for Political Change) created the Unity party. Latvian nationalists also consolidated: three months before the voting, parties "All for Latvia" and For Fatherland and Freedom/LNNK formed an election union called National Alliance. Latvia's First Party/Latvian Way also merged with the veteran of Latvian politics, the People's party, and several regional forces.

The election campaign was defined by the economic crisis and the discussion around the 2009 Riga riot. Unity won the election (31.22 % of votes) and became the main party of power in Latvia for many years. It still remains in power. However, after 2010, Unity has never managed to secure the majority of votes. In the subsequent elections it lost its leading positions to Harmony that was not allowed to get into the government.

The 10th Saeima did not survive even one year. The economy was stalling, the discontent in the society was growing. President Valdis Zatlers had repeatedly advocated for the dissolution of the parliament as far back as 2009. When, in 2011, a freshly elected parliament declined the request of the Public Prosecution office to allow the raid at the house of A. Šlesers, the president proclaimed that the Saeima had lost people's trust and initiated the referendum on the dissolution of the Parliament. The initiative got overwhelming support from the electorate with 94.5 % voting for the dissolution.

A new electoral campaign passed under the motto of "fighting the oligarchs", including Šlesers. As a result, his party running as Šlesers' LPP/LC Reform Party did not make it over the 5 % barrier. Harmony Centre won the elections with 28.37 %, Zatlers' Reform Party came second (20.82 %) due to the popularity of the president who dissolved the Parliament. The prime minister's party Unity faced a sharp decrease in support and came the third (18.83 %). That did not prevent him from getting the post of prime minister again and forming the government leaving the winner of the election behind.

As the 2011 elections were snap, the 11th Saeima worked for three years instead of four. Over this period, the MPs managed to allow dual citizenship and added a preamble to the Constitution (Satvesme) stating that the Latvian state aims to guarantee the existence and development of the Latvian nation, its language and culture. Adding the Preamble was preceded by the failure of the referendum on making Russian the second state language, after which the Latvian ruling elite almost completely stopped taking into account the Russian-speaking minority. When the Constitutional Court considers the cases brought up by the Russian activists, it cites the preamble to Satversme to substantiate the claims that forcing out the Russian language from every level of education in Latvia is constitutional.

A grave tragedy overshadowed the tenure of the 11th Saeima. The collapse of the Maxima trade centre in a Riga district of Zolitūde on November 21, 2013, took the lives of 54 people. Prime minister Valdis Dombrovskis (Unity) leading the government since March 2009 assumed political responsibility for the accident and left the post. He was replaced by Laimdota Straujuma from the same party, who retained the post after the elections of 2014.

The election to the 12th Saeima on October 4, 2014, was also won by Harmony, although it got fewer votes than in 2011 (23 %). Unity lost by a small margin and took second place with 21.87 %. It did not have any trouble forming the government with the Union of Greens and Farmers and the National Alliance. However, in 2016 it lost the prime minister's post to the Union of Greens and Farmers as a result of internal intrigues.

The education reform of 2018 marked the work of the 12th Saeima. It put an end to bilingual school education and Russian-language higher education programmes, including private. Moreover, the cabinet of ministers made Latvian the main language of communication in kindergartens regardless of parents' wishes.

At the elections of the 13th Saeima on October 6, 2018, Harmony won again, with an even lower result than before (19.8 %). A new party KPV LV ("Who owns the state?") led by actor Artuss Kaimiņš was in second place. The parliament turned out to be highly fragmented with seven parties. Given the resolution to keep Harmony away from the government, forming the ruling coalition was extremely hard and took unprecedented 109 days. After several futile attempts by other parties, the coalition was headed by the ex-member of the European Parliament Arturs Krišjānis Kariņš representing the Unity (that ran at that elections under the brand New Unity consolidating with several regional partners). It is especially striking as New Unity got only 6.69 % of votes, less than any other party that overcame the 5 % barriers. The coalition united five parties that were fierce rivals in the run-up to the election, which guaranteed instability in its work.

Finally, after numerous disputes and scandals in early June 2021, on the very eve of the municipal elections, KPV LV was expelled from the government. By that time, it had lost most MPs and popularity and had become the weakest link in the coalition. The former partners agreed to violate the coalition agreement and redistributed its ministerial posts.

For the Russian-speaking population, the key decision of the 13th Saeima is the law on automatic citizenship for the children of aliens, so no new aliens have appeared since January 1, 2020. However, the main topic of this tenure is the pandemic of COVID-19. At first, the pandemic did not hit Latvia hard, but by the end of 2020, the country had felt all the pressure of the virus, people once again faced harsh restrictions. The situation started to improve only closer to summer 2021. The actions of the government cannot be considered efficient taking into account inconsistent restrictions and the scandal with declining 700,000 dozes of the Pfizer vaccine in December 2020 that brought about the shortage of vaccines. The distrust of the government undermined the trust in the vaccination campaign.

Neighbourhood effect in voting

Let us consider spatial patterns in voting for Latvian parties over the last four election cycles. The neighbourhood has been calculated based on the method of k-nearest neighbours with five neighbours. Five electoral districts do not provide enough instances for analysis, so the study considers results in 119 municipalities.

Let us start with the so-called "Russian" parties: Harmony and the Latvian Russian Union.

Harmony (earlier Harmony Centre) was established in April 2010 by the merger of three political powers: Social Democratic Party of Egils Rutkovskis, New Centre of Sergei Dolgopolov and the National Harmony Party, whose leader Jānis Urbanovičs was the only member of every Saeima since 1995. Although the leadership of the party has claimed that it relies both on Russians and Latvians, it has been supported primarily by Russian-speaking voters. Over the last decade, it was Harmony that accumulated the majority of Russian votes [33, p. 22]. The initial popularity of the party was based on several factors ranging from the personal popularity of its leader Nil Ushakov to the successful promotion through the First Baltic Channel (and adverse publicity for its rivals). However, the hopes that the party could come to power were crucial for its success. In Riga, these hopes come true whereas at the national level the party remained "the eternal opposition".

Since 2011, the party always gained more votes than other parties. Nevertheless, its results have gradually decreased as some voters are not enthusiastic about voting for "the eternal opposition", others are dissatisfied by the lack of effort to protect the rights of the Russian-speaking population and by certain statements of the party leadership against Russia. However, in the Latvian information space, Harmony has a stable reputation as the «arm of the Kremlin». Therefore, at the national level, any cooperation with it is practically impossible for the Latvian mainstream parties. It is worth noting that at the municipal level, where economic issues are more topical than geopolitics, such cooperation is sometimes possible, for example, in 2013, the representatives of Harmony Centre joined the ruling coalition in Ādaži duma with the representatives of the Union of Greens and Farmers, Unity and even National Alliance[6].

For ten years, Harmony held power in Riga, effectively placing the administration of the capital, where even officially, one third of the country's population resides, in opposition with the central government. However, since Nil Ushakov was removed from the office of mayor and went on to work in the European Parliament, the party has remained in a deep crisis aggravated by the failure at the snap elections in Riga.

The analysis shows moderate positive spatial autocorrelation of the voting for Harmony at the parliamentary elections (Moran's I in 2010 was 0,578, in 2011 — 0,6, in 2014 — 0,586, in 2018 — 0,584).

Local indicators of spatial association (LISA) show two neighbourhood clusters found in all the four electoral cycles under examination (Fig. 3). One of them is the cluster of high support in Latgale, a region with a high proportion of Russian-speakers. The other is the cluster of low support in Kurzeme, a region with very few Russians. The monolithic structure of this cluster is disrupted by Liepāja and Ventspils, large cities with a significant share of Russian-speakers.

[6] Ruska R. Kam pieder atslēgas / Latvijas Avīze, news.lv. URL: https://news.lv/Latvijas_Avize/2013/08/09/Kam-pieder-atslegas (accessed 30.09.2021) (in Lat).

Three more clusters are seen only in some electoral cycles. Two of them are the clusters of low support in Vidzeme where Russian-speakers are also not numerous, the other one is that of high support around the capital.

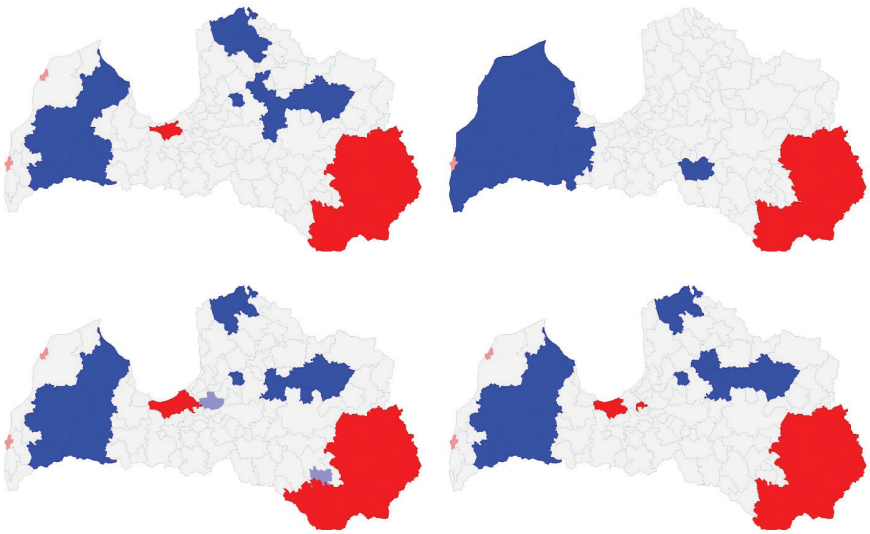

Fig. 3. LISA maps of the voting results of Harmony at 2010, 2011, 2014 and 2018 elections (left to right, top to bottom)

Note: blue are the clusters of low variable value, red are those of high value, light blue and pink are the regions where the logic of neighbourhood does not apply.

Another "Russian" party, the Latvian Russian Union has not succeeded in securing seats in the parliament over the last four elections although it remains a significant player in Latvian politics. The Latvian Russian Union (before 2014 — For Human Rights in a United Latvia) is one of the oldest Latvian parties. It had its representatives in all the Saeimas from 1993 to 2010, then it lost parliamentary representation. From 2009 to 2020, it could not secure any seats in the Riga City Council. Still, the party leader Tatjana Ždanok successfully ran for the European Parliament four times ensuring international cooperation and high representation for her party. As voters withdrew their support from Harmony, the Latvian Russian Union managed to improve its performance in the 2018 parliamentary elections although it ended up with just 3.2 % of votes and did not pass to the Saeima. Lately, the party has been on the rise inspired by the return to the Riga City Council (6.52 % of votes and 4 members of the council) and the increase in popularity due to a clear and consistent stance on protecting the rights of the Russian-speaking population.

The analysis shows moderate positive spatial autocorrelation in voting for the Latvian Russian Union over the last four electoral cycles with a declining trend (Moran's I in 2010 was 0.446, in 2011 — 0.406, in 2014 — 0.395, in 2018 — 0.362).

The LISA clusters of this party remind those of Harmony and coincide with the proportion of Russian-speakers (Fig. 4). Latgale cluster of high support and Kurzeme cluster of low support (with occasional exceptions of Ventspils and Liepāja) persist over the entire studied period. However, in contrast to Harmony, the cluster of low support in Vidzeme appears in every election cycle, whereas the cluster with Jūrmala and several Zemgale municipalities was seen only on the map of 2011.

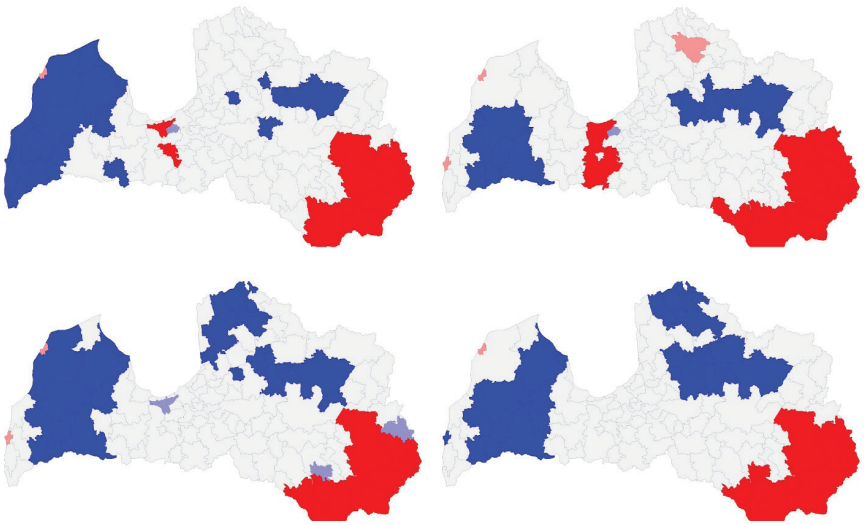

Fig. 4. LISA maps of the voting results of Latvian Russian Union at 2010, 2011, 2014 and 2018 elections (left to right, top to bottom)

Note: blue are the clusters of low variable value, red are those of high value, light blue and pink are the regions where the logic of neighbourhood does not apply.

Let us examine the results of "Latvian" parties that participated in all four elections.

As mentioned earlier, Unity (since 2018 running as New Unity with five regional partners) has been the party of the prime minister since its establishment except for the period from 2016 to 2018, when it gave up the leadership in the cabinet to the Union of Greens and Farmers as a result of internal intrigues. In summer 2018, several months before the election, the party rating was around 3%, nevertheless, it managed to consolidate, find partners and pass to the 13th Saeima, albeit with the smallest number of MPs. However, it was New Unity that eventually succeeded in forming a government, although from the very beginning it was weakened by a diverse coalition and a small fraction of the prime minister's party.

Despite all the difficulties associated with the pandemic and internal disputes that even resulted in expelling one of the coalition partners, the current government of Krišjānis Kariņš is unlikely to collapse as none of its members wants to take on responsibility for the fall of the cabinet. Taking into account the victory

at the elections to the European Parliament in 2019 (26.24 %) and successful performance at the early elections to the Riga City Council in 2020 (the third place and 15.24 %), New Unity's internal crisis seems to have peaked.

Although Unity has the reputation of the party of bureaucracy, whereas the brand of the main Latvian nationalists is upheld by the National Alliance, over the whole decade in power, Unity has implemented the policy of limiting the rights of national minorities. It was the representatives of this party that forged and put into effect the most severe reforms in this area, including the education one.

The analysis shows a moderate positive spatial correlation of voting for Unity in 2010 and 2011 and weak correlation in 2014 and 2018 (Moran's I in 2010 was 0.056, in 2011 — 0.622, in 2014 — 0.279, in 2018 — 0.173).

LISA maps identify only one cluster that can be seen throughout the period. That is a cluster of low support in Latgale where most non-Latvians live (Fig. 5). However, in 2010 and especially in 2011, this cluster encompassed most of Latgale, while in 2018 there were only three municipalities in the northeast.

A cluster of high support in Vidzeme can be seen throughout the first three elections but not the last one.

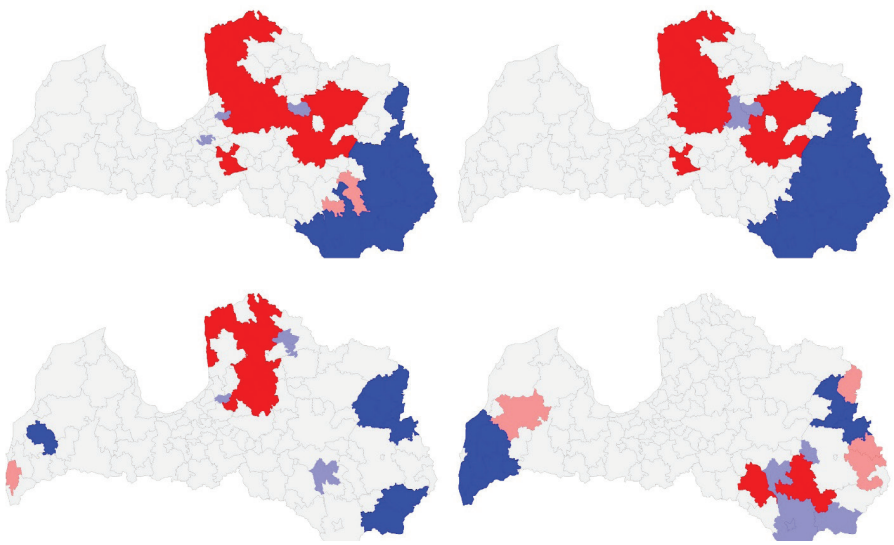

Fig. 5. LISA maps of the voting results of Unity at 2010, 2011, 2014 and 2018 elections (left to right, top to bottom)

Note: blue are the clusters of low variable value, red are those of high value, light blue and pink are the regions where the logic of neighbourhood does not apply.

Another significant power in the Latvian political arena is the Union of Greens and Farmers established in 2002 by the Latvian Farmers Union and the Green Party. The same year the Union successfully ran for the parliament. Since then,

not only has it enjoyed representation in every parliament but also participated in ruling coalitions except for two — from 2011 to 2014 and at the present moment. The party's positions at the 2011 election were undermined by the anti-oligarchical campaign, as a cooperation partner of the Union, For Latvia and Ventspils, was headed by Aivars Lembergs, one of the three major oligarchs in the country. After 2014, the party returned to the government and even led it from 2016 to 2018. In 2018, the Union lost half of its support, gained only 9.91 % compared to 19.5 % in the previous elections and found itself in the opposition. Nevertheless, the party remained strong at the local level where one way or another it controls around a third of all municipalities.

The party relies on a conservative rural Latvian electorate and subsequently leans toward the slogans of protecting the Latvian nation. At the same time, it has established fruitful cooperation with Harmony in the opposition.

The analysis shows moderate positive spatial correlation (in 2010, Moran's I was 0.534, in 2011 — 0.531, in 2014 — 0.614, in 2018 — 0.332).

Only one cluster can be identified on all four LISA maps. That is the cluster of low support in Riga and the Riga Region (Fig. 6). This reflects the "Riga curse" that has hung over the party since its establishment. The Union has nothing to offer to secure the support from the voters in the capital. The maps of the first three cycles show clusters of high support in Kurzeme, including Ventspils, and a cluster of low support in Latgale.

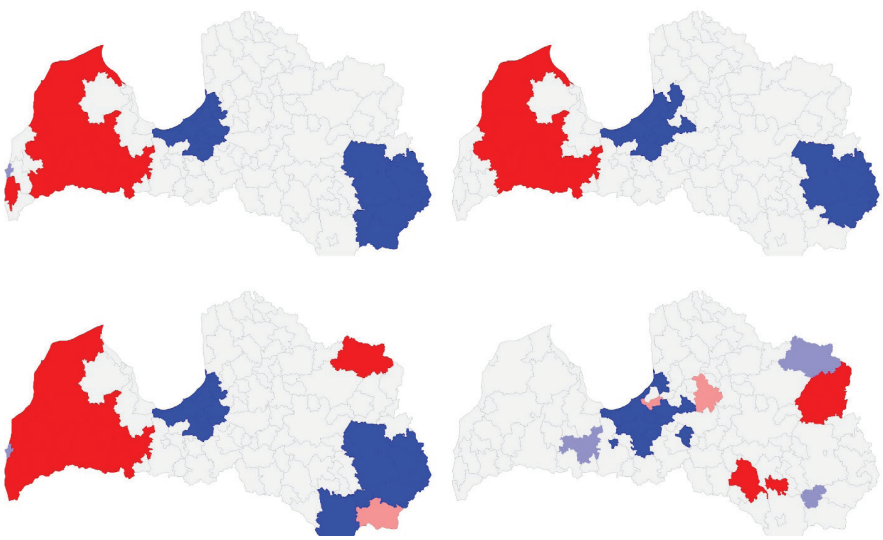

Fig. 6. LISA maps of the voting results of the Union of Greens and Farmers at 2010, 2011, 2014 and 2018 elections (left to right, top to bottom)

Note: blue are the clusters of low variable value, red are those of high value, light blue and pink are the regions where the logic of neighbourhood does not apply.

The National Alliance “All For Latvia!” — “For Fatherland and Freedom/ LNNK” is the main stronghold of Latvian nationalists, its representatives publicly postulate the aim of creating a “Latvian Latvia”. The political force was the part of the government in three out of four studied electoral cycles except for the first one. In 2010, 2011 and 2014, it increased its results at the parliamentary elections up to 16.6 % in 2014, it showed a lower result (11 %) only in 2018. However, just a year later, in the elections to the European Parliament, the party succeeded in proving that it enjoys stable support and sent not one but two representatives to Brussels. Although now the party does not lead the government, many of its suggestions get support from the coalition partners and are enshrined in laws.

The analysis shows a moderate positive spatial correlation in the voting results in 2010, 2011 and 2018 and a high correlation in 2014 (in 2010, Moran’s I was 0.521, in 2011 — 0.687, in 2014 — 0.722, in 2018 — 0.562). It is noteworthy that as the National Alliance enjoyed growing support, the neighbourhood effect increased as well, and in 2018 it dropped sharply.

On the LISA maps, a large cluster of low support in Latgale can be seen throughout the examined period. The non-Latvian population of this region apparently cannot accept nationalist slogans (Fig. 7). There is a cluster of high support in Vidzeme, however, it splits in 2014, as well as the cluster of high support in Zemgale that splits in 2018.

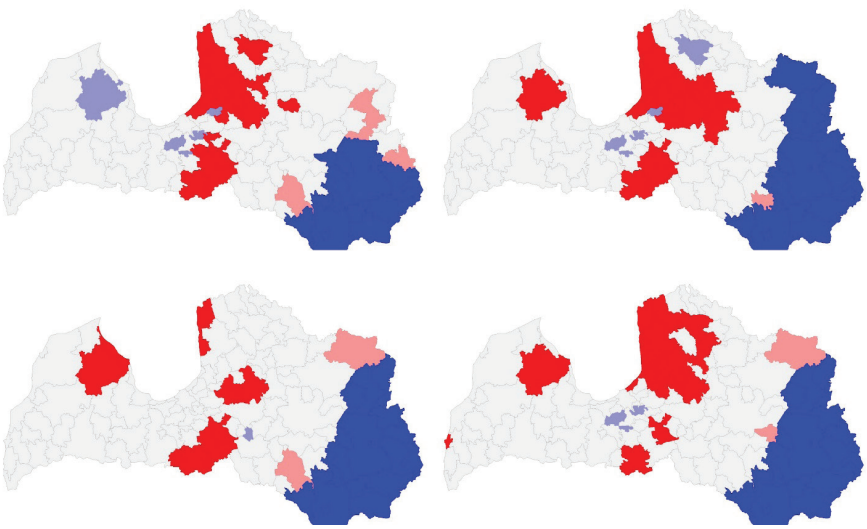

Fig. 7. LISA maps of the voting results of the National Alliance at 2010, 2011, 2014 and 2018 elections (left to right, top to bottom)

Note: blue are the clusters of low variable value, red are those of high value, light blue and pink are the regions where the logic of neighbourhood does not apply.

Other parties got into the parliament only once over the studied period. After 2010, it was the alliance «For a Good Latvia» (Moran's I — 0.314), after 2011 — Zatlers' Reform Party (Moran's I — 0.383), after 2014 — "For Latvia from the Heart" (Moran's I — 0.377) and the Latvian Regional Alliance (Moran's I — 0.141), after the 2018 elections — "Development/For" (Moran's I — 0.061), the New Conservative Party (Moran's I — 0.495) and KPV LV (Moran's I — 0.646). Thus, except for the Latvian Regional Alliance, the spatial correlation is moderate and positive.

It is worth noting that, for five out of seven of these "Latvian" parties, LISA maps show clusters of low support in Latgale. Only "For a Good Latvia" and "For Latvia from the Heart" have clusters of support in this region with the considerable or prevailing Russian-speaking population (Fig. 8). A possible explanation is that LPP/LC, one of the constituent parts of "For a Good Latvia", had previously posed as a party both for Latvians and non-Latvians. Such an approach seems to be at least partially productive. Moreover, the leader of "For Latvia from the Heart" Inguna Sudraba was almost openly deemed the "arm of the Kremlin" by Latvian politicians and was strongly criticized for the lack of desire to make resolute statements on ethnic matters, which apparently attracted some voters.

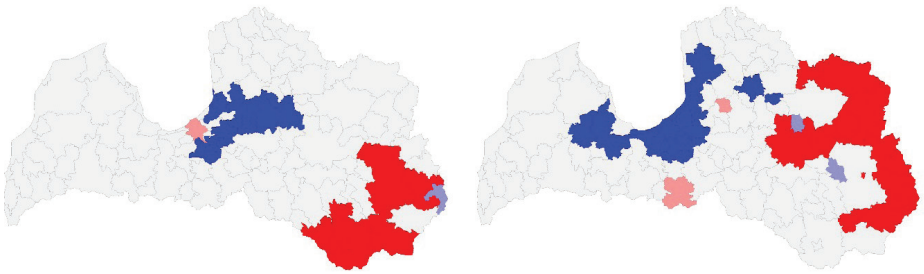

Fig. 8. LISA maps of the voting results of the alliance "For a Good Latvia" in 2010 and for the party "For Latvia from the heart" in 2014

Note: blue are the clusters of low variable value, red are those of high value, light blue and pink are the regions where the logic of neighbourhood does not apply.

Prospects and conclusions

The analysis defined the spatial structure of the ethnolinguistic cleavage in the electoral behaviour of Latvians more thoroughly and identified sustainable neighbourhood clusters in voting for different parties. For the "Russian" parties (Harmony and the Latvian Russian Union), the configuration of these clusters is more or less the same. For "Latvian" parties, there is more diversity.

As for the regions neighbouring Russia, the analysis allows defining clear spatial clusters of voting results that correlate with parties' attitudes to Russian-speakers and the Russian Federation. "Russian" parties (Harmony and the Latvian Russian Union), as well as parties showing some sympathy for the Rus-

sian-speaking population ("For a Good Latvia", "For Latvia from the Heart") have clusters of high support in this area, whereas the "Latvian" parties have the clusters of low support. However, this correlation is better explained not by the closeness to the Russian border but by the high proportion of the non-Latvian population in Latgale, which, in turn, stems from close historic ties with Russia and special conditions of development in this border region.

It would be interesting to analyse how the defined trends would manifest in the next elections. However, it is impossible to replicate the research as an administrative reform has reshaped municipal borders.

Another direction for further studies is connected with the fact that this one continues the series of electoral geography research by the Center for Spatial Analysis in International Relations of the Institute for International Studies of MGIMO University. Its materials allow comparing spatial trends in electoral voting in Latvia with other neighbours of Russia [38; 39]. The list includes the countries that Latvia is rarely compared with within political studies, but in this case, the common methodology makes such a comparison possible (for instance, the study of electoral behaviour in Norway: [40]).

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1) title of the article translated into English (12 words or less);

2) an English-language summary (150—250 words) compiled in accordance with international standards. The summary should effectively cover:

— an introduction to the topic;

— the purpose of research;

— a description of the research and practical significance of the work;

— a description of the research methodology;

— key results and conclusions;

— the significance of research (the contribution it made to the corresponding field of knowledge);

— practical significance of research results.

The summary should not reproduce the text of the article (i.e. copy sentences from the article verbatim) or its title. The summary should not contain digits, tables, footnote markers, etc.;

3) English key words (4—8 words);

4) bibliography (⩽30 sources) formatted in compliance with the Harvard System of Referencing;

5) information about the author in English. This includes full name, scientific degrees, rank, affiliation (University/ Organization, department, position), and contact details (full postal address, e-mail);

6) information on the source language of the article.

Formatting guidelines

All materials should be submitted as electronic documents formatted to A4 paper size (210×297 mm).

All materials are accepted only in doc and docx formats (Microsoft Office).

Detailed information on formatting of the text, tables, figures, references, and bibliography is available on the website of the IKBFU's United Research Journal Editorial Office at http://journals.kantiana.ru/eng/baltic_region/monograph/

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