

Development of Regions in Latvia - Growth Factors, Policy Alternatives, Synthesized Development Model

Zanda Kalnina-Lukasevica

University of Latvia

Introduction

The policies designed and implemented by states and regions are based on the theories of regional economic development. In regional science theoretical models undergo dynamic development that is changing the approaches of the regional development policy and its main emphasis. The theories of economic development of regions have close links not only with the regional development policy, but also with the related issues of administration, investments, and public participation.

When analysing the approaches of the regional development policy in different countries, one can distinguish several stages of development. In the initial stage the regional development policy in Europe, North America and East Asia tried to balance the national economy by offering incentives or strong regulations to promote entrepreneurship in the regions lagging behind. In the next phase, the emphasis was put on a development centre as a support and promoter of sustainable growth. The new generation policies emphasise the significance of functional economic regions as natural areas, where the real estate market, labour market and location of the basic assets of the region are merged (Clark, 2006).

In recent decades significant changes in the territorial perspective are observed in the international context, focusing more on the competitiveness of regions rather than on ensuring the traditional support to industries or income redistribution. The policy is directed towards the development of competitiveness of each region, not only towards the subsidization of the poorest regions, proven to be less efficient. In recent years, when analysing the regional endogenous development, the importance of education, innovations and the human capital development has been particularly emphasised. Namely the investments in the human capital are pointed out as crucial for the economic development of a region.

In recent years many discussions in the regional development policy concentrated on understanding whether the regional development policy must focus on cohesion or productivity goals. Accordingly, the discussion has been whether more public investments should be allocated for the needs of the disadvantaged regions, or they should be allocated where a larger economic return could be maintained and thus would be more productive. One of the recent studies of the OECD (Organisation for Economic Cooperation and Development) emphasizes in this regard that

each region has a growth potential. It calls for a debate that, at the national level, the government should facilitate the development of each region. The regions, however, should facilitate their own growth by using local funds and resources in order to benefit from the competitive advantages of the region, rather than to rely mainly on state-level grants (OECD, 2009). In 2009, the OECD also pointed out that the traditional policies, “based solely on the provision of infrastructure or education, are insufficient. Instead, a more comprehensive policy that interactively combines these two coherent policies at the government level is required, thus contributing to business development and innovations” (OECD, 2009, 13).

In the context of the economic development of regions of Latvia, the development of the Baltic Sea region as a whole should be assessed. In the light of the impact of the recent economic and social crisis on the state administration of Latvia and the need to make substantial structural reforms, a series of important aspects can be identified that determine the relevance of the study and its possible innovative impact on the administration of the public sector.

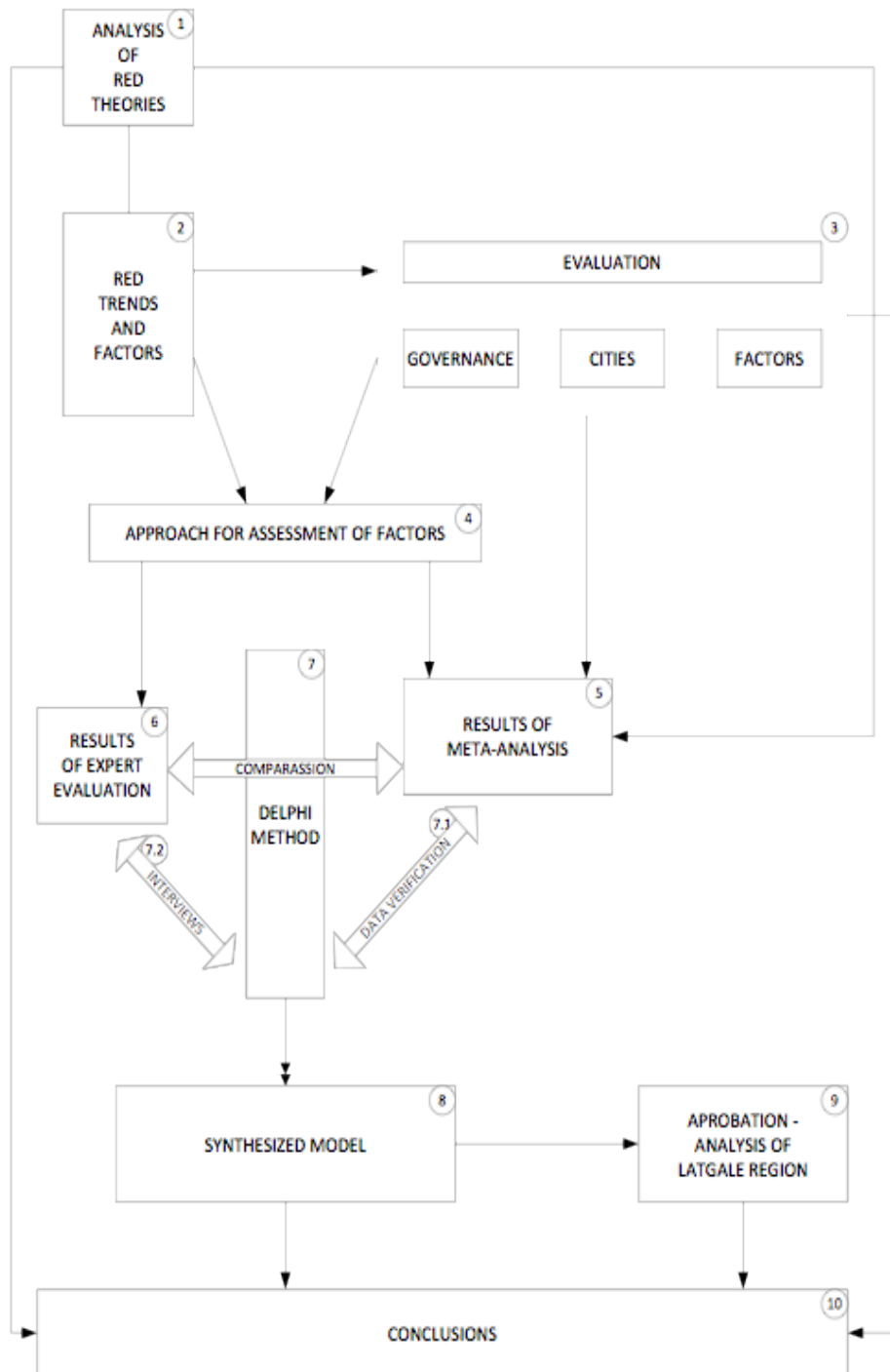
The aim of the research is by exploring the impact factors of the regional economic development and public policy alternatives to elaborate a model for the evaluation and planning of the policies of the regional economic development. **The question of the study:** which regional economic development model (implemented by public administration) could facilitate the economic development of the regions of Latvia?

To identify and to assess the tools of the economic development of regions and to elaborate a regional development model that is the most appropriate for the situation in Latvia, a **methodology of the study** was developed and research methods for the successful elaboration of the study were identified. A methodology of the study envisaged elaboration of the study in ten logically sequential stages:

1. Analyses of theories of the economic development of regions.
2. Identification and selection of the most significant factors of the economic development of regions.
3. Analysis of factors and trends of the economic development of regions in the context of Latvia.
4. Development of assessment approaches for the factors of the economic development of regions.
5. Assessment of the significance of factors of the economic development of regions using a meta-analysis and systematic analysis method.
6. Assessment of the significance of the economic development factors of regions by using expert evaluation method (the Delphi method, involvement of 9 experts)
7. Comparison of assessments of factors of the economic development of regions.
8. Elaboration of the Synthesized model of the economic development of regions.

9. Aprobation of the Synthesized model of the economic development of regions – the analysis of Latgale region.
10. Elaboration of the conclusions of the research.

Fig.1. 10 stages of the methodology of the research



Source: Figure designed by the author

As a result of the implementation of each stage, interim results (data summaries, data tables and graphics, information summaries, analysis, evaluation, etc.) of the research were obtained, which were the basis for the initiation and elaboration of the next stage of the research, i.e. each subsequent stage of the implementation of the study was based on the interim results of the research obtained in the previous stage.

For the successful implementation of each stage of the research relevant methods of the research were identified breaking them down into primary, secondary and support methods. The primary research methods were directed at carrying out the main task of the particular stage of the study, the secondary – at dealing with subtasks, and the support method – at carrying out specific additional tasks. The monographic method, the systemic analysis, the content analysis, the comparison method, the statistical analysis, the secondary analysis of data and information, the statistical analysis, sociological surveys, case studies, the meta-analysis, the Delphi method, the expert survey method, the graphical method were used within the study.

Theoretical background of the study

The theoretical reasoning on regional economic development consists of the works of several authors. Regional economic development (RED) as a concept is very broad and not clearly defined. Various researchers emphasise different aspects and their impact on economy of regions. So, for example, Malecki (1991) defined RED as “combination of qualitative and quantitative features of the region’s economy, of which the qualitative or structural are the most meaningful. The qualitative attributes include the types of jobs – not only their number – and long-term and structural characteristics, such as the ability to bring about new economic activity and the capacity to maximise the benefit which remains within the region. The standard theory of economic growth and development has concentrated on quantitative changes, despite an increasing awareness that regional growth depends, often critically, on aspects that are understood only in comparison with other regions or nations. The facts of regional development suggest that it is not enough to rely on concepts of growth without an equivalent concern for the forces which permit growth to take place or prevent it from occurring.” (Malecki, 1991, 7)

Blakely (1994) describes the RED as a function of different factors, saying that RED is “the process in which a local government or community organizations are involved to stimulate or maintain business activity and/ or employment. The main objective of local economic development is to stimulate employment in the possible sectors, which “enhance the community” by using existing human, natural and institutional resources.” (Blakely, 1994, 15). Blakely also provides his own RED definition: "RED = f (natural resources, labour, capital, investment, entrepreneurship, transport, communications, industrial technology, size, export markets,

international economic situation, local institutional capacity, all level public administration expenditure and investments, development scheme)”. (Blakely, 1994, 7).

Such a broad layout of factors includes both exogenous and endogenous factors. The growth aspects of innovations and technology also hold increasing significance in the RED concept. (Cooke, 2011). The multidimensional aspects of RED encouraged Stimson to offer the following definition: “Regional economic development is the use of economic processes and available resources, which results in the sustainable development of a region and economic results desired by the region, and which corresponds to values and expectations of entrepreneurs, residents and visitors.” (Stimson 2002, 7).

In this paper the economic development of regions is primarily analysed within the understanding of these three definitions and specifically highlighting that RED is:

1. use of economic processes and available resources, which results in the sustainable development of a region and economic results desired for a region;
2. the process in which the regional (local) administration or community organizations are involved to stimulate or to maintain business activity and/ or employment;
3. combination of qualitative and quantitative aspects of a regional economy;
4. structural features, such as the capacity to maximize the remaining benefits in a region and the ability to generate new economic activity.

Over the years, variety of approaches have been developed for the regional economic development theory and many of them have been formulated outside the spatial context. Analysis of the formation of the regional economic development theory (Carlson, 2009; Stimson et al. 2009; Capello, Nijkamp. 2009, 2009; Cooke, 2011) allows to distinguish a number of very different approaches and scholars. Different theoretical approaches have been identified and displayed.

Classic Walter Isard is considered to be one of the founders of the theory of economic development of regions, who in 1940s-1950s actively defended the theses on the role of location, premises, cities and regions in the process of economic development. His most important work is a book – Location and Space Economy – published in 1956. As the second founder of the early theory should be mentioned Cloude Ponsard who reviewed the history of the location-related economy and, based on his research, argued the role of cities and regions in the development of the country.

The overview of the theories of economic development of regions demonstrates that each of the theories aims to put forward one specific condition that ensures the regional development, however, none of these theories provides a complete response on how to ensure growth and development of a region. Development policies of regions during decades have had a close

relation with current and dominant theories of the economic development of regions of that time. A single development factor or dimension of choices dominated in each of them.

It can be inferred that during several decades the regional development policy was generally directed to “critical” territories. The original objective of the policy was to compensate regional differences of employment as well as other economic aspects in the poorer regions. Ineffectual results of diversion of subsidies and investments to poor regions requested policy changes. Based on the implicit assumption that the modern development requires a free market and the selection of a market benefiter, concentration “island” of economic activity is viewed as a technological development precondition. Regional development policy therefore essentially moves resources from lagging behind regions to prosperous regions. (OECD, 2011)

Since the end of 1990s the institutional scholar – Amin and Hausner (2007) – has discovered a new vision of the regional policy, planning it as a set of **inter-sector initiatives** supporting a more balanced model that is based on existing local values. This new paradigm is progressively adopted and the regional development policy is now increasingly trying to create conditions for **endogenous development in each territory** based on local values, skills and economic potential. (OECD, 2010)

Theories of economic development of regions analysed during the research can be divided in more than 10 groups. At the same time, these different approaches tend to be divided into four major directions: Traditional neoclassical economic growth theory, Regional innovation theory, New growth theory and Endogenous growth theory (Table 1.).

The traditional **Neoclassical economic growth theory** is based on a popular model of Solow (1956). This direction originally was formulated also by Perroux (1950), Myrdal (1956) and Hirschman (1958), and they were followed by a relatively recent work of Feser on industrial districts and business clusters (Feser, 1998) and others. **The Regional innovation theory**, which is considered to be founded by Schumpeter (1939, 1949), and later, in turn, Neo-Schumpeterian perspectives on innovation and growth were widely developed (Arthur, 2009, Forays, 1995). **New growth theory** represented and developed by Romer (1986, 1990), Barro (1990), Grassman, Helpman (1991), Rebelo (1991), Arthur (1994), Malecki (1991), Porter (1990), and the new economics geography theory developed by Krugman (1991), (2011), Venable (1995), (1996), Puga (1998) (1999), Armstrong and Taylor (2000). **Endogenous growth theory** - Romer, Lucas, Barro, Rebelo, Grasman, Helpman. The endogenous growth theory has been developing since 1980s until now. It grew from the counterarguments to the Neoclassical growth theory. Martin and Otavian (2001) combined the new economics geography theory with endogenous development models. This theory was further developed by particularly emphasizing the role of endogenous factors in the development, represented by the Stimson (2002, 2009), Florida (1995),

OECD (1993, 1999) and others. (Source for an overview – Carlson, 2009; Stimson et al. 2009; Capello et al. 2008, Capello and Nijkamp 2009; Cooke, 2011)

Table 1. Overview of theories of regional economic development and growth

Classification I	Classification II	Leading factors
Traditional neoclassical economic growth theory	Neoclassical growth theory	Increase of productivity, individual welfare, incomes
	Factor endowment theories	Increase of productivity
	Export-base theory	Increase of export
	Growth-pole theory	Large-sized firms, growth centres, FDI
	Centrality/peripherality theory	Accessibility, distance from the centre
Regional innovation theory	Epidemic models of innovation diffusion	Percipience for innovations, dissemination of technologies, networking, cooperation
	Innovative effectiveness	Innovations, knowledge, human capital
New growth theory	Industrial districts	Agglomeration, functional economic theories, industrial districts, economic, social links
	Infrastructure endowment theory	Development of infrastructure
	New economic geography	Choice of location of enterprise, transport costs, lower costs, migration flow
Endogenous growth theory	Endogenous growth theory	Territorial competitiveness, innovations, economy of scale, administration, cooperation, human capital

Source: Overview elaborated by the author based on Capello and Nijkamp, 2009, Carlson, 2009; Stimson et al. 2009; Capello et al. 2008, Cooke, 2011 etc.

Inferred that the Neoclassical growth theory, the Factor endowment theories, the Export-base theory, the Growth pole theory, the Infrastructure endowment theory, the Centrality/peripherality

theory, the Epidemic models of innovation diffusion emphasise valid preconditions for regional competitiveness. “Each of them stresses a single important element to be taken into consideration once region growth patterns have to be analysed, but (...) it is wrong to believe that each of them is a sufficient condition.” (Capello et al., 2008, 22) The Innovative effectiveness theory, the Industrial district theory, the New economics geography theory and the Endogenous growth theory try to improve flaws of previous theories and take into consideration “the presence of immobile local resources like local culture, competence, innovative capacity – generally speaking, knowledge – identified as the main endogenous territorial processes feeding local competitiveness.” (Capello et al., 2008, 26) The New economics geography theory and the Endogenous growth theory “remind us that the interpretation of growth through linear models is limited because it does not allow for taking into account the real spatial phenomena, like learning processes, agglomeration economies, economies of scale in specialisation, which are strongly characterised by non-linearities” (Capello, 2008, 28).

The early focus of regional science was directed to the aspects of the market development, production resources and economic concentration factors. However, over the past 10 years, more and more importance has been attributed to internal (endogenous) growth and development of regions. While some literature sources refer to institutional and management aspects, including entrepreneurship development in regions, there are very few studies analyzing and describing institutional factors that affect development of cities and regions. Moreover, Stimson, Stough and Salzar claim that previously there have not been any publications that would offer an approach for modulating and evaluating the impact of management factors on the development of regions, and institutional aspects have been analysed only a little. (Stimson, Stough and Salzar, 2009, vii)

Contributing to the development of regional science Stimson, Stough and Salzar (2009) offer a new model or frame for the endogenous regional growth and development. In this model it is emphasised that strong leadership of a city or a region involve proactive initiation of the regional economic development strategy to (1) set a vision for the future development of a region; (2) implement plans and processes that facilitate institutional changes; (3) monitor the regional performance and actively adjust and correct strategies and plans. (Stimson, Stough and Salzar, 2009)

Overseeing theories of the economic development of regions, the author of the study joins a conclusion that “these theories are still unable to combine the economic laws and mechanisms that explain growth with territorial factors springing from the intrinsic rationality present at local level. An approach that did so would represent maximum of cross-fertilization among location theory, development theory and macroeconomic growth theory and would give rise to a framework able to blend specifically local territorial features into a single macroeconomic model.

Today, the frontier of knowledge in regional economics consists precisely in defining the territorial micro-foundations of macroeconomic growth models.” (Capello, 2008, 28)

Main results of the research

Analysis of the economic development theory given within the study allows to identify the relevant factors advancing development and development choices of regions for each theory. This stage of the study resulted in identification of nineteen key factors (based on Capello et al., 2008; Cook et.al., 2011; Capello, Nijkamp, 2009; Froy, Giguere, 2010; Karlson et.al., 2009; Krugman, 1993; Krugman, 2011; OECD, 2010; OECD, 2011; Shumpeter, 1983; Stimson et al. 2009) advancing and determining the economic development and development choices of regions.

Development choices / development factors. Regional economic development and growth theories and meaning of leading development factors mentioned therein:

1. **Active role of space (resource).** Territorial and spatial process where territory is interpreted as an autonomous factor of production rather than only a geographic location where development occurs. Territory creates an income basis and a cumulative growth mechanism in the form of dynamic agglomeration economy. Development of economy is not only a result of the decision on the allocation of inner resources of the region or result of the growing accumulation of resources, but also a result of interregional interaction. Based on the opinion that spatial growth models where location has only a static or “container” role are not comprehensive. Space as a “resource” of growth. (Capello et al., 2008) (Capello and Nijkamp, 2009)
2. **Passive role of space.** Focused on the spatial aspects of economic growth and territorial distribution of income – the neoclassical growth theory, the export growth theory, the inter-regional trade theory. Space as a “container” of growth. (Capello et al., 2008)
3. **Macroeconomic factors.** The Regional growth and development theory. In this approach a region is considered a part of the national system. The opinion that for the development of a region the most significant is the macroeconomic basis. In this approach territorial features, economic capacity of sub-national systems, creation of economic activities and attraction ability are analysed. (Capello and Nijkamp, 2009) Some macroeconomic theories reduce the regional development to the regional location of aggregated national development.
4. **Microterritorial view.** In this theory regional development is fundamentally dependent on the focused organization of the territory that endogenously “feeds” a system of innovative and successful socio-economic relations. A belief that a microeconomic basis is the most fundamental for the development of the region. (Capello and Nijkamp, 2009) In this approach

- primarily implemented are the analysis of choices for the location of enterprises and households; analysis of differences of spatial distribution of activities. The micro-territorial and micro-behaviour theories aim to find the local factors that allow enterprises with an absolute competitive advantage to produce internationally required goods and services.
5. **Demand-oriented development.** A demand oriented approach emphasises short-term job creation processes in circumstances when there is a large amount of spare production resources. (Capello et al., 2008)
 6. **Supply-oriented development.** A supply-oriented approach emphasises individual welfare and efforts to determine the production capacity of a local system. Competition process is more based on supply than demand elements, e.g., based on local resources, products, innovation processes, technologies and local knowledge. (Capello et al., 2008)
 7. **National growth prevalence.** In the competitive development approach (directed from top downward) regions are competing for a certain scope of growth that has been generated by the national economy as a whole. (Capello et al., 2008)
 8. **Regional growth prevalence.** In the generative approach (directed from bottom upward) national growth is seen as an aggregated amount of growth performance of all regions. (Capello et al., 2008)
 9. **Development directed by tangible assets.** Tangible versus intangible assets driven development. Choice for the advancing factors of the development between tangible assets as production resources, incomes and infrastructure and intangible assets as education, culture, innovative capacity and socio-economic relation. (Capello et al., 2008)
 10. **Development directed by intangible assets.** Process of social relations where development is not based solely on tangible resources but also on intangible aspects of social relations. Emphasis on the role of intangible assets, such as education, culture, innovative capacity and socio-economic relations in advancing development. Relation elements (as Putnam's social capital, Capagni's relation capital, Becatini's trust factor, leadership factor of Stimson and Stough) provide added value to the creation of cumulative knowledge, collective learning process that impacts local decision making processes. Followers of this direction consider that traditional growth models based on accumulation of tangible resources have limited interpretation possibilities of intangible aspects. (Capello et al., 2008) (Capello and Nijkamp, 2009)
 11. **Increase of productivity, individual welfare, incomes.** *The neoclassical growth theory* is based on the opinion that in circumstances of perfect competition and mobility of production factors regional development is facilitated by increase of productivity, but in circumstances of immobility of production factors and mobility of goods, welfare is increased by buying cheaper import goods. It is considered that the individual welfare can be achieved by

increasing productivity thereby increasing also personal incomes or decreasing expenses of goods and services in the internal market. *Factor endowment theories* in 1950s and 1960s explained the regional development with increase of productivity that facilitates growth.

12. **Export.** The export-base theory looks at growth as a source for short-term employment and increase of income. It is based on the sector specialisation which is characterised by increase of demand that determines the increase of export possibilities. The theory is based on demand (mostly from outside a region) and development as advanced by export growth.

13. **Large-sized firms, growth centres, direct foreign investments.** *Perroux “growth-pole theory”* is based on his spatial perception of dissemination of enterprises and industries as a network that links centripetal forces. He believed that regional development is facilitated by a particular growth centre or a large enterprise that promotes also development of other smaller related enterprises and hence also overall regional development. According to this theory in order to facilitate the development, economic development strategies should focus on a certain development pole or contributions of sector capital. Perroux also believed that with appropriate policies urban centres can become growth poles at a multiregional context. In 1970s the examination of regional development by this theory took place under the influence of large multinational companies where it was assumed that multinational companies located their production units involving high intensity of work and unqualified workforce in less developed regions with lower labour costs, thus also facilitating the regional development. In 1980s the theory considered the positive impact of multinational companies on local economy in a wider context, such as arrangement of the entrepreneurship environment, establishing new enterprises, increasing technological and management expertise etc. The theory of economic activity localisation.

14. **Accessibility, geographical location, distance from the centre of economic activities.** *The centre – periphery theory* (developed by V.Isard, H.Geers and J.Fridman) is based on the opinion that regional development is facilitated by its location near the economic centre. The closer the region is to the centre, the more developed it is. The location near the centre ensures better and cheaper access to information, transfer of technological knowledge and proximity of final consumer goods market, while the location further from the centre means higher resource costs.

15. **Infrastructure.** *The infrastructure endowment theory* bases regional development on the system of infrastructure and emphasizes the positive impact investments in infrastructure have on the increase of productivity in a region. The theory is based on the assumption that the geographic location and concentration of infrastructure is the most important condition for the regional development potential. In 1970s the theory was based on the presence of tangible assets and it was considered that physical access allows usage of existing resources in the

region to their full extent. In 1980s the theory emphasised the role of the concentration of infrastructure in attracting entrepreneurs to the region thus increasing competitiveness among local entrepreneurs. Increase of productivity and decrease of production expenses were expected. Particular attention was drawn to road construction and decrease of the related transportation costs.

16. Industrial districts, agglomeration, functional economic territories, economic and social relations. *The industrial district theory* emerged in 1970s. J.Becatini continued A.Marshall's industrial district theory as a base taking into account the assumption that agglomerations are sources for territorial competitiveness and in this model economic growth is facilitated by a socio-cultural system. Mutual trust facilitates the increase of social capital, improves relations of private and public sectors and decreases transaction costs. *The agglomeration theory* explains that the agglomeration economy arises as a result of merging large economic activities that do not have the necessity to represent one industry. The concentration of many enterprises takes place that is apparent in various fields including, for example, transport and communications, well organised labour market, social and public services, cultural and recreation activities, geographically concentrated innovative activities. That facilitates the attractiveness of development poles creating a cumulative growth process. At the same time it is recognised that this process with "repercussion effects" (including migration of skilled labour force to richer regions) can cause a negative impact on the least developed regions. "Cost reduction occurs because economic activities are located in the same area." (McDonald and McMillen, 2007)

17. Percipience for innovations, diffusion processes of exogenous technology, networking, cooperation. Innovations, knowledge, human capital, learning. *The regional innovation theory* — the belief that localization of innovations is significant for economic development and the process of the formation of agglomerations and innovation clusters, which could attract more members of the innovation process; – targeted action of public administration for stimulating innovation . The founder of the theory is J.Shumpeter who defines an entrepreneur as an innovator engaged in "creative devastation" and applies new combinations to the market. *Epidemic models of innovation diffusion / The spatial diffusion of innovation* - (1970s) the idea assumed that the regional development and diffusion of technology innovations depend on the geographical distance. Hegerstrand, Grilich, Mansfield believed that the prevalence of innovations depends not so much on the geographical distance, but rather on economic distance: production activities in the district, income level, volume of consumption and investments. The importance of innovation for regional growth. *The innovative efficiency theory* determined that not only production efficiency of the enterprise, but also innovation efficiency is of great significance. The neo-Shumpeter approach was based on the assumption

that the regions with high economic activity enjoy easier exchange of information, the availability of skilled labour force and availability of science and development and other advantages, which promote the development of innovations in these regions. These features are easy to explain in urban districts; however, in 1980s increased interest was caused by small, non-urban regions with high innovative capacity, such as Silicon Valley in California, Jutland in Denmark and Baden Württemberg in Germany. The theory began to put the emphasis on the innovative capacity as a precondition for the development of the region.

18. Choice of the location of the enterprise, transport expenses, lower production costs, migration flow. *The “new economic geography” theory* was developed in 1990s by economist Paul Krugman based on Midral and Kaldor’s nonlinear growth model. The most prominent feature of this approach is that it avoided the direct assumption about the economy outside the enterprise and perfect competition. It determined that the choice of the location of the enterprise is based on the three main economic factors: transport costs, increasing returns and migratory flows – which determine the formation of the agglomeration or, in Krugman’s words, “a geographic concentration”. Model incorporates the location choices of firms. In *Krugman’s economic activity location theory* such regional development aspects as agglomerations, economic regions and economic activity concentration in certain countries, regions, and cities are explained. The theory also gives consideration to reasons of urbanization of the world economy, pointing out that the increasingly growing urban population stimulates economic development and increase in production, which leads to further population growth in urban areas; according to his theory, as a result of these processes regions gradually disperse in high technology “basic zones” and less developed “periphery”.

19. Ability of local production system to react to outside incentives, adapt to short-term and long-term tendencies of global and national economy, (to use them) based on endogenous factors. *The endogenous growth theory* states that the increase of productivity factors depends on such endogenous factors as (1) territorial competitiveness, (2) economy of scale, entrepreneurship; (3) innovations, learning process, human capital potential, (4) management capacity; dynamic cooperation among the involved parties. In a view of the endogenous development theory regional growth is a result of competition, social relations as well as territorial, interactive and endogenous processes. It is a result of these processes as a whole. The development of a region as an endogenous process, where a possible development path (explosive or implosive) is defined by the ability of the local production system to respond to external incentives and its ability to adapt to short-term and long-term trends in the national and global economy, and to use them to its own advantage. The theory is based on the assumption that the increase of productivity factors depends on the endogenous factors like innovations, learning process and economy of scale. (Human capital as the main driving force

of development. Knowledge-based economy. Endogenous technological progress. The impact of migration on human capital and growth rates. Cities as centres of knowledge. The increase of employment and welfare, productivity growth. Business culture as the condition for prosperity in a region.) The endogenous growth theory declines the existence of perfect competition conditions and constant return and admits the existence of increasing returns or imperfect competition. (Capello et al., 2008) (Capello and Nijkamp, 2009)

(Source: Overview elaborated by the author, based on Capello et al., 2008; Capello and Nijkamp, 2009; Cook et.al., 2011; Froy, Giguere, 2010; Karlson et.al., 2009; Krugman, 1993; Krugman, 2011; OECD, 2010; OECD, 2011; Shumpeter, 1983; Stimson et al. 2009)

In the study the significance of factors and choices in the development of the regions of Latvia is analysed, as well as regional development policy implemented in previous years is examined in order to elaborate the RED model that would ensure the growth rates of Latvia's regions which exceed the average indicators of EU.

It must be recognised that different authors in different periods of time have mostly tried to highlight one major factor. Only relatively recent researches offer a complex view, pointing directly to the mutual interaction of several factors and the decisive role of the set of these factors. Therefore number of sequential stages of the study was carried out by the author in order to analyse the most significant macroeconomic factors and indicators of the regions of Latvia and possible actions for ensuring sustainable development of the regions.

The third stage of the study provides an in-depth analysis of the factors of economic development of regions and analysis of their development trends in the context of the Baltic Sea region. Based on the analysis carried out in the course of the study (including the analysis of the theoretical literature; the empirical research analysis; the analysis of the regional spatial development opportunities and benefits, including the analysis of the role of cities in the Latvian economy and urban development policy in Latvia and examination of the prospects for the cooperation of cities in developing regional economies; the analysis of the link between the micro level choice of population with the regional economic development indicators; the analysis of the dynamics of changes of regional macroeconomic development indicators and comparative growth rates) using the meta-analysis approach, the conclusions were drawn that provide basis for the assessment of the significance of factors defined in various regional economic development theories in the development of the regions of Latvia. Such assessment aims to identify the less important, the most important and critical factors for the development of regions and later, based on this assessment, to elaborate the Synthesized Model of the regional economic development.

Consequently, as a result of the study and analytical work, the most significant macroeconomic factors advancing and preventing the development of the regions of Latvia and indicators of the attitude of population were identified. As one of the most significant results, an identified link between the indicators of attitude of population at the regional level and growth rate of the region should be mentioned.

The possibilities for productivity growth have been studied on the micro level as a willingness of population to learn and improve their qualification. The micro level analysis of the business development trends has been conducted as the willingness of population to develop and found their own enterprises and as a vision of the future ways of ensuring income and intended action. The changes in the number of population have been analysed by assessing the attitude of population to migration and localization of the planned income and acquisition of education. Social ties and co-operation potential have been analysed by taking into account the willingness of population to trust the surrounding people and institutions. Such an approach also provides for new opportunities for designing policy recommendations for fostering regional economic development. The research results suggest several long-term trends which are unfavourable for the economic development of the regions of Latvia. Firstly, the trends indicate high willingness of population to leave for searching a better job abroad, secondly, they show low willingness to invest in raising one's competitiveness in the labour market and, thirdly, a very low willingness to start one's own business. (Kalniņa-Lukasevica Z., 2011a, 2011b, 2012)

In the fourth stage of the study, based on the findings that various factors of economic development of regions have different weight in promoting the growth of regions, the factor assessment approach was developed. Given that the various factors in the economic development of regions have different "weights", or the potential impact, within the study there was a need to develop an approach how to determine the "weight" of nineteen factors identified in the second stage of the study. For the implementation of this basic task the comparative method was used for comparing the benefits and flaws of various possible approaches. This stage of the study resulted in the scale of the assessment approach where all previously identified factors were rated on a scale from 1 to 4. 1 accounted for the less critical, but 4 represented the factors which are very important for the development of regions.

The task of the fifth stage of the study was to provide the author's assessment on the significance of the factors of economic development of regions. To assess the impact of the selected factors on the existing regional development policy in Latvia and to develop the Synthesized Model of regional development, a series of key data and information sets were identified that provide information about the processes characterising the development factors. Based on this comprehensive set of information, the assessment of the major development factors was developed.

For obtaining the author's assessment the meta-analysis method was used, which provides a systemic secondary analysis of various studies to compare and combine their results and conclusions. The meta-analysis method allows, on the one hand, to identify and integrate the analysis and results of assessments of large previously elaborated studies and reports, and, on the other hand, allows to prevent the subjectivity of assessment resulting from the influence of one or only a few unilateral data and information sources. In the context of the current study, the meta-analysis has allowed to identify the mutual influences of the factors of economic development of regions, combined efficiency sets, statistical impact indicators and other relevant indicators of the factor significance.

Within this stage contextual information and data were prepared for ensuring the objectivity of the author's assessment. In order to eliminate the impact of the author's subjective assessment and to base the author's assessment on statistical, econometric, sociological and other types of evidence of factors, during this stage of the study it was essential to collect and to prepare contextually quantitative and qualitative information and data. They allow to assess the factors of economic development of regions in possibly diverse aspects. For preparing contextual information the cabinet study, comparison, content analysis and statistical analysis methods were used, each providing information for the assessment of the factors in qualitative and quantitative aspects. A graphical method – tables were used to represent the author's assessment data visually. In the fifth stage of the study, based on a meta-analysis method, the relative significance of various factors in the economic development of regions was analysed. To reflect the findings of the study in a mutually comparable form, a rating or a weight on a scale of 1 (least important) to 4 (very important) was assigned to each of the most significant factors identified within the initial analysis.

As an approach to ensure objectivity in assessing the significance of the factors of regional economic development, for the study purposes it was necessary to complement the assessment made by the author with regional experts' assessments. In order to ensure the examination and possible corrections of the assessment of factors, in addition to the author's assessment, which was based on the principles of the meta-analysis method, an independent assessment according to the expert method was carried out.

For the implementation of this stage of the study the assessment by experts according to the Delphi method were used. The procedure envisaged obtaining an independent assessment from each expert, i.e. the experts provide their assessments regardless other experts (among experts there is no mutual communication). For obtaining the experts' assessments, it was necessary to develop a convenient and efficient resource for the expert exploration method. A sociological survey was chosen as such, implementing it with a help of a questionnaire for the expert survey. The questionnaire was prepared and experts were asked to fill it in and submit to the author of the

study. In total, the questionnaire was filled in by seven regional development experts, who were selected to ensure the representativeness of various aspects of regional development (economy, entrepreneurship management, political science, sociology, management, etc.). Respectively, the sample of qualified regional development and economic experts were asked to give their assessment on the significance of each of 19 factors on a scale of 1 to 4. The assessments submitted by experts were processed with the help of the statistical analysis method which implied carrying out various calculations – average indicators, aggregate indicators, the mod and the median scores, etc. In addition a graphical method was used preparing assessment data tables. The expert assessment results are reflected as the average rate of each factor.

In order to evaluate the assessments of the author and experts and to prepare a synthesized result of evaluation, the comparison and statistical analysis methods were used, as well as the Delphi method. Calculations of the author and experts' assessments were made using the comparative and statistical analysis methods determining the median and quartiles, as well as a range of sub-quartiles for each question in the questionnaire. For the needs of the Delphi method extreme answers were also defined – for those experts' assessments which were outside the range of sub-quartiles. In the first preparatory step of the assessment the Delphi method was used, which defines the particular need to assess and to analyse the extreme experts' assessments.

In cases when experts' assessment was included in one of the extreme quartiles, an interview with the expert was foreseen, asking to ground selected rating for the factor. Since there were such results in the current study, the experts were asked to ground their assessments, and, in accordance with the requirements of the Delphi method, after receiving the justification, the assessment of all factors had to be made again. In cases when the author's assessment was included in one of the extreme quartiles, repeated examination of data and ratings was intended. On this basis, a specific assessment was assigned to the relevant factor and the need to correct the rating was observed.

As a result of activities of this stage of the study, a rank of significance of factors of the economic development of regions was prepared based on the synthesized assessments of the author and experts. For the visual representation of the comparison of assessments obtained from the author and experts the graphical method was used by visualizing the evaluation data in a table. based on the experts' evaluation results two factors were excluded from future evaluation.

The next stage of the study was to elaborate the Synthesized Model of regional economic development. It was developed using the comparative and statistical analysis method. Respectively, the Synthesized Model consists of the factors listed in the ranking according to each assessment – starting from the key to the less important.

Table 2. Assessment of the most important development factors of RED theories

	Dimensions/choices/development factors	1	2	3	4
	Micro-territorial view				x
	Development directed by intangible assets				x
	Percipience for innovations, diffusion processes of exogenous technology, networking, cooperation. Innovations, knowledge, human capital, learning.				x
	Ability of local production system to react to outside incentives, adapt short-term and long-term tendencies of global and national economy, (to use them) based on endogenous factors.				x
	Export				x
	Active role of space (resource)			x	
	Supply-oriented development			x	
	Increase of productivity, individual welfare, incomes			x	
	Industrial districts, agglomeration, functional economic territories, economic and social relations			x	
	Infrastructure			x	
	Large-sized firms, growth centres, foreign direct investments			x	
	Choice of the location of the enterprise, transport expenses, lower production costs, migration flow			x	
	Accessibility, geographical location, distance from the centre of economic activities			x	
	Macroeconomic factors		x		
	Demand-oriented development		x		
	Development directed by tangible assets		x		
	Passive role of space	x			

Source: Elaborated by the author

Further statistical analysis were carried out to identify various potential regional economic development models, the complexes of which are formed by the combinations of different assessments of factors of regional development evaluated within the study. While the comparison method was used to identify the essentially different types of models, thus identifying four types of models of the economic development of regions. An independent model was considered the only one that statistically significantly differs from other possible development models. For the visual representation of the calculations of the obtained assessments and elaborated models of economic development, the graphical method was used for the preparation of data tables and graphs of obtained assessments.

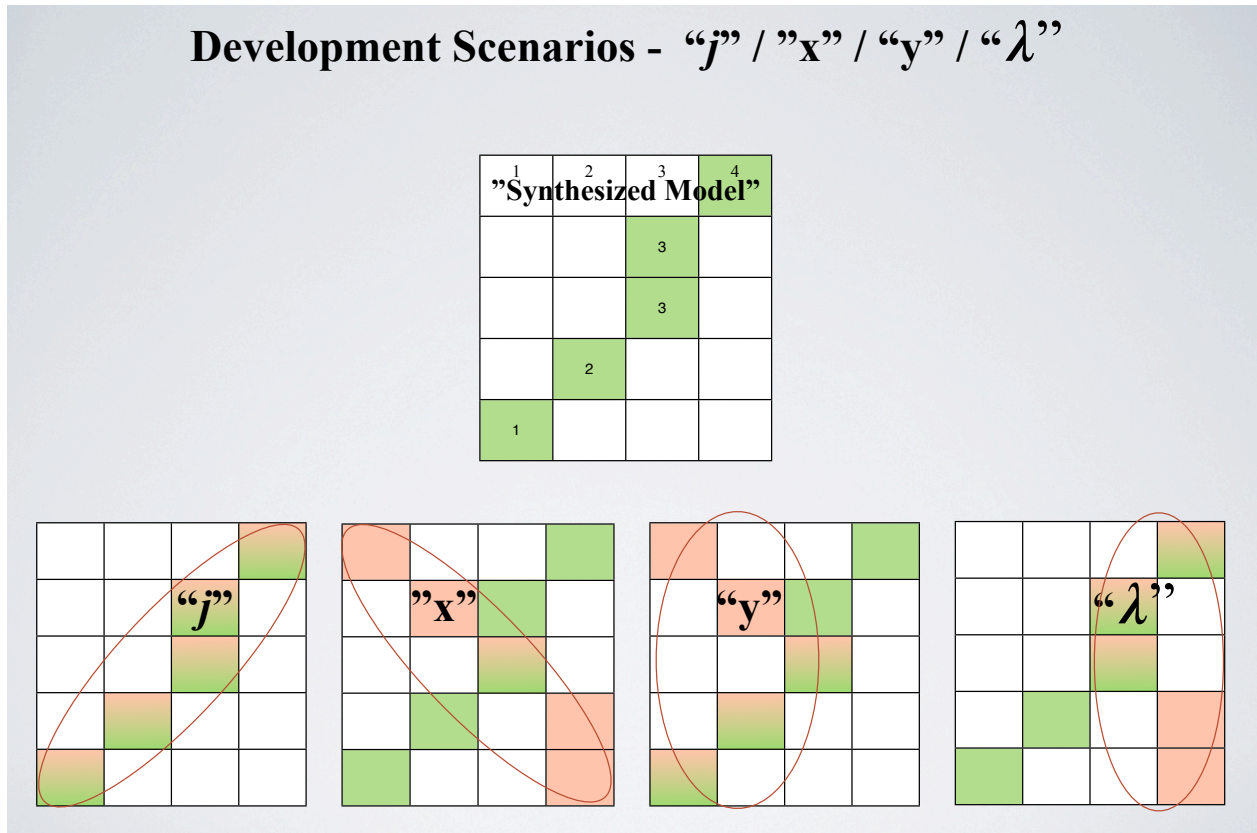
The Synthesized Model of regional economic development provides an opportunity to identify the priority areas of policy and intervention to stimulate outpacing economic development. With the Synthesized Model of regional economic development the causation of regional development trends can be identified and the development potential can be assessed in the context of the implemented policy. The Synthesized Model can be applied in developing recommendations for the economic development policies of regions.

Based on the Synthesized Model, four types of policy and development models have been identified:

1. “j” model or policy that most corresponds to the assessment of the priority areas of interventions included in the matrix, thus (along with the figure of the Synthesized Model) forming a notional “j” shaped form in the matrix. Such a development model shows effective management of development and provides development rates outpacing other regions.
2. “x” model or policy that is contrary to the values defined in the Synthesized Model, thus (along with the figure of the Synthesized Model) forming a notional "x" shaped form. This development model indicates ineffective development and investments, which results in stagnation of the region's economy and lagging behind the regions administered in a better way.
3. “y” model or policy that to some extent (the factors of lesser importance) coincides with values of the Synthesized Model, thus (along with the figure of the Synthesized model) forming a notional “y” shaped form. Most of the development factors have too low a priority value. Such a development model indicates passive control over the economic development in the region and no usage of the regional endogenous development potential.
4. “λ” model or policy that in one part (the factors with the greater importance) coincides with values of the Synthesized Model, thus (along with the figure of the Synthesized Model) forming a notional “λ” shaped form. It features an abundance of

priorities or approach “all the priorities have a bit”, as a result a lack of support and investment critical mass occurs which slow down development. In fact, this model is the sum of “x” and “y” models characterized by ineffective management and use of resources.

Fig. 1. Visualization of 4 development scenarios



Source: Figure designed by the author

By assessing the approaches of economic development of regions according to these models, it is possible to determine their potential and to project the development success or failure. Moreover, it is possible to identify some non-corresponding values, adjustment of which can provide for faster, more efficient and more sustainable economic development in the region.

Analysis of Latgale region

The approbation of the Synthesized Model of regional economic development was carried out by in-depth analysis of development trends, opportunities and challenges of Latgale region. Within the analysis of Latgale region the paradigm of the current development policy and the role given

to the specific development factors was identified. The directions of the potential interventions were determined.

Table 3. Assessment of the economic development policy and development perspectives of Latgale region

Development dimensions	Current situation in Latgale	Development perspectives for Latgale
Economic development paradigm of the region	Receiving subsidies (equalisation fund of municipal financing, programmes for development of less developed regions, programmes for development of the border areas) and dominance of investments in infrastructure (state investment programme, EU Cohesions policy investment projects, development part of municipal budget)	Development of innovations, human capital, entrepreneurship – according to the Synthesized Model of regional economic development.
Governance model	Fragmentary and hierarchical governance model. Lack of effective tools for the support of entrepreneurship. Successful application of the integrated planning practice.	Creation of regional governance cluster, closer link between planning implementation of the policy, public participation in decision making processes and participatory governance. Establishment of a regional development agency to foster development of entrepreneurship.
Urban and spatial factors	Competition and lack of cooperation (Rezekne city and Daugavpils city competitive relations, lack of cooperation tools, belated local administrative territorial reform and agglomeration of small municipalities)	Networking, cooperation, complementarity.
Public investments	Low return of public investments in economy, repeated redistribution of income, investments in base infrastructure. Investments in infrastructure with low expediency.	Investments in science, education, support for innovations, support for the start-up and development of entrepreneurship. Development of infrastructure supporting entrepreneurship.

Development dimensions	Current situation in Latgale	Development perspectives for Latgale
Employment and education policy	Demand-based employment and education policies that respond to short-term demand and labour market conditions. Also, demand-oriented and providing low returns educational programmes. Low quality and competitiveness of vocational education.	Employment, education and entrepreneurship development policy that focuses on long term challenges, on the increase of the quality of human capital in the region and on the development of innovation creation skills. Increase of productivity as an indicator and a target.
Development of entrepreneurship	Low activity of entrepreneurship, newly established enterprises per 1000 inhabitants explicitly less than in other regions of Latvia. Little focus drawn to the development of functional economic territories, establishment of cooperation links and development of industrial districts. Explicitly few investments allocated to development of innovation skills. Endogenous development factors of territory have not been used fully.	Significant raising of human capital capacity, increasing local entrepreneurship skills, raising of readiness to develop new enterprises, raising of the quality of local labour force, stimulating the inflow of foreign investments. Attraction of investments and large enterprises. Quality of administration, development of the necessary infrastructure for entrepreneurship. Advantageous education and innovation environment.
Development factors at macro level	Low activity of entrepreneurship, high unemployment, low productivity, depopulation of the region.	Rise of productivity, development of human capital, stimulation of entrepreneurship.
Development factors at micro level	Emigration, low qualification of labour force, non-cooperation, low readiness to become an entrepreneur, low acknowledgement of the lifelong learning.	Acknowledgement of the value of training, increase of qualification, development of entrepreneurship, development of cooperation skills.

Source: Assessment elaborated by the author based on the Synthesized Model approach, data analysed within the study and conclusions put forward.

The results were compared with the RED Synthesized Model. The designed matrix provides an assessment for the up-to-now (consciously or unconsciously) made choices of the actually implemented development policy and significance of the development factors. The matrix provides a comparison between the development policy of Latgale region and the Synthesized

Model elaborated by the author. The compliance or conflict with the values of factors defined in the Synthesized Model were identified.

Table 4. Assessment of the actually implemented development policy in Latgale in comparison with the Synthesized Model

	Dimensions/choices/development factors	1	2	3	4
	Microterritorial view	L			x
	Development directed by intangible assets	L			x
	Percipience for innovations, diffusion processes of exogenous technology, networking, cooperation. Innovations, knowledge, human capital, learning.	L			x
	Ability of local production system to react to outside incentives, adapt short-term and long-term tendencies of global and national economy, (to use them) based on endogenous factors.		L		x
	Export		L		x
	Active role of space (resource)		L	x	
	Supply-oriented development		L	x	
	Increase of productivity, individual welfare, incomes		L	x	
	Industrial districts, agglomeration, functional economic territories, economic and social relations	L		x	
	Infrastructure			x	L
	Large-sized firms, growth centres, foreign direct investments			L	
	Choice of the location of the enterprise, transport expenses, lower production costs, migration flow		L	x	
	Accessibility, geographical location, distance from the centre of economic activities			L	
	Macroeconomic factors		x	L	
	Demand-oriented development		x		L
	Development directed by tangible assets		x		L
	Passive role of space	x		L	

Source: Elaborated by the author

As a result of the analysis it is concluded that:

- (1) In the assessment of the policies implemented in Latgale region only 2 factors coincide with the Synthesized Model;
- (2) In the assessment of the policies implemented in Latgale region 10 factors received less significance than recommended in the Synthesized Model;
- (3) In the assessment of the policies implemented in Latgale region 6 factors received higher significance than recommended in the Synthesized Model;
- (4) The discrepancies between the policy implemented in Latgale region and basic principles of the Synthesized Model are not chaotic, but rather very consistent. Factors, which the Synthesized Model identified as having the highest significance in Latgale region, are given less value. While factors that the Synthesized Model assigned as having the secondary significance were attributed the highest importance within the policy implemented in Latgale region.
- (5) Consequently, the development paradigm implemented in Latgale is opposite to the Synthesized Model of regional economic development . It should be concluded that in relation to the Synthesized Model the “x” shape development policy has been chosen.

As indicated the “x” model policy is contrary to the values defined in the Synthesized Model, thus (along with a figure of the Synthesized model) forming a conditional “x” shaped form. The “x” model indicates ineffective development and investments which results in stagnation of the region's economy and lagging behind the regions which are more effectively governed.

The explicit discrepancy between the development policy implemented in Latgale region (which has been unsuccessful) and the Synthesized Model (which sets the conditions for an outperforming development) approves the assessment of the values of the development factors defined in the the Synthesized Model.

The findings of the analysis of Latgale region allowed to approbate the Synthesized development model. It can be concluded that the matrix approach based on the Synthesized Model of regional economic development is applicable as an analytical tool to evaluate the implemented policies of regional economic development and to identify the necessary changes.

Conclusions

1. By assessing the diverse development factors defined in the RED theories, the Synthesized Model of RED was developed. It allows to identify the causations of regional development trends and to assess development potentials in the context of implemented policies, as well as to design recommendations for regional economic development policies. The Synthesized Model of regional economic development provides an opportunity to identify the priority areas

of policy and intervention for stimulating outpacing economic **growth**. The aim of the Synthesized Model is to define the development dimensions / factors where the investments of management resources would provide for a greater return and positive and outperforming regional economic growth.

2. A distinctive difference from the RED models elaborated by other authors is the necessity not only for generally available economic, demographic and innovation skill characterizing macroeconomic indicators of a region, but also the necessity to clarify the attitude of population towards the matters influencing economic processes and to provide a qualitative assessment of the implemented development policy. This means that the key is the availability of the results of sociological surveys and expert assessment of the specific situation of the region. The quantitative and qualitative assessment of the economic development of the region is equally important in the model.
3. To evaluate the implemented policies of regional economic development and to identify the necessary changes the matrix approach based on the Synthesized Model of regional economic development elaborated by the author is applicable as an analytical tool.
4. Having identified that the development policy in Latgale has been selected contrary to the values defined in the Synthesized Model, suggests that the backwardness of the regional economic development is etiological. The explicit discrepancy between the development policy implemented in Latgale region (which was unsuccessful) and the Synthesized Model (which sets the conditions for an outpacing development) approves of the assessment proposed by the author in the model about the most significant and secondary development factors. Results of the evaluation of Latgale region development policy in comparison with the values defined in the Synthesized Model confirm the assumption set in the model about the factors advancing and preventing development.
5. In order to tackle the socio-economic backwardness problems specific to regions in the Baltic States, the first group of activities should focus on facilitating entrepreneurship development or on the task of the administration to contribute to the economic development of the territory. The second required pillar for ensuring socioeconomic development of regions is modern governance and integrated planning practices.
6. Development and implementation of the regional development policy can be essential to address the socioeconomic problems and to promote growth of the region. The research proposes to use the Synthesized Model of regional economic development for the assessment and elaboration of development policies.

Based on the Synthesized Model matrix as directions for further studies can be identified a potential to carry out an international study about the scale of the possible use of this model outside Latvia and Baltic States and to assess the significance of each factor as well as their

former weight in the development policies of regions implemented in the EU countries. It would be useful to continue to approbate the use of the Synthesized Model and to develop it by defining the significance and value of each factor depending on the nationally or regionally specific features.

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