

ESTONIA AND OTHER COUNTRIES OF THE BALTIC SEA REGION AS ACTORS OF DEVELOPMENT: CONCEPTUAL APPROACH

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Abstract

The article describes conceptual model for analyzes processes occurring in the Baltic Sea region during the formation of single market - a unified social, economic and technological space within the European Union. These processes are seen as an important condition for more comprehensive and intensive integration of Baltic social and economical systems of Estonia, Latvia and Lithuania into the European space. Most important tasks of the Baltic States integration into the European Union social and technological space is maximum possible overcoming of existing differences in these States and integration of political interests, societies and economical structures within this region whilst preserving their national identity.

In paper was introduced a conceptual model based on the idea of Baltic region seen as environment consisting of open and non-linear systems in which occur transformational processes, reorganizing the social, political and economical structures of the Baltic States in the process of sustainable development. The model contains the abstraction which designated as “flow through the area”, where “flow” means the transit - any movement of goods, resources and people through the area of single market.

Sustainable social development requires the availability of renewable resources in sufficient quantities with permanent quality. One of the natural and renewable resources of the Baltic region is the transit, which is available because of the unique geographical location of these states.

We examine the Baltic region’s states and their transit of cargo and people as a system in which structures emerge, disappear and alter under the influence of the energy flow resulting in the system’s new functions and properties and different levels of interaction with the environment.

Apart from the above-mentioned conceptual model of regional transformation, two types of flows were examined – cargo and goods and migration.

Based on the quality changes, the prognosis is made with anticipation of further development of processes towards the society founded on knowledge, tendencies in social development and the development of relations between the states in the region. Estonia is assumed to be a country with tax tolerance, highly advanced informational environment and good fiscal discipline might take participation in forming the role model for the whole region.

Keywords: integration; transformation; unified social, economic, technological space; Baltic region, Europe, sustainable development, society.

Introduction

In the rapidly changing economic situation the common problems and challenges which emerge in front of the Baltic Region should be considered on the regional level – within the European Union as «EU strategy for the Baltic Sea Region». This program of cooperation is an instrument which assists further integration and increasing of competitive status of the Baltic States in the European Economic Area. The primary strategic goal of the program is defined as building of stable, competitive and territorially integrated region within the European Union. (Ozoline, Reinholde, Rostoks, 2010).

The development of the innovative economy has named one of the main goals of joint transnational activities. Such development is mainly focused on educational services, social services and on correction the disadvantageous demographical situation in the region. The program has

proposed the participation of the Russian Federation as a partner for implementation of priority tasks.

The strategy is estimated to perform up to 2013 and is a part of the overall strategy European Commission «Europa 2020: A strategy for smart, sustainable and inclusive growth» (COM (2010)2020). The success in achieving the goals of this strategy largely depends on the decisions made in the 27 European states as well as in the states of the Baltic Region (COM (2011)17 final). One of the major tasks of integration of the Baltic States into the European Community is overcoming the differences existing within the region and implementation of regional integration of economics, politics and social sphere while preserving the national identities.

This work is aimed to formulate the conceptual model, which can be used to study the processes transformation of social and political space in the Baltic Sea region into unified whole.

In the first chapter we introduce the conceptual principles of our model. The second chapter contains the formulation of the model itself. In the following chapters we examine the different social and economical spheres within the model boundaries. And in the conclusion we formulate further plans of study.

For the description of the model the following concepts and approaches have been used: Prigogine, Stengers, 1984; Coleman, 1990; Norgaard, 1997; Bassel, 1999; Rotmans 2001; Haken, 2006; Loorbach, Rotmans 2006; Ciegis, 2009; Todorov, 2009, Melnikas, 2010.

The method of the research - logical abstraction, analysis of the concepts and methods published in scientific literature.

Conceptual model

We consider the countries of the Baltic region as an open and non-linear system. Openness means availability of sources and exchange stocks of matter and energy and/or information with the environment in which the system is running. Nonlinear nature proposes the presence of macroscopic processes of exchange of matter, energy or information within the system.

Openness and nonlinear structure of the system presuppose the variety of the multiple options of further development on the certain steps of evolution. Such choice comes into existence when the initial condition of the system is destroyed and the differentiations arose between the parts of the system or between the environment and the system. The differentiation starts with the self-organization processes which lead the system to stabilizing under new conditions or to her destruction (Haken 2006).

The process of choosing the development options in a certain moment is a bifurcation in the meaning which was introduced by I. Prigogine. Such choice assumes that the system may not develop in any random direction but only in a few defined ways of development. Variety of evolution directions determines by the present system condition and the environment.

In contrast to opposition to natural environment the bifurcation in social systems is not a one-moment state of transformation from one condition to another but a stretched in time process of system rebuilding (transformational process).

The system evolution into new state under the influence of attraction certain structure called «attractor». Here «attractor» is a subset of the possible variety of way's, on which the system will evolve further.

Under the influence of the attractor the system begins its evolution evolving into the foregoing state. The total amount of attractors which could be reached by system during the transformational processes might become the set of various scenarios for the future.

We accept that the social system evolves in a direction of sustainable development.

The trajectory of this system development has been affected by two groups of forces. One of them is the forces which deflect the development from the sustainable trajectory. Another group is the forces which push the development to the sustainable trajectory.

Extreme depletion of the resources is the factor of limitation of development. When depletion increases, the rate of consumption of resources reduced, and the society begins to increased investments to renewal of the resources.

In terms of the Balaton's group accessing the sustainable

development, there are three following allocated systems: 1) Humanity: Social system (population development, ethnic composition, income distribution and class structure, social groups and organizations), Individual development (individual autonomy and self-determination, right to work, social integration, qualification, specialization, education), Government (government and administration, population and migration, international assistance, technology); 2) Economy: transportation, communication, facilities for education, science, research and development, labor and employ these; 3) Natural. (Indicators for Sustainable Development, 1999).

In compliance with the co-evolutional approach (by Norgaard) the sustainable development is a meta-system which contains the balanced components - human, economic and nature.

Specifications of the model

The role of attractors in our model belongs to the Russian Federation and the European Union under which influence the transformational processes are occurred in the Baltic region states – Estonia, Latvia and Lithuania.

The European Union is the main center of attraction of the model that defines the rules and allocates the resources within the system.

The Russian Federation is the major regional power which is one of the leading suppliers of energy transit, goods and services.

States of the Baltic region are the result of a bifurcation process - the collapse of the Russian Empire in 1917. From 1918 to 1939 the Baltic States experienced the influence of two attractors «Europe» and «Russia». In 1939 they were included in the sphere of influence of the attractor «Russia», until the 1991. During this time the social systems of the Baltic States were influenced by next flows: ideological, migration, and economic activities, was transformed into stable structures, typical of the attractor «Russia».

The collapse of the Soviet Union it is yet another bifurcation process, as result of which: 1) the Baltic States regained their independence; 2) the system of the Baltic Sea region has acquired its present configuration - two powerful attractors «Europe» and «Russia», among which are located the social systems of the Baltic States.

Despite the fact that in the past 20 years, the Baltic States have shifted into the zone of influence of the attractor «Europe» we use the term «the transformation of social systems». This is due to the fact that the transformation process is not completed.

The reasons “why” are listed above. After the collapse of the Soviet systems, in social system the Baltic States preserved the some structures, foremost in the ethnic composition of population and industrial structures, that were formed in the time spent in the Soviet Union. We make the assumption that the current position of the Baltic States depends on the varying degrees of transformation and integration of these structures into the space of their social and economical systems.

Joining the European Union in 2004 has provided the Baltic states with consistent development of the economy. In Figure 1 it is shown that starting from the moment of entry into the EU, GDP in all three states shows the tendencies to grow up until 2007 when the rates of growth slow down due to the political conflict with Russia and a fall in GDP to the negative area due to the global economical crisis in 2008.

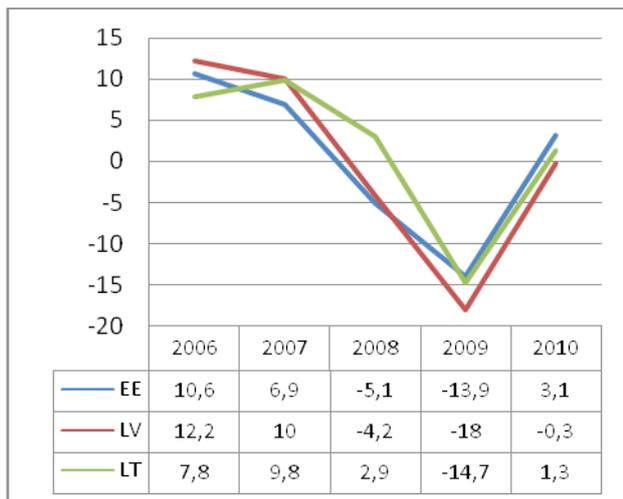


Figure 1. Growth rate of GDP volume - percentage change on previous year (Eurostat 2010)

We interpret this behavior of GDP as an indication that the membership of the Baltic States in the European Union, despite the possible crisis situations provides sustainable economic development.

In 2009 the majority of Europe's post communist countries (and all Baltic states) may consider themselves to be modern capitalist societies (Kirch, Inotai, 2009, 5). At this time Estonia is the only one among the Baltic States which joined the European Economic Area for which she had equated her financial showings to the European standards.

It demanded the enforcement of strict financial discipline and reduction of social spending. It didn't result in lowering showings, which testifies in behalf of stability of the social sphere to the adverse effects.

Bertelsmann's index which gives an integral estimate of social and political transformation of the state shows that Estonia ranks first among the Baltic States (Figure 2) on quality of governance, the interaction with the environment and development of civil institutions and public education (<http://www.bertelsmann-transformation-index.de/en/bti/>).

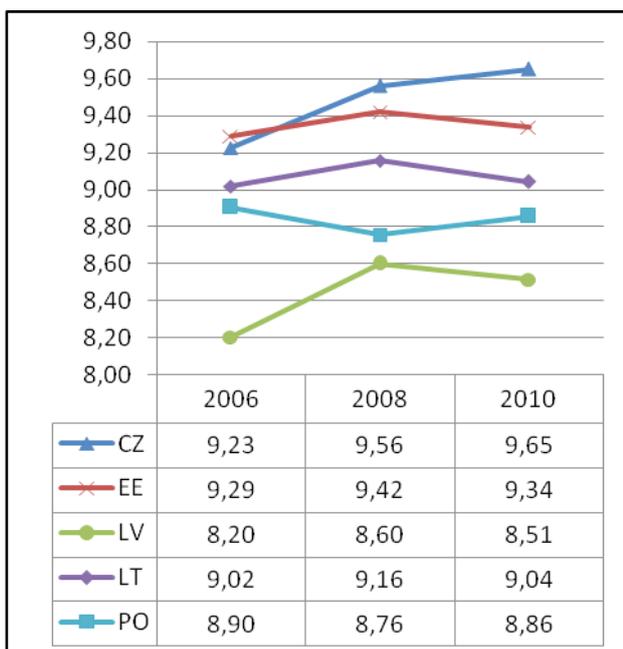


Figure 2. Composite Bertelsmann Index

Development of transformational processes in Estonia, Latvia and Lithuania moves in the direction of sustainable development.

For the development of the society, the renewable resources should be available. For sustainable development the renewal of resources should be at least in unrelenting quantity and permanent adequate quality (Daly, 1991).

One of the natural and renewable resources of the Baltic region is the transit, which exists because of the unique geographical location of these states.

We define Baltic region states (Latvia, Lithuania, Estonia) and their transit flows through it, as a system through which the flow of energy, under whose influence there, disappear or altered internal structure, so that the system itself takes on new properties or functions and moves to new level of interaction with the environment (Haken, 2006). Here, under the energy flow we mean transit as any movement of goods, ideas and human resources across the field.

The transit in any of its form we examine as a structure-foundation factor (by Haken). At the same time only those structures which have a property of resistance to unfavorable external conditions are assigned.

Below we examine two types of transit: cargo transit as an economic category and the migration processes.

The migration process within boundaries of our model may seen as a flow, which originates when the differences in the socio-economical potential between two regions – the state of origin and the state by choice, occurs (see Beine, Docquier and Rapoport, 2001; Hardill, 2000; Williams, 2005; Čekanavičius, Kasnauskienė; 2008).

We examine migration processes, mainly in part of the migration of highly skilled personnel and the side-effect of this process on the development of an innovative economy.

Transit as an economic category

As mentioned above the transit is a natural and renewable resource of the Baltic Region which existence becomes possible thanks to the unique geographic position of states located there. Currently transport infrastructure is used to ship goods from the West to the East and vice versa. Russia, China and Southeast Asia should be considered as a primary destination of export and import of goods. (See Table 1).

Table 1. Extra - EU27 trade by main partner, 2008 bn euro External and intra-European Union trade Monthly statistics, 2009. p.25).

	Export	Import
China	78.4	247.9
Russia	105.0	177.9
Norway	43.8	95.8
DAE(Dynamic Asian Economies)	100.4	126.2
ASEAN	55.7	79.7

Shares of the Baltic region in the total cargo turnover for the year 2009 are presented on the Figure 4.

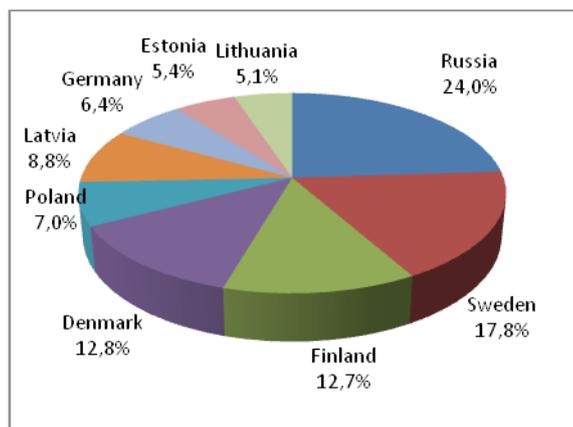


Figure 4. The market structure of cargo seaports service in 2009, %. (Baltic Transport Journal, 4,2010, p.30)

The Russia leads the chart with 24% share of total volumes. Sweden is on the second place, which lost its leading position with the biggest slump in total cargo (-25.8% or -43 mil ton than a year before). Denmark became the third country in cargo handling in the Baltic region, the amount of processed goods into its ports decreased by 14.6%.

For Estonia, cargo transit in addition to its economic attractiveness hides potential risks.

The increase in freight traffic through the Baltic region involves the participation of Russia as a stable supplier for the steady increase in the volume of goods transported.

You should also consider a possible negative scenario. As an example: 1) Russia reduces the transit flows through one of the Baltic Sea region and directs the flow of cargo into a neighboring country; 2) Russia has been increasing flow of cargo through its terminals in the Baltic Sea, and 3) must separately consider the presence of the existing customs unions with participation of Russia, Kazakhstan and Belarus. Under these conditions rely on the steady growth of the transit flow through the ports of Estonia and neighboring countries is not possible.

Migration process as “a transit to open society”

The development of the innovative economy named as one of the main objectives of the joint efforts of the Baltic States. Let's compare the showings of innovation opportunities in Estonia, Latvia and Lithuania with the Summary Innovation Index (<http://www.proinno-europe.eu>), which is calculated for the EU27 (Figure 3).

In compliance with this index the states included in the EU27 are divided into the following categories:

- 1) Innovation leaders. Denmark, Finland and Sweden all show a performance well above that of the EU27;
- 2) Innovation followers. Estonia shows a performance close to that of the EU27;
- 3) Modest innovators. Latvia, Lithuania are well below that of the EU27.

As we have seen on ground Figure 3, Estonia has a good position for the development of the innovation economy. Such development is greatly focused on education and social services. (Kirch, 2010).

Estonia has the tolerant tax policy, good fiscal policy and the maximum developed electronic environment. (Varblane et al, 2008).

Also Estonia has good potential for establishing the transit “to open society” of highly qualified resources from Russia for further education, researching and innovation activities.

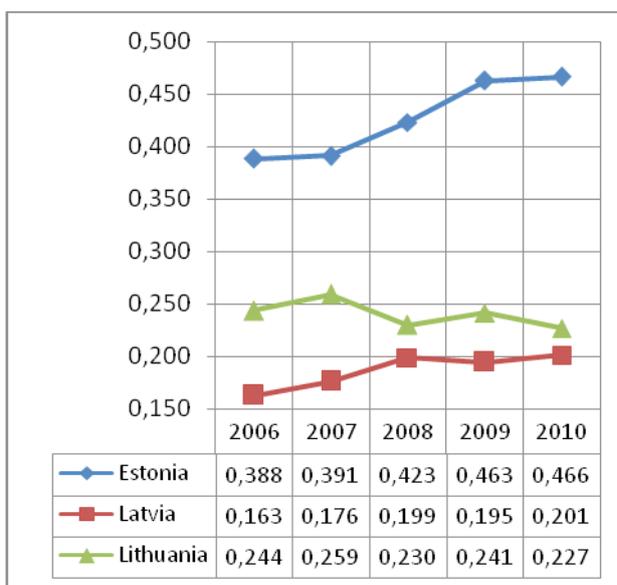


Figure 3. Normalized Summary Innovation Index calculated over a five-year period (<http://www.proinno-europe.eu/metrics>)

The reasons for the migration process lay in the processes of globalizing of world economy, increasing mobility of population and increasing of freedom of self-realization (Biene, Docquier and Rapoport, 2008, 631).

For the states participating in the migration process it exerts the positive and negative impact at the same time. The migration of highly educated people on the international scale can be considered as a mechanism of diffusion of knowledge and rotation of scientific personnel which aids to research and development of educational systems in the recipient countries. Possible positive and negative effects for both involves countries see Table 2.

Table 2. Positive and negative effects of high skilled migration for involved countries (Daugeliene, 2007, p.61)

Effect	Positive	Negative
For «source» country	Migrants return with new competence, new relations with foreign partners. The growth of average wages. Decline of unemployed level	Loss of investments in education of the individual. Loss of high competence specialists. Decline of producing amounts. The negative change considering demographic situation.
For «purpose» country	Knowledge workers invest in competence as well as in adaption to new life circumstances. Total growth of economy. Growth of investment in R&D.	Decline the ambitions of local habitants to seek for the highest qualification. Possibility to lose the know-how potential.

For the state of origin the migration of highly qualified

personnel towards more comfortable social system means the losses in productivity of educational system financial losses. The reason for such losses is the migration of teachers, qualified researchers and students and as a consequence of that, impossibility to return the money invested to maintain and develop the educational system which lost its productivity.

The negative consequences of migration process estimated as the following: 1) exhaustion of the human resources who lead to lower productivity and underdevelopment; 2) reducing the tax base and reducing investments in education; 3) increasing of poverty and inequality in the country.

Research results show that Lithuanian and Latvian migration is starting to change from a short-term economical migration to a long-term, because of the family reunion process and fast-developing social network (in Ireland, United Kingdom and Spain as main directions of Lithuanian emigration).

In Lithuania emigration flow increased 2010 about five times compared to 2009, in Latvia emigration flow increased in 2010 about 3 times compared to 2009. According to certain estimations, approximately 12-15% of adult Lithuanian citizens have departed to work abroad (Gaydis, 2010: 29).

But in Estonia migration flows (immigration and emigration) have stabilized in the last few years (in the period of 2005-2010 net migration was only 13 thousand persons). Estonian migration to Finland is today long-term economical migration. In 2010 about 29 thousand Estonian citizens live in Finland and they form biggest ethnic minority in Finland.

Due to the quality of emigrants, Lithuania and Latvia is losing investment in human capital in the future, because almost one half of the emigrants are the representatives of qualified labor force (Daugeliene, 2008; Sedziuviene и Veinhardt, 2009).

Attracting of knowledge workers in the high tech sector and consequences in the form of accumulation of human capital is the topical issue for the countries which going through processes of transforming their systems.

Conclusions

For the examine of the integration processes in the Baltic Sea region was proposed the conceptual model of environment consisting of open, non-linear systems in which there are processes of transformation, transforming the socio-political and economic structures are seen as the processes of sustainable development. The model has been proposed the abstraction of «flow through the area» where the flow means the transit – the movement of cargo, people or resources through the certain area. As the external forces which determine these flows and causing the transit of open social systems have been defined attractors – the European Union and Russia.

The hypothesis was formulated that current differences in social and economical situation of the Baltic States depend on their success in the transformation and integration of structures which cannot self-adapt to the new social and economical conditions.

Within the boundaries of the model the cargo transit in the direction of the Russia-European Union through the states of the Baltic region have been examined. Increasing the freight traffic through the territory of the Baltic States involves the participation of Russia as a stable supplier for the steady

increase in the volume of goods transported.

Migration of highly skilled manpower has been identified as a flow, causing the difference in economic potential. Future research on this topic should focus on the problem of migration knowledge workers in the context of the transit process. External migration from the Baltic States should be regarded as a positive factor that influences the development of higher education, research and development. Problem of the future study is defined as: 1) The analysis of processes in an education sphere and migration of knowledge workers of the countries of Baltic Sea in a context of free moving of capitals, the goods, services, people and knowledge; 2) The analysis of tendencies knowledge workers migrations in Nord- and Baltic-Europe and the connected institutional and behavioural mechanisms of adjustment; 3) An estimation positive and negative sides of migration knowledge workers of the countries of Baltic Sea in a model «donor-recipient»; 4) Revealing and the analysis of the reasons leading to «brain drain» in a context of innovative processes of science and education.

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