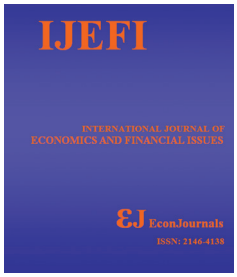

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The Spatial Transformation of the Urban Environment in the Conditions of Post Industrial Development of Society: Dedicated to the 100th Anniversary of Jean Gottmann, Immanuel Kant Baltic Federal University, 23-26 August 2015, Russia.

Forms of Transnational Economic Cooperation and Integration in the Baltic Region

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ABSTRACT

The Baltic macro-region is a heterogeneous socio-economic ecosystem consisting of both the innovative and successful "core regions" and the peripheral areas of the borderland. Facing contemporary challenges of the global market competition, national policies are increasingly being directed at establishing conjoint competence centers capable of absorption and recombination of heterogeneous tacit and codified knowledge generated by the nodes of an international innovation network. Furthermore, systematic and sustainable institutional efforts on facilitating the embeddedness of the remote and underdeveloped areas into these networking activities have created a diversity of transnational economic cooperation and integration forms being elaborated and applied by the institutions of the respective territories. Drawing on an in-depth review, the study reflects on the development factors relevant to an active integration and cooperation process of individual territories of the respective countries. The study suggests that social, cultural, institutional proximity facilitates industrial collaboration being of the highest significance in increasing competitive advantage of a territory.

Keywords: Cross-border Cooperation, Baltic Region, Regionalization, New Regionalism, Russia
JEL Classifications: F15, F63, O19, R10

1. INTRODUCTION

Based on the statistical data, the intelligence and benchmarking reports of the recent years, one can clearly see that the Baltic region is a striking example of an area, which exhibits large density of highly developed and innovative countries as well as the respective border territories, closely intertwined with each other in a constant process of social, cultural, political, economic and other types of interactions. The spatial, institutional, and socio-economic proximities of the countries located in this area ensure intense inter-regional transboundary collaboration involving all possible spheres of life activities. The presence of historical and cultural commonalities, the availability of a single economic space and common unrestricted, or even "virtual" administrative borders, lay the grounds for the formation of successful cross-border and transnational links in a single macro-region. These linkages are further supported by a substantial desire of the sovereign states to solve mutual problems of this geographical area, e.g. ecological state of the Baltic Sea, population aging, migration policies, renewable energy, economy stagnation, insufficient level of productivity and R and D efficiency, etc.

The issues of spatial coherence and the diffusion of innovation within the Baltic region have been in the forefront of scientific research from the early 1990s (e.g., see Tarkhov and Treivish, 1992) and remain no less challenging today. Intensification of the global market competition and the increasing complexity of modern technologies are forcing the establishment of conjoint competence centers capable of absorption and recombination of heterogeneous tacit and codified knowledge generated by the nodes of an international innovation network. Accumulation of resources as well as the synergetic effect of using complimentary expertise of the distant regional clusters in a single value co-

creation network is regarded as the most sophisticated strategy of increasing a competitive advantage of a territory. In the scope of the Baltic region, scholars suggest a wide array of theoretical constructs that take into consideration both the contemporary geopolitical and socio-economic state of the macro-region, and the more general pattern of "glocalisation" of the world economy.

An "international cluster" concept is widely studied by (Asheim et al., 2009), Kibitkin and Emelyanov (2006), Mikhaylov and Mikhaylova (2014), Zamborsky (2012), Zashev (2008), whose research is primarily conducted in the scope Europe and the Baltic region in particular. International production networks, such as the global production and global innovation networks are discussed in detail in publications of Borrás and Lorentzen (2011), Chaminade and Liu (2012), Ernst (2009), including a specific issue of transformation of the production network into innovation network (Cooke, 2013; Liu et al., 2013) and case studies held in various regions and industries (Chaminade and de Fuentes, 2012; Dias et al., 2012; Gastrow and Lorentzen, 2012).

A broader approach on the antecedents and barriers to the involvement of a particular territory in the cross-border cooperation ties within the spatial reach of a Baltic region in reflected in the studies of Fedorov and Korneyevets (2010 a, b), Klatt and Hayo (2011), whose research is devoted to transnational regionalization under the institutional framework of the "Euroregions" and the concept of "development corridors," The concept of "growth triangle" (equally known as "growth zone" or "growth area") has originated in Asia as the original idea of strategic management (Kettunen, 1998), but it was further elaborated in the works of scholars from the Baltic region (Fedorov, 2010; Kivikari and Lindström, 1999). Transport infrastructure, as an essential factor of transnational cooperation and integration, is noted in the concept of transnational and cross-border transport regions (Gumeniuk, 2013; Ingo et al., 2000), "mega-corridors" (Singh, 2012), "corridors of urbanization" (Gottmann, 1961; Rodrigue, 2004) and "urban networks" (Schulman and Kanninen, 2002).

Thus, empirical research held in the previous years has resulted in a plethora of scientific publications that discover the existing and emerging forms of transnational economic cooperation and integration (TECI) represented in the Baltic region. While analyzing these publications, one can clearly observe supremacy of certain territories over others, hence evidently reflecting the fact that the Baltic region is not a homogeneous space of universally successful regions. The macro-region consists of both the "limping dog" and "shining star" territories, while both the metropolitan and peripheral areas (i.e. the center-periphery) are found to be vulnerable of various development factors, bridging of which is the major challenge for local business community, state authorities, and academia. By reviewing and summarizing some of the accumulated knowledge, authors intend to delineate the features of prosperity of certain areas with a particular emphasis on the factors that have distinguished an active integration and cooperation process of individual territories of the respective countries.

2. REGIONAL CONSOLIDATION AGAINST GLOBAL CHALLENGES

The main impetus for the development of international and in particular cross-border cooperation over the last number of years was intensification of internationalization processes in the economy, accompanied by increased labor mobility, formation of global transportation and information channels, reduction of barriers to international business activity, development of horizontal linkages, and the formation of supranational network associations. Researchers have developed a considerable number of theoretical concepts explaining the reasons and benefits of internationalization (Danciu, 2012; Mojtaba and Dadfar, 2012; Morgan and Katsikeas, 1997). Aspiration of the regional actors to cooperate, in this regard, received consideration as a natural desire to increase competitiveness in the global market by improving resource efficiency and utilization of synergies. The need to find a balance between local and global - "glocal," cooperation and competition - "co-opetition," has increased dramatically, encouraging the formation of interstate regional growth poles or the "many regional worlds," as noted by Hurrell (2007). The process of development and strengthening of economic, political and other relations between the regions and whole countries belonging to the same macro-region is defined as regionalization phenomenon (Fedorov and Korneevets, 2010a; Hettne et al., 1999; Keating, 1998; Schmitt-Egner, 2002). Regionalization as opposed to regionalism is an informal process of societal and economic integration often resulted as an outcome of intergovernmental policies - regionalism (Beeson, 2007; Hurrell, 2007; Ravenhill, 2008).

Since the second half of the XX century, the commitment to regionalization becomes a bright pattern of the social development, varied in content and spatial forms. Hettne and Inotai (1994) consider it as a dynamic factor that explains the broader processes of regional development. They argue that regionalization is the final product for "rationality," which can be established in regions of different levels: micro, meso, macro. Regionalization as a process within the notion of new regionalism is suggested to be deployed in two main contradictory directions (Hettne and Inotai, 1994; Hettne et al., 1999). On the one hand, the integration of individual regions occurs, that results in the increase of intensity and the scope of relations between the actors of neighboring territories, as well as the emergence of common authorities (i.e., multinational committee, council, panel, etc.). Interactions, in this case, become systemic in nature or the properties of integrity and self-organization in case of an already established system are enhanced. On the other hand, the disintegration of states occurs, leading to weakening or a complete breakdown of the previously established systemic links. Deformation of vertical hierarchical organizational structures (i.e., center - periphery) toward the dominance of horizontal linkages creates favorable conditions for the formation of new spatial forms of economic cooperation and integration. The aim of which, as a rule, is the resolution of common problems, which is achieved by coordinating efforts on the use of resources and redesign of strategic approaches on governance and growth.

There are numerous antecedents to intra-regional rapprochement, while Stubbs and Underhill (1994) highlight the following integral elements of regionalism: Common historical past of the regional alliances; allocation of similar problems to be solved; strong links between the participating states, enabling the formation of one or more coordinating bodies; and the desire to standardize rules and approaches for managing interactions. Scientific and technological progress, in particular in the field of information and communication technologies, provides the decisive importance in shaping both the opportunities and objective needs in establishing cooperative ties of transnational collaboration. Meanwhile, the development of transport infrastructure and subsequent establishment of mega-corridors, cross-border and transnational transport regions, etc. provides a twofold effect. Mainly, it promotes the formation of new global economic centers, as well as strengthens the position of the existing ones (such as megacities, world cities, etc.). Withal, it stimulates the border territories and geographically remote areas in their search for different ways to integrate into the world economy and innovation space as to overcome the peripheral position.

3. FROM COMMON PROBLEMS TO MUTUAL BENEFITS: LAYING THE BASIS FOR TECI

The Baltic Sea and the issues around it is a powerful factor in strengthening the integration process and development of stable cooperative ties in the macro-region. With that, the Baltic region is not only a geographical but also a political, social, economic, environmental and cultural concept (Cornett and Folke, 2002; Katajala, 2013; Pilyasov and Klimenko, 2011; Zitkus, 2013), which covers an aggregate area of Scandinavia (i.e., Denmark, Sweden, Norway, and Finland), Baltic states (i.e., Lithuania, Latvia, and Estonia), northern voivodships of Poland (Lubusz, Warmian-Masuria, Podlaskie, Pomerania and West Pomerania), northern lands of Germany (Mecklenburg-Vorpommern, Schleswig-Holstein and Brandenburg, as well as cities of Hamburg and Berlin), and the North-West of Russia (Leningrad, Pskov, Novgorod, Murmansk and Kaliningrad regions, Republic of Karelia and the city of Saint-Petersburg).

As to jointly solve the most pressing problems facing the countries of the Baltic region, a number of international thematic network alliances were set up. According to the review of Dutkowski et al. (2009), they exhibit diverse forms of organization: association, conference, forum, council, union, committee, alliance, club, cooperation, partnership, center, festival, fair, network, program, agency, initiative, etc. In the field of ecology and environmental protection since 1974 acts the Helsinki Commission, aimed at protecting the marine environment of the Baltic Sea, and an International Baltic Sea Fishery Commission is created, designed to promote the preservation and enhancement of fish stocks. Twenty-two coastal regions from six countries of the Baltic region (Estonia, Finland, Poland, Germany, Sweden, and Norway) participate in the conference of Peripheral Maritime Regions of Europe. Partnerships in infrastructure have also received considerable attention. In 1991, in order to promote maritime transport a Baltic Ports Organization was formed, as the union of the most important ports in the Baltic region. Since 1992 operates the Baltic Sea Conference of Transport Ministers. A large number of organizations and associations in the field of energy are created and successfully operate (e.g., Baltic Sea Conference of Ministers of Energy). In order to increase the tourist attractiveness of the Baltic Sea coast, since 1983 operates the Baltic Sea Tourism Commission. In 1990, the Association of Castles and Museums around the Baltic Sea was formed, and in 1991 - the ARS BALTICA network was set up to improve cultural collaboration between the countries of the Baltic region. In the healthcare sector and as to improve the level of social welfare since 2003 operates the Northern Dimension Partnership in Public Health and Social Well-being. In the area of trade, the development of business relations and labor protection in the early 1990s was created the Baltic Sea Chamber of Commerce Association, the Baltic Sea Trade Union Network and economic forum "Mare Balticum."

Spatial planning is another important area of cooperation between the countries of the Baltic region. Since 1992 was developed the "Vision and Strategies around the Baltic" initiative. The updated policy document "Long-Term Perspective for the Territorial Development of the Baltic Sea Region (BSR) till 2030" of the Baltic Countries advocates in favor of territorial cohesion within the macro-region and its integration into the European space. The main thematic areas are: Network of cities; relationships of the "urban-rural" type; providing free access to energy, ICT networks and services; planning and management of marine space. Since the Baltic region is characterized by a high proportion of urban population, a relevant networks of cities were created. Such as the Union of the Baltic cities - A voluntary union of more than 100 cities located in the Baltic region, which is formed in 1991 with an aim to mobilize capacities in the political, economic, social, cultural and ecological spheres. Moreover, in 2002, the Baltic Metropoles Network (Baltmet) was created, as a forum for capitals and major cities in the BSR aimed at fostering innovation sphere and increase competitiveness.

Cooperation within the framework of innovative networking is predominantly realized by the research and education sector. In 1990 was established the Conference of Baltic University Rectors, bringing together more than 80 universities and similar institutions with full academic rights, who are interested in the development of international academic cooperation in the Baltic region. There is the Baltic University Programme educational program, aimed at supporting the role of universities in promoting peace, democracy and sustainable development in the region. Since its foundation in 1991, about 225 universities and other higher educational institutions from 15 countries have joined it (e.g. 31 universities from Belarus, 5 from Czech Republic, 6 from Slovakia, 12 from Ukraine and one from USA). Another agreement was signed in the year 2000, between 16 universities in the Nordic countries on establishment of the BSR University Network (BSRUN), which was later joined by universities from the Baltic countries, Poland, Russia, Finland, and Belarus. Developing a network of cooperation on the principles of equality and mutual benefits within these networks, countries of the Baltic region are oriented on the development of joint educational programs, promotion of

academic mobility, joint research projects and the development of common guidelines on universities' management. One of the priority areas of cooperation remain environmental, energy and transport security, as well as the sustainable development of the macro-region.

The major innovative project of a network type in the Baltic region is the formation of an innovative "ScanBalt Bio Regio," bringing together regions, regional networks, clusters, companies, research institutions, hospitals, innovation and promotion agencies in the field of life science from Denmark, Estonia, Finland, Iceland, Latvia, Lithuania, Norway, Poland, Sweden, northern Germany, northern Netherlands and north-western Russia. For the purpose to promote the bioregion, back in 2001 was formed an association "ScanBalt" and created a "ScanBalt Business Club." In addition, a number of other networks were created. For example, Business Network for Blue and Safe Innovation, Network of regional tourism innovation centres for BSR, Baltic Innovation Agency, etc. However, innovation networking of the Baltic region countries inevitably involves the participation in the pan-European and international innovation networks (e.g., ERRIN, EEN, CORDIS, EBN and others), as to widen the access to new markets, resources, and financing. In turn, networks of European countries strive to cooperate with global networks and organizations, as to expand their geographic representation (especially in Asia), and to replenish contacts database of potential partners. The main thematic areas of innovation networking in Europe are bio-economy, alternative energy and environmental technology, transport and logistics, social innovation.

4. ENABLING FACTORS OF AN INTEGRATED COOPERATION IN THE BALTIC REGION

4.1. The Proximity Factor: Building "Bridges" of Cooperation

One of the oldest but still relevant areas of cooperation in the Baltic region is the development of infrastructure in transport and power generation, which laid a solid foundation for the development of cooperation in other spheres (e.g., political, economic, R and D). Among the striking examples on the importance of infrastructure cooperation is the ferry service between Elsinore in Denmark and Helsingborg in Sweden, as well as the opening of the Oresund bridge between Copenhagen and Malmo. These infrastructural projects acted as the driver in the development of the Oresund Euroregion and the formation of a number of successful international clusters on its basis, including the widely known "Medicon valley."

To date cross-border regions and the respective transport corridors are being actively formed in the macro-region. In the last decade, one of the main tools for the development of transport networks in the Baltic region countries, members of the EU, was the pan-European program "TEN-T," aimed at supporting the development of all types of transport and logistics, the respective innovative solutions, facilitating increase in personal mobility and development of trans-European transport network (particularly in border areas). During the implementation of this program in Sweden (2003-2012), a total number of 77 infrastructure projects were implemented, 45 projects were realized in Denmark (2004-2012), 40 projects in Finland (2006-2012), 46 projects in Poland (2004-2012), 19 projects in Estonia (2006-2012) and Latvia (2005-2012), 18 projects in Lithuania (2006-2011). Out of the top 30 priority projects of the Program that are relevant to the whole of Europe, three projects relate to the Baltic region:

- Construction of the Oresund bridge between Sweden and Denmark. Today the project is successfully completed, linking the Nordic Triangle road and rail links via Denmark and the Fehmarn belt with Germany and central Europe.
- Creation of the Nordic Triangle corridor, linking the Nordic countries of Sweden and Finland and their capitals to each other, and improve passenger and freight transport from the region to central Europe, the Baltic countries, and Russia.
- "Rail Baltica" axis project: Warsaw-Kaunas-Riga-Tallinn-Helsinki, which aims to provide rail service between Poland, Lithuania, Latvia, Estonia and Finland.

Another tool for the development of infrastructure in the Baltic region is the Interreg IVA program, many projects of which have cross-border orientation. For example, creation of the Scandinavian Arena transport corridor, which is designed to unite the Oresund, Halland and the Gothenburg-Oslo regions, is the result of the "COINCO North II - The 8 Million City" project (2011-2014), approved within the "Oresund-Kattegat-Skagerrak" sub-program.

4.2. The Institutional Factor: Creating a Barrier-free Environment

An important enabling factor that provides an opportunity for various forms of international cooperation alliances to emerge was the creation of a barrier-free environment. Largely it has been achieved with the European Union. Currently eight countries of the Baltic region are the EU members: Germany since 1952, Denmark (1973), Finland and Sweden (1995), Estonia, Latvia, Lithuania, Poland since 2004. All of them have also entered the Schengen zone at a different period of time: Germany in 1985, Denmark, Finland, and Sweden in 1996, Estonia, Latvia, Lithuania, and Poland in 2007. Further on, Estonia, Finland, Germany, and Latvia entered the Eurozone. While Norway is not the EU member, since 1954 it belongs to the Nordic Passport Union on par with Iceland, Denmark, Sweden and Finland, which gave its citizens the right to visa-free movement within the Nordic countries. Following the acceptance of Denmark, Finland and Sweden in the Schengen area in 1996, countries kept the preferences of the Nordic Passport Union, which automatically included Norway and Iceland into the Schengen process. Norway and Iceland have signed the Association Agreement with the Council of the EU, regarding the Schengen acquis in 1999.

A considerable superiority of the Nordic countries in terms of TECI prevalence is partly due to the Nordic Council - one of the oldest official inter-parliamentary bodies in Europe, which carries out its activities on the development of international cooperation in Northern Europe since 1952. Since 1971 operates the Nordic Council of Ministers. It is notable, that since 1995 this organization

is developing a partnership with Russia in the following areas: research, education and innovation; environment, climate and energy; creating favorable conditions for cooperation in the economic sphere; cooperation within the 'Northern Dimension initiative'.

Over the years, a large number of partnerships and coordinating political associations have been established in the Baltic region. Palmowski (2009) observes that a significant number of network associations acting as platforms for regional intergovernmental cooperation started to emerge in the early 1990s, the key of which are: Baltic Sea Parliamentary Conference (1991), Council of Baltic Sea States (1992), Baltic Sea Forum (1992), Baltic Sea States Subregional Co-operation (1993), Baltic Development Forum (1998). Overall, the priorities of these organizations are to ensure long-term sustainable social and economic development, as well as energy, environmental and civil security in the Baltic region.

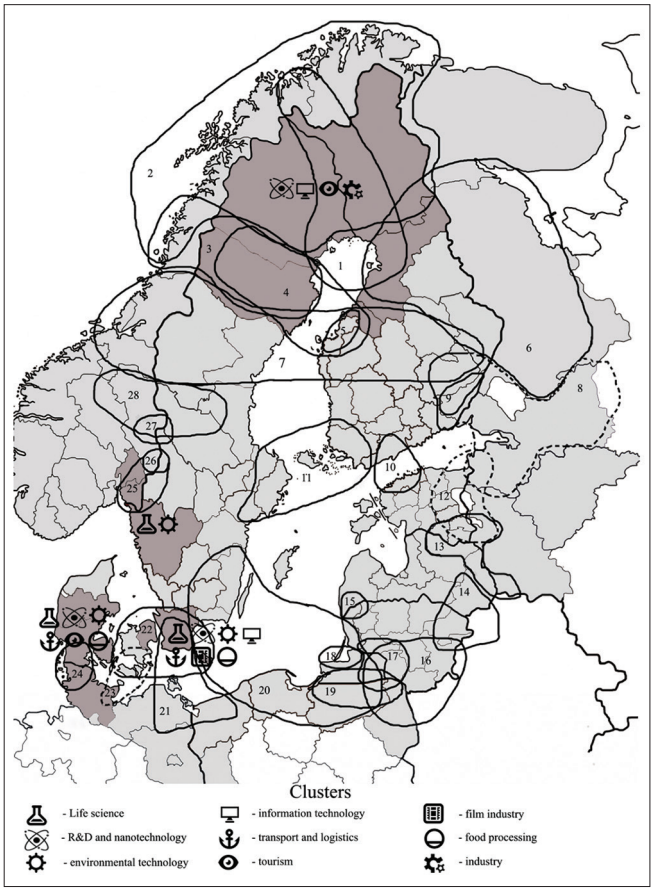
An essential step in the development of TECI was the formation of Euroregions. The main activities of Euroregions are associated with efforts to increase cooperation of regional government and local authorities in the areas of education, health, social work, environment, development of transport infrastructure. Harmonization of regional development plans and configuration of a common strategy is of interest to all the parties involved, thus are being implemented via common projects. Preservation of cultural heritage and establishment of cultural ties, as well as popularization of the idea of cross-border cooperation, formation of European identity and solidarity of Europeans are among the priority areas of the Euroregion concept. Overall, Euroregions are focused on the development of cross-border cooperation as to overcome the drawbacks of border peripheral location of the respective subjects and ultimately - to gain competitive advantages in comparison with other regions.

Out of the total number of 134 cross-border regions in Europe, 25 are located in the Baltic region, seven of which have the membership status in the Association of European Border Regions (AEBR) and six are the partial members in planning (Figure 1). The Euroregions of the Baltic region are most widely presented by Sweden (it participates in 12 Euroregions), Norway - 8 and Finland - 8, least of all by Latvia - 3 and Estonia 3. Russia is also an active participant of the Euroregion format in the Baltic region. Subjects and municipalities of the Russian Federation are involved in eight Euroregions: "Neman," "Baltic," "Pskov - Livonia," "Peipsi Transboundary Cooperation," "Karelia," "South-East Finland - Russia," "Sesupe," "Lyna - Lawa," most of which were formed in the late 1990s and early 2000s.

5. TOWARDS TRANSBOUNDARY INTER-REGIONAL BUSINESS COLLABORATION

Cooperation within Euroregion format increasingly transfers from the socio-cultural sphere in the plane of the development of economic relations. To date on the basis of five Euroregions in the Baltic region (Øresundkomiteen, Tornedalsrådet – Bothnian Arc, Gränskommittén Østfold – Bohuslän/Dalsland, Värmland - Østfold, and the Sønderjylland - Schleswig region) as many as 21 cross-border clusters are formed (Mikhaylov and Mikhaylova, 2014). Although the Euroragions are consistently regarded as one of the major antecedence for the formation of transboundary business alliances, there is no direct correlation of the two. While the areas of cooperation in the framework of Euroregion are concerned with a wide range of global issues, such as identification and removal of cross-border barriers, creation of a common labor market, coordination of favorable conditions to promote export, trade and tourism, infrastructure development, health and environmental protection, development of human capital, the areas of cross-border clusters' specialization are more focused and specific – life science, R and D and nanotechnology, environmental

Figure 1: Euroregions and cross-border clusters of the Baltic region



Note that numbers represent the following Euroregions:
1. Tornedalsrådet – Bothnian Arc; 2. Nordkalotten/Nordkalottenrådet; 3. MittSkandia; 4. The Kvarken Council/Kvarkenrådet; 5. Österbottens Förbund; 6. Karelia; 7. Mittnorden; 8. South-East Finland - Russia (partially Member of AEBR in planning); 9. Regional Council of South Karelia; 10. Helsinki - Tallinn; 11. Skärgårdssamarbete; 12. Peipsi Transboundary Cooperation (cross-border region in planning); 13. Pskov - Livonia; 14. Country of Lakes; 15. Bartuva; 16. Neman; 17. Sesupe; 18. Sesupe; 19. Łyna - Ława; 20. Baltic; 21. Pomerania; 22. Øresundkomiteen; 23. Fehmarnbelt; 24. Sønderjylland - Schleswig; 25. Gränskommittén Østfold - Bohuslän/Dalsland; 26. Värmland - Østfold; 27. ARKO; 28. TRUST Hedmark-Dalarna

technology, IT, transport and logistics, film industry, food, etc. (Figure 1).

Research suggests that determining factors for the creation of cross-border clusters in the Baltic region are (Mikhaylov, 2014; Mikhaylov and Mikhaylova, 2014):

- Concernment of the border regions in the development of a mutually beneficial cooperation ties and jointly address common challenges.
- Availability of the necessary transport and energy infrastructure (e.g. NORDEL energy association - one of the largest energy production networks in the world, which includes Finland, Sweden, Norway, Iceland and eastern Denmark).
- Well-developed institutional framework for cooperation.
- Absence of restrictions on the movement of people and capital.
- Commonality of traditions, history and culture, the presence of historical partnerships.
- A comparable level of socio-economic, scientific and technological development;
- Concernment of national and regional authorities in: (1) Promotion of research activities; (2) improvement of the use of advanced knowledge and technology, followed by the introduction of innovations in the economy; (3) ensuring a high degree of correlation of fundamental and applied sciences.
- Strong financial support from the state.

Given the fact, that these factors have received a considerable amount of attention from the authorities at all levels, the countries of the Baltic region have elaborated their own success model for creating cross-border clusters. A unique approach to establish clusters across national borders of the neighboring regions was conceptualized into a Baltic model (Mikhaylov, 2014). This model is characterized by a bottom-up orientation of the initiative actions, a leading role of the university as the initiator of the cluster initiative, a significant proportion of public funding, and an establishment of a special organization to promote clusters (largely due to the regionalism policy of the states).

Among the most actively involved countries in cross-border clusters of the macro-region are Denmark - 14 and Sweden - 15. Notable examples of cross-border cooperation results between the two countries are the clusters "Medicon Valley" and "Cluster 55." Transboundary cluster cooperation in Germany, Finland and Norway developed to a much lesser extent, whereas no evidence on such bonds established in the Baltic countries, Poland and Russia are present. Most cross-border clusters of the Baltic region are occupied in innovative industries and almost all relate to the introduction of innovative solutions. Among the major clustering areas are life science, including pharmaceuticals, biotechnology and medical technology; R and D and nanotechnology; environmental technology; transport and logistics (Figure 2). The most developed sphere of specialization is life science, due to its long development history in the framework of the Baltic region. Moreover, further development of this trend might position the macro-region as a global center of competence in life science sector.

6. TRANSNATIONAL NETWORKING WITHIN THE SCOPE OF EUROPE AND BEYOND

Active participation of the Baltic region in network associations, including innovation networks undoubtedly has a positive impact on the development of transnational economic relations between various economic entities, triggering the formation of transnational clusters and cluster networks. It should be noted that the creation of a transnational cluster, which involves cooperation at the national level or between the non-bordering subjects of states, is more complex process compared to cross-border type - interactions established between the borderland subjects of the states. The region must have a significant potential secured in the chosen field of specialization. A competitive advantage, expressed in lower production costs, generally does not have such a significant weight in organization of a transnational cluster, as it does in cross-border cluster, or even a global value chain. However, a cross-border cluster often acts as a transitional stage in the development of an international cluster capable of eventually increase its participatory network and territorial boundaries.

Currently, there are seven transnational clusters formed in the Baltic region: "Service Cluster Denmark" involving actors from Denmark, Sweden, Finland and Great Britain; "Baltic Biomaterial Cluster" and "Baltic Diabetes Cluster" (Germany, Poland, Lithuania and Norway); "Media Evolution" (Sweden, Denmark and Austria); "Oslo Cancer Cluster" (Norway, France, Denmark, Sweden, Germany and the United States); "Alucluster" (Denmark, Sweden and Norway); Cluster of robotic medical technology "ROBIN" (Denmark and Germany). Over 57% of transnational clusters of the macro-region are initiated with the participation of Germany, which indicates the great importance of this country in international cooperation and transnational regionalization processes. Norway and Sweden are other leading countries in terms of transnational regionalization. One of the key areas of transnational clusters in the Baltic region is life science (Figure 3).

Figure 2: The distribution of cross-border clusters in the Baltic region by specialization, in percentage

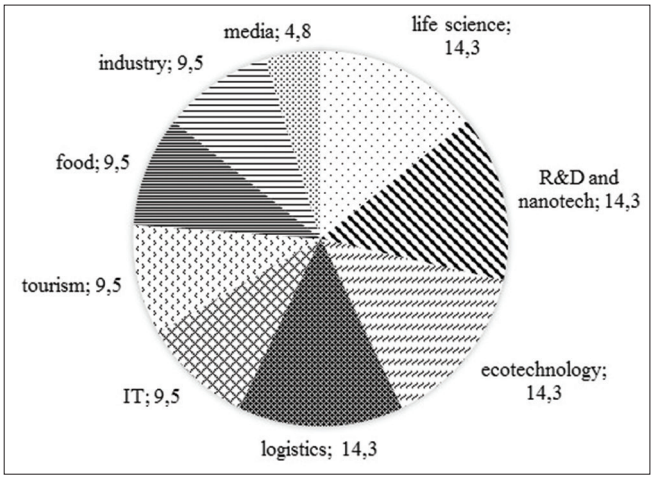
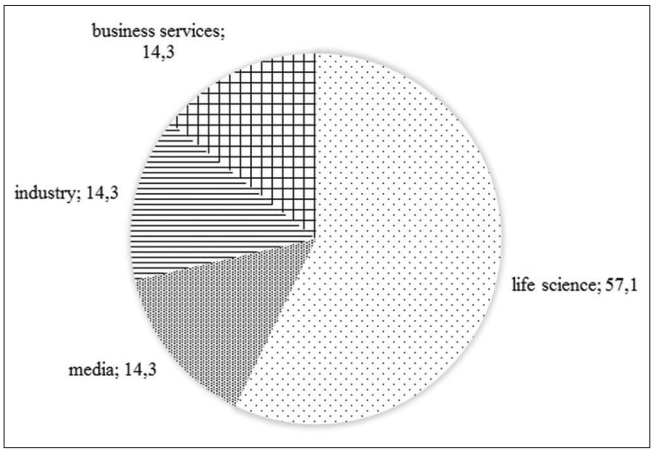


Figure 3: The distribution of transnational clusters in the Baltic region by specialization, in percentage



International clusters of both types can transform into international cluster-network structures and further into cluster networks. Differentiation of transnational cluster and international cluster-network structure is complicated in practice due the vagueness of principles in allocating an individual actor being a part of a cluster. The most effective method of such cluster mapping is considered to be a self-proclaimed membership or the data of a cluster organization, in case there is one (Mikhaylov and Mikhaylova, 2014). Such successful examples of international clusters as "Medicon Valley" and "Cluster 55" can equally be attributed to international cluster-network structure type.

The development of transnational links between clusters can result in establishment of an international network of clusters, such as "INNOTEX," "CASTLE," "ABC-Network," etc. Interactions within these networks enable individual clusters to promote international scientific and technological cooperation; promote the commercialization of high-tech innovations; optimize the use of infrastructure and various resources; amplify the effects of clustering among the existing and potential cluster members, as to improve the level of innovation development and competitiveness in the global market; share best practices for the implementation of innovative solutions (Mikhaylov, 2013).

General analysis of the geographical distribution of the various forms of TECI shows a significant spatial heterogeneity. Nordic countries and Germany are better integrated into the processes of cooperation in the Baltic region. They often act as initiators of such interactions, as in cross-border and transnational levels. The long history of mutually beneficial partnership in the framework of various associations has enabled these countries to build up functioning and effective forms of international (particularly cross-border) economic cooperation in different areas. Baltic countries, Poland and Russia are somewhat less involved in TECI in the Baltic region. They have not been able to form a fully flagged cross-border business network (such as, for example, cross-border cluster) or to establish effective cooperation in the framework of the Euroregion. The influential barrier to cooperate with the Nordic countries and Germany is the difference in the level of socio-economic, scientific and technological development, a limited access to financial resources. Not the least role is played by historical and cultural factors. Yet, a positive impact on the strengthening of the position of the Baltic countries and Poland as equal partners was their entry into the European Union, which provided access to additional sources of supranational financing and significantly increased labor mobility.

Currently, the Baltic countries and Poland actively develop their national cluster policies. Estonia has both national and regional programs for creating clusters, which are financed by national and European funds. Priority areas are science and education, enterprise networks and export oriented industries. While the major areas of specialization are forestry and wood processing (including furniture production), metallurgy, biomedicine, IT. Cluster policy in Lithuania aimed at attracting foreign direct investment, increasing economic competitiveness and strengthening the country's integration into the world economic processes. The national program to support clusters provides co-financing from pan-European funds and business sector, in particular in the field of construction and building materials, food, forestry and woodworking. The basis for the formation of clusters in Latvia is laid in the "National Innovation Programme 2003-2006," and a specialized cluster policy developed in 2008, which is regulated by the Ministry of Economy and Finance. Additionally, a specialized agency was created – "Latvian Investment and Development Agency" that promotes the development of IT, metallurgy, pharmaceuticals, chemicals and forestry, and tourism. Poland has also created specialized agencies: 'Polish Agency for Enterprise Development' and 'Industry Development Agency'. The main share of support programs for creating clusters constitute of regional programs with various funding sources (e.g., "Training Program on Clustering," "Support for Cluster"). The main priority areas include IT, R and D, industry, tourism, furniture manufacturing, transportation and logistics, medicine, eco-technology. Although each voevodship is eligible to select its own priority areas.

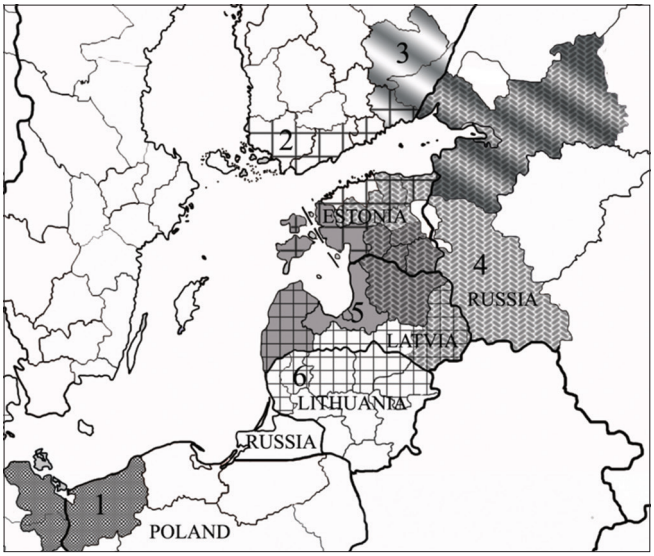
The result of the ongoing cluster policy involving the Baltic countries and Poland in recent years is the emergence of a significant number of international cluster initiatives (Figure 4). The choice of a specialization area usually derives from the prospects to a particular industry and of its appeal to the more advanced markets of the Nordic countries and Germany, rather than being based on the actual accumulated competencies of the country or a region (Mikhaylov and Mikhaylova, 2015). However, it should be noted that among the declared areas of the cluster cooperation increasingly arise the traditional spheres of these countries – manufacturing, agriculture, and forestry.

Along with international cluster initiatives, scholars suggest a number of specific forms of TECI that are based not only on European, but also on Asian experience. The most elaborated propositions are the South Baltic and East Baltic growth triangles, South Baltic Arc, 'large regions', international territorial production systems (bipolar: 'Tricity-Kaliningrad' and tripolar 'Tricity-Kaliningrad-Klaipeda'), the region of cooperation (Fedorov, 2013; Kivikari, 2001; Klemeshev and Fedorov, 2005; Klemeshev et al., 2004; Kunzmann, 2007; Palmowski, 2009; 2010)

(Figure 5). Most of the proposed integration associations involve regions of the Baltic countries, Poland and Russia, for whom the integration into the supranational system of interactions within the scope of the macro-region is of particular interest. However, most of the TECI concepts and theories shown remain as hypothetical models, rather than a reality.

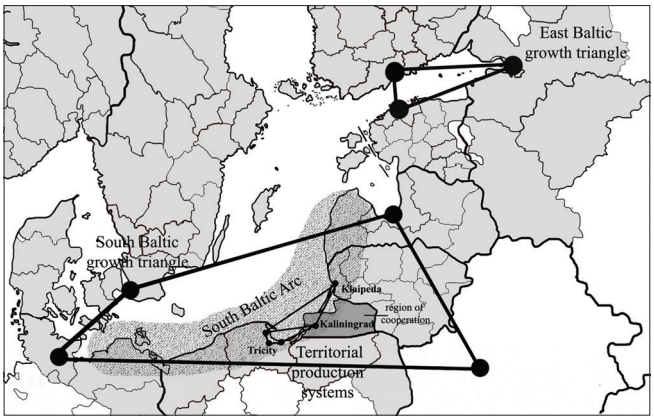
In case of Russia, a significant impact on the strengthening of cross-border relations and the development of border regions may have a small border traffic regime. It entitles residents of the border areas for multiple entries in the frontier zone of the neighboring countries with different socio-economic, cultural, and tourist related purposes. Currently, the relevant bilateral agreements Russia has signed with Norway (since 2010) and Poland (since 2012). As part of these agreements, it is expected to develop and expand mutual interpersonal contacts within the border territories and develop cross-border cooperation, which promotes the equalization of socio-economic level of development

Figure 4: International cluster initiatives in the Baltic countries, Poland and Russia



Note: 1. Pomerania region (DE/PL), 2. Border territories ES/FI, 3. Border territories FI/RU, 4. Border territories of ES/LV/RU, 5. Border territories LV / ES, 6. Border territories LT/LV

Figure 5: Perspective forms of transnational economic cooperation and integration involving the Baltic States, Poland and Russia



of the border areas. Visa-free regime covers all residents of the border territory that legally reside in this area for the last three years, and covers a number of border areas[1].

7. CONCLUSION

Studies on the spatial forms of TECI within the scope of the macro-region reveal a variety of modes, most of which can be categorized by the geographical scope, the intensity of cooperation, the institutional type of actors involved, and their geopolitical origin (e.g., European, American, Asian, post-soviet types) (e.g. see Perkmann, 2002). Overall, the Baltic region as a place of intense transboundary collaboration is a perfect ground to conduct studies within the framework of new regionalism, which enables to collect valuable factual material for the subsequent development of the respective territories. Scholars suggest that one of the results demonstrating the effectiveness of the cooperative policy being held are the high values of gross domestic product per capita achieved in the Baltic region, which are on average almost 2.8 times higher than the world average level, with a population density 1.4 times lower (Fedorov et al., 2013). The cross-border cooperation is especially well developed in the macro-region, which is initiated to jointly address common problems of border regions (e.g. infrastructure, social, environmental) and increase their economic competitiveness. The most widely used forms of TECI are transport regions, Euroregions and, starting from the early 1990s, the cross-border clusters. The main tool of cross-border cooperation is the implementation of joint projects in the framework of pan-European programs with EU funding.

Active development of cross-border relations in the Baltic region is the result of deliberate strategic approach at all levels, starting from individual municipalities to the European level. The Nordic countries act as the core and the driver of cooperation in macro-region, having a long history of partnership and successful experience in creating a barrier-free (including visa-free) environment. Back in 2009, the European Union has adopted a comprehensive development strategy in respect of the Baltic region, aimed at strengthening international cooperation in order to jointly address major common issues and to strengthen integration between the countries. The strategy was preceded by a special BSR Programme, which was elaborated two years earlier. The first implementation phase of the program (2007-2013) has stated the strategic development objective of the macro-region as a growth of competitiveness through the generation of new knowledge. This set the creation of an enabling environment for generation and diffusion of innovations as a key priority for international cooperation in the macro-region. Today, a second phase of the program (2014-2020) takes place, aiming at strengthening the potential of integrated territorial development and cooperation in the interest of creating a more modern, open and sustainable environment of the BSR.

1 Russia-Poland: Kaliningrad region of Russia; territories of the Pomeranian Voivodeship (Gdynia, Gdansk, Sopot, as well as four powiats) and of the Warmian-Masuria Voivodeship (Elblag, Olsztyn, and 11 powiats) in Poland. Russia-Norway: four Russian settlements and a part of Sør-Varanger commune in Norway.

A distinctive aspect of cooperation between the countries of the Baltic region is the existence of a common unifying idea of a sustainable development of this macro-region. This idea is reflected in one way or another in the mission and goals set by any pan-Baltic organization and association. Historically, the priority areas of cooperation were ecology, tourism and spatial planning, which are then supplemented by cultural, social and, most importantly, economic components. An important role in the development of cooperation play research and educational institutions of the Baltic region. As a rule, the main form of partnerships between universities are network associations. In addition, it is the research sector that has initiated projects to establish international clusters via respective international initiatives.

Another feature of the interactions in the Baltic region is a combination of different forms of cooperation. Along with such well-established European forms as the Euroregion and cross-border cluster, there are initiatives to establish growth triangles - a concept borrowed from best practice of Asian countries, and other specific forms of TECI: South Baltic Arc region and regions cooperation.

The development possibilities of the macro-region are not limited to cross-border cooperation. Transnational business and scientific links stimulate the development of transnational forms of cooperation, such as networks, transnational clusters, international cluster-network structures and cluster networks. Development of the Baltic region countries requires participation in transnational cooperation as to gain access to new knowledge and competencies in order to avoid technological blocking, and have access to new markets through the establishment of long-term partnerships. For the Baltic countries, Poland and the North-West of Russia participation in transnational forms of cooperation is of a particular interest as the point of entry into new markets, gain entrepreneurial experience in the international arena and access to additional sources of financing.

Regions of Russia shall endeavor to develop cooperation in the Baltic region. However, in most cases, Russia is a partner country, and not the initiator of such cooperation. This is largely due to differences in access to additional sources of financing, mainly to the EU funds. Russia has no mechanism to facilitate international cooperation in the priority areas of the country with an appropriate level of funding. Adversely affected by visa restrictions, lack of comprehensive legislation in the field of cross-border cooperation (e.g. approval of the Federal Law 'On the cross-border cooperation') and limited rights of regional and local authorities in the field of cross-border cooperation, the regional business sector is struggling to lead this cooperation bottom-up.

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