

Performance trends for smart growth in the rural territories of Latvia

B. Rivza*, M. Kruzmetra and V. Zaluksne

Latvia University of Agriculture, Faculty of Economics and Social Development, Svetes street 9, LV-3001 Jelgava, Latvia

*Correspondence: baiba.rivza@llu.lv

Abstract. Any country is interested in economic growth regardless of its development level in the given period; yet an increasingly important role in defining growth is played by the term *smart growth*. The EU development strategy until 2020 defines smart growth as a strategic objective. For this reason, economic performance trends towards smart growth and smart specialisation have become an urgent task in project No.5.2.3 ‘Rural and Regional Development Processes and Opportunities in Latvia in the Context of Knowledge Economy’ in National Research Programme 5.2. ‘Economic Transformation, Smart Growth, Governance and Legal Framework for the State and Society for Sustainable Development – a New Approach to the Creation of a Sustainable Learning Community: EKOSOC-LV’.

The research performed by the authors gives an insight into the socio-economic performance trends towards smart growth in Latvia’s regions and municipalities in particular, which are typical local administrative units in the country. The research used statistic data of the LURSOFT, Central Statistical Bureau and RDIM (Regional Development Indicator Module) databases for the period 2009–2013, examining the acquired information and performing horizontal and vertical analyses and data grouping, in order to identify the accumulation of positive/innovative changes. For a detailed examination of the mentioned phenomena, Zemgale region was selected as the territory in Latvia with an average development level. The research led to the conclusion that an increase of the proportion of knowledge-based goods (produced by high-tech and medium high-tech enterprises) and knowledge-intensive services in the overall increase of output in Zemgale region was greater than an increase in the total number of enterprises. The growth was observed both in ‘accessible’ territories and in ‘remote’ territories at different population decline rates etc. The latter allows considering that smart growth is determined not only by objective circumstances but also by local authorities, the activity of various public organisations and the readiness of residents to act under the guidance of the mentioned formations. It has to be taken into consideration when working on a territorial development strategy and achieving the objectives set in the strategy.

Key words: performance, smart growth, municipalities.

INTRODUCTION

In the Europe 2020 strategy, smart growth, sustainable growth and inclusive growth are defined as strategic objectives: smart growth is understood as developing an economy based on knowledge and innovation – promoting a more resource efficient, greener and more competitive economy and inclusive growth – fostering a high-employment economy delivering social and territorial cohesion (EC. Europe 2020). The

Europe 2020 strategy for smart, sustainable and inclusive growth can only be achieved if the territorial dimension of the strategy is taken into account, as the development opportunities of the different regions vary (EU, 2011). The place-based economic transformation role again highlights the EU National/regional innovation strategies for smart specialisation (EC, 2014a).

The present research is based on the methodology for rural analysis accepted in the European Union, which is known as ‘the EDORA cube’ and involves a three-dimensional framework for analysis – rurality/accessibility, a degree of economic restructuring and socio-economic performance, with a special focus on smart growth processes as the factors influencing economic performance trends (ESPON, EDORA...). The issue of smart growth in research studies refers to both a broad multidimensional approach and the observation of this phenomenon in a particular sphere of social life, for example, economics which outlines developing an economy based on knowledge and innovation (EC, EUROPE 2020). Smart and sustainable growth is not possible without radical innovations based on technological change that alter or replace traditional solutions. (EC, 2012) In practice this means to increase the share of a knowledge-based economy in the business as a whole.

Therefore the aim of the present study is to find out the knowledge-based economic growth in the rural areas of Latvia and conditions most significantly affecting the ongoing process by influencing agents as state institutions, local governments and communities in local territories.

In order to reach the aim, the following tasks were set:

- 1) to find out whether there is knowledge-based business expansion in Zemgale, one of Latvia regions, and if there is, then to what extent;
- 2) to evaluate agent groups’ activities in business promotion or hindering.

The research on the issues regarding the economic growth in Latvia has been quite extensive (Vitola & Hermansons, 2012; Hilkevics & Stefenberga, 2014; Lonska, 2014; Garanti, 2015; Šipilova, 2015) yet, it is usually limited to the level of the regions which form the country. The authors’ research for the first time provides an insight into the socio-economic performance trends towards smart growth in Latvia not only at a regional level but also at the level of municipalities, typical local administrative units in the country, thus contributing to the continuation of the 2009 administrative and territorial reform started in 2009.

MATERIALS AND METHODS

The research used Lursoft, Central Statistical Bureau and RDIM databases for the period 2009–2013, analysed the acquired economic information, performed horizontal and vertical analyses and data grouping. Zemgale statistical region, a territory with an average development level in Latvia, was selected for a more detailed examination (see Table 1).

Successful changes in the economic sphere occur when sufficiently large part of the residents perceive these changes positively and are ready to engage. Therefore simultaneously the survey of several social groups was carried out. Executive directors of Zemgale region’s municipalities (n = 12) and social work performers (n = 39) as well as local residents (n = 103) were questioned to find out their opinions regarding the changes taking place in rural territories currently and the factors promoting or hindering

the changes in the economic sphere assessing the state institutions, local authorities and citizens in these changes.

Table 1. Internal disparities in Latvia at the level of regions

Region	Population density per sq. km in the beginning of 2015	Gross domestic product per capita (EUR) in current prices in 2013	Household disposable income per equivalent consumer in 2013, EUR
Pieriga	36	9305	579.96
Vidzeme	13	6944	448.72
Kurzeme	19	8497	490.85
Zemgale	23	7152	432.93
Latgale	19	6159	384.80

The results of the study could be taken into account when designing a future development scenario. The present research is closely related to the government-funded research project ‘Rural and Regional Development Processes and Opportunities in the Context of Knowledge Economy’ whose one of the key goals is the development of a strategy for smart rural and regional development (EKOSOC-LV 5.2.3.).

RESULTS AND DISCUSSION

I. Entrepreneurship trends in Zemgale region in the period 2009–2013

Even though the years of the global economic crisis were a complicated period, statistical data pointed to some increase in entrepreneurial activity. The total number of enterprises operating in the region increased and the number of enterprises performing innovative economic activity rose even faster. Consequently, the proportion of enterprises performing innovative activities increased as well (see Table 2).

Table 2. Increase in the proportion of HT, MHT and KIS enterprises (NACE Rev.2)

	Total enterprises in the region	HT, MHT and KIS enterprises	Proportion of HT, MHT and KIS enterprises
2009	2604	308	11.8%
2013	4215	612	14.5%
2013/2009	161.9%	198.7%	122.9%

* – The knowledge-based enterprises: MH – high technology; MHT – medium-high-technology; KIS – knowledge-intensive services.

Overall, the data of the region point to both the vertical growth trend and horizontal/structural changes, which are supported by the increase in the proportion of enterprises performing innovative economic activity. This means that, on the whole, the trend towards a knowledge based economy can be observed in the region. However, there is a question regarding whether the changes may be observed in all the municipalities of the region (20 municipalities), whether the changes have not only economic but also social influence, the most important among which is the maintenance of population.

The analysis of the data obtained from each municipality of the region has led to a conclusion that average figures may be used only as a criterion for comparative assessment of the situation in each municipality. In fact, quite different trends in entrepreneurial activity may be observed within the region.

First, although entrepreneurial activity has increased in all the municipalities of the region, the municipalities may be divided into two groups regarding an increase in the number of innovative enterprises (see Table 3). The first group consists of the municipalities where an increase in innovative entrepreneurial activity lagged behind the overall increase in business activity (this group comprises five municipalities), while the second group is made up of the municipalities in which an increase in the number of innovative enterprises was greater than an increase in the total number of enterprises (this group contains 15 municipalities). So, explicit structural changes took place during the course of development.

Second, the group of municipalities that presented a greater increase in innovative entrepreneurial activity also collected greater income tax revenues from enterprises operating in their territory. If the number of residents decreased in the municipalities, but the number of enterprises increased and the tax revenue paid by enterprises to the local governments increased in the analysed period, one has to assume that the smart growth process had taken place in all the region's municipalities. However, economic growth in the municipalities where an increase in innovative entrepreneurial activity was greater than the overall increase in business activity has achieved higher economic efficiency, which actually is the purpose of performance of a territorial unit (Stankevics, 2014).

Table 3. Percentage change in entrepreneurial activity for the groups of Zemgale region's municipalities in the period 2009–2013

Groups of municipalities	Total enterprises	HT, MHT and KIS enterprises	Increase in enterprise income tax revenue of municipalities
1 st group of municipalities	168.3	129	122
2 nd group of municipalities	168.6	225	133.9

Different growth paces led to structural changes in the distribution of enterprises. An increase in the number of economically active statistical units in such industries as agriculture and forestry (from 36.4% to 50.6%) was reported for the first group of municipalities, while growth, although insignificant (from 50.9% to 51.5%), was observed in the services sector for the second group of municipalities. Consequently, in 2013 in the region, there were municipalities that focused on economic activity in agriculture and forestry and there were also municipalities where a half of economic activity there was related to the services sector (see Table 4). However, a common feature is that manufacturing industry contributing to higher added value and labour productivity growth, played a quite small role in both groups of municipalities.

Table 4. Proportion of the dominant economic activities for the groups of municipalities in 2013

Groups of municipalities	Agriculture, forestry	Manufacturing	Services
1 st group of municipalities	50.60%	9.95%	32.68%
2 nd group of municipalities	25.15%	11.54%	51.54%

The indicators of some municipalities show also quite explicit internal disparities between both groups of municipalities. The proportion of manufacturing enterprises ranged from 2.1 to 14.8% for the first group and from 3.3 to 20.6% for the second group of municipalities. Since the municipalities with the highest proportion of manufacturing enterprises are border area municipalities and they are located outside the national and regional agglomerations, it could be assumed that rural areas refer to the space where growth of processing industry, associated with the group of high and medium high technologies, is possible similarly to cities.

The analysis of vertical economic growth and horizontal restructuring allows drawing the conclusion that smart growth as a performance trend in Zemgale region occurs, while regarding other regions of Latvia smart growth could be assumed to be hypothetical since the research and more detailed analysis of the data from other regions have not been completed yet.

II. Role of performance agents' groups in promotion of smart economic growth

According to the European Union's smart growth strategy, an increasing role in performance management is assigned to governmental institutions and community-led local development. Governmental institutions have to act as initiators and coordinators for the expansion of innovative activity in their administrative territories. This relates to both national institutions and local authorities that act as institutions administrating local territories. Good quality government institutions may be considered as an essential prerequisite for the development of effective innovation strategies (EC, 2014b). That is why it is of great importance that local governments do have the capacity for this kind of work. At the same time, the population of local territories are ready for such activity.

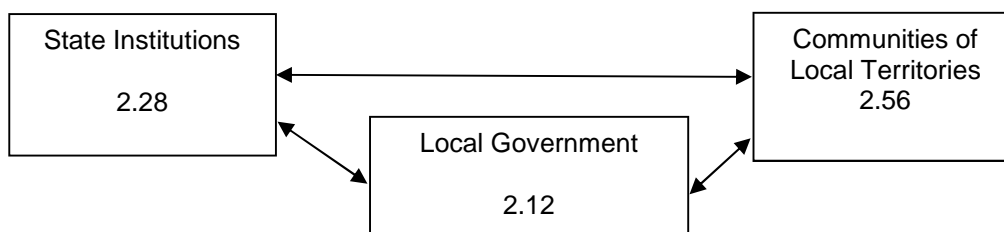
Community-led Local Development can mobilise and involve local communities and organisations to contribute to achieving Europe 2020 strategy goals of smart, sustainable and inclusive growth (EC, 2014c).

The dynamics of territory performance includes three phases:

- 1) *Preconditions of performance* – agents have potential to achieve a certain level of performance in a municipality,
- 2) *Achievement of performance* – agents of a municipality reach a certain level of performance and become players in the national or global economic space,
- 3) *Result of performance* – to understand the municipality performance which has been achieved by the performance of agents as one of the factors that influence the performance (Stankevics, 2014).

However, transition from one stage to the next one within the country is affected by three groups of performance agents: the state as a set of institutions, local governments and communities of local people, which act as the Triple Helix model's elements that mutually interact (Ranga & Etzkowitz, 2013).

The authors were interested in the opinion among people regarding the influence of the agent groups on economic growth in municipalities, including knowledge-based growth, and in opportunities to determine which performance phase each agent group belongs to (see illustration in Fig. 1).



(Evaluation scale from 1 to 5, where 1 – very good, 2 – average, 3 – low, 4 – critical, 5 – no answer)

Figure 1. Evaluations of the groups of performance drivers by the respondents.

The results of the survey could be used for a more detailed analysis of the specific geographic place, but it was not the aim of this article. The authors were interested in the weighted average result of the agent groups and the most important factors promoting or hindering the necessary development.

The respondents considered local authorities to be the most important driver for change followed by state institutions, while the lowest evaluation was given to residents living in the administrative territory. However, the opinion of each respondent group brings some corrections in the performance evaluations of the agent groups.

- The executive directors of municipalities (who represented 60% of the total number of the region’s municipalities) regarded state institutions, the kind of their activity and their performance as the most important agent group bringing change, whereas the role of local community members was rated very low.
- Social work performers ranked the authority of the local administrative territory in the first place and equally rated both state institutions and the local population.
- The municipality residents, assigning no priority to themselves, rated the authority of the local administrative territory in the first place and state institutions as performance drivers as the lowest (see Table 5).

Table 5. Evaluations of the groups of performance drivers by the respondents

Surveyed groups	Impact of		
	state institutions	local governments	communities of local territories
representatives from Zemgale region municipalities	1.83*	2.19*	2.87*
social work performers	2.40*	2.23*	2.40*
municipality residents	2.60*	2.15*	2.40*

* – Evaluation scale from 1 to 5, where 1 – very good, 2 – average, 3 – low, 4 – critical, 5 – no answer.

The information acquired allows identifying the most positive contribution of each agent group to rural development and the most negative activities or the lack of activity in achieving an objective from the perspective of the respondents.

The most positive result of **state institutions** regarding the development of rural territories, according to the respondents, was their efforts in making the EU funding available, but the following problems were mentioned as negative: the tax system that poorly contributed to or even hindered economic activity in the country and the operational principles of the financial equalisation fund.

The most positive specific activity of **local authorities** was their skill to attract the EU structural funding and to effectively use the funding, which was explained by the competence of the municipalities' officials in planning the development of their municipalities and in the management of development projects. However, the respondents mentioned the insufficiently integrated vision of the deputies elected in municipal government structures about the key objectives of territorial development and their insufficient work with local community groups to engage them in discussing and tackling important problems as the factors hindering their successful development.

The evaluations of **the local population's** contribution were different. On the one hand, the respondents stressed the local residents' readiness to acquire new and innovative knowledge, their readiness for economic activities aimed at raising their personal incomes and even their readiness for change in their job, community and surrounding environment. At the same time, the respondents pointed to the local residents' low readiness to actively cooperate in tackling practical problems in their municipality's life and their very low interest in economic cooperation. The respondents attributed high activity to 10.0–12.0% of the local residents and low activity or even reluctance to 35.0–45.0%. The results of this small survey are consistent with both international research studies on this problem (Keller, J.W.) and those done in Latvia (Paula, 2015) that reveal that the population cooperate mainly in the social, educational and cultural fields, while low or even insufficient activity is observed in the economic field in which the 'own government' (Pukis, 2010) has to not only make the population aware of state functions but also to play the roles of the community leader, initiator and promoter (Bariss, 2009).

The analysis of the opinions of respondents summarizes the directions of activities that performance agents have to primarily tackle with in order to favourably influence the pace of development and specifically the increase of the proportion of knowledge based entrepreneurship in the economic activities in the rural space. For the time being state institutions and local governments have mostly contributed their efforts in obtaining and using various EU funding, but they have not sufficiently explained the necessity of the change of the form and content of the economic sector according to new emerging requirements of the 21st century and have put limited efforts to enhance residents' inclusion into these changing processes. Therefore the sufficient pace of growth of successful innovative activities in entrepreneurship on the whole and specifically in knowledge-based entrepreneurship and faster growth of proportion of knowledge-based entrepreneurship have not been achieved yet which is proved by the analysis of LURSOFT un CSB data as well as by the results of the survey among the residents of the region.

The task of further research is, of course, to identify the most preferable fields of activity of municipalities and the most effective approaches to contributing to economic activity in rural areas in order to foster business, knowledge-based economic growth and the viability of rural areas under the modern complicated circumstances.

CONCLUSIONS AND PROPOSALS

Objective data indicate that even under the complicated circumstances caused by the global crisis economic growth trends could be observed in rural areas. The number of enterprises registered in the LURSOFT system in Zemgale region increased 1.6 times over five years. At the same time, the number of enterprises engaged in knowledge-based economic activity (HT, MHT, KIS) increased 1.9 times, which indicated not only quantitative but also qualitative changes. The proportion of knowledge-based economic activity increased. Unfortunately, the increase totalled only 2.7%-points over a five-year period, which makes us seek solutions to raise the pace of increase in the proportion of knowledge-based growth and in the proportion of the number of related enterprises in the total enterprises.

An analysis of quantitative knowledge-based growth reveals that the pace of growth differs among the municipalities. Based on the comparison according to two indicators (increase in the total number of enterprises and the number of knowledge-based enterprises) for the period 2009–2013, Zemgale region's municipalities may be divided into two different groups. In Group 1 (five municipalities), the total number of enterprises rose faster than that of knowledge-based enterprises; in the result, the proportion of knowledge-based enterprises decreased from 8.2 to 6.4% in those municipalities. In Group 2 (15 municipalities), an increase in the number of knowledge-based enterprises considerably exceeded an increase in the total number of enterprises, and their proportion rose from 12.1 to 15.0%. In two municipalities of the region, the proportion of this kind of enterprises was even greater than 20% of the total enterprises. Since the municipalities of Group 2 have both 'accessible' territories and 'remote' territories, an opinion forms that smart growth is not determined only by objective circumstances but also by subjective factors such as municipal government performance, the activity of various public institutions and residents' readiness to work under the guidance of the institutions and organisations.

The information acquired in the survey of executive directors of Zemgale region's municipalities, social work performers and residents give some insight into the perspectives of the mentioned rural community groups about the roles of performance groups on the way towards a smart economy. The respondents considered their municipal government to be the most important driver; yet they suggested it has to better play the role of the 'own government', expanding cooperation with the local population and the municipality's entrepreneurs. The respondents mainly perceived state institutions as those conducting the EU financial flows to municipalities, criticising instability in economic policies (tax policy and legislation). The third driver of performance is the community of residents themselves, as progress depends on their readiness for actions. According to research studies on the implementation of innovations in the real life, it takes time to get from the birth of an innovative idea to the 'integration' of the innovation into the society. The survey data show that Latvia's rural society is still at this stage, as only 10–15% of the residents actively engage in the

processes of change taking place in rural areas, which also influences knowledge-based economic growth.

The findings on the performance trends in Zemgale region of the present research make it necessary to verify the conclusions based on the data of other regions in order to contribute to the elaboration of Latvia's rural smart growth strategy in the context of knowledge-based economy. Secondly, discussions should be carried out on larger scale among all three groups of performance agents in order to find the solution to the problem.

ACKNOWLEDGEMENT. The paper was prepared in the framework of the National Research programme EKOSOC-LV as the part of subproject 5.2.3. 'Rural and Regional Development Processes and Opportunities in Latvia in the Context of Knowledge Economy'.

REFERENCES

- Bariss, V. 2009. Public Administration. (in Latv.) Jelgava, LUA, 112 p.
- European Commission. 2010. EUROPE 2020. A Strategy for Smart, Sustainable and Inclusive Growth. <http://ec.europa.eu/eu2020/pdf/COMPLET%20EN%20BARROSO%20%20%2007%20%20Europe%202020%20-%20EN%20version.pdf> [10.01.2016.]
- European Union. 2011. Territorial Agenda of the European Union. Towards an Inclusive, Smart and Sustainable Europe of Diverse Regions. <http://www.eu2011.hu/files/bveu/documents?TA2020.pdf> [12.01.2016.]
- European Commission. 2012. Connecting Smart and Sustainable Growth through Smart Specialisation. A practical guide for ERDF managing authorities. Regional and Urban Policy. http://ec.europa.eu/regional_policy/sources/docgener/presenta/green_growth/greengrowth.pdf [15.02.2016]
- European Commission. 2014a. National/Regional Innovation Strategies for Smart Specialisation (RIS3). Cohesion Policy. http://ec.europa.eu/regional_policy/sources/docgener/informat/2014/smart_specialisation_en.pdf [11.02.2016.]
- European Commission. 2014b. The Role of Government Institutions for Smart Specialisation and regional Development. IRC Technical reports. IRC.
- European Commission. 2014c. Community-led local development. Cohesion Policy. http://ec.europa.eu/regional_policy/sources/docgener/informat/2014/community_en.pdf [25.02.2016]
- Garanti, Z. 2015. Regional Cluster Establishment and Development Possibilities in Latvia. Summary of the Doctoral Thesis for the Scientific Degree Dr oec. Jelgava, Latvia University of Agriculture, 120 p.
- Hilkevics, S. & Stefenberga, D. 2013. Problems of Latvia Regional Economic Development and Innovative Entrepreneurship. Regional Review, Nr 9, Daugavpils University, pp. 16–24.
- Keller, J.W 2016. The Importance of Rural Development in the 21st Century – Persistence, Sustainability, and Futures. The Regional Institute. Online Publishing. <http://www.regional.org.au/au/countrytowns/keynote/keller.htm> [12.04.2016]
- Lonska, J. 2014. Assessment of Territorial State of Development in Latvia Regions. Summary of the Thesis for obtaining the Doctoral Degree in Economics. Daugavpils, Daugavpils University. 103 p.
- Paula, L. 2015. Capability of Communities as Precondition for Sustainability of Rural Areas. *Proceedings of the 2015 International Conference 'ECONOMIC SCIENCE FOR RURAL DEVELOPMENT'* No38. Jelgava, LUA, pp. 103–112.

- Pūķis, M. 2010. Own government. Latvian local government experience, ideas and vision for the future. (in Latv.) LPS, 512 p.
- Ranga, M. & Etzkowitz H. 2013. Triple Helix Systems: An Analytical Framework for Innovation Policy and Practice in the Knowledge Society. *Industry and Higher Education* **27**(4), 237–262 pp.
- Sipilova, V. 2015. Structural Changes in manufacturing and their Impact on Economic Growth. Summary of the Thesis for Obtaining the Doctoral Degree. Daugavpils, Daugavpils university. 116 p.
- Stankevics, A. 2014. The Role of the Higher Education in the Increasing of Performance of a Region. Summary of the Thesis for Obtaining the Doctoral Degree. Daugavpils, Daugavpils university, 241 p.
- Vitola, A., Hermansons, Z. 2012. Perspectives of Rural Development in Latvia. In: *Riga Technical University 53rd International Scientific Conference: Dedicated to the 150th Anniversary and the 1st Congress of World Engineers and Riga Polytechnical Institute / RTU Alumni: Digest*, Latvia, Riga, 11-12 October, 2012. Riga: Riga Technical University, pp. 511–511.