

City environment: Regional development dimension. Baltic case

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1 ABSTRACT

Economic processes underway in the country directly and indirectly affect the welfare of the people and the social environment, starting with job security and having a direct impact on the qualitative and safe living environment.

Population differences of wealth are defined by uneven distribution of resources and economic activities within the countries, which affects also population welfare level in rural areas. There is a higher level of welfare of the people observed near cities in Baltic States. The relatively small distances to the city restrict labour everyday mobility. Settlement structure in the Baltic States since 1920 have greatly changed, which clearly outlines the population preferred the social environment.

The article describes existing situation and gives analysis of the regional development policy determination and implementation in the all three Baltic States. According statistical indicators there are differences between implementation of the regional development activities between all Baltic States and in regions of inside each country.

The author is analysed more detail differences between regions in Latvia, Lithuania and Estonia according possibility to evaluate success of development processes in regions of the Baltic States. The descriptive analyse of documents, statistical indicators at national level and regional level were used in the research.

2 SOCIAL ECONOMIC ENVIRONMENT OF THE BALTIC STATES

Baltic region consists of three small countries: Estonia, Latvia and Lithuania, and it look like a miniature model of the European nations. In large geographical scale it is advisable to include these countries into one group - the Baltic States.

As long as there are differences, there is regional identity in the Baltics. Close trade ties among the Baltic cities within Hansa, the union of city-states, is often mentioned. It brought prosperity to the entire region in the Late Middle Ages and left traces still visible in the capitals of the Baltic States. In the 20th century during the short period of independence between 1918 and 1940 political initiatives for the purpose of the development of regional identity, including formation of the Baltic Union (with Finland and Poland) and a plan to establish customs union between Estonia and Latvia, emerged in all three countries. During the Soviet regime similarity of the Baltic States was taken into account when planning economy.

Despite the geographical proximity of the three countries, it is hard to miss the essential historical, ethnic, cultural and social differences in the region. Traditionally they were formed from smaller settlements that historically grew to a large trade centres. State territorial and administrative borders remained unchanged, according to the current government and its military achievements and needs. There were similar trends observed in Baltic economies. However, countries today are at different growth level of development, which clearly confirmed by macroeconomic indicators.

On the one hand the Baltic States have always served as a bridge between the East and the West where their development was facilitated by the great potential for growth due to the respective trade and business ties.

States on the shores of the Baltic Sea can use many economic cooperation possibilities. In this aspect geographical position of the Baltic cities is advantageous, and they have received significant foreign investment with a substantial contribution from neighboring Nordic countries. These factors stimulate specialization of the production network and vertical specialization that may serve as an important source of static and dynamic efficiency.

After the restoration of independence all three Baltic States adopted similar price liberalization policy trends. They chose about the same development scenarios and methods as transition states in the Central Europe with greater progress levels.

Although according to international experts quality of the business environment in Latvia is comparatively only slightly behind that of the neighbor countries Estonia and Lithuania, it is essential to at least maintain

this level under the current conditions of the global economic crisis. Environment favorable to economic activity is the key aspect facilitating investment flow to the country, creation of new jobs, and gross domestic product (GDP) growth. All of these factors are critical for Latvia to get out of the present economic hole.

State can improve its general business environment by investing in infrastructure, education, and other resources available to all companies based on equal competition thus decreasing their operating costs and increasing efficiency of labor.

Despite aspirations for economic integration, economic likeness, and perception of national interests, cooperation of the Baltic States has also caused contrary effects. Since on a large scale capital and labor capacities are very similar, they manufacture almost the same types of products and compete for the same exterior markets; gains from the interior interstate market in the Baltic States are not great.

Starting with the Treaty of European Union, the conception about cohesion was further defined and was understood the decrease of developmental levels between the different regions, not the general division between the regions.

In general Estonia, Latvia, and Lithuania as member states of the EU gain considerable benefits and advantages thanks to the greater influence of EU common foreign trade policy on international level as well as due to increased availability to third country markets provided by EU free trade treaties. As a result of EU expansion the largest common market with more than 450 million consumers has been created. Thus Estonian, Latvian, and Lithuanian businessmen may sell their products in other EU member states and member states of the European Free Trade Association (Norway, Switzerland, Lichtenstein, and Iceland) making use of the advantages of the free movement of goods, services, labor, and capital. While for the Baltic States as EU member states foreign trade means trade with third countries where the major foreign trade partners include Russia, USA, Belarus, and the Ukraine etc.

It is equally important for the EU member states to maintain the social welfare, to provide conservation actions, health security, and educational system, decrease the crime rate, increase the quality of services and provide growth and development for scientific work and development in general.

Although the average level of consumer prices in the Baltic States is roughly the same, the way it has been achieved differs across countries - high and low inflation periods are not equally pronounced and causes of inflation differ.

Based on the institutional analyses on the European Union action principle and formation of the regional policy, the author understands that terms for long lasting economical growth are development, competition and employment.

In the last decades not only the country, using the central governing institutions and local authorities, is active in the implementation of the regional policy, but also the European Commission and other international organisations (Vaidere, 2006).

There can be observed quintessential social economical differences between the regions in the EU. The big social economical differences slow down the EU in general, as a whole, and each region of each state, even the wealthiest slow down in growth. Therefore one of the EU priorities by realizing the solidarity principle (European Commission, 2009) is the economical and social reconciliation (cohesion).

The main investment areas in Baltic States are financial intermediation and real estate and renting. In the newest Eastern Europe Outlook (2009), considering the economic situation of the Baltic States, specialists of SEB Bank point out that the recession of the global economy is over, but the recovery is equivocal and there are still many risks. The recovery of economics, especially in Latvia and Lithuania, depends on the stabilization of state finances. Swift changes have reduced unbalances in economies. Low purchasing capacity and increasing unemployment will continue to force drop in prices.

Governments will be forced to keep implementing sharp and unpopular cost optimization measures. Significant prerequisites for the recovery of the region will be the financial stability of those countries and the recovery rate of external markets.

Economic processes in the country have direct and indirect impact on the welfare of population and the social environment, starting from job security, and have direct influence on qualitative and safe living environment.

Several important priorities are established for the development of the social field in some policies of European Union – to create conditions for sustained growth and employment, where a potential obtained from one market could be fully used, to develop “know-how” policies stimulating scientific activities and technical development in the EU countries, increasing educational level and developing educational programs; to streamline employment systems; to increase the quality of life by guaranteeing economical development in an integrated society by improving public health condition, environmental protection and implementing policies for the establishment of freedom, safety and justice regions.

Currently the initiatives to be implemented in the field of employment, social and health areas are additions to the revised strategy of Lisbon (Treaty of Lisbon, 2007) oriented to economic, social and environmental regeneration. The strategy of Lisbon envisages “making the EU the most dynamic and competitive knowledge-based economy in the world capable of sustainable economic growth with more and better jobs and greater social cohesion, and respect for the environment”.

Participants of the economy need time to change their consumption habits. Since mid-2003 the rise of inflation has been stimulated by external and internal processes – the global rise of oil prices took up, fundamental tax law changes took place in the Baltic States due to the joining the EU, import prices increased because of the EUR value increase, the pressure of the supplying party on the inflation hardened. In its turn, wider availability of credit opportunities, income sent home by persons working abroad as well as EU funding increased the domestic demand simultaneously having strong impact on the interaction of supply and demand factors.

The population has been ageing, i.e. the share of elderly people compared to the total population increased. In Latvia there are 467 thousands retirement pension receivers per approximately 1.15 millions of employed population, which means that approximately 2.5 employed persons have to support one retired person. In Lithuania 1.5 millions employed persons have to support 596 thousands retirement pension receivers, which means, that like in Latvia one retired person is supported by 2.5 employed persons there. Only in Estonia one retired person is supported by 3.6 employed persons. Also social insurance payment volumes are similar in all three countries, respectively, in Latvia 33.09% are paid in total, from which 20% are payments into the pension capital, in Estonia the social tax is also 33%, from which 13% are allocated to medical insurance and 20% – for provision of pensions, and in Lithuania the tax is 30.7%, from which 23.85% are allocated to the social insurance of pensions that is for some percent points more.

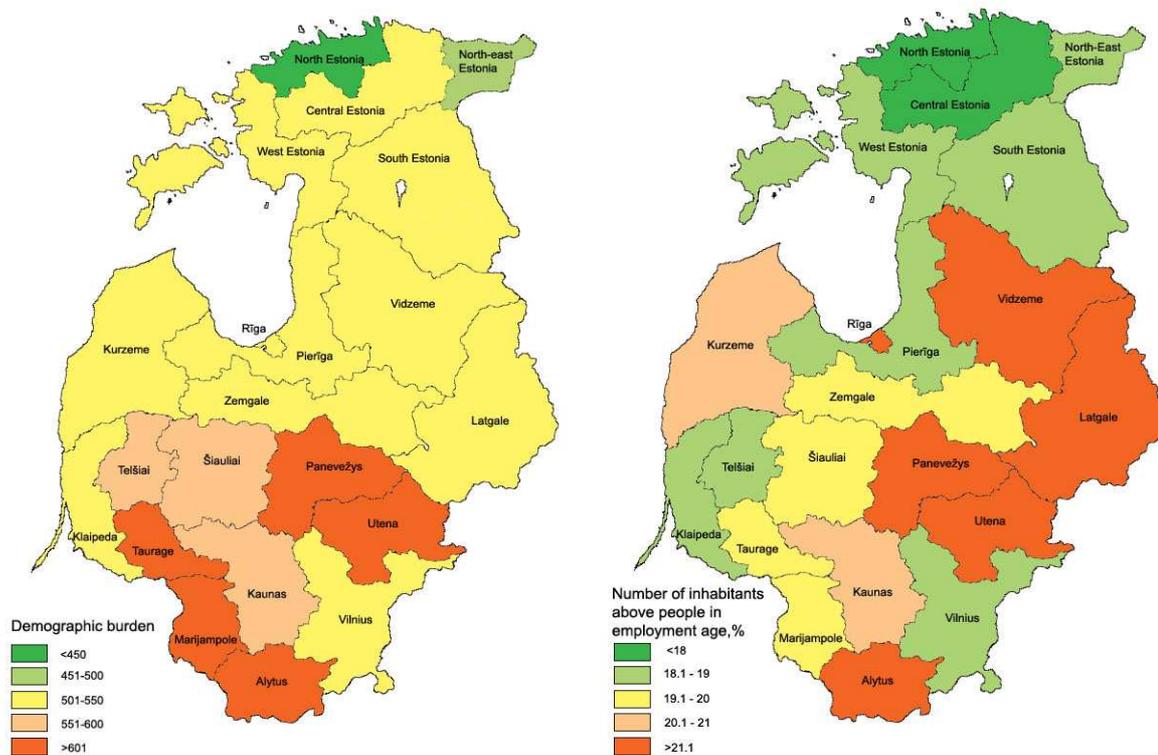


Fig. 1: Demographic burden and number of inhabitants above employment age in Baltic States, % of total population, 2008

The allocation of labour forces is strongly subordinated to the economic activities, respectively – allocation of employment possibilities, consequently the demographic burden varies in different territories. In the territories with more jobs and higher remuneration possibilities, especially in cities and their surroundings, there is a higher concentration of able-bodied population, whereas economically not so active rural regions are mostly populated by retired persons, not looking for employment possibilities any more.

Differences in welfare levels of the population are determined by uneven allocation of resources and economic activities in the countries causing highly different welfare levels of the population in different rural areas. Higher welfare levels of the population are near the towns, where relatively small distance to the town does not limit everyday mobility of labour forces.

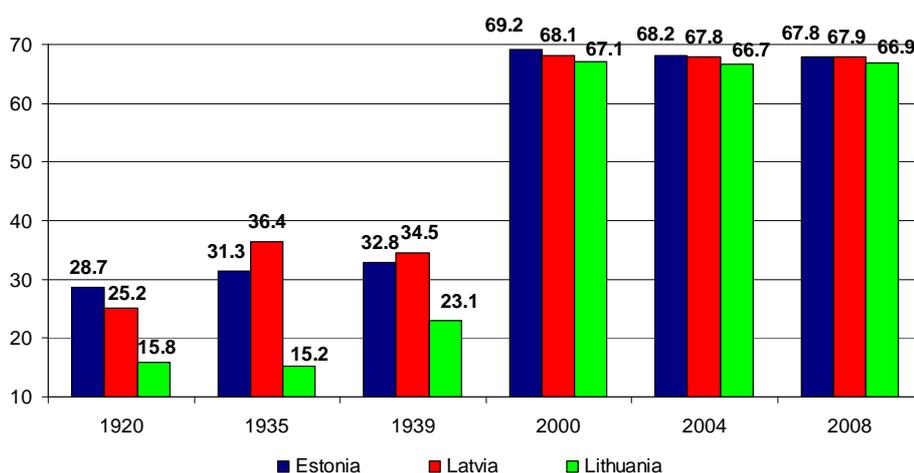


Fig. 2: Urban population, % from total population in country

The structure of the population in the Baltic States has strongly changed since 1920, which clearly defines the preferable social environment of the population. During the first independency more than one third of the population lived in towns, in year 2000 almost two thirds of the population of the Baltic States has chosen the city environment as their place of residence (Fig. 2).

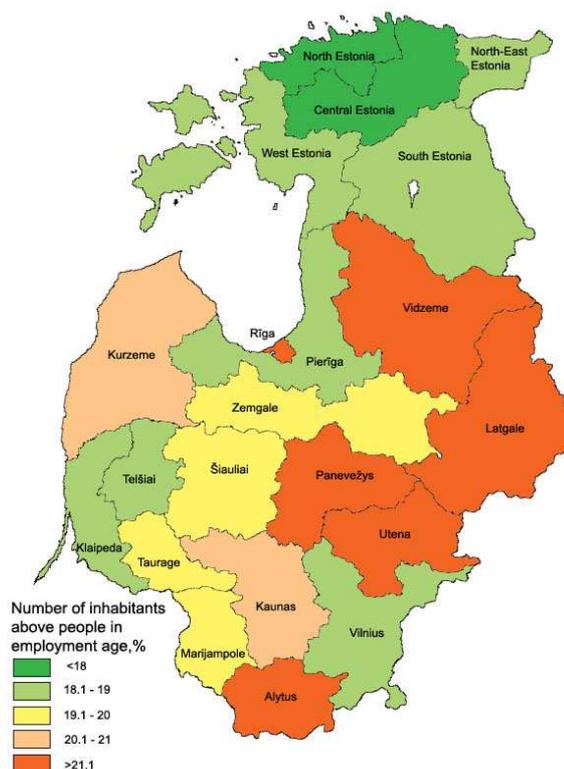


Fig. 3: Urban population in the regions of the Baltic States, 2008

Among the population of Lithuanian regions there is a tendency (more than in other Baltic States) to choose towns as their permanent place of residence (Fig. 3). At the beginning of 2009, 66.9 per cent of Lithuania’s population lived in towns on the major part of its territory. Over 2000–2008, the share of the urban and rural population remained almost unchanged (Statistical Yearbook of Lithuania, 2009).

In Estonia and Latvia the ratio of the urban population (more than 50% of the population living in towns) makes little bit less than a half of the total territory. In the region of Central Estonia the ratio of urban population makes just 21.4% of the total population of the region, but in region of the Baltic States (including capitals) the ratio of urban population is between 78 to 83% of the total population in the respective region.

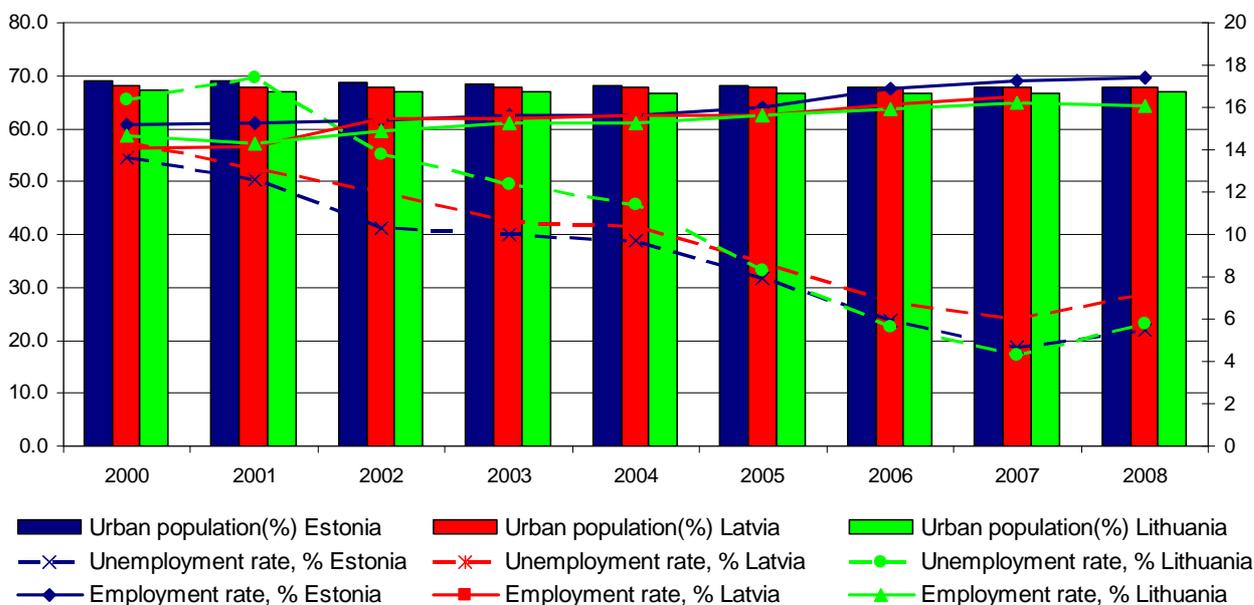


Fig. 4: Urban population and employment indicators in Baltic States during 2000 – 2008

Also the number of the unemployed has been annually decreasing. The employment level in the Baltic States has increased in the last eight years (Fig. 4). The highest number of the unemployed had been recorded in 2001, while in 2007 – 4 times less than in 2000. From 2001 to 2007 the unemployment rate in all three Baltic States was decreasing, but from 2008 it has began to increase and, according to the EUROSTAT data, a big leap is prognosticated in 2009 – in Latvia up to 19%.

Due to decreasing employment possibilities the unemployment increased in 2008 among persons with low educational level as well as among persons with high educational level. Persons who have only general education had remarkably more problems with finding a job (Statistical Yearbook of Estonia, 2009).

Changes and influences on the labour market reach other fields but at different time, this also applies to other fields which are influencing the labour market. In case of mutual relation it is unclear what field has stronger influence but in most cases it is easily discovered, which field is stronger (Statistical Yearbook of Estonia, 2009).

Comparing the volume of natural growth in the 20s and 30s of the 20th century with today’s tendencies we can see sharp differences – in the beginning of the 20th century the natural growth was positive in all the Baltic States (Fig. 5), but at the beginning of the 21st century, comparing indicators of the demographic situation, we can trace negative tendencies in the changes of population numbers.

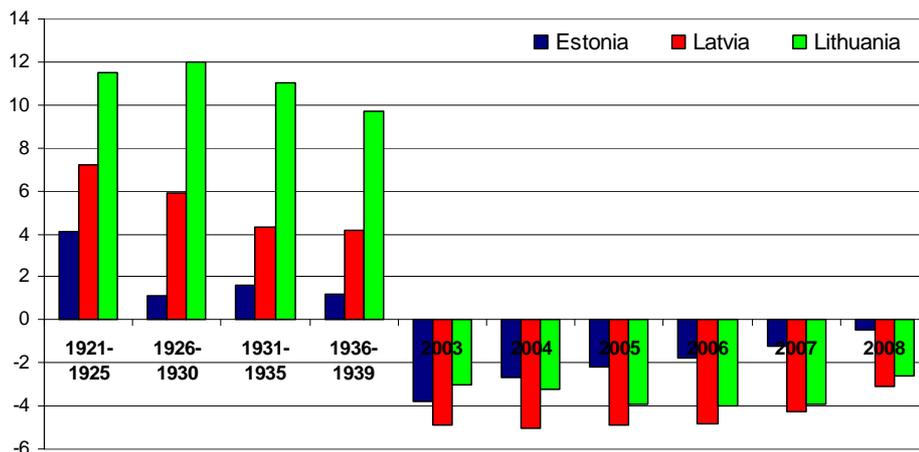


Fig. 5: Natural growth in Baltci countries

During the last three years a negative growth tendency can be observed mostly in regions of Latgale and Utena where the natural growth indicators were -9.1 and -7.2 per 1000 inhabitants respectively. The main reason of the decrease in population is not only the natural decrease, but also international migration that can be observed on all the territory of the Baltic States. As from 2006 the situation in all the Baltic States has been improving and we can see the increase in birth rates.

There is a tendency characteristic of the capitals of the Baltic States to oppress economic potential of other areas of the respective state, thus total growth is generally accounted for by the state's capital. Author reminds that the key prerequisite for common development of the cities is their willingness to become part of the collective network and cooperation among the most important participants in the field of politics, economics, and administration.

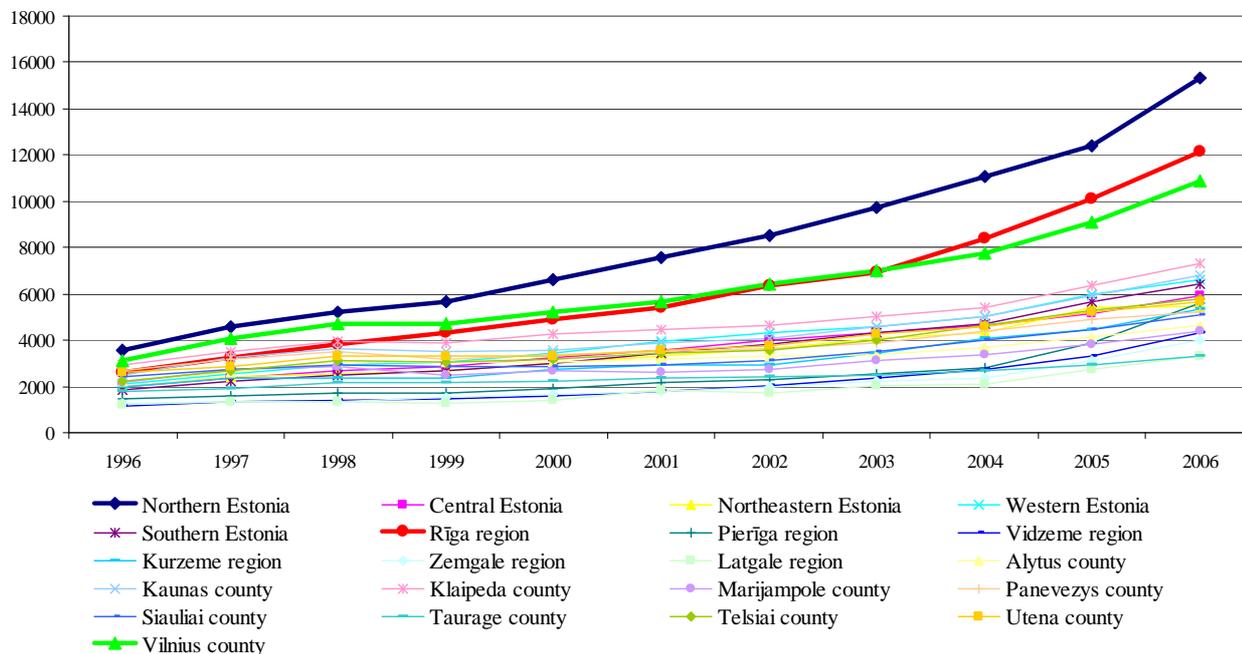


Fig. 7: Regional GDP per capita n Baltic States

Region of Riga accounts for a substantial share of the state economy of Latvia – in 1996 it was 46.5%, in 2006 – 57.3% of Latvia's GDP, the remaining share is accounted for by the rest of the regions (Fig. 7). Whereas Northern Estonia accounted for 53% of the state economy in 1996 and 61.1% - in 2006, and region of Vilnius accounted for 28.6% of the GDP in 1996 and 36.9% - in 2006.

In 2006 GDP per head in Vidzeme was as many as 9 times smaller than in the region of Riga, other regions showed only slightly higher rates – in Zemgale it was 8 times smaller, in Latgale - 7.5 smaller, in the outskirts of Riga and in Kurzeme - 5 times lower than in the capital.

In Estonia the situation is similar – in Northern Estonia, where the capital Tallinn is located, the rate was even 9.5 times higher than that of Central Estonia. Northeastern Estonia showed GDP per head 8 times smaller than Northern Estonia, in Western Estonia it was 7 times lower, and in Southern Estonia - 3.5 times smaller than in Northern Estonia where the capital Tallinn is located.

In Lithuania the difference in respect of GDP per head among regions is even sharper – region of Taurage showed even 20 times lower share of Lithuanian economy than region of Vilnius, Marijampole and Alytus counties were also behind by more than 10 times, Utena and Telsiai counties showed a value 8 times smaller, the rate was 5 times lower in Panevezys County, 4.8 times - in Siauliai County, 3 times - in Klaipeda County, and GDP value was almost 2 times lower in Kaunas County.

Sharp differences in respect of GDP rates across the Baltic regions may most clearly be observed in diagram (Fig. 8) where data of the capital regions differs considerably.

During the period (1996 - 2006) discussed in the study basic growth rate of GDP per head in Riga Region (taking 1996 as the base year) was 363%, average growth rate was 17%. Whereas other regions of Latvia did not show such a rapid economic growth, and the average growth rate in regions across Latvia ranged from 11 to 15%, 11% in Kurzeme and Latgale, 13% in Zemgale, 14% in Vidzeme, and 15% on the outskirts of Riga.

In Estonia basic growth rate of the Northern Estonia was 335%, while the average growth rate was 16%. In other regions it showed the same tendency as in Latvia ranging from 11 to 13% - 11% in Northeastern Estonia, 12% in Central and Western Estonia, and 13% in Southern Estonia.

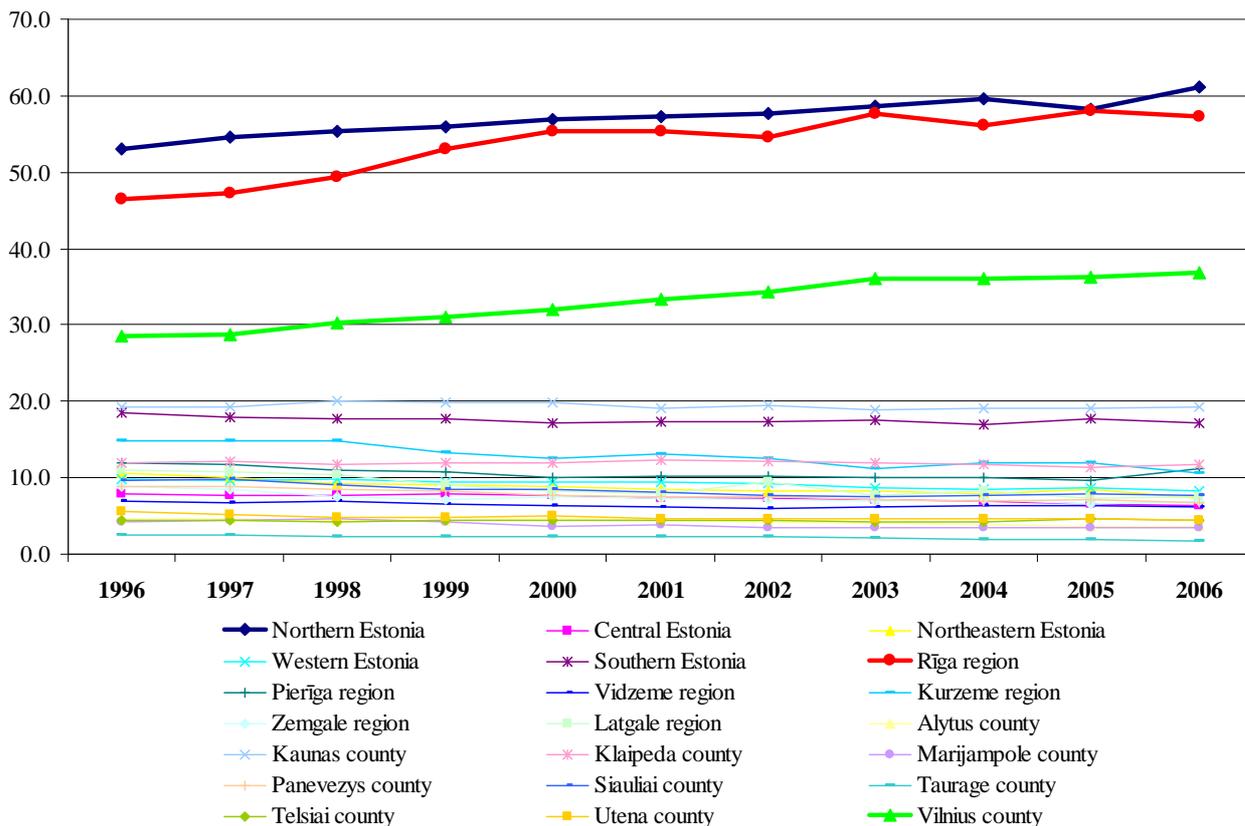


Fig. 8: Annual regional GDP in Baltic States during 1996 – 2006, % of GDP within each country

In Lithuanian the average growth rate was slightly slower - 14% in Vilnius Region, 6% in Taurage County, 7% in Panevezys County, 8% in Alytus, Marijampole, Siauliai, and Utena counties, 10% in Klaipeda un Telsiai counties, and 11% in Kaunas County.

The life rhythm in modern day Europe is fast. To solve problems that affect us not only in Europe, but also outside it, the legislation needs to adjust to the fast growing technological development and need to further

innovations that could protect the wellbeing and security of the inhabitants of Europe. The public offices and authorities need to be effective, flexible and determined. These are the standards that the European Commission (2009) has set for themselves.

The public authorities adopt legislations for the society to reach numerous goals - to provide fair trade and competition, provide health security and security, further innovations and protection the environment. When developing the policies and legislations the government tries to obtain betterments – make sure that the right instruments are used for the corresponding task, the gains are maximized and the negative influence is minimized, and they make sure to listen to those who are directly influenced by these actions. Therefore the author is convinced that the legislation is a tool that makes policies become reality and realizes the needs of citizens.

The international dialog and collaboration is extremely important not just because of security of high consumer rates and social and environmental protection, but also from the perspective of business development. Just like the creation of a single market in the Europe was set by the company needs to get rid of the unreasonable differences in norms between the member states, the international collaboration motivation is to scale down or liquidate excessive formalities between the business partners.

3 COMPARISON OF THE REGIONS OF BALTIC STATES USING FACTOR AND CLUSTER ANALYSIS

As in the past, even today we can talk about each country individually as well as of single region. Further analysis of the regions of the Baltic States is done at NUTS III level according to Eurostat's defined statistical regions of Europe.

Each administrative territorial units (parishes, towns, districts, counties) and regions can be described using many different parameters, and each of them can form different spatial clusters. Particular importance of these characteristics is among those that may serve as indicators, both describing the situation as a whole and find a causal relationship, as well as emphasizing the ongoing processes.

Based on the assumptions that there are complex interactions and relations of dependency between variables and parameters and thereby the possibilities of reduction the information, it is necessary to apply the method of gathering information, which remove the relevant information from non-significant one and indicates interrelationships.

Based on a set of indicators that characterize the Baltic country's socio-economic development using factor analysis it is useful to form a small number of complex factors that can not be observed directly and which are not correlative to each other and describes the overall structure in the initial factor system.

Factor analysis method allows dealing with some approximation of a very substantial research task - based on the wide array of information processing, to develop the classification scheme with an explanatory description.

Studying the characteristics of a system with factor analysis it is possible to reveal the logical structure of complex phenomena, to distinguish between independent and substitutable indicators, relevant from the irrelevant, and to justify the choice of indicators system and assess its information load, as well as to test hypotheses on system regularities of the indicators (Field, 2000; StatSoft, 2003; Patria, 2007).

The choice for usage of factor analysis in work was the essence of the method - identifying the links between the initial indicators and get a smaller number of factors, which characterizing the socio-economic development of the Baltic regions, and describing their competitiveness.

Initial indicators corresponding characteristics of territory and living environment has formed 3 complex factors using factor analysis which generally explains 69.8% of information. The first factor explains 32.2%, the second - 24.5% and a third - 13.1% of information.

<i>Factor</i>	<i>Initial Eigenvalues</i>		<i>Indicators</i>	<i>Component</i>
	<i>Total</i>	<i>% of Variance</i>		
Quality of living environment	4.186	32.2	Level of demographic burden (2008)	-0.840041
			Number of dwellings per 1000 inhabitants (at the end of 2007)	0.830591
			Housing stock average per inhabitant, m ² (2008)	0.732723
			Number of beds in hotels and other accommodation establishments per 1000 inhabitants (at the end of 2007)	0.719869
			Number of visitors in hotels and other accommodation establishments per 1000 inhabitants (at the end of 2007)	0.829385
			Recorded criminal offences per 10000 inhabitants (at the end of 2007)	0.762847
			Sown area, thsd ha (at the end of 2007)	-0.541485
Attractiveness of living environment	3.179	24.5	Population density, population per 1 km ² (2008)	-0.653436
			Immigration per 1000 inhabitants (at the end of 2007)	0.653294
			Emigration per 1000 inhabitants (at the end of 2007)	0.837291
			Urban population ratio, % of total population in region (2008)	-0.860151
Accessibility of territory	1.709	13.1	Road traffic accidents per 1000 inhabitants (at the end of 2007)	0.91566

The result of factor analysis describe the quality of living environment – the higher value of the first factor belongs to regions with bigger amount of housing stock and number of dwellings calculated per 1000 inhabitants what is characteristic for urban area. Those regions have also more visitors stayed in hotels and other accommodation establishments and number of beds in those establishments calculated per 1000 inhabitants. As negative feature characterizing the same regions should be mentioned higher level of recorded criminal offences per 10000 inhabitants.

By contrast the characteristics of the demographic burden and the sown area of agricultural land is part of the package that form factor with a negative component, which means that the region has low dependency ratio and low agricultural crops.

The higher value of the second factor describing attractiveness of living environment within the region the bigger migration flows of population and more forest cover in territory. At the same time there is lower population density and wherewith lower urban population ratio characteristic for those regions.

The third factor describes accessibility of territory and the higher values of this factor characterise regions with more road traffic accidents calculated per 1000 inhabitants.

These complex factors clearly show interaction of urban and rural areas and characteristic marks typical for urban and rural environment.

Further study was done using cluster analysis, which is a statistical analysis method, and can be used to set up essential groups of similar objects. The main purpose and challenge of this method is to form groups of investigated objects into clusters, based on certain representative comparison of parameters. However, different groups of elements should be divergent. The cluster analysis was done by SPSS program.

The author chose the optimal regional allocation of 6 groups, which further described in the work.

Factor / Cluster	1	2	3	4	5	6
Quality of living environment	1.48389	1.34060	0.58582	0.59162	-1.03904	-0.54831
Attractiveness of living environment	-1.19455	0.90629	1.61198	-2.72410	-3.8052	0.08945
Accessibility of territory	-1.12623	-0.16568	1.72472	2.25487	-2.21580	0.07582

This table shows the values for the final cluster centres. The values in the table are the means for each variable within each final cluster. The final clusters centres reflect the attributes of the prototypical case for each cluster.

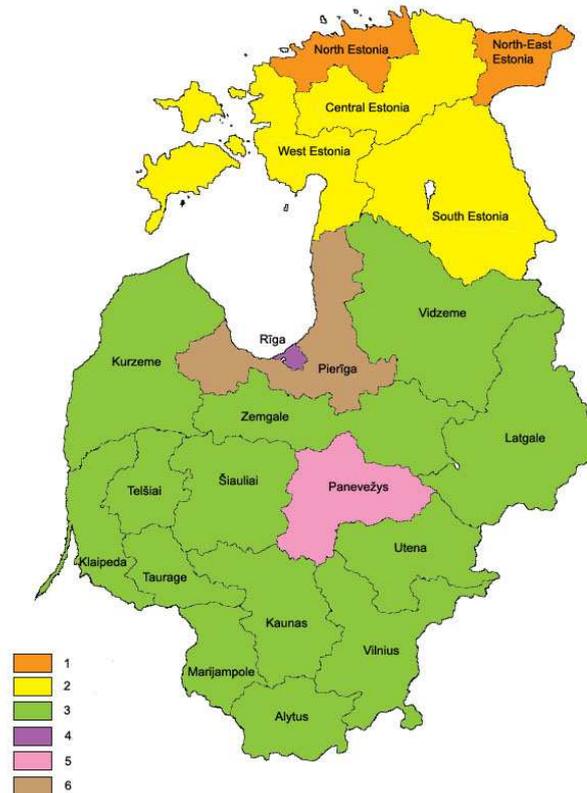


Fig. 9: Clusters of territory and living environment factors

The author, along the traditional statistical analysis, analysed clusters using cartographic method, which gives an overview of the diversity of circumstances in the Baltic region. During cluster analysis for selected complex factors it was made 6 groups obtained following distribution of Baltic regions (Fig. 9).

4 CONCLUSION

The regional policy often is called the structural policy because in the result of implementing the regional policy the regional and state economical and social structures change.

For the regional development and promotion of competitive capacity in the Baltic States in 2007-2013 large means of structural funds for different programmes of business activity and research development therefore promoting the state and individual region competitiveness from the European Union are available.

More similarities in management of social and economic processes have Latvia and Lithuania. Promoting cross border cooperation between regional and local municipalities in Latvia and Lithuania it is possible to foster economic growth jointly addressing the cultural, industrial and social problems.

Rational use of available resources in regions is an investment in future development, promoting better interaction between regional bodies and thus improving the living conditions and future economic development.

Regional disparities and increasing gap between regions within the Baltic States and the Baltic States themselves justifies the need for implementation of long-term development policy and spatially differentiated approach to regional support to provide solutions to specific problems in the region mostly using the existing resources and potential.

The author suggests using different instruments for support of regional development at state level and local (municipality) level to foster the effect of support actions:

State level: Subsidies, loans, donations; Investments; Differentiated support for problematic regions; Rationing of resources consumption.

Municipality level: Finance, credits, warranties; Consultancy, employment training; Licensing, certification, privatization; Development of organizational structures.

5 REFERENCES

- Baltic Macro Outlook: Update Macro research, July 2009, Swedbank. Retrieved 1st of December, 2009 from <http://www.swedbank.lv/lib/en/Baltic%20Outlook%20Update%20July%202009.pdf>
- Bank of Latvia: Annual Report 2008 Bank of Latvia: Premo, 2009.
- Eastern Europe Outlook. Stockholm: Skandinaviska Enskilda Banken AB, 2009.
- Europa, Summaries of EU legislation Retrieved 15th of September, 2009 from http://europa.eu/legislation_summaries/regional_policy/index_en.htm
- European Commission homepage. EU policy. Retrieved 1st of December, 2009 from http://ec.europa.eu/policies/index_lv.htm
- Eurostat. Retrieved 5th of September, 2009 from <http://epp.eurostat.cec.eu.int/portal/>
- Fadejeva L., Melihovs A. The Baltic States and Europe: Common Factors of Economic Activity. *Baltic Journal of Economics*, vol. 8(1), pp.75-96., 2008.
- Field, A. *Discovering Statistics Using SPSS for Windows*. London: SAGE Publication, 2000.
- Foreign Direct Investment in Lithuania, Vilnius: Statistics Lithuania, 2009.
- Homepage of Central Statistical Bureau of Latvia. Retrieved 1st of December, 2009 from <http://www.csb.gov.lv>
- Homepage of Statistics Estonia. Retrieved 1st of December, 2009 from www.stat.ee
- Homepage of Statistics Lithuania. Retrieved 1st of December, 2009 from <http://www.stat.gov.lt>
- Patria B. Factor Analysis on the Characteristics of Occupation. Retrieved 15th December 2009 from <http://www.pdfgeni.com/book/Factor-Analysis-using-SPSS-pdf.html>
- Statistical Yearbook of Estonia. Tallinn: Statistics Estonia, 2009.
- Statistical Yearbook of Lithuania. Vilnius: Statistics Lithuania, 2009.
- StatSoft. Principal Components and Factor Analysis. Retrieved 8th December 2009 from <http://www.statsoft.com/textbook/stfacan.html>.
- Treaty of Lisbon amending the Treaty on European Union and the Treaty establishing the European Community, signed at Lisbon, 13 December 2007 (2007/C 306/01). Retrieved 1st of December, 2009 from <http://eur-lex.europa.eu/>
- Vaidere I., Vanags E., Vanags I., Vilka I. Regional policy and municipality development in EU and Latvia. Riga: Latvia University, Latvian Statistical Institute, 296 p., 2006. (In Latvian)