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Balvi District Partnership, 2011
Daugavpils University, 2011
Estonian Agricultural Registers and Information Board, 2011
Estonian University of Life Sciences, 2011
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Foreword

Every year the Faculty of Economics, Latvia University of Agriculture holds the international scientific conference “Economic Science for Rural Development” and publishes internationally reviewed papers of scientific researches, which are presented at the conference. **This year the conference is organised for the 12th year running and all the papers are published in English.** Selected papers from the Proceedings are included into *ISI Web of Knowledge* database and the Faculty of Economics has applied also to Scopus database for including the Proceedings into this database.

Researchers from various European countries representing not only the science of economics in the diversity of its sub-branches have contributed to the conference this year; they have expanded their studies engaging colleagues from social and other sciences, thus confirming inter-disciplinary and multi-dimensional development of the contemporary science. The conference is dedicated to topical themes of rural development; hence, the research results are published in three successive volumes (No. 24, 25, and 26). The first volume of scientific conference proceedings was published in 2000.

Professors, doctors of science, associate professors, assistant professors, PhD students, and other researchers from the following higher education, research institutions, and professional organisations participate at the International Scientific Conference held on April 28-29, 2011 and present their results of scientific researches:

Latvia University of Agriculture
Academy of Management in Lodz
Balvi District Partnership
Daugavpils University
Estonian Agricultural Registers and Information Board
Estonian University of Life Sciences
Fulda University of Applied Sciences
Latvian Academy of Agricultural and Forestry Sciences
Latvian State Forest Research Institute “Silava”
Latvian State Institute of Agrarian Economics
Latvijas Mobilais Telefons
Lithuanian University of Agriculture
Ministry of Education and Science of the Republic of Latvia
Research Institute of Agriculture Machinery, Latvia University of Agriculture
Research Institute of Biotechnology and Veterinary Medicine “Sibra”
Riga International School of Economics and Business Administration
Riga Technical University
Rural Support Service
School of Business Administration Turība
Seinäjoki University of Applied Sciences
University College of Economics and Culture
University of Helsinki
University of Latvia
University of Life Sciences in Lublin
University of Ljubljana
Vidzeme University of Applied Sciences
Vytautas Magnus University
Warsaw University of Life Sciences
West Pomeranian University of Technology in Szczecin
West University of Timișoara

The following topical themes have been chosen for the conference:

- **Primary and secondary agricultural production and cooperation;**
- **Integrated and sustainable development;**
- **Finance and taxes;**
- **Education and rural science;**
- **Resources and sustainable consumption;**
- **Home economics.**

The comprehensive reviewing of submitted scientific articles has been performed on international and inter-university level to ensure that only high-level scientific and methodological research results, meeting the requirements of international standards, are presented at the conference.

Every submitted manuscript has been reviewed by one reviewer from the author's native country or university, while the other reviewer came from another country or university. The third reviewer was chosen in the case of conflicting reviews. All reviewers were anonymous for the authors of the articles. Every author received the reviewers' objections or recommendations. After receiving the improved (final) version of the manuscript and the author's comments, the Editorial Board of the conference evaluated each article.

All the papers of the international scientific conference "Economic Science for Rural Development" are arranged into the three following thematic volumes:

No. 24 Production and Taxes

Primary and Secondary Production and Cooperation

Finance and Taxes

No. 25 Resources and Education

Resources and sustainable consumption

Education and rural science

No. 26 Sustainability

Integrated and Sustainable Development

The publishing of the Proceedings before the conference will promote exchange of opinions, discussions, and collaboration of economic scientists on the international level. The research results included into the Proceedings are available worldwide to any stakeholder.

The abstracts of the conference proceedings provided in English are submitted to the international databases:

Web of Knowledge, which is a unified platform, that integrates all data and search terms. It provides access to the world's leading citation databases, including powerful cited reference searching, the Analyse Tool, over 100 years of comprehensive backfile and citation data. *Web of Knowledge* also delivers access to conference proceedings, patents, websites, and chemical structures, compounds and reactions. While other databases simply aggregate data, *Web of Science* information is carefully evaluated and selected. This time-tested approach helps conserve an institution's resources and researchers' time by delivering access to the most relevant resources. *Web of Science* offers a true cited reference index, which is still the best tool for discovery and the only method of retrieving accurate citation counts.

AGRIS - International Information System for the Agricultural Sciences and Technology set up by the Food and Agriculture Organisation of the United Nations (FAO UN), and especially to the databases containing full research texts set up by the academic higher education institutions.

EBSCO Academic Search Complete is the world's most valuable and comprehensive scholarly, multi-disciplinary full-text database with more than 8,500 full-text periodicals, including more than 7,300 peer-reviewed journals.

CABI PUBLISHING CAB ABSTRACTS database. *CAB Abstracts* gives researchers instant access to over 6.3 million records from 1973 onwards, with over 300,000 abstracts added each year. Its coverage of the applied life sciences includes agriculture, environment, veterinary sciences, applied economics, food science, and nutrition. **CAB Abstracts** is a comprehensive bibliographic database that covers worldwide literature from all areas of agriculture and related applied and life sciences. Published by CAB International, a division of CAB International, CABA is the world's most comprehensive database in its field containing 5 million entries of which 95% are supported by abstracts. Starting from 2009, part of entries is available as full-text periodicals.

The Conference Committee and editorial Board are open to comments and recommendations for the development of future conference proceedings and organisation of international scientific conferences.

We would like to thank all the authors, reviewers, members of the Programme Committee and the Editorial Board as well as supporting staff for their contribution organising the conference.

On behalf of the conference organisers

Gunita Mazūre

Associate professor of Faculty of Economics

Latvia University of Agriculture

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Integrated and sustainable development

Accessibility of Public Services for Business Development Displayed on Zemgale Region Local Governments' Web Pages

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Abstract. The Operational Programme "Human Resources and Employment" has noted that the administrative burdens and costs of public administration can be significantly reduced by effective use of Information Communication Services (ICT), e-government as well as the modernisation of public administration services by ensuring better access and customer-oriented approach. According to the different studies, the main obstacles to receive services from public administration are the lack of information on the services.

The aim of the research is to investigate the efficiency, accessibility and readability of the public services displayed on the local governments web pages for promoting the advancement of business development information.

The author reflects the role of public services availability and accessibility for the promotion of business development. The survey was conducted in order to investigate the kind of information customers are searching on local governments' web pages. The results of the survey are analysed and suggestions for further development of information displayed on the local governments' web pages are presented in the research.

Key words: Information Communication Services (ICT), web pages, public, services, business, development.

Introduction

Successful transition to innovative and sustainable development is provided by upgrading technologies, transferring and absorbing knowledge, and providing information accessibility end user-centric approach. The main focus of national or regional authorities is currently dedicated on fostering innovation, and high and knowledge-based technologies. Information communication technologies role in the decision making process is estimated as one of the most crucial and it ensures the survival and growth of economies in general.

Berisha-Namani M. (2009) pointed that information technology, particularly the Internet was having a significant impact on the operations of business companies which facilitate an increased interactivity, flexibility, cheap business transactions as well as improved interconnection with business partners and customers.

The European Structural Fund Operational Programme "Human Resources and Employment" noted that the administrative burdens and costs of public administration could be significantly reduced by effective use of Information Communication Services (ICT), e-government as well as the modernisation of public administration services. West D.M. (2000) notes that public administration websites are not accessible to all citizens and businesses in case of not full realisation of the benefits of government.

Different policies support state and municipal institutions in both improvements of services as well as internal and inter-institutional cooperation processes promoting availability and quality of services, facilitating administrative processes for people and entrepreneurs as well as information availability. However, Lipsky M. (2010) argues that reformers who hold out for prospects of radically better services and client outcomes tend to be dismissed as excessively idealistic.

Frequently different surveys have taken place from the aspect of public services in general rather than outlining importance of web pages of the public administration as promoter of business development. The research is based on the survey which was carried out in Zemgale region in the framework of the European Social Fund project "Evaluation of the Public Services and Improvement of Business Development in Zemgale Region" (Contract No. 1DP/1.5.1.3.2/09/APIA/SIF/045/4).

The research **hypothesis** was set based on the previous recognitions – information accessibility and public administrations' offered public services based on information communication technologies can substantially influence business development.

The research **aim** is to investigate the efficiency, accessibility and readability of the public services displayed on the local governments web pages for promoting the advancement of business development information.

The following **tasks** are stated to achieve the defined aim:

- 1) to investigate and characterise the theoretical aspects of information communication technologies for public administration;
- 2) to analyse the results of the survey on the information availability on Zemgale region local governments web pages;
- 3) to define the strategy for the public e services which support business development.

The research covers the study of regulatory and information base - special economic literature, statistical data, survey data, and other materials were used in order to deal with defined tasks of the research. The monographic descriptive method, the method of analysis and synthesis, and sociological research method – a survey were used for the purpose of the study. The questionnaire researched customers who are searching for the information on business development on local governments' web pages of Zemgale Planning region. In accordance with the research results, the author presents conclusions and recommendations on information e-services for business development on local government web pages.

Results and discussion

State and public institutions including local governments' websites play a significant role for the business development and have become a global learning institute. Mayers D. (2008) notes that they provide information and services to the public as well introduce with their purpose and the way they conduct business. Accessible 24 hours a day, these sites give the advantage of seeking help from state and public institutions, which is more efficient than an express mail, because it is received within minutes. On these sites it is possible to research and access information and save time that would have taken weeks or sometimes months for people to have physical access to these institutions. Mayers D. (2008) continues that this method has caused state and public institutions to be more efficient in their public relations matters. It gives the advantage over spending time visiting the public institutions' offices and waiting in line to speak to a person to access this information.

Having easy access to the information facilitates and prepares for business and living; thus enabling everybody to handle situation more effectively. Internet is a very powerful tool for bringing closer public services to the society and to catch everybody's interest and get everyone being involved. Friis C.S. (2002) admits that the electronic systems have been large electronic reproductions of the existing institutional patterns and relations, so it is no wonder that few dramatic institutional changes have occurred in the process of implementing e-government.

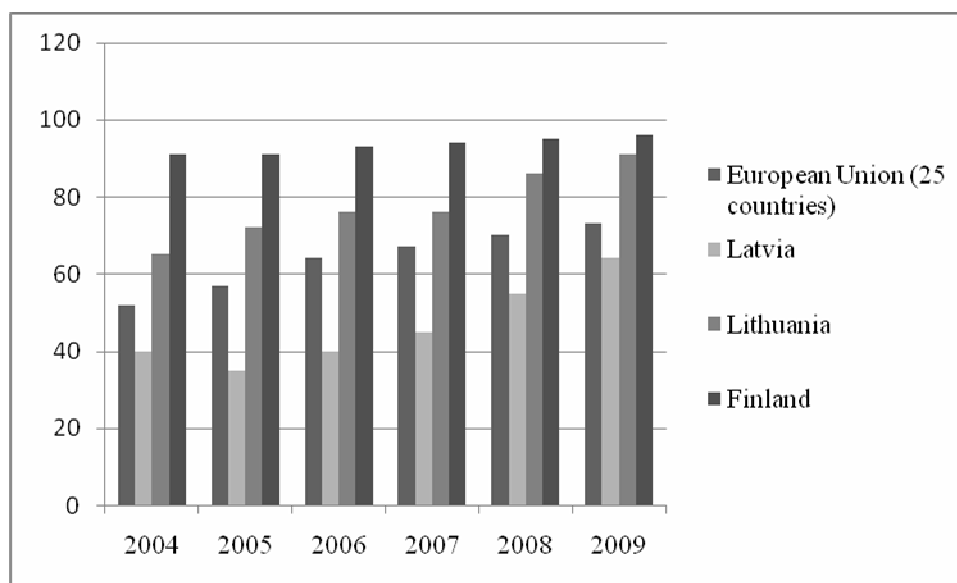
In terms of information technology for the future, Ziraks D. (2010) admits that information technology (IT) role in the decision-making capacity will be critical in the future. According to International Data Corporation study (2010) between now and 2020, the amount of digital information created and replicated in the world will grow to an almost inconceivable 35 trillion gigabytes as all the major forms of media – voice, TV, radio, print – complete the journey from analogue to digital.

Ziraks D. (2010) continues that any business viability of the own critical elements becomes global information filtering and processing. In practice this means that even with this the company should be collecting information and structuring mechanisms and IT solutions for business analysts.

The EU strategy "i2010 – A European Information Society for Growth and Employment" (adopted by the European Commission on 1 June 2005) defines actions for the development of information society. Under the motto, "**better online than in line**", more than 90% of all providers of public services across the European Union are now online due to access to broadband.

According to Whitman M. E. and Woszczynski A. B. (2004) e-services are viewed as interactive, content-centred, and Internet based customer services, driven by the customer and integrated with related organisational customer support processes and technologies with the goal of strengthening customer service provider relationship.

The European Union statistical office Eurostat data (Figure 1) show that the percentage of enterprises using eGovernment services in Latvia from 2004 to 2009 has increased by 24%. The increase is a little bit higher than in the EU-25 countries on average – 21%. However, the percentage has not reached the EU-25 average. In Lithuania the percentage of enterprises using eGovernment services from 2004 to 2009 has increased by 26%; however, in 2009 Lithuania has reached 91%. Finland has the highest percentage of eGovernment services used by enterprises, and in 2009 it reached – 96%.



Source: author's construction based on the Eurostat data

Fig. 1. **E-government usage by enterprises in the European Union (EU-25), Latvia, Finland and Lithuania in 2004-2009**

In order to promote urban and rural development and accessibility to the public services, the Strategic Development Plan of Latvia 2010-2013 (accepted on 19 April 2010 by the Cabinet of Ministers) foresees the implementation of one stop agency principle (remotely and at presence) increasing the efficiency of services availability to the public.

The "Guidelines for Development of the Public Administration Policy 2008-2013" for better governance covers a number of issues related to public administration and its performance. The development of this e-government policy will eventually reduce administrative burdens. The guidelines foresee the development of a concept for universal identification cards ensuring the state aid in the form of investment and the utilisation of financing from the EU Structural Funds. Thus fostering the cooperation with private companies and developing client connections with the main information networks. The concept refers to the development of local government information system for 2009-2013, and to further development and operation of national information systems and other measures.

Latvia's eGovernment strategy is laid down in the Latvian e-Government Development Programme 2005-2009 which overall objectives are to implement information technologies and optimise Public Administration processes, thus:

- improving the **quality and accessibility of state government services**, and decreasing the administrative and financial burden for citizens and businesses;
- developing a **more efficient and cheaper government** - improvement of administration effectiveness and reduction of costs.

Developing a **more open and democratic government** increases the society participation in the work of state administration.

The Latvian e-Government Development Programme 2005-2009 is closely aligned with the eEurope 2005 Action Plan and the EU strategy "i2010 – A European Information Society for Growth and Employment".

The policy planning system has achieved several tangible results as a state portal www.latvija.lv which offers a variety of 56 eServices and more services are still on their way. It is planned that these services will function automatically, ensuring data exchange between citizens and state institutions. However, Aizstrauta D. (2010) notes that the policy planning system in Latvia defines the organisation of policy planning documents, so they all have rather similar structure and predefined sections. Among the descriptions of the situation and desired results, the policy planning documents have to state clear directions of action and tasks to reach the goals. Politicians are aware that several important developments are still in progress such as: the digitalisation of governmental and municipal services, the creation of a national Internet portal of web links, and the development of eProcurement and eSignature systems.

Several planning documents define business development in Zemgale region. The research on implementation of Zemgale region business development programme 2006-2011 implemented by "Laboratory of Analytical and Strategic Studies" Ltd has admitted the role of state and municipalities in facilitation of entrepreneurship. However, the survey showed contradictory data in the target groups of both entrepreneurs and inhabitants – on the one hand, respondents expressed their opinion on that the state and a municipality should provide a special and multiform support to entrepreneurs (tax allowance, availability of financial resources etc.) but, on the other hand, the majority of respondents are of the opinion that the state should intervene in entrepreneurship as less as possible, only providing an enabling environment for business performance. Wherewith – entrepreneurs and inhabitants have no unequivocal perception of how vast and what exactly should be the role of state and municipalities in the entrepreneurship. In addition, many municipalities (Dobeles town, Dobeles district, Jelgava district, Jēkabpils district) noted information flows between local governments and businesses as an essential improvement.

The strategic objective of Zemgale Planning Region Innovative Development Programme 2008 - 2014 is to develop the innovative capacity of Zemgale; while one of the tasks of Priority No. 2 "Development of Business Environment" and the operational direction No. 1. "Implementation of Technical Infrastructure" is the promotion of public e-services' access. The task of the operational direction No. 2 "Development of Intellectual Environment" is the promotion of advised business, educational etc. service design and development.

According to Whitman M. E. and Woszczyński A. B. (2004) e-services are viewed as an interactive, content-centred and Internet based customer services, driven by the customer and integrated with related organisational customer support processes and technologies with the goal of strengthening customer service provider relationship.

According to **Yu C.C. (2008) and information from** the Ministry of Regional Development and Local Government of the Republic of Latvia web site, **e-Service functions** are possible to distinguish three types of electronic services:

- 1) information e-Services, through which residents may obtain on-line knowledge of the authority;
- 2) transactions e-Services which replaces the administrative procedures required in person. The service which initiates and / or implements action by the authorities to adopt a decision on a person or group of persons (e.g. licensing, grant etc.).
- 3) participation e-Services which involve citizens directly in the state and local government work processes (e.g. population surveys, e-elections, opportunity to view draft laws, to express their views etc.).

The Cabinet Regulations No. 171 "Procedure According to which Institution Place Information on the Website" prescribe the procedures according to which institutions shall place information on the Internet to ensure its availability.

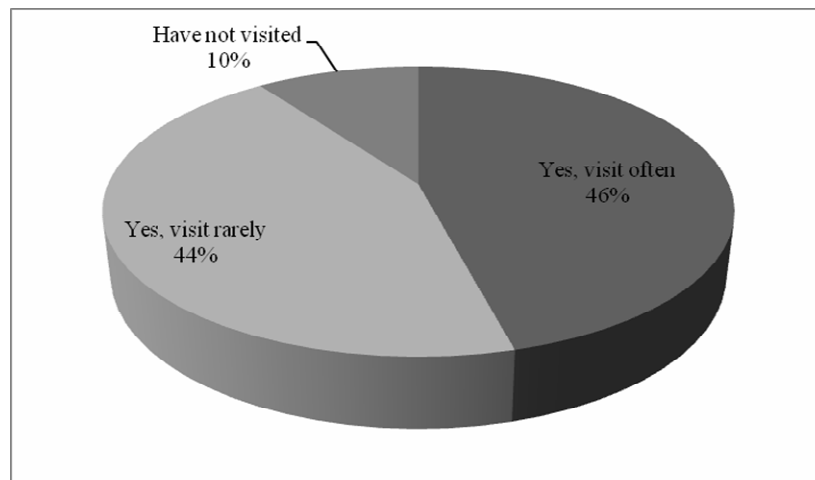
Results of the survey on the public services availability

The survey was conducted in order to investigate what kind of information customers are searching on Zemgale Planning region local governments' web pages. The research object was e-services provided by local governments of Zemgale region. The questionnaire was organised in order to achieve the research aim. It included a web based questionnaire (Google Doc) and it was conducted in November and December 2010. The link of the created questionnaire was sent to the representatives of local governments and entrepreneurs directly. The responses cover all 22 counties and 2 cities of Zemgale region as well as several local governments from Kurzeme region as cooperation partner of the project – totally the author received 221 responses: Aizkraukle county - 3%; Aknīste county - 4%; Auce county -5%; Bauska county - 6%; Dobele county - 5%; Iecava county - 4%; Jaunjelgava county - 3%; Jelgava county -4%; Jelgava city -10%; Jēkabpils county - 3%; Jēkabpils town -3%; Krustpils county -3%; Koknese county -3%; Nereta county -3%; Ozolnieki county -2%; Plaviņas county -3%; Rundāle county -4%; Sala county -3%; Skrīveri county -3%; Tērvete county - 4%; Vecumnieki county -5%; Viesīte county - 3%; and other counties -5%. The project requirements defined that at least 2 entrepreneurs, 2 inhabitants, and 1 representative of each Zemgale local government should complete the questionnaire.

What is your internet access availability?

The respondents answered that 87% of them have permanent connection at home; 10% use Public internet access points; 57% have permanent connection at work place; 5% answered that it is possible to use internet in one of the institutions / companies, and other possibilities – 2%. The results show that the Internet access is available in Zemgale region local governments' territory and shows a variety of possibilities for availability.

Have you visited your local government's website?



Source: author's construction based on the survey data
Fig. 2. Visits of the local governments' websites

The respondents answers show that: frequently visit 46% of respondents; rarely - 44%; not visited - 10%. The results show that more than half of respondents rarely visit web page and the interest could be raised in order to search information there.

Your occupation is?

Student - 6%; job seeker - 5%; local government employee - 43%; entrepreneur – 30%; employee in the private sector -4%; other - 3%. The survey covered different occupation groups from the local communities.

Is it necessary to upload information of local businesses and their business area on the web site of the local government?

Yes, it would help businessmen to advertise their services - 60%; Yes, it would help people get information about available services - 69%; No, it would be competition for other sources

of information - 2%; No, the municipal web site does not work as a source of information - 2%; Hard to say - 9%; Other - 4%. The responses show that practically no possibilities are defined on what kind of values the businesses may get from the close cooperation with local government and on the same time what kind of information the local government might provide on their webpage in order to promote the business development in its territory.

Will you use the option to fill in and submit an application electronically to the local government?

Yes, it is convenient - 50%; Yes, if I provide free electronic signatures as possible - 25%; No, I trust only the direct contact 11%; No, electronic submission is not strong as the paper - 1%; No, I doubt that I will get the answer on such document - 4%; Hard to say - 8%. The respondents have already evaluated the role of electronic submission and sending possibilities. Yet, 25% of respondents believe that electronic signature would help in reduction of the administrative burden for public services, and 11% of respondents believe in direct and personal contact with a public servant.

What do you think how important is for the entrepreneur to see a contact person responsible for business issues at local government on the website?

There is no need for such information - 3%; low need - 3%, neutral - 16%; essential - 25%; very essential - 53%. The majority of respondents evaluate the importance of such contact person for business promotion issues. There is a high probability that the respondents, who are not connected with business activities, respond on this question properly.

What do you think how important is for the entrepreneur to see the information on funding opportunities for business (the EU Structural Funds, state aid programmes, municipal aid, etc.) on the website?

There is no need for such information - 3%; low need - 2%, neutral - 10%; essential - 18%; very essential - 67%. The information on funding opportunities is one of the most evaluated information which entrepreneurs would like to see on the web pages of local governments.

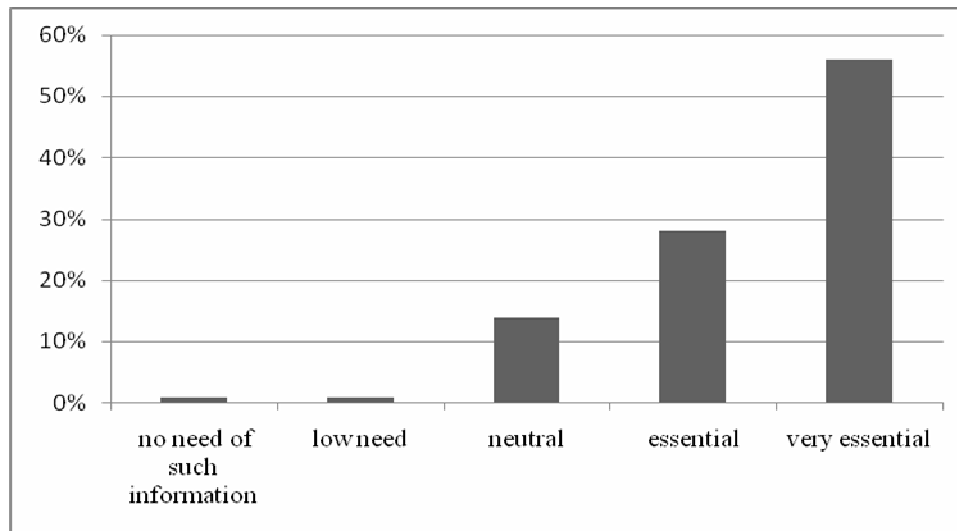
What do you think how important is for the entrepreneur to see the information on local business support structures (information centres, incubators, adult education and counselling centres, business incubators and technology parks) on the website?

There is no need for such information - 1%; low need - 1%, neutral - 10%; essential - 24%; very essential - 64%. The information on local business support structures is very essential, especially for entrepreneurs.

What do you think how important is for the entrepreneur to see the information on available facilities, premises and industrial areas on the website?

There is no need for such information - 2%; low need - 3%, neutral - 16%; essential - 25%; very essential - 59%. The information on available facilities, premises and industrial areas is one that could be displayed on the web pages.

What do you think how important is for the entrepreneur to see the information on the latest developments at the local governments' web pages?



Source: author's construction based on the survey data

Fig. 3. **Importance of information on the latest developments on the web site**

There is no need for such information - 1%; low need - 1%, neutral - 14%; essential - 28%; very essential - 56%. The information on the latest developments of the local government is very essential and essential for business development.

What do you think how important is for the entrepreneur to see the information on the municipal council meetings, decisions, binding regulations on the local governments' web pages?

There is no need for such information - 1%; low need - 4%, neutral - 14%; essential - 30%; very essential - 51%. The results show that the information is necessary but not so important as information on different funding possibilities or business support structures.

What do you think how important is for the entrepreneur to see the information on local procurements at the local governments' web pages?

There is no need for such information - 2%; low need - 2%, neutral - 9%; essential - 19%; very essential - 68%. The information on the procurements could influence the entrepreneur directly for straight business. Therefore, respondents have provided so high positive results.

What do you think how important is for the entrepreneur to see the information on issued permits, licenses, building permits on the local governments' web pages?

There is no need for such information - 1%; low need - 2%, neutral - 22%; essential - 28%; very essential - 47%. The results of the respondents' answers show that information is essential and very essential; however, it is not so essential as procurements or different funding possibilities, or business support structures.

Conclusions

1. Information communication technologies role in the decision making process is estimated as one of the most crucial and it ensures the survival and growth of economies in general. E-services provided by public institutions including local governments may influence business development by supporting entrepreneurs with information as well as reduction of administrative costs due to internal processes organised and minimum of the actions.
2. The survey covering 221 respondents and implemented in Zemgale region explored the kind of information necessary for business development to be displayed on local governments' web pages.
3. The survey results showed that local government web pages have to include the following information e-services for business development: information on job sites, facilities, industrial areas; Information on municipal permits issued, licenses, building permits; information on the

municipal council meetings, decisions; information on the municipal binding regulations, planning documents; information on the business environment in the municipality, the sectors represented, company list or database; information available on local governments' business support structures (information centres, incubators, adult education and counselling centres, business incubators and technology parks); information on local government procurements; Information on funding opportunities for business (the EU Structural Funds, foundations, etc.); and contact person for business development in the local government.

4. Transaction eServices and participation eServices seem convincing respondents; however, they are not so familiar with them and do not know all the possible services that could be used for making public service available for the citizens, especially entrepreneurs. The responses show that practically no possibilities are defined on what kind of values the businesses may get from the close cooperation and interaction with eservices with local governments on their web pages and at the same time what kind of information the local governments could provide on their webpage in order to promote the business development in their territory.

5. The process of elaborating eservices on local governments' web pages for business development is in progress, especially in the smaller counties. It requires a complex of competences for the staff to ensure the appropriate service quality for customers: responsiveness (prompt response), reliability (accurate and efficient response), competence, access (accessibility of service and contact information), personalisation, courtesy, continuous improvement, communication, convenience, and control. Active participation and feedback is required apart from this very close cooperation with entrepreneurs.

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Moving towards E-government: a Case of Balvi Region

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Abstract. Macroeconomic environment pushes local municipalities to look for new models to improve operational efficiency by cutting costs; therefore, introduction of e-government and e-services becomes more topical than ever before.

The aim of the paper is to analyse the potential benefits from and obstacles to implementation of e-government in local municipalities by examining theoretical frameworks and a case of Baltinava, Balvi, Rugāji and Viļaka municipalities in the North-Eastern part of Latvia – Latgale region.

Results show that during the implementation phase of e-government the communication with citizens is to be directed via the widest range of channels; systematic general information flow needs to be developed to establish two-way communication; habitual factors and the role of individual contact need to be taken into account in e-government communication models.

Key words: e-government, e-services, ICT solutions, e-signature, local municipalities.

Introduction

Development of e-government in Latvian municipalities is currently at the start-up phase. Macroeconomic conditions require municipalities to search for new solutions and patterns to increase efficiency via cost reductions. Therefore, introduction of e-government and e-services is more needed than ever before. Furthermore, the development of e-government is a crucial step to provide citizens with governmental services of up-to-date quality by supplying at least a share of governmental services online as well as to integrate and optimise the work of municipal administration, different departments, and governmental entities.

Although the State Regional Development Agency (VRAA) has pronounced the development of e-government to be the top priority in 2010 (State Regional Development Agency, 2010); yet, the actual implementation of e-government principles is slower than expected.

The aim of the paper is to analyse theoretical aspects of introduction of e-government, current experiences, potential risks, and benefits in order to identify potential to improve the economic efficiency in public and private sectors. This is to be accomplished by applying information analysis (research and publications on e-government, policy papers, and legislative documents) and a case study from Baltinava, Balvi, Rugāji, and Viļaka municipalities located in the North-Eastern part of Latvia. Consequently, the research object of the paper is administrative territories where the introduction of e-government is in an early phase with intention to identify the potential challenges in advance. Such administrative territories are characterised by relatively low ICT penetration and small degree of government services available online. Therefore, it is crucial to bear in mind technological, social and behavioural factors that have an impact on the potential for e-governance to be a success.

The authors set forth the following tasks in order to achieve the research aim:

- 1) to examine the theoretical background of the development of e-government according to international and local practice and research;
- 2) to study legislative framework in Latvia regarding regulation on electronic documents, electronic services and electronic identity;
- 3) to identify the most significant risks and barriers that may impede successful development of e-government;
- 4) to quantify the potential and risks for the introduction of e-government in regions with low degree of digital development by using a case study from the North-Eastern Latvia.

The aim of the paper is to be achieved by applying both quantitative and qualitative methods as well as by carrying out a comprehensive analysis of theoretical framework. Quantitative methods include paper-based and online questionnaires, complemented by in-depth personal interviews with local municipalities. In addition, a thorough review of theoretical and legislative framework, and previous studies is to be done in order to identify the underlying drivers of the development of e-governance in an early phase.

Results and discussion

1. What is e-government

Academic literature usually defines e-government as “the use of technology to enhance the access to and delivery of government services to benefit citizens, business partners, and employees” (Titah R., Barki H., 2006). Some sources indicate that, apart from other benefits, e-government improves the transparency of public sector (Brown M. M., 2007; Kraemer K.L., King J.L., 2003; Titah R., Barki H., 2006; World Bank, 2004); thereby securing the enforcement of the basic principles of democracy (Gatautis R., Kulvietis G., Vilkauskaitė E., 2009; King J.L., 2006; Torres L., Pina V., Acerete B., 2006). As a result, e-government provides grounds for more efficient public administration by applying information and communication technologies.

E-government as a concept has become a widespread term in a number of contexts. By e-government one may mean public information and decision-making support systems as well as automation of governmental processes; online-based access to public services via information and communication technology (ICT) solutions, and application of e-commerce principles to secure provision of high-quality public services, increased both efficiency of the public sector and the rate of public participation (Briedis J., Lauriņš P., 2008).

There are three main components of e-government recognised in Latvia:

- electronic documents;
- electronic signature;
- electronic services.

Electronic Documents Law (Cabinet of Ministers, 2002) states that an electronic document is any data which is created, stored, sent or received electronically, which ensures the possibility of utilising such data for the performance of some activity, realisation of a right and protection, and that the State and local government institutions have a duty to accept electronic documents from individuals and legal bodies. An electronic document acquires legal effect if signed by a secure electronic signature, and an electronic document shall be considered to have been signed by hand if it has a secure electronic signature. Furthermore, electronic signature serves as an instrument for electronic identity, thereby providing authorisation of a natural or legal person in electronic environment and offering simple access to public services electronically.

Academic literature (Briedis J., Lauriņš P., 2008) recognises several benefits that arise from modernisation of public sector and implementation of e-government principles:

- efficient government – increased quality of public services, more transparent government, decreased levels of corruption;
- convenient government – elasticity of working hours, convenience of online services;
- cost-effective government due to more efficient organisation of work-flow, cost reductions and optimisation;
- democratic government, as the level of citizen direct participation in public administration increases.

The National Development Plan 2007-2013 (Cabinet of Ministers, 2006) states that the development of *good* governance is a priority to secure sustainable development policy. Good governance is defined as the ability of national and local government institutions to act and organise their work in a modern way and to provide access to high-quality services of public and municipal bodies by improving the accessibility and quality of public administration services as well as related information exchange, by developing e-governance solutions; by ensuring compatibility of national and local information systems and facilitating development of national and local information systems; by facilitating the use of ICTs in enterprises and households in order to ensure wider accessibility of services and information.

2. Barriers to e-government

Alongside with the benefits of development of e-governance, literature recognises the main barriers to successful introduction and adoption of e-government principles. A study by the European Commission on barriers and challenges on the way to e-government defines seven main categories of barriers that can prevent or limit progress on e-government (European Commission, 2007).

2.1. Leadership failures

Slow and inconsistent progress in adoption of e-government can result from a lack of adequate leadership during any stage in the initiation, implementation, promotion, and ongoing support of developments. Leadership failures can be observed on both political and management levels. On a management level it is often related to weak resource planning, inability to manage complex ICT projects, and to motivate and support sustained commitment to e-government within public administrations and the use of e-government services by citizens.

On a political level leadership challenges are related to short-term planning and lack of awareness of the essence of e-governance, benefits related to it, and the practical applicability of the solutions.

2.2. Financial inhibitors

The costs of developing, implementing and maintaining ICT systems often prevail in e-government cost-benefit assessments as they can be more easily identified and frequently occur before the benefits become noticeable.

Another aspect that often impedes the introduction of e-governance is the inadequate cost-benefit analysis. The tangible costs used in traditional cost/benefit analysis techniques include those related to investment in systems and equipment (e.g. ICT hardware, software licenses, network infrastructure) and people (e.g. the public administration, and technical and consultancy staff). Even though some benefits are clearly measurable (e.g. reductions in cost overheads, personnel costs), many of them cannot be defined in a similar way as they are too qualitative, intangible or require a longer time horizon (e.g. new services, improved quality of service, meeting citizen needs or prevention of costs that would have been incurred using non-digital channels). Therefore, challenge to define tangible benefits often holds back allocation of financial resources to go down this road.

2.3. Digital divide

Wealth, age, gender, disability, language, culture, geographical location, size of business, and other social and economic divides indicate the e-government resources are used very differently (or not used at all) by various individuals, groups, and organisations. Therefore, to secure successful implementation and adoption it is crucial to limit these differences with respect to user skills, access to technologies by providing services that would be accessible to the widest range of users in terms of perceptions, knowledge and capacities. Without a detailed analysis on user needs and offer segmentation there is a significant level of risks that e-services will not be used and the potential benefits would remain unrealised.

2.4. Poor coordination

Developing forms of e-government service delivery and contents frequently cross traditional government jurisdictions and administrative boundaries, and overcome geographic distance. Differences in legal, regulatory and administrative regimes on all sides of those boundaries can inhibit and impede the flow of information and services through new networked governance channels on the EU, the Member States, regional, and local levels.

Lack of coordination can take various forms – vertical (among different levels of the State and municipal bodies) or horizontal (across Member States, different local public entities, or even departments).

2.5. Workplace and organisational inflexibility

Resistance to innovation by public administration management can cut back or prevent the necessary changes of organisations and their processes required to provide effective e-government structure that support activities cutting across traditional administrative responsibilities. Such rigidity can form barriers to the creation and delivery of efficient and effective e-government services that could meet changing citizen and business needs. Nevertheless, prevailing practices can be hard to change as they are formed to support certain patterns of communication and information exchange, while preventing others.

Several factors need to be taken into account that prevent elastic approach towards the implementation of e-government, such as lack of knowledge and skills among staff, insufficient training in ICT and change management, fear of change, management indisposition to take on risk, fear of lack of trust that arises from integrated information systems and shared information storage as well as insufficient availability of information on e-government "success stories".

2.6. Lack of trust

Several authors emphasise that perception and prejudice by citizens concerning privacy and security of sensitive personal data are crucial barriers to adoption of e-government (Jaeger P.T., 2003; Lee J.K.; Rao H.R., 2003; Warkentin M., Gefen D., Pavlou P.A., Rose G.M., 2002). Although the development of e-commerce in private sector has stipulated reliance on e-services, e-government is often related to distribution of sensitive personal data in digital form; thus both individuals and enterprises are concerned about inappropriate secondary use of personal information in computer databases. Therefore, distress about 'cyber trust' in e-government is a significant element in the adoption and effectiveness of e-government services. Also, as the volumes of data stored and level of integration of various databases increases, concerns relating insufficient security systems and risks of online fraud grows as well. Hence, to mitigate the trust barrier it is crucial to develop and employ sufficient communication tools and techniques to promote trust and prevent their private data from unauthorised use. Moreover, the level of trust is directly influenced by the level of transparency in the public sector.

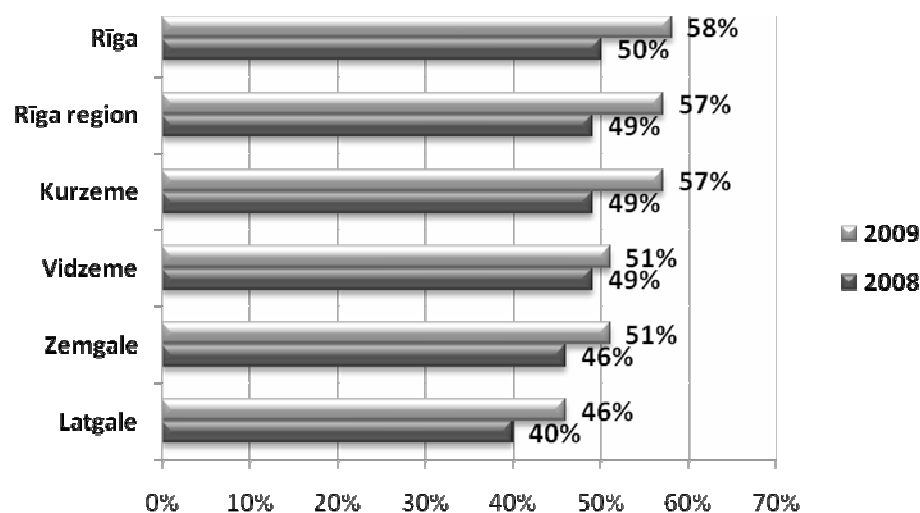
2.7. Poor technical design

Often e-government systems and services fail or perform poorly because of the insufficient design and implementation of technical capabilities. Incompatibilities in hardware, software or networking infrastructures within and between public entities and challenges caused by inapt user interfaces to e-government systems can seriously impede relations between public agencies and citizens, and businesses. Therefore, such operational difficulties can damage even potentially successful services and, even more, sabotage the concept of e-government in the eyes of who experience these difficulties and prevent them from using e-services altogether. State of the art technologies *per se* do not guarantee e-government to be a success; however, every initiative has to be supported by adequate resources, infrastructure, management support, talented ICT specialists, and efficient IT support.

3. Introduction of e-governance in regions

When analysing the potential of e-government adoption and related financial gains often the most emphasis is put on the geographical areas where ICT penetration is the highest.

Internet access and usability is a crucial factor to be borne in mind when planning the development of e-government. Internet penetration in Latvia is growing constantly. As market research agency TNS Latvia indicates (TNS Latvia, 2009) in the autumn of 2009 there were 62% of inhabitants aged between 15 and 74 years, or 1.1 million inhabitants reporting they have used internet within the last six months. The research also shows that internet penetration had reached 56% of households in Latvia. Furthermore, when analysing internet penetration by geographical regions the highest rate of internet users is observed in Riga (58%), followed by Riga region (57%) and Kurzeme (57%). Relatively, the lowest internet penetration rate is observed in Latgale – 46%.



Source: TNS Latvia, 2009

Fig.1. Internet users in Latvia by regions in 2008-2009, %

Furthermore, in 2009 as *Eurostat* (Eurostat, 2010) data indicate 22% of inhabitants on average have used internet to communicate with the state or municipality agencies. Within the EU-25 this indicator equals 29%. Therefore, one may conclude that the difference between the demand for online government services in Latvia and the EU-25 is not critical.

On the contrary, as a research by the Secretariat of Special Assignments Minister for Electronic Government Affairs "Assessment of Availability and Efficiency of Electronic Services in Latvia" (Secretariat of Special Assignments..., 2005) points out, although 82.9% of inhabitants do use governmental services that can be interpreted as a rather large potential target segment for the introduction of e-services; yet, a majority of citizens (61.6%) prefer to obtain the necessary information by visiting governmental agencies in person. This is a clear indicator that the supply of e-services is currently undeveloped and the potential benefits of electronic communication are not realised.

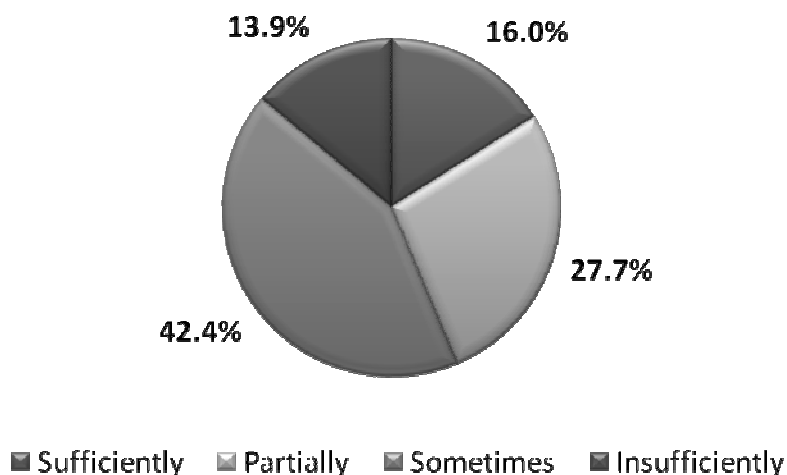
Even though so far a vast majority of research is dedicated to priorities of introduction of e-government on a state level or to geographical regions where ICT penetration is the highest, the aim of this paper is to analyse the current situation of e-government principles and development of e-services in Latgale where ICT penetration is the lowest in order to recognise potential benefits and barriers early. The subject of the fieldwork is the municipalities in Baltinava, Balvi, Rugāji, and Viļaka districts.

4. Description of e-government development in Balvi region

During July and August 2009 a total of 925 citizens of Balvi region were surveyed asking them to assess their communication with municipality in terms of availability of information, use of electronic communication channels, and the level of citizen involvement in municipality processes. Totally 696 respondents or 75.2% were surveyed during various public cultural and sports events in Viļaka, Medņeva, Šķilbēni (including Upītes village), Žīguri, Rugāji, Baltinava, Bērzpils, Kubuli, and Vīksna parishes, and Balvi town. In turn, 229 respondents or 24.8% filled in the questionnaire online after receiving an individuation invitation in their e-mail or via social portal www.draugiem.lv.

Results show that only 16% of respondents state that they possess sufficient information regarding local municipality and its processes; 27.7% indicate they are informed regarding spheres that are of interest to them, yet, more than 1/3 of respondents or 42.4% obtain information regarding municipality only every now and then, and 13.9% state that they do not

have sufficient information. Therefore, only one out of every six citizens believes they receive all the necessary information.



Source: authors' research in the summer of 2009, n=925

Fig.2. **Level of awareness regarding municipality operations in Baltinava, Balvi, Rugāji and Viļaka municipalities in 2009**

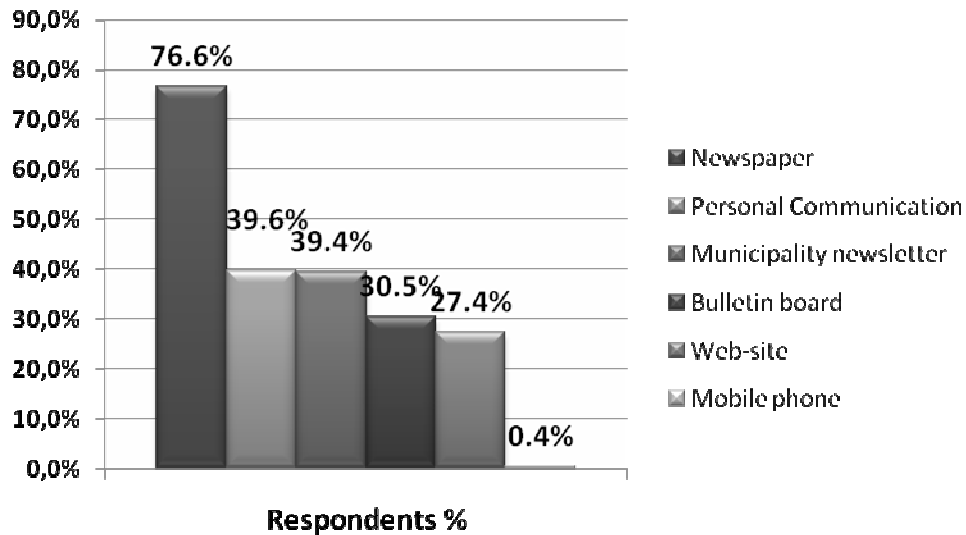
Municipality website is regarded to be the primary communication platform of municipalities. During the fieldwork 9 municipalities or 42.9% had a municipality website set up; yet only three of them (*www.balvi.lv*, *www.vilaka.lv* and *www.tilza.lv*) had it updated on a regular basis. The remaining 5 municipalities published static information, it was not updated on a regular basis, or web-side was only used to publish public procurement tenders.

When regarding the development of municipality web-page as a sound prerequisite for e-government principles to be employed, it is of the utmost importance to account for such factors as technical support, psychological readiness, and incentives of citizens to switch to online form of communication. Also, the perception of security is an issue when regarding online data exchange.

In turn, when assessing the importance of ICT usage in communication with municipality (website, online submission of documents, online correspondence), 34.5% of respondents ranked it to be very important to them, and additionally 46.9% as important.

On the contrary, when reviewing information flow by the type of information channel, 76.6% of respondents prefer to obtain information regarding municipality from a local newspaper, 39.6% prefer word-of-mouth via personal communication with fellow citizens, 39.4% choose to read municipality newsletters, 30.5% acquire the relevant information from the municipality bulletin board, and only 27.4% receive the needed information by visiting municipality website. Only 0.4% use mobile telephones to get in touch with local municipality. These numbers clearly indicate that although citizens recognise ICT usage as an important feature when communicating with municipalities, these channels are used rarely.

When analysing future potential of different communications channels, almost 2/3 of respondents state that in the future they would prefer to obtain the relevant information from municipality newsletters (64.8% of respondents), 50.8% would use municipality website; 30.5% would use bulletin boards, 13.5% prefer meetings in person, and 11.2% of respondents would prefer SMS-based newsletter. What is worth noting, the results show positive correlations between the current and expected communication channels, meaning that respondents who currently use any of the communication channels, in future expect to use the same channel. Only a small share of respondents has indicated that they plan to change their communication patterns in the future.



Source: authors' research in the summer of 2009, n=925

Fig.3. Channels of communication regarding municipality operations in Baltinava, Balvi, Rugāji and Viļaka municipalities in 2009

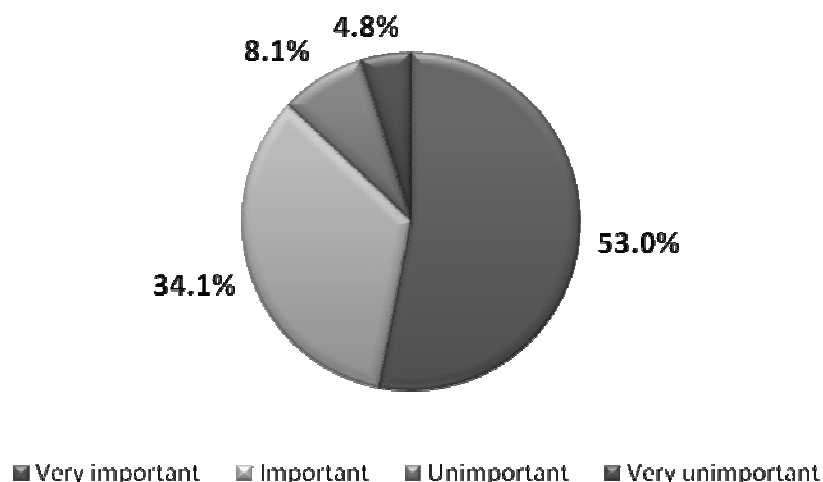
To continue, low level of interest could be an explanatory factor that would justify an insufficient flow of information. However, the empirical study does not support the hypothesis – out of 100 respondents 42.3 rate communication with local municipality as important, and additional 49.1% as important.

Secondly, ICT penetration needs to be taken into account when explaining the low level of electronic communication with municipalities. 91.5% of respondents use mobile telephone to make or receive phone calls or to send an SMS, 4.1% read e-mails on their mobile handsets, 3.9% download information from the internet, and only 0.5% does not possess a mobile phone. Regarding internet penetration, similar results are obtained – only 28.1% of respondents state that they do not have an internet connection in their households, and 60.5% use either cable or mobile internet. Even though 60.5% internet penetration rate is relatively high and is significantly above the average numbers in Latgale; therefore, Balvi region is not to be considered to be representative; yet, this high level of internet penetration cannot justify the low intensity of communication between citizens and local municipalities.

Thirdly, the involvement of the Head of municipality and their awareness on the availability of electronic information is of importance. 71% of Heads of municipalities were equipped with electronic signature; yet, only 23% of them used it on a regular basis; the rest admitted using e-signature infrequently. All of Heads of municipalities in the sample used official e-mail addresses for communication with citizens.

Information symmetry is an important factor here - during personal interviews municipality Heads rated the level of information significantly higher than citizens. According to the municipality management, 62.9% of citizens possess sufficient amount of information regarding municipality (as stated above, only 43.7% of citizens share this belief). Furthermore, 53% respondents have rated the involvement of the Head of municipality as very important and additional 34.1% as important. Hence, the role of adequate leadership is recognised empirically.

Fourthly, research results indicate that 55.4% of respondents rate option to obtain information at municipality in person as very important; and additional 30.8% of respondents rate it as important. Noteworthy, there is a moderate correlation ($\rho=0.418$; $p\leq 0.01$) between the (positive) attitude from the Head of municipality, and the propensity of citizens to receive information regarding municipality in person.



Source: authors' research in the summer of 2009, n=925

Fig.4: **Role of Head of municipality in establishing communication in Baltinava, Balvi, Rugāji and Viļaka municipalities in 2009**

This indicates that social factors like personal communication, routines and the sense of involvement are playing a crucial role in the development of communication among municipalities and citizens, and assessment of potential gains of e-government.

Conclusions and recommendations

After analysing the capacities, current experiences, potential benefits, and barriers to adoption of e-government by employing the case of Baltinava, Balvi, Rugāji and Viļaka municipalities, the authors provide the following conclusions.

1. The widest range of communication channels need to be used when establishing information flow with citizens. By limiting the communication model to ICT solutions or to social information flows only, it is not possible to reach the whole target population. It has to be taken into account that not all citizens have time or motivation to attend meetings in local municipalities, and not all of them have access to ICT resources.
2. When the development of e-governance is in an early phase the leadership initiatives play an important role in forming an outline for e-government success. The degree of involvement of the Head of municipalities has the potential to be a decisive factor in success of adoption of e-government.
3. Habitual factors need to be taken into account. Each individual has established one's communication practices and channels to receive information from and communicate to local municipalities; and a significant share of the population are unwilling to change those habits. Therefore, it is crucial to include time and financial resources targeted to alter the old habits and form new ones when designing e-government implementation strategy.
4. When designing communication strategy of municipalities, it is important to establish a general information flow from municipality to citizens (informational leaflets, regularly updated web-page etc.) to form and reinforce the communication between municipalities and citizens.
5. Focusing on individual communication facilitates the highest efficiency. By using even the most effortless individual communication channels (e-mail, mobile phones) it is possible to secure an efficient communication flow and to obtain immediate feedback, at the same time avoiding unnecessary expenses or significant start-up investments. Furthermore, here social factors (personal communication and sense of involvement) are taken into account; thereby securing sustainable two-way communication.

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Place Marketing and Specialisation of Cities and Towns in Latvia

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Abstract. There had been few studies performed on the place marketing of cities and towns in Latvia from the economic as well as sociological position. At the same time the place marketing and specialisation of cities and towns is determined by the globalisation tendencies and the aims of polycentric development in the regional policy. Cities and towns are considered the driving force of the development and one of the most significant agents of a region as a system. Semi-structured interviews with the heads, specialists, and parliamentarians of the local governments of cities and towns of Latvia had been used for the research purposes in order to find out the place marketing tendencies in Latvia. The results of the research show that cities and towns pay more and more attention to the place marketing, relating it to the economic development and enhancement of competitiveness. At the same time, the place marketing of cities and towns takes place individually, without taking into account and harmonisation of actions with other settlements in the region and country.

Key words: place marketing, brand, cities, towns, specialisation.

Introduction

The aim of the EU and Latvia's regional policy is the polycentric development, envisaging the redistribution of economic functions among the cities. It means that the cities and towns should try to specialise by developing one industry deeper, instead of emphasising the development of the same industries in their territories. To increase their competitiveness, the cities and towns choose a certain niche, how to ensure further development. The specialisation, complementarity and integration are also viewed as the most significant instruments to achieve the polycentric development.

The specialisation of cities and towns is related to the place marketing. The relations of both concepts are complex and multidimensional. Place marketing is an instrument or an opportunity to disclose the identity of a city or a town, to popularise the specificity of a city or a town, thus attracting various resources. Place marketing is not a compulsory precondition for the specialisation; the specialisation may take place with or without the use of particular marketing activities. At the same time, the place marketing, when it is implemented actively, may ensure an impulse for the specialisation of a city or a town in a particular industry, because it includes the awareness of existing resources and their purposeful utilisation.

The aim of the article is to describe cases of place marketing in the cities and towns of Latvia within the context of specialisation. The objectives include the analysis of the theoretical aspects of place marketing, and city and town specialisation, and the analysis of empirical material, e.g. semi-structured interviews according to qualitative approach in sociology. The article covers the sociological aspects of place marketing of cities and towns in Latvia: how the place marketing manifests, what examples of place marketing could be identified now, to what degree does the orientation towards other cities in the region and country take place. The interviews with the representatives of the local governments of cities and towns that took place from 2007 to 2010 had been used for the research purposes.

Theoretical perspectives of the place marketing and specialisation of cities and towns

Nowadays the necessity for the specialisation and place marketing of settlements is determined by globalisation of integrated world economy that causes the so-called territorial competition. The settlements are forced to compete to attract investments, tourists and local population, political power, besides it takes place not only on the local or regional levels, but also on a global scale. Cities and towns, as the most significant social agents within the borders of a particular country or a region, take part in the competition that becomes more and more severe under the dynamic and complicated environmental conditions. Thus, the

policy of local governments shall be more oriented towards market, taking into consideration and utilising resources, strengths and weaknesses of the place. During the last decades (since the 1980s), more and more cities and towns use marketing as an instrument of city management (Berg L. van den, Braun E., 1999).

The attachment of a new image to a particular place is considered as one of the elements of business strategy. Place marketing (also "place branding") may be defined as the restructuring of local economy based on local resources. Its primary aim is the creation of a new image for the place, reducing the possible vague or negative image as perceived by present or potential investors. An interesting explanation of place marketing is "to pack and sell" the place with the purpose of capital increase and attracting of population (Nel E., Binns T., 2002). In another point of view, marketing is defined as a strategy that comprises all activities, increasing the attraction of a place as a potential place for living, working, and leisure activities (Messely L., Dessein J., Lauwers L., 2010). It means the utilisation or strategic manipulation with the image and culture of the place in order to create economic and social infrastructure, thus promoting the economic development. In practice, the place marketing envisages the use of a specific word, logo, symbol, or design to differ from the competitors (Gotham K.F., 2007). The above-mentioned interpretation is widespread among scientists and professionals; however, in its wider conception the place marketing is conceptualised as an instrument of communication among the social agents. The city brand is related to the identity to emphasise the difference between the offered product and other products (Hankinson G., 2003). Thus, the brand performs the communication function in relation to other organisations, cities etc. social agents. The brand management in this sense becomes the defining and management of a brand in order to enhance the competitiveness (Hankinson G., 2004).

From the sociological aspect, the defining and management of a brand may be analysed within the context of social relations. During the process of brand development, several social agents or concerned parties gather and share the responsibility. Thus, the social networks may be formed with the main aim to create and maintain the brand (Hankinson G., 2004).

Place marketing is usually viewed within the context of one settlement (a town, a village). However, this concept may be attributed also to the cities and regions. Place marketing is very important for the small places with a small number of population and poorly developed infrastructure. In this case the place marketing does not mean only the creation of new workplaces and the promotion of population's welfare; it is also the issue of the existence or survival of a town or a village.

The place marketing is a process of manipulations, when the urban management mobilises the local cultural and historical resources in order "to sell" the town both the local population and the potential newcomers (Berg L. van den, Braun E., 1999). As it is emphasised by this and other definitions, the place marketing is based on the existing, local resources. There are cases described in the scientific literature, when the idea of place marketing of a city or town is recreated and, in fact, it has nothing in common with the specificity of a particular place; however, during the process of place marketing the cultural and historical or geographical resources of a particular place are utilised. It should be emphasised that, according to the paradigm of the new regionalism, the best result of place marketing is achieved, if the authors and implementers are the local residents. The developmental ideas, based on the community, provide the best results both in economic and social sphere – there are innovations introduced, and business and new co-operation practices developed. On the contrary, the place marketing is an opportunity and the means to preserve the existence and sustainability of local culture (Askegaard S., Kjeldgaard D., 2007). The responsibility and the distribution of functions of all concerned parties are also important. The main responsibility for the implementation of place marketing is usually taken upon local leaders or the so-called social businesspersons (Nel E., Binns T., 2002). The local and regional identity is considered the main source or base of place marketing (Messely L., Dessein J., Lauwers L., 2010). But the ideas, enforced "from above", which is characteristic feature of totalitarian regimes, centralised state administration may be implemented; however, alongside with the change of political or economic structure, they turn out not to be sustainable.

An important issue that is being discussed in the scientific literature is the application of marketing principles for the urban management, namely, as far as they can be related to the functions of a local government. Irrespective of the different aims of local governments and businesses, the local government can also offer different services to the present and potential consumers. The potential marketing of town's services is divided into three levels:

- 1) the development or maintaining of one service (marketing);
- 2) the marketing of interrelated clusters of services, for example, the infrastructure of a port;
- 3) a place as a system, entirety – the development of the common image of the city and town, the creation and consolidation of community's associations (Berg L. van den, Braun E., 1999).

Specialisation is a broad concept, applied in relation to both separate inhabited places and regions. Usually specialisation is perceived as sharing of the functions of separate territorial units in order to create interrelations and act for the achievement of a common goal. Such position is characteristic for the aims of polycentric development, where a particular territory (a country, a region) is perceived as a system. Specialisation is often described within the context of convergence approach. Namely, in the course of time, the differences between the territorial units become weaker, the borders are less explicit, because each unit has found and developed its industry or niche (Dawkins C.J., 2003). One of the approaches to the specialisation of cities and towns emphasises in the research that the distinctiveness of cities and towns manifests in three dimensions:

- 1) production – characterises the uniqueness of the place from the perspective of factors and resources, important for the production. This dimension discloses the structure of labour market in the city and town;
- 2) consumption – reflects the urban population's choice of goods and services;
- 3) identity – discloses the views of urban population and tourists on the fact, whether the city and town is unique in relation to culture, whether the population feels that it belongs to the place, etc. It should be noted that the formation of identity and the place marketing activities are closely interrelated (Markusen A., Schrock G., 2006).

Having summarised the theoretical conclusions drawn during the recent years on the place marketing, it is possible to state that it is a strategic instrument for the enhancement of cities' and towns' competitiveness and their further development. The place marketing is usually based on the mobilising and utilisation of local resources; it may be also called an instrument of communication and the identity of the place, and it may be analysed on several levels. The analysis of place marketing within the context of specialisation means to study what activities are carried out by the cities or towns to develop their images and how this process is harmonised with other inhabited places.

Results and discussion

The tendencies of the specialisation of towns in Latvia, according to the above-mentioned theoretical framework, had been studied within the following research projects:

- 1) in 2007 – the research project of Latvia University of Agriculture "Strategies for Small Towns to Become Centres of Employment and Services";
- 2) in 2008 – the research project of the University of Latvia "Towns and the Sustainable Development of Regions";
- 3) in 2008-2009 – the research project of the University of Latvia "Proposals for Development of Latvia's Cities Policy";
- 4) in 2010 – the project of the Advanced Social and Political Research Institute at the University of Latvia "Regional Identity and Legal Capacity" (Reports of research projects).

The qualitative approach in sociology was selected for the purpose of fieldwork. In total there were carried out 54 semi-structured interviews with the heads of local governments of cities and towns, specialists from different fields, and parliamentarians. They were asked about the place marketing strategy and instruments the local governments use. Within the framework of projects, in total there were interviewed the respondents from 3 republic cities and 20 towns (towns – until 1 July 2009 – the centres of districts and district towns, since 1 July 2009 – the

centres of municipalities and towns of municipalities). The research covers the cities and towns of all five planning regions.

Having analysed the interviews, performed in 2007 and 2008, the author can conclude that, in fact, no local government of a city or town indicates the necessity for the place marketing of the city. The local governments consider as the most important task the implementation of functions provided by the law and the management of infrastructure in order the city would be attractive for both present and potential residents. The local governments take into account the cultural and historical as well as geographical resources, existing in the territory of the city or the town, they try to attract investments, to create the environment favourable for the business development, but overall the ideas of place marketing are poorly developed.

The results of the interviews, performed in 2009 and 2010, show that the place marketing tendencies are more noticeable. One of the reasons is the Administrative Territorial Reform (ATR), implemented from 1 July 2009, which changed not only the structure of settlements in the country, but also made the local governments to review the existing image of the town, the associations, and the vision of further development. Thus not all municipalities, covered by the research, have a clear progress of further development and place marketing. If the cities and towns had tried to develop their image since the country regained its independence, it is more difficult for the new municipalities, created as a result of the implementation of ATR, to understand and develop their identity. When the respondents are asked about the vision of a municipality, it is, in fact, unclear yet:

"Honestly, the budget of the previous year was drafted in a hurry, we had to manage everything. Everybody was busy. Therefore, the time has come, when preparing the budget, to think over about the future, what we would like to see."

When a municipality is formed, the loss of the name or identity of a town is one of the questions worrying local people. Such situation has developed because towns mostly are the centres of municipalities, where the council of the municipality is situated. Other administrative units of municipality have the administrative authority of rural municipality, while the town does not always have a separate administrative authority. Therefore, the town merges with the rural territories and loses its individual, former identity, and it should reconsider its opportunities of further development. As a positive example, the author can indicate Salacgrīva, where the council of the municipality tries to emphasise simultaneously the significance and the community of separate administrative units:

"it is foolish, if the new symbols are not being prepared. Because it is, I think, a brand that should be demonstrated, demonstrated, demonstrated on an ongoing basis in order it would be recognised. There are three similar anchors, and maybe it is good that we do not know which is which."

Place marketing or searching for one's own niche is a significant tool for the strengthening of the identity and image of a city and a town. According to the results of interviews, place marketing at present is at the initial stage of its development. In fact, in all respondents' answers one can find more or less clear vision of a cities' and town's development, and the view on "one's own niche". The difference lies only in the achievements of the aims of these places. It is interesting to observe, how cities and towns have come to their own ideas on place marketing. Some local governments use natural resources to attract tourists:

"The more events: festivals, sports games, championships, the more tourists and guests in the city. We take part in many tenders for the world championships, we have already marked ourselves....orienteering, biathlon.we have snow. We have alighted distance skiing route of 5 km. We want to install snow cannons."

Other towns have found their niche because of economic considerations and calculations:

"I receive the regular bill.. we wanted to construct the connection, I find - 200 lats as the payment for the connection, asphalt has to be torn up, and there, and there... and I found in the internet that it is possible to use also wind generators for generating lighting. It is the idea of independence - why should we always pay?! We invested in the infrastructure of Latvenego 250 thousand just in a year, but later we present it as a gift to Sadales Tikli. It is not good, awkward situation.. the same we can say about the price we pay for heating - why should we always look for the German price?!"

As a result, Salacgrīva has found its niche as a “green” or ecological town, because it uses untraditional sources for lighting and heating:

“We had an idea that we could adopt this green declaration and ask all the social groups to sign the declaration. And our formula is as follows – we do not strive for joining any associations, we will try to achieve that everybody would want to do something good for the nature – it can be done by means of simple and understandable measures. We would like to turn those enormous volumes into an understandable text by means of which we would inform people on important things. For example, it is 15 July today. We say: “Dear residents of Salacgrīva, do not mow the reed until 30 July, because the ducks have their nests there!” And also – why should we buy as souvenirs such pens of Chinese production, if our craftsmen would make them of wood at the Art School?!”

One can evaluate positively the fact that each resident of the municipality is potentially involved in the activities of the place marketing of municipality. These activities bring together and integrate the population of municipality; they help create the unity, place identity, and the feeling of belonging to the place:

“at present we do not want to be involved in any associations, travel around the world, spend money, pretend to be very smart, sign any papers. People see – the papers are piling, but does it change anything?”

It should be added that the model chosen by Salacgrīva is oriented towards the sustainable development, the cultivation of traditions, instead of being oriented towards the organisations of a single cultural and other type of activity:

“we do not accept such single events, if they do not prospect of further developments.

But Positivus and the concert of classical music we will try to develop, improve, until people are aware that they like classical music and they cannot do without participation in the annual festival!”

On the contrary, the activities of the municipality are purposefully oriented towards gaining of profit and benefit, but this is one of the ways, how to ensure the development and recognition of the town. According to the results of interviews, sometimes the ideas for the place marketing of cities/towns are found also through informal contacts. In any case, place marketing is a topical theme and issue for the cities and towns in Latvia, because the local governments see them as an opportunity to attract means and develop.

When asking respondents concerning the place marketing of cities and towns, the historical economic sectors and those determined by natural conditions, where it is possible to achieve the best results. There is an opinion that an invention of one’s own niche cannot bring the significant development for the city or town:

“we have observed that, for example, there could be build a little chess town somewhere – but it would not survive. These are the same basic values. We have a port at the sea, the freight traffic. We have also rivers; the fishing guides have become very active lately. The tourism corresponds to the place, which is related to the processing of fish. What we have here, is determined by natural and geographical conditions. There had been different ideas, but the land is expensive here, and it is unlikely that anybody would start the production of buttons for jeans. It is unlikely that anybody would buy such buttons for a higher price just because they had been manufactured at the place, where one can observe the sea.”

At the same time, the local governments accept the application of new technologies and the fact that the structure of labour market has considerably changed:

“only one person works there, but VAT is enormous! If we establish a company with many workplaces, it would not last for long. Perhaps, we cannot gain benefit by acting like that.”

One of the variants in the place marketing is to utilise the existing industrial sectors for the popularisation the name of the city or town and as a means for creation one’s own “brand”, for example, Rūjiena uses the popularity of “Rujienas Saldejums” (Rujiena Ice-Cream), naming itself a city of “gastronomic tourism”:

“we are proud of gastronomic tourism. And it is popular, especially among the youth. September, May... where shall we go to? And we have thought about the ice-cream festival, because everybody likes ice-cream.”

The stories of place marketing differ considerably. For example, in Latvia and also on an international scale Staicele is recognised as a town of storks. The first impression is that, whether there is a larger number of stork rookeries, but the beginning of this idea was unintentional – an injured stork once spent winter in the town – the local residents named the stork Professor. This case was the basis for the idea of Staicele as a stork town. At present, there are organised joint activities with the towns in other countries, and the children, residing in Staicele, are involved in the implementation of this idea:

"then we welcome the little children who have lived in Staicele for three years, to the community of town dwellers. We give them a big stork as a present and a certificate that the child has become a lawful resident of Staicele"

It is possible to add one more positive aspect of a town to the example of Staicele – the other niche of the town is football, because Staicele Youth Centre of Football Federation is situated in the town. The result of the activities of this centre is that the sport trend of the Secondary School. This aspect, according to the respondents, has saved the school from closing or merging, when the new municipality was formed. Thus, place marketing may serve also as an instrument for preserving the infrastructure of the local government. The above-mentioned facts prove that the local government plays the main role in the place marketing activities. At the same time, the development of the respective service and town image involves also other social agents – business people, non-governmental organisations, municipal institutions, and local population. Gradually the respective town service or product is put in the centre as the main brand representing the town, and a wider and closer circle of involved agents is developed.

At present, the research and discussions take place in the planning regions regarding the place marketing and specialisation of republic cities and towns on the scale of a separate region in order to develop mutual complementarity and facilitate the polycentric development. However, according to the respondents, this process is permanent, because local governments have difficulty to agree on the distribution of functions:

"there is such image of an industrial city outlined in our region. But, of course, we did not agree that we are only an industrial city..."

Overall, local governments agree to the idea of place marketing, because they see it as an opportunity for further development and attracting of resources. However, it should be emphasised that the place marketing at present takes place with the primary aim to enhance the city's competitiveness, and attractiveness to investors or tourists. As the weakness of specialisation and place marketing process it is possible to point out also the fact that the cities and towns do not harmonise their vision on future. This does not take place either on a regional or state level. Thus, these visions overlap:

"we are a green city of art"

"we are really green in fact!"

Overall, one can find that towns and cities are concerned about their recognition on the national and international level. The difference lies in the confidence about the chosen strategy, place marketing – some are more confident, others are less confident; however, all cities and towns see it as a guarantee of their further development. It may be also viewed as a competition instrument. Cities that are more competitive than others are (pay more attention, purposefully develop action strategies) have also clearer developmental vision and place marketing. There are towns that have had unsuccessful initial attempts for place marketing. For example, a town at the sea had an idea to develop a market in Riga with a corresponding "brand", but due to the fishermen's disagreements these plans collapsed. This example shows that sometimes the new ideas are not being implemented due to the competition or isolation strategy, although these ideas could ensure benefit for both involved agents and community.

Conclusions

1. Place marketing is a strategic instrument for the enhancement of cities' and towns' competitiveness and their further development.
2. The Administrative Territorial Reform, implemented from 1 July 2009, has become the most significant milestone in the place marketing of cities and towns in Latvia.

3. The local governments of cities and towns construct their place marketing in conformity with the cultural and historical, geographical resources as well as the economic profitability.
4. The most significant motive for the place marketing is the enhancement of a city and town's competitiveness or the economic considerations. The cities and towns apply marketing principles to ensure the recognition of cities and towns; however, for the time being the place marketing is limited to one service or the development of a cluster of services.
5. There is a difference between the place marketing activities of republic cities and other towns. The place marketing activities of republic cities are broader, based on more industries or services. The difference is determined by the range of industries developed in the cities and towns.
6. Overall, the place marketing in the cities and towns in Latvia is on the initial stage of its development. The towns, more active in implementing marketing principles, are considered positive examples.
7. In the case of Latvia, the strength of place marketing is a wide and diverse range of involved agents on the level of a city or town. The weakness is the insufficient harmonisation of specialisation on the regional level.
8. It is possible that the place marketing activities in the cities and towns in Latvia lay the foundation for the further specialisation.

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Workplaces with Stipend Programme in Latvia: Evaluation from Regional Perspective

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Abstract. Economic crisis in Latvia has introduced changes in labour market, leaving many people without jobs and any income. One of the tools for promoting employment, is active labour market policy, introduced in Sweden in the 1950s and widely used in other world countries as well, especially in the periods of economic slowdown (Adams, Thomas, 2007, Johnston, 2006, Puhani, 2003, Sianesi, 2007, etc.). One the active labour market policy measures used in Latvia is Workplaces with Stipend Programme

that guarantee monthly scholarship - LVL 100 (approximately EUR 150) for a period of 6 months during one year. Besides, the scholarship aims to provide persons with job skills and municipalities - with valuable workers. There are many opinions for and against the WWS, and, to ensure deeper analysis on WWS, survey results of municipality representatives (representatives from all municipalities of Latvia were asked to participate) are presented, by providing the regional cut.

It is concluded that the municipality representatives agree on the condition that persons in the WWS are involved, basing on the queue principles and the amount of scholarship provided in frames of the WWS is appropriate, taking into account the current economic situation.

The overall research methods involve content analysis, analysis of municipality representatives' survey results and statistical analysis, by using central trends and location measures. Time of statistical analysis mostly cover the years 2009 - 2010.

Key words: labour market, workplaces with stipend programme.

Introduction

Economic crisis in Latvia has introduced changes in labour market. Many people have been forced to leave their jobs; however, the number of new working places is limited, and the persons are subject to long stay outside the labour market.

One of the tools for promoting employment is active labour market policy, introduced in Sweden in the 1950s and widely used in other world countries as well, especially in the periods of economic slowdown (Becker, Bjorklund, Calmfors, Chrisafis, Dorgan, Flanigan, Gardiner, etc.). In the US, experiences with both the implementation and evaluation of such programmes date back well into the 1960s (Heckman et al., 1999). Building on a rather established culture of implementing and evaluating such ALMPs in the US and the Western European countries have caught up substantially in this regard (Kluve, et. al, 2008).

There are several active labour market policy measures used in Latvia, one of them being Workplaces with Stipend Programme (hereinafter - WWS) that guarantee monthly scholarship - LVL 100 (approximately EUR 150) for a period of 6 months during one year. Besides, the scholarship aims to provide persons with job skills and municipalities - with valuable workers. At the same time several problems have been drawn concerning the WWS.

The aim of the paper is to provide analysis on active and passive labour market policy, and to investigate opinion of municipality representatives (who are mostly related to the WWS administration) on criteria applied for the WWS.

Municipality representatives (from all municipalities of Latvia (118) were asked to participate in autumn 2010 and 106 answers were received) are presented in the survey. The overall research methods involve content analysis and statistical analysis, by using central trends and location measures. Time of statistical analysis mostly cover the years 2009 - 2010.

Results and discussion**1. Active labour market policy – positive and negative aspects**

Active Labour Market Policy Programmes (hereinafter – ALMPs) are used to reduce the risk of unemployment and to increase earnings for low-income workers, and may include interventions such as employment services and training (Johnston, 2006). There are different measures of ALMPs: the most widely known being consultations provided by the state institutions (information of the free working places, consultations on professional adequacy etc.), subsidised employment (paid temporary works, support for starting commercial and self-employment activities etc.), and provision of training (both for employed and unemployed) including training at the employer's workplace (Adams etc, 2007 etc.; Laužadute, 2010; Puhani, 2003; Sianesi, 2007, Thomsen, 2009; van Ours, 2004).

In 1997, the EU Member States even committed themselves to ensure that every young unemployed is offered retraining, work practice or another employability measure before reaching 6 months of unemployment, the same applying to unemployed adults before they reach 12 months. The OECD has also explicitly called for an expanded use of such measures, together with a 'reinforcement of their effectiveness' (OECD, 1996). For the EU Member States, Active Labour Market Programmes (ALMPs) constitute a central part of their European Employment Strategy, which defines employment as one key objective of a joint economic policy in the European Union (Kluve J., et. al., 2010).

If the individual chooses not to join unemployment insurance fund and becomes unemployed, he or she is eligible for social assistance, which consists of cash benefits. Social assistance benefits are available to any adult person who is unable to provide for him- or herself either through work, support from the spouse or through other social services (Jespersen S.T., et.al. 2008). The ALMPs are regarded as an important tool while solving the problem of unemployment (Laužadute M., 2009, Johnston D., 2006). Besides, ALMPs may not only have an effect on the participants, but also on the non-participants (employed or unemployed). Substitution effects exist if the subsidised job would have been created in the absence of the subsidy, but instead of employing an unsubsidised worker, the employer hires a subsidised one. If substitution effects are predominant, ALMPs do not raise total outflows from unemployment into employment, but only change the unemployment composition (Haskel J., Jackman R., 1988). Therefore, a support for idea that social assistance should be integrated with active labour market policy measures, especially working schemes exist. However, there are many arguments that criticise the ALMPs (Thomsen S.L., 2009; Kluve J., 2010; Sianesi B., 2008; van Ours J.C., 2004 etc.).

It is however important not to jump to the hasty conclusion that job subsidies are the solution – the most effective programme as well as the cheapest. Several issues can be raised both in terms of the effective magnitude of the uncovered effects and in terms of their general applicability should the scope of the programme be extended. A first issue concerns the validity of the ignitability assumption for participants in this programme: since job subsidies informally entail the expectation that the engagement will then continue, it is likely that potential candidates are considered quite carefully (Sianesi B., 2008). Increasing simple job subsidies does not necessarily reduce low-skilled unemployment or unemployment spells. By introducing heterogeneous skills and possible downgrading of the high-skilled workers, we show that the effectiveness of such policies in reducing the classical unemployment is decreasing. In fact, any additional classical unemployed re-entering the job market is accompanied by an increasing number of high-skilled workers downgrading to low-skilled jobs (Belan P., et.al. 2010). The opinion is proved by several facts.

Although European countries in particular provide a number of different active labour market policy programmes to reduce the risk of and the amount of long-term unemployment, these countries suffer from high long-term unemployment rates (Thomsen S.L., 2009). There is little consensus on whether active programmes actually reduce unemployment or raise the number of employed workers, on which type of programme seems most promising, and on the question what a particular country can learn from ALMPs experiences in another country (Kluve J., 2010). Joining a programme has increased participants' employment rates, but also allowed

them to remain considerably longer on unemployment benefits and in the unemployment system (Sianesi B., 2008). The active labour market programmes provided in many countries focus on particular sets of barriers to employment, such as lack of motivation (via sanctions), lack of job search skills (via job search assistance), lack of experience (via wage subsidies), or lack of marketable skills (via training programmes) (Thomsen S.L., 2009). The ineffectiveness could be due to a number of reasons. For example, if people participate in a programme they could be expected to reduce their job-search intensity during the programme, which counteracts the intended effects (van Ours J.C., 2004). Although these three reasons have been proven to be relevant for the poor success of many active labour market programmes, the major reason may be that the available programmes do not (or do not fully) meet the needs of the unemployed (Thomsen S.L., 2009). In periods of high unemployment, it might be more difficult to put participants back into stable work, or the massive use of ALMPs in the 1990s might have resulted in inefficient programme administration (Sianesi B., 2008). Employers might want to sack some of their workers in order to employ subsidised programme participants. Such displacement effects seem most likely for intervention works, public works, or loans to employers. ALMPs might also have a negative impact on outflows from employment to unemployment by keeping workers employed, for example, through training programmes, intervention and public works schemes, start-up loans, or loans to employers (Puhani P.A., 2003). However, other authors have found that almost all of the participants experience a decline in their employability due to participation in a job creation scheme. Even 30 months after the programmes started, only men and women starting in the fifth quarter of the unemployment spell experience positive effects on employment rates (Hujer R., Thomsen S.L., 2010).

Meanwhile, one should take into account that ALMPs may provide effect, in case they are properly applied.

The more similar to a regular job, the more effective a programme is for its participants. Subsidised employment is an important tool of active labour market policies to improve the reemployment chances of the unemployed (Gerfin M., et. al., 2005). Employment subsidies perform best by far, followed by trainee replacement and, by a long stretch, labour market training (Sianesi B., 2007). Simple job subsidy clearly reduces classical unemployment; whereas the net effect on frictional unemployment is ambiguous for low-skilled workers as more numerous high-skilled workers compete with low-skilled ones on the simple job market (Belan P., et. al., 2010). Subsidised jobs (whether in a competitive or non-competitive market) are at least partly based on the belief that labour market disadvantages of long-term unemployed are due to employer discrimination (low productivity signal) and that those jobs provide the necessary skills to become permanently employed without any subsidies (Thomsen S.L., 2009). Consequently, subsidising low-paid jobs always diminishes classical unemployment, but may increase the average unemployment duration for all workers. Any additional classical unemployed re-entering the job market is accompanied by an increasing number of downgraded high-skilled workers (Belan P., et.al. 2010).

The most promising instrument out of the set of discretionary measures available to the German local labour offices are the further training measures and the incentive schemes, i.e. wage subsidies. A rather detrimental effect is exhibited by public job provision programmes (*Arbeitsbeschaffungsmaßnahmen*), which display a statistically significant negative impact on the relative net outflows from unemployment in the East Germany. From an analytical point of view, the recent employment promotion reform creates a particularly favourable, quasi-experimental situation regarding the regional variation of the policy mix (Fertig M., et.al, 2006). However, there are also a number of arguments for and against the training schemes in frames of the ALMPs.

Training programmes, for example, should provide necessary human capital skills, subsidised jobs are intended to maintain the employability of the unemployed person and to improve the work experience (Thomsen S. L., 2009). First, differences in skills measured by elementary skills, formal education and soft skills could only explain a small part of the employment gap between short-term and long-term unemployed persons. Hence, providing courses that aim at increasing the skills of the individuals (at least in Germany) may reduce the employment gap, but the scope is limited. Moreover, this may explain why training

programmes in Europe and particularly in Germany are not much successful in terms of employment integration of participants. Second, differences in obstacles to employment – in particular care obligations – are crucial. If long-term unemployed persons were equal in characteristics to the short-term unemployed, the employment gap between both groups would clearly be narrower. Third, differences in the state of health and limitations in daily working ability largely account for the employment gap. For this reason, policy makers should pay more attention to the last two findings when designing the placement process. Moreover, the set of active labour market programmes should be revised, addressing these aspects in order to increase the employability of the participants (Thomsen S.L., 2009). For the years 1995 – 2005, it is found that private job training programmes have substantial positive employment and earnings effects, but also public job training ends up with positive earnings effects. Classroom training does not significantly improve employment or earnings prospects in the long run. When the cost side is taken into account, private and public job training still come out with surpluses, while classroom training leads to a deficit (Jespersen S.T., et.al., 2008). For participants followed from 1995 to 2005 it has been found that private job training generates a very high social surplus, which is mainly due to substantially higher earnings and reduced income transfers after participation. Public job training also generates a significant social surplus due to earnings and transfer effects. Classroom training generates a significant deficit, due to weak earnings and transfer effects and substantial costs of administration and operation (Jespersen S.T., et.al., 2008).

Skill differences are relevant for the employment gap but the scope for increasing the employment chances of long-term unemployed persons by improving human capital is limited (Thomsen S.L., 2009). Participants in most programmes initially experience severe and long lasting negative locking-in effects due to programmes of long duration. Positive post-programme effects eventually become important, but typically not until after 1–3 years. The long-term effects are important in order to capture all the social gains and losses from the programmes, and to take into account the profile of training programmes, which tend to first yield deficits but later surpluses (Jespersen S.T., et.al. 2008). Estimation of employment effects of the West German training programmes over a 7–8 year period have concluded that the programmes have negative effects in the short run and positive effects over a horizon of about four years (Lechner M., et al., 2005).

Basing on the theoretical analysis, the next chapter provides an overview on the WWS in Latvia as well as discusses possibilities for its improvement.

2. WWS and possibilities for improvement its administration in Latvia

There are several active labour market policy measures introduced in Latvia in recent years by the State Employment Agency, e.g. training schemes, support for setting up entrepreneurship, subsidies, etc. One of the measures introduced in Latvia in 2009, as a response to high unemployment level, is the measure - WWS. In frames of it people work 40 hours per week and receive a monthly scholarship of LVL 100 (approximately EUR 150 per month).

Despite the comparatively low amount of money provided, there are many people willing to participate in the measure. From 1 January 2009 to 29 May 2010 totally 39216 (approximately 33% of the unemployed not receiving unemployment insurance) people participated in the measure and 52917 people (approximately 45% of the unemployed not receiving unemployment insurance) waited in the queue, since there were no free places available (State Employment Agency, 2010).

Taking into account the high number of persons interested to participate in the WWS, there have been several opinions concerning the necessity to change the conditions for participating in the WWS. For instance, discussions exist on whether the condition proposed for the WWS condition - participants in the programme are involved basing on the queue principles allows clearly reaching the aim of the WWS to provide support for the persons mostly requiring it.

Critics note that not all the unemployed people primary need financial assistance, since they may be supported by family members. Besides, some of the persons involved in the WWS

are not willing to fulfil the tasks. At the same time, supporters of the other opinion note that the administration of the WWS is much cheaper and easier, in case the queue principle is applied. Besides, additional evaluation of the persons applying for the WWS (e.g. the amount of their household income) would not ensure reaching of the objective due to the high-unregistered employment in Latvia.

Taking into account the different opinions, the question was investigated in frames of the municipality representatives' survey. Evaluation scores suppose than in general municipality representatives agree to the condition that place in the WWS is provided, basing on the queue principles. Detailed results of the analysis are included in Table 1.

Table 1

Evaluation of the WWS condition "participants in the programme are involved basing on the queue principles" on reaching the objective of the WWS – to provide support for the persons mostly requiring it

	Riga region	Vidzeme region	Kurzeme region	Zemgale region	Latgale region
N	26	20	18	21	19
Mean	6.85	7.45	6.50	6.62	7.00
Std. error of mean	0.336	0.366	0.487	0.480	0.557
Median	7.00	7.50	7.00	7.00	7.00
Std. deviation	1.713	1.638	2.065	2.202	2.427
Range	7	6	7	9	9
Minimum	3	4	3	1	1
Maximum	10	10	10	10	10

Evaluation score 1 - 10, where 1 fully disagree, 10 - fully agree

Source: Results of the municipality survey performed by authors, 2010, n = 104

Statistical analysis conclude that the average evaluation of municipality representatives does not differ significantly among Latvia's regions with probability of 95% ($p=0.614$).

Another aspect of investigation was related to the amount of the scholarship. Also here the municipality representatives mostly agreed that the amount of scholarship was appropriate. Some of them, however, also noted that the amount of scholarship was too small, since the municipalities were forced to pay additional allowances to the persons participating in the WWS (e.g., in case a person has small children). More detailed survey results are reflected in Table 2.

Table 2

Evaluation of the amount of scholarship (LVL 100) on reaching the objective of the WWS – to provide support for the persons mostly requiring it

	Riga region	Vidzeme region	Kurzeme region	Zemgale region	Latgale region
N	25	23	18	21	19
Mean	7.600	8.304	7.722	7.429	7.632
Std. error of mean	0.3162	0.3525	0.4631	0.5003	0.4473
Median	8.00	9.00	8.00	8.00	7.00
Std. deviation	1.5811	1.6905	1.9646	2.2928	1.9497
Range	5	5	6	8	6
Minimum	5	5	4	2	4
Maximum	10	10	10	10	10

Evaluation score 1 - 10, where 1 fully disagree, 10 - fully agree

Source: Results of the municipality survey performed by authors, 2010, n = 106

Statistical analysis conclude that the average evaluation of municipality representatives does not differ significantly among Latvia's regions with probability of 95% ($p=0.592$).

Conclusions

ALMPs have played an important role in promoting people possibilities for returning into labour market, and, in case it is properly applied, may provide significant results.

One of the ALMPs used in Latvia from 2009 is the WWS, in frames of which persons are provided a scholarship of LVL 100 (approximately EUR 150) and are asked to perform simple tasks set by the municipality. Despite the comparatively low amount of money provided in frames of the WWS, the number persons willing to participate in the WWS highly exceed the number of places available.

There are different opinions concerning the condition for participating in the WWS. It states that participants in the programme are involved basing on the queue principles. Despite criticism that the condition does not allow participation in the measure for persons who really require it, municipality representatives mostly agree that the condition is appropriate, since it allows easy administration of the WWS. Besides, the municipality representatives' opinions do not differ significantly among the regions.

Municipality representatives also mostly agree that the amount of scholarship LVL 100 (EUR 150) is appropriate to the current economic situation, since it should not be as high as the minimum wage in Latvia and is a short-term measure for persons without jobs and income.

In addition, they consider that the measure in most cases reaches its aim – to provide support for persons mostly requesting it.

The municipality representatives' opinions do not differ significantly among the regions.

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Project Management Principles in Rural Tourism – Encouraging Sustainable Business

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Abstract. As of the accession of Latvia to the EU in 2004, financial resources have been made available for tourism project implementation within the framework of the ERAF and ELFLA programmes, and consequently the reception and efficient administration of the financing have become topical issues.

The amount of financing devoted to rural tourism projects includes a total of LVL 5,054,709 of unused financial resources, and projects fail to make use of the project management principles that would ensure efficient administration of the funds allotted to the projects and sustainability for the affirmed projects.

The research revealed that project management principles are not applied in the project initialisation process in Latvia, which results in implementation of low quality projects that do not foster development of the industry or continuing business activity following the project implementation.

Fulfilment of the suggestions and recommendations provided at the end of the research report would ensure application of the project management principles and consequently efficient administration of the allocated financing, particularly in the project initialisation process as well as improvement of the methodological documentation, thus ensuring implementation of efficient, compliant rural tourism projects that would encourage sustainable business.

Key words: project goal, project management, rural tourism.

Introduction

Latvian tourism product promotion is greatly supported by the various financial instruments provided by the European Union (EU); their use depends on the priorities of the industry and the state budget allocations to tourism policies. Both in the periods of 2004-2006 and 2007-2013 funds were provided for infrastructure, business, cooperation, and marketing activities as part of the EU Structural Fund projects.

Financing of LVL 30 million is envisaged for the development of national level tourism products and a tourism information system, as part of Measure 3.4.2. "Tourism" governed by the Ministry of Economics. The businesses of tourism industry may also submit projects within the framework of the programme "Business and Innovation" as well as other EU Structural Funds and programmes in the competency of other ministries.

Unfortunately, only a small part of the available resources has been used, because of which sustainable business promotion is not ensured in the industry of rural tourism.

The aim of this article is to provide arguments, based on the principles of project management, to support the importance of project initialisation process in the utilisation of the financial instruments of the EU Structural Funds in the field of rural tourism.

In order to achieve this aim, the tasks include reviewing the main project management principles, studying the opportunities provided by the EU financial support for rural tourism to encourage sustainable business, defining the key problems in formulating objectives for the European Union Structural Funds projects, as a result of which the EU Structural Funds financial resources for the tourism industry development are not used up completely.

The subject of the study refers to the approved rural tourism projects.

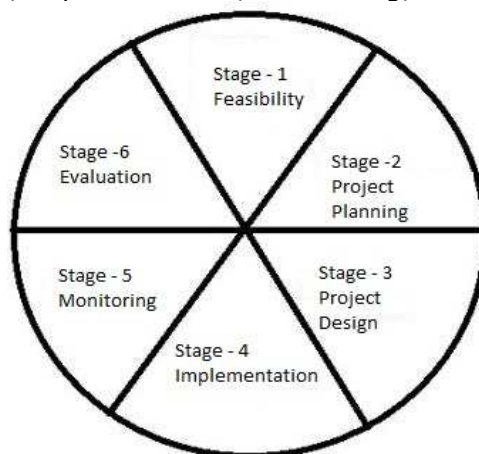
The methodological basis for the article is made up of the laws, regulations, and guidelines of the EU and the Republic of Latvia as well as works of foreign authors, and research carried out by the authors.

The listing of literature provides references to works of both foreign and Latvian authors, and sources of publicly available information.

1. Project management principles

A project is a set of activities or undertakings characterised by the following: a project is unique; it has a pre-formulated objective, a defined beginning and closure, financial, material and human resource limits, and a specific project organisation.

Any project has activity cycles, known as project phases. Such stages include the feasibility study, planning, design, implementation, monitoring, and evaluation (Figure 1).



Source: (Pandey, D. P, 2008)

Fig.1. **Project cycle**

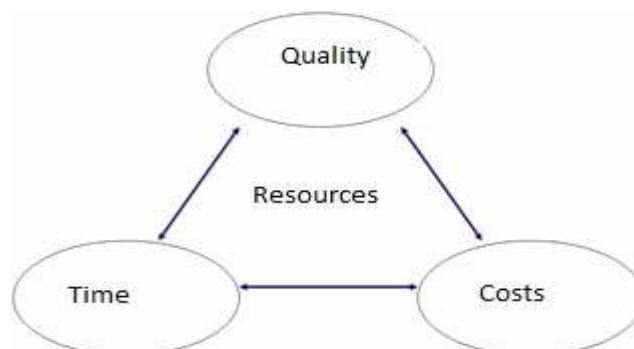
Successful project management can be defined as having the project objective:

- within time-frame;
- within cost;
- at the desired performance;
- while utilising the assigned resources effectively and efficiently.

The management of social development project involves application of different managerial skills in the all the stages of project cycle. These skills are applied in decision making, supervision, budgeting, and reporting (Pandey D.P., 2008).

A project is made up of many different interrelated activities designed to achieve a common goal. The key objective of the project is fulfilled only when all the activities have been carried out. Dynamics is a characteristic feature of a project – it is its ability to react to changes and issues (Ilmete Ž., 2004).

The project objective system is formed by the so-called project tension triangle of the basic indicators: time, resources, and quality (Figure 2).



Source: (Barnes M., 1985)

Fig.2. **Project tension triangle**

- Quality: specifications, standards – high quality of planning and implementation.
- Costs: the planned budget, estimates, and expected costs.

- Time: time schedule – the scheduled beginning and end date; accuracy and implementation on time. (Barnes M.,1985)

Although there is much debate about the precise meaning of 'quality' in the context of sustainable rural tourism, there is general agreement among its key stakeholders that delivering quality is a key requirement for achieving success in rural tourism businesses (Hall, D. R., Kirkpatrick, I., Mitchell, M., 2005). Consequently, investment and implementation of projects of high value added and proper quality guarantee sustainable business development in the tourism industry.

The project objective reflects all of the key aspects, that is, technical, financial, organisational, time, economic, contract-defined aspects as well as quality, personnel, safety, logistics, information system, and technologies. Hence, a project objective may be defined as a collection of separate sub-goals (system of objectives) to be achieved in the course of the project.

Analysis of literature reveals that in the 1940s and 1950s there were ever more publications addressing the discussion of such indicators as specific measurable objectives. However, these terms, mainly in a wider sense, are being used only in the recent years.

The SMART principles were first defined by Peter Drucker. In his *Practical Management of 1954*, P. Drucker uses the term management by objectives and points out the importance of defining objectives in improvement of organisational management (Drucker, P. F., 1954).

Blanchard includes reference to the SMART principle in his *Management and One Minute Manager*. In this publication, Blanchard uses the acronym SMART to define objectives (first published in 1985). However, the author does not provide any reference to the source in this work. Blanchard defined SMART as specific, measurable, achievable, realistic, and time framed.

2. The EU financial support for the rural tourism industry

The EU financial support for development of the public and private sector of tourism is mostly available from the related field structural funds, Community programmes, and initiatives (improvement of the small and medium business competitiveness, regional development, environmental protection, education and training, preservation of cultural heritage, and research and development of new technologies). The European Investment Bank offers crediting opportunities as well. The EU financial support is usually provided based on co-financing – the recipient has to invest its own resources, which could be private, public organisation, state, or municipality financing. The EU has no common procedure of application for the financial support. Mostly, the resources are allotted by an open competition procedure.

As part of the programmes are administered by the Ministry of Economics and the Ministry Agriculture, the tourism industry will have a total of LVL 48 million available until 2013, which brings up the issue of receiving the financing and administering it efficiently.

The support activities to be financed in 2007–2013 have been established based on the National Strategy Plan for Rural Development of Latvia for 2007–2013 and Rural Development Programme of Latvia for 2007–2013, the planning documents determining the agricultural development objectives and directions, and ways of achieving the set objectives.

The aim of Encouragement of Tourism Activities is to encourage non-agricultural activities in rural areas by developing and improving the rural tourism and related services and infrastructure. At the European Agricultural Fund for Rural Development (EAFRD), the grounds for granting their financing is an approved project submittal.

Within the framework of the programme, tenders were announced for a total available financing of LVL 10,317,675 for tourism activity encouragement project implementation. Totally 164 projects were submitted to the announced project submittal tenders, for a total of LVL 5,731,864.

On 7 January 2011, there are 40 projects being implemented as part of the EU EAFRD programme (on 5 project submittal selection stages), totalling to LVL 3,190,566, covered from the EC allotted resources at the amount of LVL 1,120,267; the remaining financing is to be used up by the end of the project implementation deadline.

Although the programme framework provided financing for all of the submitted projects, only 40 were approved, and the approved financing covered 31% of the available financing for tourism project implementation as part of the EAFRD activities. This indicates

clearly that the quality of the submitted projects, since the available financing for tourism projects is currently not used up. The potential bureaucratic obstacles and formalities that are not comprehensible to the project submitters shall be taken into account, but the professionalism and competence of the project submittal authors in the field of project management has also got to be evaluated. At the moment, there is a lack of qualified and knowledgeable project managers that could develop well-justified project applications, based on previous problem and cost-benefit analysis.

Until the beginning of 2008, application for the most part of the EAFRD undertakings went well – the financing available for particular stages of tender could not cover the submitted projects. Nevertheless, since the middle of 2009, the number of projects has decreased notably, and the financing available for the stages has not been used up completely.

The European Commission emphasises that high quality is the main comparative advantage of the EU tourism; it invites the Member States, and regional and local institutions to stress and strengthen the quality in tourism services, guaranteeing safety, diverse and modern infrastructure, corporate social responsibility of the companies involved, and environment-friendly operation.

The Rural Support Service is announcing an open tender for Tourism Activity Encouragement undertaking, which is organised by the EU EAFRD and Rural Development Programme (RDP), in accordance with the Cabinet Regulations No. 1057, "Procedure for Granting State and European Union Support for Tourism Activity Encouragement, in the form of Open Project Submittal Tenders" of 16 November 2010.

The project submittals will be accepted in the following stages:

- Stage 6, January 10 - February 11, 2011, total public financing LVL 1,684,920;
- Stage 7, February 14 - March 18, 2011, total public financing LVL 1,684,920;
- Stage 8, March 21 - April 26, 2011, total public financing LVL 1,684,920.

The European Commission believes that the financing of rural tourism and agri-tourism development in the EU is fully justified. More than 500,000 accommodation businesses related to this field, and approximately 6,500,000 beds, 15-20% of which are located in agro tourism objects; the demand and supply in these fields have been growing by an average of 10–15% a year for the last 10 to 15 years, when the total increase in tourism reached 4–5% on average. The EC also stresses that the rural tourism and agri-tourism deserve particular attention because they are more than other fields influenced by special aspects, such as the necessity to improve the rural infrastructure, the limited access to credit for rural tourism activity development as well as the insufficiently structured supply, and weak connections with the market.

Currently, the tourism industry in Latvia has a negative balance, and the development rates are expected to decrease in the near years. Therefore, the main goal now is to ensure efficient implementation of such tourism development encouragement activities that would provide for sustainable competitiveness of Latvia's tourism products and services, i.e. high quality, correspondence to the demands of the market and consumers, reasonable prices, recognisability, and attractiveness.

3. Objective formulation problems in the European Structural Funds projects

The SMART principle is used in the project management theory to define project objectives. However, upon analysis of the methodical and regulatory documentation of Structural Funds, the authors of this article conclude that the above principle is defined as a complex set of criteria and the project in general shall comply with the principle. At the same time, the methodological documentation does not mention that exactly the project objective ought to comply with SMART.

One of the issues stressed by the authors is the defining of project objectives and their correspondence (or lack of it) to the business environment problems in the particular area, which fails to promote the development of sustainable tourism business on a strategic level.

Any project is oriented towards the solution of a certain problem, so to formulate the objective of the project it is necessary to define clearly the existing issues that require a solution. Even on a strategic level, it is important for businesses operating in a particular field to define appropriate project objectives that would promote sustainable business.

When a problem is found, it is subdivided into sub-problems, which are further analysed and suggestions are made to solve it. If all sub-problems can be solved, then the main problem is solved, too, but if it is not, then the priority sub-problem is chosen and specified. Businesses should apply the generally accepted theoretical justification for object definition when initialising a project and formulating its objective. Municipalities should define Smart Objectives, but it is not implemented in the practice.

The main problem in formulating a project objective is that the objectives are not coordinated with a problem, which is defined in the project and require a solution. Consequently, it is necessary to obtain sufficient information to describe the issue and correctly formulate the problem to be able to define the project objective corresponding to the problem formulation.

In order to analyse the objective formulation problems in the context of the EU Structural Funds projects, the authors carried out an analysis of the regulatory and methodological documentation and analysed the project objective formulations in the submitted projects approved by municipalities.

This problem exists on a national level, i.e. the institutions involved in administration of foreign financial instruments have defined inappropriate requirements in the methodologies developed for project submitters and guidelines for filling in the project submittal forms.

The results of incomplete guidelines that fail to comply with the project management theory are low-quality definition of project topicality, problems, and objectives. Considering that in methodology the SMART principle is incompletely or, in the case of some institutions, quite incorrectly applied, this affects project submittals. It shall be noted, though, that the existing guidelines and methodologies do not prevent the businesses from developing project submittals in compliance with the project management theory, but inaccurate definitions in the methodological documentation misinform and restrain the project submitters.

When the objective is set, it is important to establish the objective achievement strategy, because there are various ways to reach a goal. Ideas shall be generated on how the objective should be achieved. The more ideas, the higher quality action model can be developed to achieve the objectives.

In the methodological regulations on filling in project submittal forms for the EU EAFRD Rural Development Programme *Tourism Activity Encouragement* activities for 2007–2013, the Rural Support Service provides guidelines to businesses and indicates that the “objective of the project is the individual objective of the applicant for support. It is the project’s main specific task and the conception of what the applicant for support wishes to achieve in the course of the project and as a result of the project”. The authors conclude that the explanation provided by the administering institution in the objective definition section of the methodological documentation does not at all conform to the SMART principle, and compliance with it is not required or indicated as a guideline for the project submitters. Such incomplete regulation, when included in the project development methodologies, refers to the business project submittals demonstrating incomplete project objective definition.

The authors of this article carried out a project goal definition study, which included analysis of the methodical documentation and bids of tourism promotion projects. The results of the study are summarised in Table 1.

The study selection comprised 17 projects. Because of the study, the authors found that none of the goals defined in the project bids conformed to the SMART principles. However, all of the included goals that were analysed showed a partial correspondence to the above-mentioned principle.

Analysis of the study results lead the authors to conclude that the role of goal definition is not sufficiently understood which is proven by the 100% non-correspondence of the selected projects to all of the SMART principles. The analysis shows that the goals set forth in the 17 project bids have no set time limits, and 10 of the project goals do not include measurable indicators. Meanwhile, 6 out of the 17 formulated goals do not reflect specificity, they are general and have not been limited.

Table 1

Formulated goal conformity to the SMART principle

	Goal fully corresponding to SMART principle	Goal partly corresponding to SMART principle	Not time-bound	Not measurable	Not specific	Not attainable	Not realistic
Number of projects for the respective criterion	0	17	17	10	6	0	0

It should be analysed, in the context of Structural Funds and other foreign financial instruments, whether the formulated problem is relevant to the priority defined by the financial instrument or the purpose of allocation of the financing. If the municipality's issue is not relevant, the project application is not considered. If it is considered, the sub-issue is considered that the initialised project aims to solve.

Upon analysis of the goal of tourism club Oga for the project "Development and Improvement of the Inventory and Equipment Base of the Tourism Club OGA", that is to "popularise new and modern, environment-friendly sports and recreational active tourism to the inhabitants of Grobiņa district", the authors conclude that SMART indicators such as *measurable* and *time-bound* have not been observed when formulating the goals, and so it is impossible to determine the criterion that would signify that the particular goal can be considered achieved. It is unknown until which time the goal is to be achieved and at what extent or quantity of the works to be done the goal will be achieved.

If a non-compliant project objective is defined, it is impossible to check it for compliance after the project is implemented, because it has not been set in accordance with the SMART criteria from the beginning. The administering institution originally obligates the project submitter to define the objective as a task, not as the desirable state – complete or partial solution of the problem.

Conclusions

The following conclusions were made in the course of study.

Analysis of the project submittals determines that the objectives formulated at the lowest hierarchical level are not always sufficient for achievement of the subsequent hierarchical level objectives. This brings about the risk of unforeseen costs, which may result in additional load on the municipal budget because the costs incurred outside the project and priority objectives cannot be covered by the financial instrument resources.

The authors conclude, given the previously analysed information, that both the methodology of filling the project bid form and the methodology of project bid assessment indicate incomplete requirements for goal formulation and do not set clear control mechanisms. Consequently, a project's assessor has no such duty to verify the conformity of the project's goal formulation to the criteria set by the project management theory (SMART principles). In view of the incomplete methodology, the project submitter prepares non-conformant goal formulation and the project's assessment expert only formally assesses, whether the goal corresponds to the purpose of the activity.

It leads to believe that the developed rural tourism projects are not target-oriented and do not reflect the particular project issue that the project's implementer (recipient of the financing) wants to reduce or prevent. Consequently, the approved projects are not always oriented towards solution of the predefined problems, which in turn signals inconsiderate application of the financial resources. This is confirmed by the amount of unused or inappropriately used financing occurring during implementation of the projects.

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Highly Qualified Workforce Attraction from Abroad – Issues in the European Union

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Abstract. The article overviews immigration policies of the European Union (EU) Member States – Germany, Austria, the Netherlands, Belgium, Hungary, the Czech Republic, Italy, the United Kingdom, Ireland, Finland, Sweden, Lithuania, Estonia, and Latvia, including admission of highly qualified workforce, terms and conditions of issuing work permits and quote systems. Recently introduced highly qualified workforce programmes indicate on improvements of the immigration policies in each of the Member States. Latvia has no policy of workforce attraction from abroad yet, but there is a labour market protection policy. The labour market protection immigration policy has to be replaced by an active immigration policy to attract a highly qualified workforce that would contribute to the development of the national economy in the future. The effective immigration policy providing favourable entrance and living terms would enhance the economic, demographic, and social development of the country. Latvia has to attract and retain highly qualified workforce to foster the economic competitiveness. Thus, the country may meet the current demand gradually overcoming the lack of highly qualified workforce by stimulating the inflow of highly skilled specialists to the market of Latvia.

Key words: immigration policy, work permits, highly qualified workforce, labour market.

Introduction

As a result of the ageing population, when the number of retired persons increases, fewer children are born and few young people are able to work, the demographic situation in the country worsens influencing the economic development. Solutions to overcome the negative demographic situation are as follows – to increase the retirement age, to encourage higher economic activity of females, among immigrants, to introduce the effective family policy, and to improve the integration policy and lifelong learning.

Practice shows that increase of the immigration flow can lessen the negative influence of the current demographic situation. The introduced immigration policy in relation to highly qualified workforce is aimed at investing into highly skilled immigrants to get the resulting economic benefits. Highly qualified immigrants are regarded as positive immigration due to higher value added from their activity in a particular country.

The research **object** is the experience of foreign countries in attraction of highly qualified workforce. The research object is highly qualified workforce itself.

The research **aims** to analyse the experience of foreign countries in attraction of highly qualified workforce.

The following **tasks** were set to achieve the aforementioned aim:

- to analyse the EU Member States immigration policy for skilled workers;
- to analyse Latvia's immigration policy.

General research **methods**: graphical and monographic methods are used in the research.

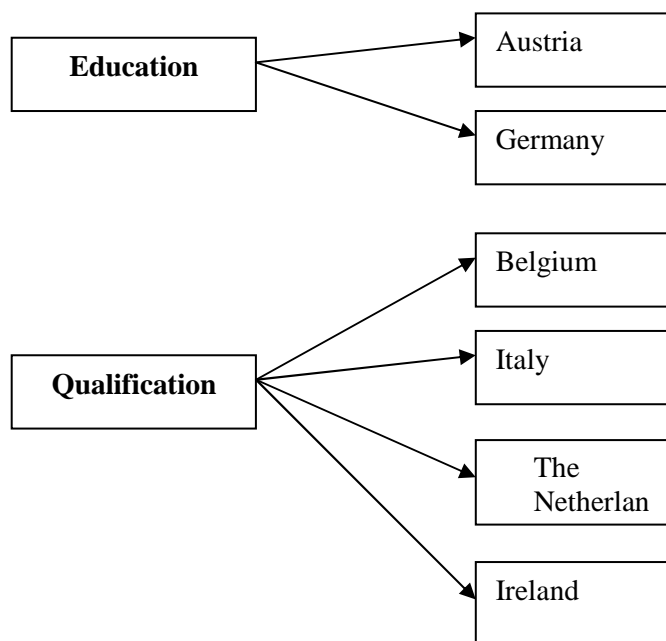
Results and discussion

Immigration in the EU

The demand for highly qualified workforce in the EU market is growing progressively – the EU employees will not be able to fulfil it in the future. Demographic forecasts show that working-age population will experience a 48-million decrease by 2050, while the demographic burden would double (Bassard L. 2009). The EU will need to attract more immigrants of various qualification levels due to the demographic ageing. Thus, the EU countries have to create an integrated programme for attracting highly qualified workforce and agree on the unified definition of the notion.

At present, each EU country defines the notion of a highly qualified workforce differently. However, there is one common feature – the demand (Figure 1).

In Austria and Germany education is the main indicator of a qualification level (International Organisation..., 2006).



Source: author's construction

Fig. 1. **Highly qualified workforce identification basis in the Member States**

In Belgium a qualification per se is important (European Migration Network, 2006). The Italian legislative system defines highly qualified employees as having corresponding educational and practical skills (European Migration Network, 2006). In the Netherlands a highly qualified immigrant is an individual with higher education or academic qualification who contributes to the country's innovation process (Netherlands.Focus Migration, 2007).

At present, every EU country has its own criteria to define the qualification level. Unifying these criteria to identify a highly qualified specialist by his/her education, qualification, and experience would help generate the universal definition for all the EU Member States and contribute to the overall economic development.

Each EU country attracts highly qualified workforce in line with its own immigration policy (European Migration Network, 2006).

There are two types of immigration policies in the EU:

- active immigration policy which favours attraction of highly skilled specialists; and
- protective immigration policy which focuses on the labour market protection.

Immigration policy governs terms of entrance, available types of jobs, and the number of immigrants that are allowed to enter a country. However, differing market necessities, immigration systems and definitions of highly qualified workforce among the EU Member States impede the implementation of unified programmes that would benefit all the Member States. At present, the EU is developing such a system which would allow highly qualified immigrants to enter the EU on an operational basis.

When working out an immigration policy, each EU country manages its immigration flows taking into account the economic and labour market situation. The Member States privilege high-priority job clusters, thus influencing immigration flows and improving the demographic, economic, and social situation. In Germany pharmacy, machinery, medicine, and IT specialists are highly demanded; for this reason, the country has not accepted immigration quotes for any other job clusters. The Netherlands focuses the immigration policy on attracting international managers, researchers, and IT specialists which can improve the overall economic climate in the country. The immigration programme introduced in Ireland fosters attraction of the highly skilled IT, medicine, health, and social care specialists. The policy is aimed at meeting the

labour market demand and reducing the workforce deficit in the priority industries (European Migration Network, 2008).

To stimulate competitiveness of the national economy, the UK government has been implementing Highly Skilled Migrants Programme since 2002. The programme uses the system of points (European Migration Network, 2009). The idea of this system is to employ an elastic structure, within which the immigration policy can be applied to the changing economic and labour market conditions. An applicant has to gain at least 65 points – based on his/her previous achievements, qualification, experience, and age. Within the programme, a highly qualified employee can work in any industry and his/her work permit will stay valid even in case of termination the employment agreement.

There are various models and schemes for attracting highly skilled workforce in the EU Member States. Each country defines the required number of immigrants and concludes agreements with them. For instance, Finland has decided to attract more highly skilled specialists. In 2009, the government of Finland concluded a collaboration agreement with China. The agreement governs terms and conditions of employing a fixed number of highly skilled specialists. This collaboration also includes liaison with reputable enterprises guaranteeing stable employment options (European Migration Network, 2009).

Economic immigration policies in the Baltics are based on the internal labour market protection when foreign specialists are employed only if none of the local applicants is suitable for an open vacancy. The employment procedure is similar in all the Baltic countries; however, there are some differences. In Lithuania, for example, a simplified employment procedure is applicable to those vacancies where there is a labour force deficit. The immigration policy is open and flexible enough to react to the labour market changes and favours specialists from Belarus, Ukraine, Moldova, and Caucasus (European Migration Network, 2009). Estonia is trying to encourage immigration actively – by using the lifelong learning programme which aims to attract university professors from the EU and third countries. In addition, Estonian employers and entrepreneurs are entitled to search and employ highly skilled specialists themselves (European Migration Network, 2009).

Some countries do not employ special programmes to attract highly skilled workforce due to the limited demand and internal labour market protection. Austria has no such programmes and it is quite hard to enter the Austrian labour market. Belgium, Germany, Greece, Italy, and Sweden have no similar programmes either.

When granting work permits, each EU country takes into account the prevailing labour market situation – identifies priority job clusters, simplifies the work permit granting procedure thus increasing the appropriate immigration flow. The length and complexity level of this procedure is very important, because it whether increases or decreases attractiveness of a country. In Sweden professional painters, researchers, sportsmen, and entrepreneurs should wait up to 4 years to get a work permit due to additional requirements set by the government (European Migration Network, 2006). In Germany academics, scientists, high-ranked teachers, and distinct specialists receive special work permits, if a respective position is available (European Migration Network, 2006). In Belgium highly skilled researchers and managers of international companies can get the work permits quicker and easier. This advantage relates to the managers that are working in export enterprises within the country or in international enterprises founded in Belgium (European Migration Network, 2006). In Austria work permits are issued seasonally based on demand from the agriculture and tourism industries. Austrian employers manage the process of granting work permits themselves – depending on the labour market requirements (International Organisation..., 2006). The Italian legislation defines highly qualified employees as having the required skills and experience, e.g. managers and employees whose office or branch is located in Italy, as well as teachers, scientists and university academics, translators, maintenance and technical specialists, dancers, painters and musicians, theatre, cinema, television and radio artists, professional sportsmen, journalists who work in Italy, and young participants of exchange programmes (European Migration Network, 2007).

In countries with well-developed immigration policies the procedure of issuing work permits is organised to meet the economic requirements. The civil rights of married individuals and their equal opportunities carry great importance. In Ireland the work permit system is based

on the labour market checks. The system allows every highly skilled employee to work in any enterprise of a chosen industry given the permit. The allowance for spouses to get the work permit makes the Irish labour market even more attractive. In Germany the work permits are issued in line with regulations contemplating that foreign employees have to be complementary with the necessities of the German economy. Highly qualified foreigners can get a residence permit without a job offer and settle down anywhere in Germany; their family members are also entitled to get the permits. The German government admits that the rights of spouses to get residence and work permits in Germany is a significant factor in stimulating the inflow of highly skilled workforce from abroad (European Migration Network, 2006).

The immigration policy of Sweden contemplates equal regulations of entrance and residence for all immigrants irrespective of their qualification. Immigration of workforce in Sweden completely depends on requirements of an employer and the labour market is open for all employees (European Migration Network, 2006). The work permit granting procedures in the Member States depend on their economic needs and labour market situation. One of the most favourable procedures is the one that allows issuing the work permit to a highly qualified applicant, even if s/he has not been offered a concrete job yet, simultaneously granting the same rights to the applicant's family members.

To regulate the quantity of issued work permits, some countries, e.g. Greece, Italy, and Latvia, apply various types of quotes' systems. Austria makes favourable exceptions in relation to quotes, if it corresponds to certain conditions. In Greece and Italy there are a number of jobs that are not attached to the quotes' system; these jobs have different application structure. In Estonia amendments to the Immigration Law allow increasing the quotes from 0.05% to 0.1% of the core Estonian population and defining salary criteria for foreign specialists who come to work in Estonia, except individuals from Island, Japan, Norway, Switzerland, and the USA (European Migration Network, 2007).

To stimulate inflow of highly skilled specialists from the third world countries, the EU is planning to introduce a special type of residence permit – "**Blue Cards**". However, the Member States have no unified viewpoint whether highly skilled specialists are those who have higher education, or who have 3 or 5-year professional experience. The minimal salary coefficient is set at 1.5 meaning that the salary of a highly qualified citizen of the third world country should be 1.5 times higher than the average monthly salary (including taxes) in a Member State. Each Member State defines and controls the number of immigrants corresponding to the labour market requirements (Angenendt S., Parkes R., 2010).

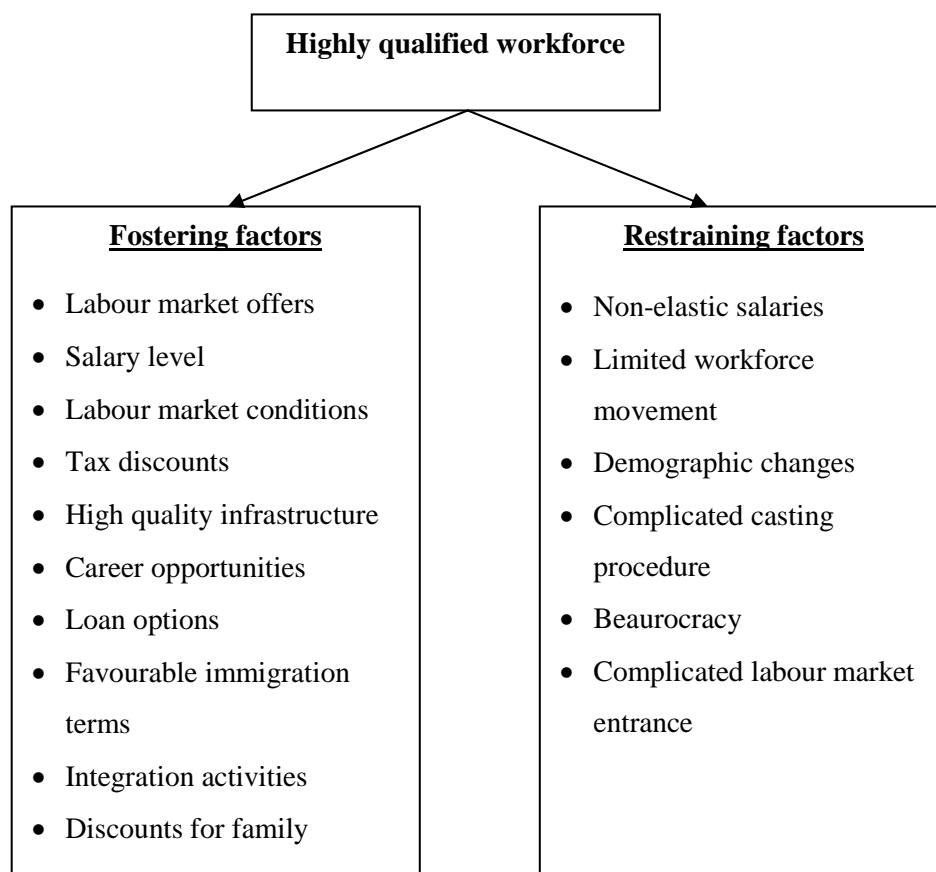
Blue Card programme is already adopted by Sweden and Estonia. Germany is implementing a similar programme and has introduced the Green Card system which attracts IT specialists to the German market. Hungary is working out Green Card Directive which will help attract highly qualified workforce, students, and researchers. In the Czech Republic the aim of the Green Card system is to improve and facilitate the workforce migration process, and to ease beaurocratic requirements. The main advantage is online search options and connection of Green Card with a work permit which allow unifying the application procedure and, thus, saving time. Due to the economic crisis, less Green Cards are issued – at present, the system is not functioning properly.

A number of solutions can be identified to stimulate immigration of highly qualified workforce, such as growth of employable population, increase of salaries and labour efficiency, or qualification changes (Figure 2).

Salary is the major factor that motivates employees. Other factors include career opportunities, collaborative team, elastic working hours, and family. On the contrary, such factors as non-elastic salaries, complicated casting procedure, beaurocracy, etc. restrain immigration of the highly skilled specialists. Understanding these restraining factors and diminishing its influence, it is possible to increase attractiveness on the international level and get more economic benefits. The government policy can support attraction of the highly qualified workforce using tax discounts, offering loan options, high quality infrastructure as well as more attractive salaries.

Immigration policy formation in relation to the highly qualified workforce is a continuous process. Some countries do not need to attract the workforce from abroad and there policies are designed to protect the labour market. In some countries quality and effective immigration

programmes are introduced in order to attract highly skilled specialists, and cover the labour force deficit and improve the economic situation. It is strongly advised to pass a unified European directive that would simplify the regulations that govern entrance of the highly skilled specialists to the EU countries. However, differing labour market necessities, migration systems, and definitions of highly qualified workforce complicate the issue and hinder the Member States to interact synergistically.



Source: author's construction

Fig. 2. **Highly qualified workforce immigration – fostering and restraining factors in the EU Member States**

Immigration in Latvia

According to the data provided by the Central Statistical Bureau of Latvia, in the beginning of 2009, 2.261 million of people lived in Latvia or 9600 less than a year before. Due to demographic processes, as a result of which the number of deaths exceeded births, the local population decreased by 7100. The number of people aged more than 65 has increased by 37.5 thousand people (CSB). Indicators reveal that the overall demographic burden increases as a result of the low birth rate. The demographic burden can cause additional difficulties to social insurance and healthcare systems. It is a serious problem for the future of the economy of Latvia, since the number of employable population decreases, while the number of people who get social allowances, increases.

One of the main reasons behind the increase in employment related immigration is being explained by the need to bring in the third country workforce to foster the growth of the national economy. Inflow of people requires development of the local infrastructure which, in turn, attracts local capital investment. Hence, immigrants influence labour market either directly, by increasing the supply of labour, or indirectly, by increasing the demand for labour (European Migration Network, 2006).

Latvia is not among those countries which attract immigrants – yet, due to comparatively low level of social welfare and strict national immigration policy. In Latvia the immigration policy is focused on labour market protection.

Latvia is not considered as a popular immigration target for the third-world countries either. Although the allowed maximum of foreign employees is not fixed, the quotes' system applies only to the IT industry – the employment procedure for these specialists is easier as compared with others. Before granting the work permits, the government of Latvia checks whether a required specialist can be found among Latvia's citizens, non-citizens, citizens of other EU countries, countries of the European Economic Area and Switzerland, residents of the European Community as well as foreigners who already have residence permits (European Migration Network, 2008).

Latvia does not have any programmes or agreements with the third countries for recruiting highly-skilled workforce (European Migration Network, 2006).

According to the data provided by the Central Statistical Bureau, the immigration dynamics has a downward tendency. The increased immigration flow was noticed from 2006 to 2008, when local employers started to look for the labour force on international markets. In 2009 the number of immigrants in Latvia decreased due to the economic crisis.

As a result of the analysis of the Latvian immigration policy, it is concluded that the country protects the internal labour market, simultaneously attracting foreign specialists. At present, the number of immigrants in Latvia is low and it tends to decrease further. Latvia can improve its competitiveness in terms of productivity, innovation and technology as compared with other countries by implementing the effective and active immigration policy aimed at attracting highly skilled specialists from abroad.

Conclusions and recommendations

1. Ageing population and decrease of the employable population may create serious obstacles for the future economic development in the EU and the stability of its social system. As long as the demographic situation worsens, the immigration policy has to be focused on attracting the highly skilled specialists from the third world countries. The demand for the highly qualified workforce gradually increases in the EU labour market and will continue to grow in future – the EU specialists will not be able to fulfil the growing demand.
2. Each European country attracts highly qualified workforce in line with its own immigration policy. There two types of immigration policies in the EU – active immigration policy which favours attraction of the highly skilled specialists, and protective immigration policy which focuses on the labour market protection. When working out an immigration policy, each EU country manages its immigration flows taking into account the economic and labour market situation. The Member States privilege high-priority job clusters, thus influencing immigration flows and improving the demographic, economic, and social situation.
3. Understanding the factors that restrain immigration and diminishing its influence, it is possible to increase attractiveness on the international level and get more economic benefits. The government is strongly advised to support attraction of highly qualified workforce.
4. In Latvia the immigration policy is focused on labour market protection. Latvia has to implement more effective immigration policy that corresponds to the current economic necessities. Labour market protection policy has to be replaced by the active immigration policy to attract a highly qualified workforce that would contribute to the development of the national economy in the future. The effective immigration policy providing favourable entrance and living terms would enhance the economic, demographic, and social development of Latvia.

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Interaction of Local Governments and Entrepreneurship

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Abstract. Promotion of entrepreneurship has become an integral part of any local government, both rural and urban municipalities. Choosing a place for business is one of the first tasks after making a decision to start a business, so for local governments it is important to ensure an attractive place for business. In the article, the authors theoretically analyse opportunities of local governments to influence business environment. At first, the authors identify factors of business environment, which influence the development of entrepreneurship. Secondly, the authors define groups of factors, which local governments can either influence fully or partly, or have no influence at all. As result of the research, the authors draw a conclusion that theoretically local governments can influence several components of business environment, though not all of them. To improve business environment local governments can influence such factors as geographic conditions, infrastructure, and institutional environment. Local governments can partly influence economic environment, social environment, legal environment, and competition and culture environment, but they cannot influence financial environment, technological environment, and global environment. It is also important for local municipalities to determine a direction of territories strategic development, because each entrepreneurial sector needs specific support and it is not possible to use one successful support model in all cases.

Key words: local government, entrepreneurship, economic development, business environment.

Introduction

Business sector is one of the groups with special needs and requirements from local governments. Entrepreneurship and its development are seen as a basic of country's progress, since business creates workplaces, provides tax revenues and the output of goods and services. Business can be considered as one of the driving forces of public life. Consequently, the business environment and business development is one of the points for various levels of governments, also local governments. Obligation to facilitate economic activity within the relevant administrative territory and to be concerned about reducing unemployment is determined in the law "On Local Governments" (On Local Governments, 1994). This issue is topical due to recent changes in the fiscal policy of Latvia, which have an impact on entrepreneurship. Recently finished administrative territorial reform has made corrections in the principles of management on local governments' level. Consequently, local governments have to search new approaches to develop local economies and entrepreneurship. However, there is a lack of research on the possibilities of local governments to affect entrepreneurial activity in their territories, since usually there are discussions held on the support of entrepreneurship and business environment on national, yet rarely on a local government level. However, entrepreneurial activity differs in several areas, thus researchers seek for factors influencing business sector also on a regional level.

Consequently, the authors set a **hypothesis** that theoretically local governments can improve factors of business environment to develop entrepreneurship in their territory.

The **aim** of the paper is: theoretically, to determine, which business environment influencing factors local governments can improve in order to develop entrepreneurship in their area. **Tasks** to achieve the aim are as follows:

- to identify factors of business environment, which influence the development of entrepreneurship;
- to define groups of factors subject to possible improvement by local governments.

The following research **methods** are applied in the research: monographic method, analysis and synthesis, induction and deduction, and logical-constructive method.

Results and discussion

Local governments play an important role in the social development and welfare. No doubt that this level of public administration is particularly significant, as decisions of local governments influence people's daily life, and they ensure public services that directly influence the quality of life. Usually local governments have varied functions and there are plenty of groups with several needs, which are interested in fulfilment of these functions. Local authorities have to provide a balance between interested groups, for instance, local governments should accommodate citizens' needs for infrastructure and quality of life on the one hand, and growth demands on the other (Jeong M., Feiock R.C., 2006). Citizens may protest against construction of any infrastructure or industrial object, considering that it threatens the environment or creates various types of discomfort (such as increased traffic flow or emissions). Local governments have to provide both living environment and resources for future generations and reflect the needs for the economic development. Now and then entrepreneurs and inhabitants have a different view on the development issues.

Entrepreneurs recognise that local government is not a public authority, which substantially influences them. Overall, only 9% of entrepreneurs consider that local government has created favourable conditions for their business. Twenty-one per cent of entrepreneurs regard local government as an obstructive institution. The majority of entrepreneurs, i.e. 64% believe that local governments have no influence on their company. In general, the influence of local government institutions is considered neutral. Local government mainly affects business environment in its territory and not directly an enterprise. Therefore, entrepreneurs perceive local government as neutral partner. Constructing a business environment is a long-term activity, so the impact and results may be evaluated after years.

One of the controversial questions is the different level of economic activity in several territories. Urban economists have offered several hypotheses about why entrepreneurship differs across space: differential returns to entrepreneurship (movement along an entrepreneurial supply curve); differential availability of inputs to entrepreneurship, including entrepreneurial human capital, and differential supplies of ideas, and differences in the local culture, political system, or endowments (Glaeser E.L., Rosenthal S.S., Strange W.C., 2010). E. Vanags draws attention that in the future rapid growth of information and communication technologies will be the main factor for competitive and sustainable advantage. Advantages will be achieved not by location of a municipality and traditional resources, but knowledge and skills, competence, innovations, creativeness, openness of governments and entrepreneurs to the changes and courage to adopt extraordinary decisions.

Promotion of entrepreneurship has become an integral part of any local government, both rural and urban. Entrepreneurship in rural areas and provincial towns plays a significant role in steady rural distribution of population and balances the development of the whole country.

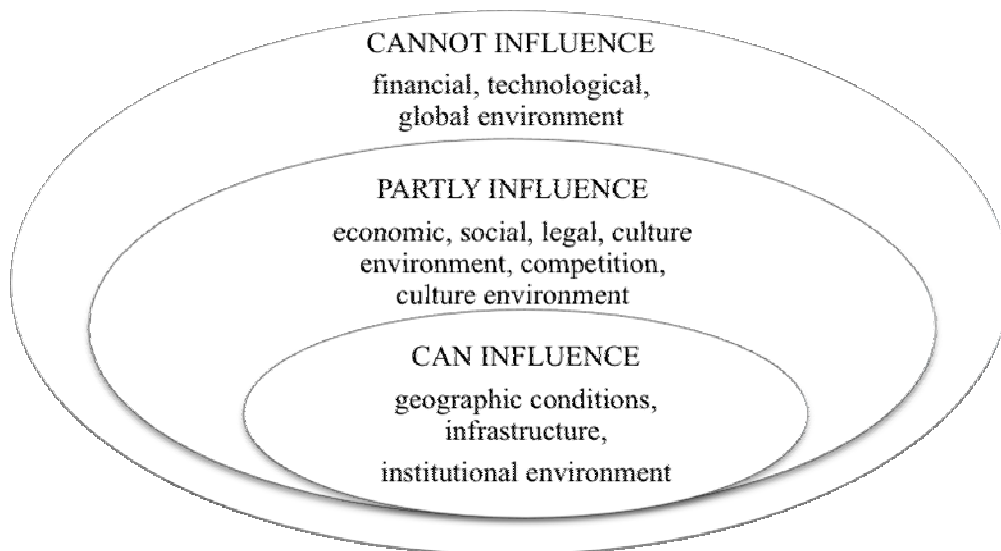
Choosing a place for business is one of the first tasks after making a decision to start business. Young entrepreneur can choose to start business in its municipality or look for another place having better conditions, like more friendly tax policy, better infrastructure, or access to resources etc. Entrepreneurial attractiveness is formed of several factors – social, economic, political, technological, regulatory, and geographical conditions. Local governments are the owners of resources, they are also responsible for regional planning, social and economic development, and strategic planning. It means that local authorities need knowledge on entrepreneurs' needs, and resource planning and using.

Business environment is defined as an unbiased and biased factor, which defines and measures situations of entrepreneurship and the factors influencing it in a fixed period of time (Spīča I., 2001). The most important precondition for a successful development is driven entrepreneurship and national wealth increase in an arranged business environment as well as competitive enterprises and creative entrepreneurs (Zvirgzdiņa R., Auziņa A., 2008). Changes in business environment may be noticed in a long-term period.

There are several approaches related to factors and aspects forming business environment. I.Spiča considers that components of business macro environment include natural, social, political, legal, economic, financial, labour, competition, technological, and international environment. The availability of short-term and long-term loans, knowledge and experience, taxation policy, infrastructure (Rudusa I., Kirila K., 2005), social capital, culture, demography and migration, and institutions (Bruneckiene J., Ramanauskiene J., 2005) area also mentioned as influencing factors. Grīnberga D. and Nešpors V. (2001) emphasise that business environment, looking from local government position, depends on internal and external factors. External factors include the region's geopolitical situation, the macroeconomic situation of the country, legislation, globalisation, integration into the European Union as well as collaboration between neighbouring local governments etc. Internal factors include geographical location, conditions for economic development, access to resources, natural, cultural, financial and human resources, labour force and its qualification, low level of crime, utilities, and infrastructure.

Other researchers have discovered that the institutional system and social and cultural factors are the most important factors influencing business activity in the territory (Lafuente E., Vaillant Y., Rialp J., 2007). The authors hold a view that it is also necessary for local governments to keep in mind ethnic groups of the population, because the society has become more and more multicultural. It is a new challenge for any public authority, also local government. Smallbone D., Kitching J., Athayde R. (2010) consider that ethnic diversity can contribute to city competitiveness through new venture creation, in circumstances where, firstly, differences exist between BME groups in the propensity to engage in entrepreneurship; and secondly, the city contains concentrations of groups with a high incidence to form businesses. In such circumstances, an ethnically diverse city has a potential asset, particularly if at least some of the latent entrepreneurship can be channelled into higher value added activity.

Summarising the information about factors influencing entrepreneurship in general, the authors have subdivided all these factors into three groups, according to local governments' ability to influence them (Figure 1).



Source: authors' construction

Fig.1. **Local governments' ability to influence business environment**

Internal factors, which local governments can affect, are as follows:

- geographic conditions (location, natural resources and their use);
- infrastructure (roads, communications);
- institutional environment (cooperation between administrative structures of local government, other organisations, neighbouring local government).

Local government can promote its development through geographical advantages. For instance, being close to large cities might be an advantage, as it is possible to become an attractive living place for families, who live in suburbs and work in a city. Consequently, local government can also increase budget revenues from personal income tax. The municipality is responsible for various natural resources, which benefit the economy, such as water body, mineral resources, and recreational resources that bring an advantage, for example, in tourism development. Although investments in infrastructure are financially intensive, local governments have to provide local infrastructure for both inhabitants and business development. As Čapkova S. (2005) considers, investment in physical infrastructure has long been seen as both a cause and consequence of economic development. Infrastructure investments are often seen as a stimulant for promoting local economic growth. Traditionally, infrastructure has been viewed as roads, highways, airports, and utilities. The availability of these services has indicated a well-endowed territory. However, in addition to the availability of these traditional infrastructure services, their quality (including timeliness, dependability, and capability) has become an important criterion for business development in recent years.

Infrastructure is one of the most important aspects choosing a business location, and municipality's financial and strategic capacity ensuring successful development of infrastructure is an important criterion for the progress of entrepreneurship.

The development of municipality is influenced by both elected deputies and administrative structures of local government. Entrepreneurs require a certain number of services provided by these structures. For business sector, it is important to get the service at the earliest possible date and the highest quality. Cooperation, clear flow of information between administrative structures of local government can advance the entrepreneurs' positive attitude to the municipality. Whereas, local government in Latvia is relatively small; thus attention shall be paid also to the municipalities' cooperation with each other. For instance, it is necessary to work together for implementing large projects, since only cooperation allows improving the situation in all regions. Needs of entrepreneurs' shall be communicated on all levels of local government.

Local governments can partly influence the following factors:

- economic environment;
- social environment (labour, demographic situation, migration, crime level etc.);
- legal environment (laws and regulations, tax policy);
- competition;
- culture environment.

Local economies are incompletely independent on the performance of their state's economy. Local financial incentives, employee training programmes, and business-friendly regulatory environments are attempts by communities to control and manage their economy. Nevertheless, many economic factors are often beyond their ability to control, and the state economy can often exert substantial influence on local economic performance (Jeong M., Feiock R.C., 2006). Also Čapkova S. considers that economic situation of a municipality is closely linked to national economic situation. Simultaneously, local governments, being closer to inhabitants and entrepreneurs, in critical situations (like, economic crisis) can react more rapidly than other governmental institutions.

Demographic level, income, education level, values, habits, and attitude towards various issues are factors of social environment. Local governments in a long-term period can influence these factors. It is possible to increase population, for example, supporting education institutions or attracting professionals in some fields by creating an attractive living place. There is a viewpoint that talents attract talents, so this means - places with high concentration of specialists increase the ability to attract greater numbers of professionals. Population growth also creates more opportunities for businesses due to more consumers, so there are more possibilities for both the existing and the new companies.

Local governments can also partly influence the level of crime, providing security, lightening etc. Social environment depends on situations on the national level, like the policy of employment and welfare.

Legal environment encompasses both national and local laws and regulations. According to the Law "On Local Governments" (1994), municipalities are allowed to pass

binding regulations: regarding building in a republic city or county territory; regarding the protection and maintenance of public use of forests and waters as well as of natural and cultural objects of the republic city or county that requires special protection; regarding trading in public places as well as restrictions on the time and place of retailing alcoholic beverages; regarding public order; regarding the maintenance of buildings and their territory and structures; regarding maintaining sanitary cleanliness and the maintenance of territories for public use adjoining properties (footpaths, except for public transport stops, ditches, culverts, or grassed territory to the edge of the road); regarding the placing of advertising materials, sign boards, advertisements and other informational material in public places; regarding the use of public transport; regarding improvements of the territories of republic cities or counties, maintenance and protection of plantings; regarding the keeping of domestic animals; regarding the protection of city, county or parish engineering and communication systems; regarding the conversion of residential buildings (flats) into non-residential buildings (non-residential premises), in conformity with the local government territorial development plan; regarding other matters provided for by the law and Cabinet Regulations. These regulations can also influence business environment in a municipality. Still there is national legislation, which local government cannot change so easily.

Competition influences all enterprises. Municipalities can create special provisions for one or several industrial enterprises, so they get a competitive advantage over others (for example, real estate tax allowance for tourism industry). However, the competitiveness depends on factors outside local government control, like product quality, which depends directly on manufacturers and service providers.

Culture factors are traditions, habits, traits, and values of the society. Each community has its own characteristic culture. Local governments can take advantage and make profit from it, for example, creating cultural tourism products, brand; thus promoting the development of entrepreneurship. However, culture factors have been formed in a long term, so it is hard to change them in case of necessity.

External factors, which are outside local governments, are as follows:

- financial environment (short-term and long-term loan availability);
- technological environment;
- global environment.

Local governments cannot influence the availability of long-term and short-term loans. In addition, municipalities cannot directly change technological environment. Loan availability is important for the development of an enterprise to increase production capacity and obtain current assets. Moreover, the technological environment often has a vital impact on innovations.

Support mechanisms for entrepreneurship on local governments' level are a complex issue. On the one hand, local governments can be considered as a separate system. On the other hand, all municipalities have the same regulations and policy from the state administration. However, municipalities are different from each other; thus causing unequal entrepreneurial activity. This means that the most important reasons for the development of entrepreneurship have to be searched for in municipalities and local government's performance.

Local governments play an important role in the economic development for the following reasons:

- local governments have properties;
- local governments have access to information that can be used by new and existing enterprises;
- local governments can support new and existing enterprises through the structures, and providing a department or administrative employee, which contacts with entrepreneurs;
- local governments have extensive obligations through which municipality influences situations in the area and industries.

It is necessary for local governments to decide the direction of economic strategic development, since every industry needs specific support. For instance, entrepreneurs from retail industry as well as other small service enterprises will be interested in regions with high

population density and inhabitants with high-income level. Manufacturing sector enterprises are more interested in areas with low employees' costs and well developed infrastructure. Local government can influence factors more successfully if it knows the development trends and serves as an attractive place for business.

Conclusions, proposals, recommendations

1. Business issues on local government level are associated with the economic development of a particular territory.
2. It is complicated to identify one successful entrepreneurship support model, due to geographic, socio-economic, and demographic differences of municipalities.
3. Local governments can influence such factors as geographic conditions, infrastructure, and institutional environment to improve business environment.
4. Local governments can partly influence economic environment, social environment, legal environment, competition, and culture environment.
5. Local governments cannot influence financial environment, technological environment, and global environment.
6. Local governments need to focus on the needs of both new and existing entrepreneurs in their territory.
7. Local governments have to decide a strategic development direction to support development of entrepreneurship. Every entrepreneurial sector needs specific support and it is not possible to use one successful support model.
8. The hypothesis is partly approved – theoretically, local governments can influence several components of business environment.

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Theoretical Aspects of Volunteer Work in the Context of Development of Human Capital

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Abstract. The analysis of theoretical literature displays that a concept “volunteer work” has no precise definition, and it has several aspects and definitions. The paper characterises a concept of the volunteer work in the context of Development of Human Capital. The research shows that volunteer work has been identified as relatively new kind of leisure activities where the human capital has been accumulated. Theoretical literature views volunteer work as process, individual activity, and sphere of activities, and it plays the role in the sphere of human capital development. Human capital is one of the key factors that defines the potential of a country’s economic growth, as demonstrated by the objective of the Latvian National Development Plan 2007-2013 that an educated and creative person is a priority for improving the quality of life. Therefore, successful development of volunteering enhances the development of socio-economic processes in the state.

Key words: volunteer work, human capital, leisure, competence.

Introduction

Topicality of the research is volunteer work as a concept for spending leisure time. The history of volunteer work goes **back** to at least the 19th **century**. Volunteer work is manifestation of public participation and democracy ensuring harmonised development of the society. It plays a big role in such different and various fields as education, youth, culture, sport, environment, health protection, humanitarian aid, consumer’s safety, development policy, research, equal opportunities, and external relations. At the same time it is a great possibility to learn and get new skills, and to accumulate human capital during volunteer activities. Due to its importance volunteer work is a recognised and popular way involving people into social life to transform their and neighbouring quality of the life during the work for gratis in state, private, and non-governmental institutions.

The theories of accumulation the human capital and human resources development focus on people as an investment to increase production amounts. They are of the opinion that people are assets in reaching higher incomes and welfare. This fact was established analysing theoretical aspects of the human capital.

Within the macroeconomic level, the human capital is characterised by its ability to boost work productivity. Therefore, educated and high-qualified labour represents potential for the growth of the national economy. On the microeconomic level, the human capital is all capacities and skills giving the material and non-material benefits to individual.

Although the concept “volunteer work” is very widely used both in scientific researches and planning documents, the content of this idea is many angular and unclear, and no infrastructure (no legal framework, no data systematically gathered on volunteering in Latvia, no organisation to regularly analyse data on volunteering in Latvia etc.) currently has been built for developing the volunteer work in Latvia. Therefore, the aim of the study is to research the theoretical explanation of voluntary work and its relevance in the context of human capital development.

The hypothesis of the research – the concept of volunteer work is important factor in accumulation of human capital for the formation of new knowledge, competences, and skills in compliance with the potential of state for the economic growth.

The following tasks are advanced to achieve the set aim:

- 1) to summarise and research the notional explanation of voluntary work;
- 2) to characterise the historical aspects on voluntary work origination;
- 3) to show the relevance of voluntary work and its role in the development of human capital;

- 4) to characterise the nature of human capital and tools to assess its role in the national economy;
- 5) to develop a definition of voluntary work in the context of human capital development.

The following research methods were used: monograph method, comparative method, constructive logic, analysis and synthesis, and inductive and deductive methods.

Results and discussion

1. The concept of volunteer work

Time is a universal criterion for all social processes and phenomena. A person uses his or her time to achieve specific objectives and to meet needs. Therefore, a person's time use can be divided into working time and free time, which the person can spend in accordance with his or her wishes. It is believed that free time can be defined as a set of activities of various types that a person can undertake of its own free choice, after he or she has carried out professional and family duties, meaning only recreation or entertainment, raising of the level of awareness or education, voluntary social activities, or the actualisation of creative abilities.

In accordance with the mentioned before volunteer work is one of ways of spending useful leisure time. In nowadays volunteer work is recognised as significant activity for the development of civil society. Volunteer work is action done by people of their own free will, choice, and motivation, and without any financial interest. An aim of volunteer work is to contribute to the wealth of society.

To understand the concept of voluntary work, it is necessary to discuss various definitions of voluntary work and terms those relevant to this concept, and to show the current regulatory enactments that regulate voluntary work in Latvia.

Evaluation of available information resources shows that there is a range of definitions on volunteering. The authors deem that approach given by Australian non-profit organisation "Volunteering SA Inc" is significant because of fact that it shows the necessity to establish the key criteria for assessing definitions of volunteer work.

In line with information provided by "Volunteering SA Inc" the criteria can be used to assess the structure and language of the definition, its usefulness in guiding decision making, and the extent to which it can accommodate diversity in the volunteering sector. The following criteria have been identified:

1. Clear and Simple to Understand
 - a) written in 'plain language';
 - b) uses unambiguous language;
 - c) clarifies the key terms used in the definition.
2. Practical and Useful for Decision Making
 - a) allows for consistent and coherent decision making;
 - b) adequately distinguishes voluntary from paid and other unpaid work;
 - c) identifies the scope and extent of volunteering activities.
3. Forward Looking
 - a) embraces the diversity and change within the volunteering sector;
 - b) allows for new and innovative arrangements for service delivery;
 - c) addresses emerging contemporary issues (Sage, 2009).

The authors have evaluated several definitions of volunteer work according to these criteria.

The National Centre for Volunteering in England identifies volunteering as "an important expression of citizenship and essential to democracy. It is the commitment of time and energy for the benefit of society and the community and can take many forms. It is undertaken freely and by choice, without concern for financial gain...it is a powerful force for change" (Sage, 2009). The definition is made using a philosophical framework and terminology that in addition need to be clarified. Therefore, a readability level of definition is assessed as low. For the same reason, since it includes a philosophical framework, it is not practically applicable in decision-making processes. It is positive that the definition notes that volunteering is a potential for changes, so the definition is forward looking.

The Australian Council of Social Services has defined volunteer work as follows:

- done of one's own free will;

- provides a service to the community;
- is done without monetary reward, excluding out of pocket expenses (Sage, 2009).

The definition can be considered understandable, but it does not cover the essence of the notion, since it merely names separate elements. The definition does not include all the elements that would give a truthful insight into volunteers' activities; thus the definition cannot be used in decision making. The definition is not forward looking either.

In line with the Council Decision of 4 June 2009 on the European Year of Voluntary Activities, voluntary work is a core expression of civic participation and democracy, putting European values such as solidarity and non discrimination into action and contributing to a harmonious development of the society. This definition has also been formulated using a philosophical approach and including terms that require extra explanation, so the degree of understandability has to be identified as low. In addition to that, the authors of the present paper believe that it is essential to discuss definitions of voluntary work that have been formulated in Latvia. Now the legal framework for volunteer work activities is provided by the Associations and Foundations Law, which entered into force in 2003 and covers the rights and responsibilities of associations in general. Section 8 of this Law provides a definition on what is considered volunteering work and its sub-points stipulate:

- a written agreement shall be entered into regarding the performance of volunteer work upon the request of a person, indicating the work to be performed and the performance deadline thereof;
- a person performing volunteer work may request the compensation of such expenses which have arisen during the course of the volunteer work, if it has been provided for in the articles of the association or foundation, or by the decisions of the executive board;
- an association or foundation shall be liable for any harm caused to a person while performing volunteer work and also if the harm was caused due to the fault of the association or foundation (Biedrību...,2003).

This regulation was complemented by the Youth Law that entered into force on 1 January 2009 and it only applies to persons aged from 13 to 25 years. Section 9 of this Law defines youth volunteering as follows:

- youth volunteering shall be oriented towards activities that benefit the public and that promote the development of knowledge, skills, abilities and attitudes thereof as well as the useful utilisation of leisure time;
- a young person shall carry out volunteering free of charge, and should not enter into a legal employment relationship with the organiser of the volunteering;
- youth volunteering shall not be used for the purpose of profit-making of the organiser of the volunteering or a third party;
- prohibitions and restrictions specified in the regulatory enactments regulating legal employment relationship shall be applicable to youth volunteering (Jaunatnes likums, 2008).

As to the definitions set out in Latvian legal enactments, one has to conclude that they define voluntary work in a specific area, thus a general definition is not available. Moreover, a definition should be as concise as possible, but these definitions fail to meet this criterion. For example, if one considers that the opposite aspects are stipulated regarding paid employment, namely, it is stipulated that voluntary work is done without entering into legal employment relations with the organiser of voluntary work. The initial opinion of the authors of the present paper before analysing the situation in more detail is that the definition provided in the Associations and Foundations Law could be limiting in that respect that the status of a person who does voluntary work is prescribed there.

It can be concluded that the current legal order pertaining to voluntary work is insufficient, because first, clear guidelines have not been given for entering into a contract for volunteer's work, and second, the law does not specify the rights, duties and liabilities of both the parties. It is also necessary to define a wider spectrum of legal subjects who can employ volunteers, because the current regulatory enactments generally regulate only voluntary work by young people (people who are from 13 to 25 years old) and voluntary work in associations and foundations, but it does not regulate the procedures specifying how other legal subjects -

public institutions, local authorities, political parties, and religious organisations - employ volunteers who are not young people.

It is interesting that in 2005, a draft law called the Law on Volunteer Activities was formulated to address these faults. It was hoped that the draft law would provide basic definitions for ensuring and implementing volunteer activities in Latvia. It was also planned for the draft law to prescribe the rights and duties of both the volunteer and volunteer organisation. The draft law was not adopted, because it was concluded that there was a need to reconsider the legal order envisaged in it and to address the declarative nature of the draft law (Strode, 2008).

After the draft law failed to be adopted, the issue of organising the legal framework governing voluntary work has become topical in the context of implementation of the planning period 2007-2013 of the European Union Structural Funds and the Cohesion Fund. The Informative Report on Proposals for the Simplification of European Union Funds Acquisition prepared by the Ministry of Finance was examined by the Cabinet in September 2009, which is indicative that this issue has become topical. While examining the Report, the Cabinet delegated the task of amending regulatory enactments by defining the concept of voluntary work as well as by setting the principles for registering voluntary work in accounting.

On 5 October 2010, the Cabinet examined the draft law Amendment to the Civil Law. In accordance with the amendment, it is planned to add Sub-Chapter 5 "Contracts for Volunteer's Work" to the Civil Law, and Chapter 15 "Claims Arising from Employment Relations". Sub-Chapter 5 is planned to prescribe that with a contract for volunteer's work one party - the volunteer - shall undertake to carry out such tasks set by the other party - organiser of voluntary work - without remuneration that correspond to an objective that does not involve material benefits and that is prescribed in the organiser's by-law, articles of association or constitution (Luse, 2010). However, the amendment does not stipulate all the tasks mentioned above delegated by the Cabinet in 2009; it does not define voluntary work, and it does not ensure the use of voluntary work for a wider spectrum of legal subjects, because it might not give a businessman the right to use voluntary work, since the purpose of business is to gain profit. Thus, it is currently controversial whether, in accordance with the planned amendment, the purpose of the organiser of voluntary work always has to be other than gaining profit, or whether the purpose has to be other than gaining profit only in cases where there is a wish to use voluntary work. Although at the moment it is impossible to forecast when the Parliament (Saeima) might adopt the amendment. After the amendment has come into effect, the practical application of the law would prove the effectiveness of the amendment in the development of voluntary work (Berlaus, 2010).

By evaluating in detail the definitions of voluntary work analysed before, summarising key criteria in a constructive manner for implementing voluntary work as well as by clarifying in more detail the benefits from voluntary work, **the authors have formulated a definition of voluntary work. Voluntary work is unremunerated activities that are carried out of one's own free will, in one's free time under organised conditions, thus promoting personal, social, and economic well-being.**

2. History of volunteer work

The historical aspects of volunteering shall be discussed to assess the value of volunteering in today's society. They have shown that volunteering has always been a part of the society. It can be concluded that one of the earlier forms of voluntary work is mentioned in the Bible, depicting the Samaritan assisting a stranger without asking for any compensation (Bibele, 1997).

Consequently looking at historical trends in volunteering it can be considered that it is derived mainly from two traditions:

- 1) Christian philanthropy or religious philanthropy;
- 2) tradition of socialists - as a collective action to achieve common objectives (Skubina, 2001)

First-World countries such as the United States of America have been the forerunners in general development. Literature of the 19th century shows that volunteering is a way by which people try to defend themselves against the most oppressive actions. M.L. Damon has

researched the history of volunteering and her study reflects to E.L.Brilliant who states that "two primary Western sources influenced the formulation of volunteerism in the United States. These sources stemmed from two ideas, namely, Greco-Roman and Judeo – Christian. The Greco-Roman source of philanthropy provided benefits for general welfare and love of mankind; the other source was the Judeo-Christian idea of providing charity to the poor, seen as the religious duty leading to salvation" (Damon, 2007).

According to the mentioned above a conclusion can be provided that voluntary work was originally organised in the context of philanthropy, and later it was organised in the formats of voluntary organisations. Consequently, it is estimated that the growth of voluntary movement took place in the 20th century, when it was becoming popular not only in the United States and in Britain but in the countries with different welfare policies – France, Italy, Norway, and Israel (Skubina, 2001).

Unlike the long-term traditions concerning the development of voluntary work in the aforementioned countries, it must be noted that in Latvia, voluntary work movement only started to be developed in a purposeful and organised manner as late as 1998. In Latvia, the voluntary work movement has to be examined in the light of the establishment of non-governmental organisations. Although the oldest associations and organisations in Latvia arose as early as the feudal period as trade fraternities and guilds founded by German conquerors, associations were founded on a wider scale in the second half of the 18th century and in the first half of the 19th century. Those were scientific, charitable, and mutual help associations of a practical nature (Skubina, 2001). During the First World War, the activities of the associations dwindled, but after the battles for Latvian independence, the bustle of social life started anew, this time in an independent country. A number of associations founded before the First World War re-started their work, and new ones were founded later. The activities of associations were regulated by the Law on Associations, Unions, and Political Organisations passed in 1923. The Law stipulated provisions that had to be complied with when founding an association. The provisions envisaged that in order to found an association, one had to submit articles of association, names of the founders, the composition of the administrative bodies, procedures for election, information regarding the existence of funding, and other information. Interestingly, the Law stipulated that one could become a member of an association starting from the age of 18. As the provisions mentioned above can be assessed as simple requirements, they promoted a rapid increase in the number of associations. In 1928, totally 8 035 associations were registered in Latvia (Indriksons M.).

After the Soviet occupation, the associations were abolished or re-organised, thus providing opportunities to spread propaganda and to execute the decisions made by the Communist Party. When the transition to democracy took place, the structure, type of activities and role in the society of non-governmental organisations changed, and they served as the basis that civic society formed on. Voluntary work also developed in a democratic Latvia in a purposeful and organised manner, as it is demonstrated by the fact that in 1998 a programme was established with the support from the Soros Foundation to develop voluntary activities in the Eastern Europe (Skubina, 2001).

Although the results of an analysis of relevant literature indicates that in Latvia voluntary work is implemented mostly within the framework of non-governmental organisations, voluntary work is also put into practice by public institutions, local authorities, and private institutions. However, it cannot be put into practice in a comprehensive way by using it as a resource for ensuring that certain functions are carried out, because currently Latvia lacks regulatory enactments prescribing voluntary work. Concurrently, the putting into practice of voluntary work in Latvia is not being coordinated, and compulsory statistical data about volunteers and organisations that do voluntary work is not being accumulated. The director of the Department of Statistics of International Labour Organisation underlines the relevance of the situation by saying that "voluntary work is one of the aspects of the labour market that has not been included in statistical systems in an adequate manner" (Bilzor M). Therefore, there is no mechanism for assessing the volume and impact of voluntary work.

3. Nature of human capital in the framework of volunteer work

According to Fiorillo D. one group of volunteers does not refer to the enjoyment of volunteer behaviour by itself but to the increase in utility due to extrinsic rewards from volunteering. Two extrinsic rewards can be distinguished: 1) people can volunteer in order to invest in social network; and 2) volunteering can be undertaken as an investment in human capital (Fiorillo, 2009). According to the second reward individuals engage in volunteer activities to raise future earnings on the labour market. As in Latvia statistical data are lacking, there is a possibility to assess the economic value of voluntary work from a human capital angle by researching the concept of human capital, its relevance for a country's economic development as well as tools for assessing it.

Voluntary work is carried out creating a public good, but the process of voluntary workers itself accumulates human capital. The concept of human capital is complicated – it is the knowledge, skills, abilities and other characteristics, in terms of economic activities promoting personal, social, and economic welfare.

Human capital is one of the key words used when talking not only about economic processes, but also on social issues. Human and social capital is particularly important in searching for new ideas and practical approaches. In rapidly changing economic environment, it has a particular strategic importance. Human capital is the main factor in economic production, it ensures the existence of economic development, its size and location have led to considerable economic and social consequences (Eglitis, 2003).

There is a link between the economic growth and human development, from which it can be concluded that the value of Gross Domestic Product directly affects human capital. Expected impact of individual variables on the economic growth can be expressed:

- in the short term, where it is affected by inflation;
- in medium term, where it is affected by the increase of investments;
- in the long term, where it depends on the resources, human capital and scientific and technical progress.

Analysing the theoretical aspects of human capital it was found that theory of formation of human capital and development of human resource focuses on people as a contribution to the increase in production. They look at people as a resource for getting greater income and wealth.

On macroeconomic level human capital is characterised by its ability to increase productivity of human capital, so that the educated and highly skilled workforce represents the growth potential of the national economy. On microeconomic level the human capital comprises all skills and knowledge which give to individual certain tangible and intangible benefits, so it is the potential of persons to get equal income from work adequate to his/her skills (Dovladbekova, 2006).

Human capital theory is explained by Jaster (Смелзер, 1994) as follows "the people have some capital starting their lives, i.e. innate ability, it increases in early childhood, but the capital would be squandered if the knowledge and professional training does not meet the requirements and it is not improved." Thus, human capital should be mobilised. Human capital is formed in three stages:

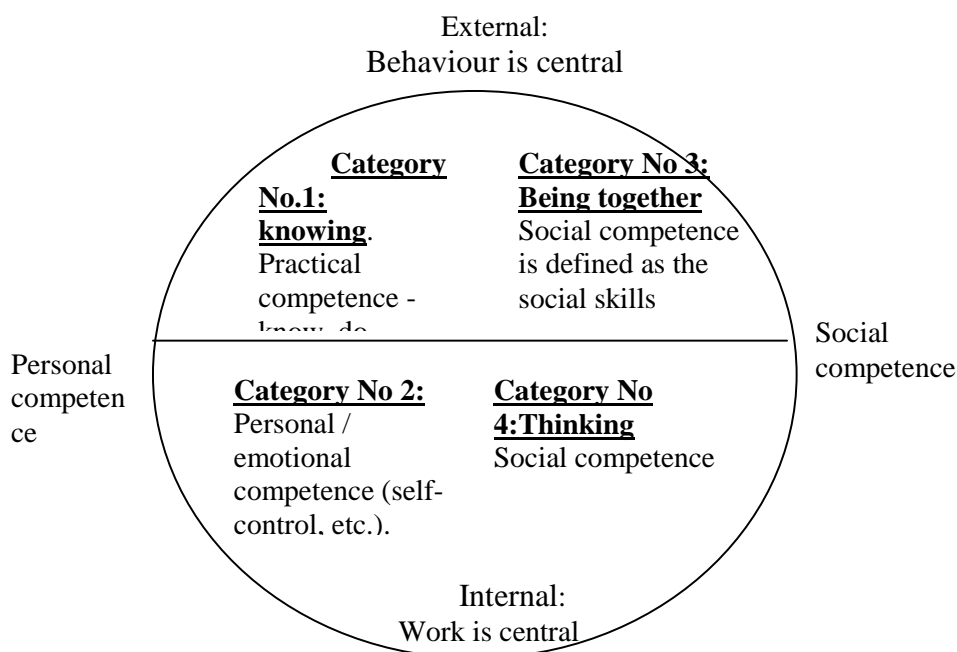
- education stage (childhood, teen years) - no revenues, but the expenditure for education;
- active employment phase - income comes from employment, but in addition, there are expenditures for accumulation gotten for human capital to supplement purposes of income-building;
- pensions stage - continue to gain income (pension), but the development of human capital is not in addition to income generation purposes.

Accumulation of human capital in these three stages takes place not only in the process of learning; getting involved in the voluntary work movement helps promote the accumulation of human capital. The authors believe that voluntary work is highly essential in the active employment stage, where expenses for accumulating human capital can decrease, as an individual engages in voluntary activities and, as a by-product of these activities, acquires knowledge and skills, which form human capital.

In macroeconomics, human capital is used as one of the factors in the methods for assessing the country's competitiveness, researching how necessary it is in the production of export goods. This way the goods exported by the country demonstrate its actual relative advantages. Goods with no or little processing account for the highest proportion of Latvian exports (40% on average) while the proportion of human capital intensive goods is low (12% on average) (Davidsons G., 2005). Therefore, the main condition for Latvian competitiveness is the accumulation of human capital, which is achieved through high levels of competence.

By analysing the theoretical aspects of human capital, it was ascertained that theories on human capital formation and human resources development focus on people as investment into the production growth. They see people as means for achieving higher income and a higher level of well-being (Eglitis, 2003).

Competence could be as one of the indicators for evaluation the human capital. Since this is quite a complicated concept, it is possible to classify the two dimensions into four categories. One of these dimensions is defined as personal / social dimension, the other - external / internal dimension (Figure 1), which indicates that the ability "to do" on the one hand could be determined by environment and it occurs in behaviour, but on the other hand everyone knows himself what he is able to do.



Source: *Modern adolescents' leisure activities, Bjarnadottir*

Fig. 1. **Instrument for measurement of human capital - competencies - the dimensions and categories**

The authors believe that the instrument for measurement of human capital proposed by Bjarnadottir R. could be used assessing the competence of an individual incurred by engaging in voluntary activities from the point of view of the qualitative approach. This approach should be specified as a corollary of the method selected in order to obtain initial information of voluntary workers for exploration the acquired competence.

Conclusions

1. Although the term "voluntary work" has a long history, infrastructure for the development of voluntary work has not been created in Latvia, and regulatory enactments do not cover voluntary work in an adequate manner.

2. Currently regulatory enactments in effect in Latvia stipulate the putting into effect of voluntary work merely within a specific field.
3. The notion of volunteer work is related to the EU strategies, since voluntary work contributes in such European values as solidarity and non-discrimination.
4. By undertaking voluntary activities in his or her free time, an individual can accumulate his or her human capital, which provides a link between voluntary work and economic processes.
5. The development of volunteering in Latvia is facing numerous challenges - lack of a coordinated system for the promotion and development of the voluntary sector in the country, lack of general information and awareness about volunteering that results in relatively low public awareness and little value being awarded to the voluntary sector.

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Production Development Perspectives of Aggregates in the Regions of Latvia

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Abstract. Perspectives of aggregates production development are closely related to the country's economic development and the state's support to road construction. Competitiveness in this sector largely depends on decisions made and support given to quarries on the state level. Seeing that mineral deposits are non-renewable resources, and decrease of the reserves is inevitable, sustainable and rational usage of the materials is called for. Production of aggregates has good perspectives to develop business in the regions of Latvia. However, Latvia lacks a profound research on deposits and extraction of aggregates as well as further development options. Demand for the production of aggregates in Latvia has been verified within this research. The research also includes the analysis on extraction of the most demanded aggregates – sand and gravel – in the regions of Latvia and development of the market in general; identification of the main problems governing in the sector; elaboration of a scheme for recycling sand and gravel in the process of road construction (reconstruction); and provision of suggestions for changes in the legislation that relate to tenders for aggregates for road construction. The authors have justified the necessity for excise tax exemption for production of aggregates and described technical and economic characteristics related to the production of aggregates. Suggestions for solving the acknowledged problems with the aim to increase competitiveness in the sector have been developed in the concluding part of the research.

Key words: aggregates, production perspectives, sand, gravel, recycling.

Introduction

Deposits of aggregates that are used in producing building materials may be found in the territory of Latvia. In 2004, Latvian Environment, Geology and Meteorology Agency assessed approximate prognosis for the supplies of mineral resources: rock gypsum – 50 years, sand – 100 years, sand-gravel – 200 years, dolomite – 210 years, clay – 1130 years, and limestone – 1310 years (Ministry of Finance, 2007). These are non-renewable resources, and a decrease of their reserves is inevitable. Therefore, it is a necessity to use these materials in a sustainable and rational way.

Sand and gravel are the most demanded aggregates in Latvia. Necessity for these particular ingredients is correlated to the development of road construction and concrete production. Sand and gravel for an average of 35% of all material expenses are used in the production of concrete, and an average of 11% of all material expenses are used in construction, reconstruction, and maintenance of roads. It has been estimated that the demand for aggregates in the world will annually grow by 2.9% up to 2013. In the Western Europe, demand for aggregates will also grow, yet not so fast – 1% a year. It can be expected that from 3.27 billion of tons in 2008 the demand will grow up to 3.68 billion of tons in 2018 (Aggregates, 2010).

One of the biggest problems related to extraction of aggregates is the state's disinterest in research of entrails of the earth. At the moment, research is carried out only by companies and individuals who have interest in this market, and since the research process is expensive and time-consuming, mineral resources remain untapped in many regions that have deposits of the demanded aggregates.

Due to the economic recession in Latvia, the construction volumes have decreased, and currently surplus of capacity in the production of sand and gravel is observed in Latvia. Frequently one finds the materials on market for unreasonably low price. Therefore, one can gain more by using the produced supplies instead of producing more and selling. The authors present the following hypothesis: production development perspectives of aggregates are closely related to the country's economic development and support to road construction;

whereas competitiveness in the sector largely depends on the adopted resolutions and support on the state level to quarry development.

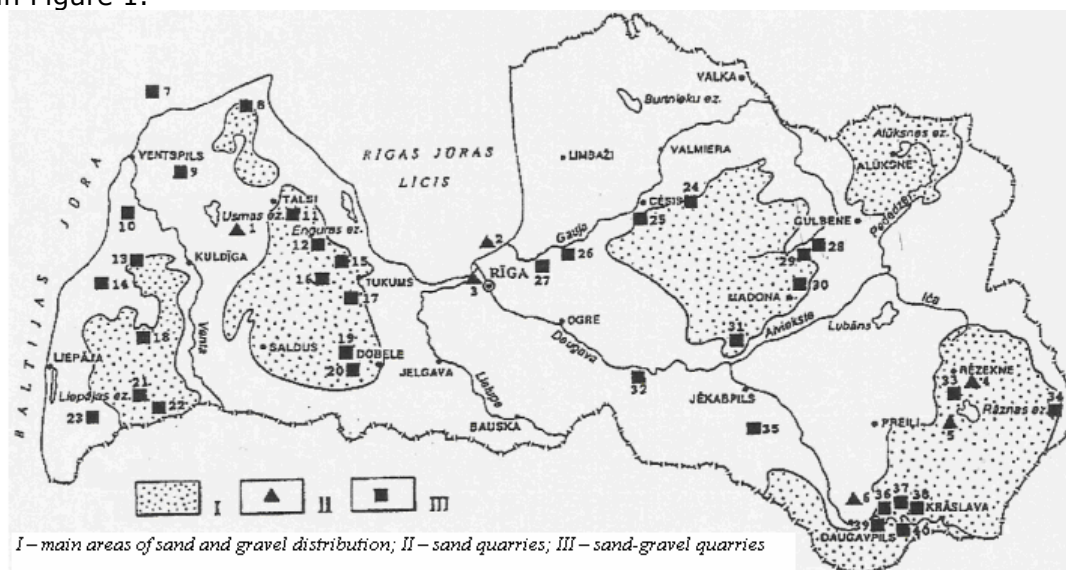
Scientific novelty of the research: demand for production of aggregates in Latvia has been proved; a research has been performed on extraction of sand and gravel and development of the market in general; a scheme for recycling sand and gravel during road construction and reconstruction process has been constructed; suggestions for changes in the legislation that relate to tenders for aggregates for road construction have been developed; necessity for excise tax exemption for producers of aggregates has been justified; technical and economic characteristics of production of aggregates have been recognised, suggestions have been developed for solving the acknowledged problems with the aim to increase competitiveness in the sector.

The aim of the research is to identify the most significant problems in production of aggregates and to provide solutions for increasing the competitiveness in the sector. The following tasks have been advanced in order to achieve the set aim: to evaluate supplies of deposit of sand and gravel in the regions of Latvia and the country overall; to develop a scheme for recycling sand and gravel; and to identify the main shortcomings of legislation and provide suggestions for elimination of the shortcomings to promote competitiveness in the sector. The object of the research is the development of production of aggregates in Latvia, while the subject of the research is extraction of sand and gravel.

Monographic method as well as methods for calculation of static and economic indices has been used in order to carry out the research. Unwillingness of businesspersons to reveal the classified information has to be mentioned as one of the impediments for a profound research. Serious impediment was inaccessibility of effective data regarding supplies, deposits, and extraction of aggregates. In Latvia, this information is aggregated by Latvian Environment, Geology and Meteorology Agency; however, the data regarding previous year is published only in the second half of the current year. The authors have collected data and opinions of professionals such as Strežs and Augulis thus providing topical information on problems in the industry. Studies about situation on Latvian roads, Transport Development Guidelines, and Road Specifications have helped identify problems and make proposals. Production of aggregates is a perspective sector that can develop business in the regions of Latvia; however, Latvia lacks profound research on deposits, supplies, and development possibilities.

Results and discussion

Disposition of sand and gravel quarries is not even throughout the country, e.g. due to specific character of geological structure there is scarcity of sand and gravel in Limbaži, Bauska, and Valmiera districts. Areas of sand and gravel distribution and main quarries are shown in Figure 1.

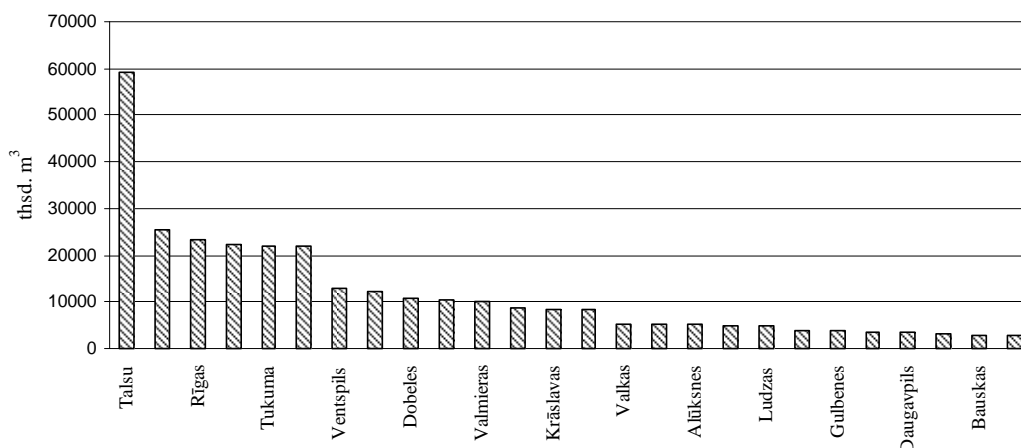


Source: Straume, 1997

Fig.1. Areas of gravel and sand distribution and main quarries in Latvia, 1997

Talsi is the richest district in Category A sand and gravel resources, followed by Rēzekne, Rīga, Aizkraukle, Tukums, Jēkabpils, Liepāja, Ventspils, and Madona districts (Figure 2).

Category A means the explored reserves of mineral deposits secure an efficient extraction and use of the mineral deposit as well as the highest possible environment and earth entrails' protection from the negative influence of extraction. Geological research is sufficient to create a pit development project. Basing on inquired qualities of the mineral deposit it is possible to create a technological scheme of the processing of mineral deposit.



Source: authors; construction based on the data from Latvian Environmental, Geological and Meteorological Agency

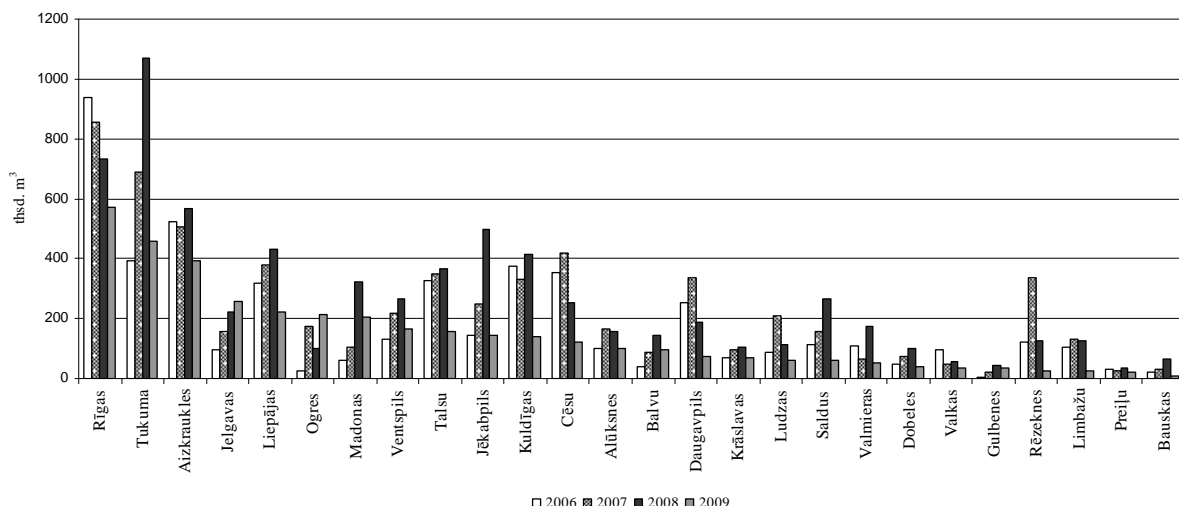
Fig. 2. **Category 'A' sand-gravel reserves in the regions of Latvia on 1 January 2010, in thou. m³**

There are 59234 thousand m³ of sand-gravel reserves in Talsi district, which equals to 29% of total Category A sand-gravel reserves in Latvia. It has to be noted that in Talsi district there is a sand-gravel quarry of the national importance called 'Kurzeme', which on 1 January 2010 contained 54538.65 thousand m³ of sand-gravel reserves that equals to 92% of the total sand-gravel reserves of Talsi district. Rēzekne, Rīga, Aizkraukle, and Tukums districts are also rich in Category A sand-gravel reserves, accounting for 25529 thousand m³, 23225 thousand m³, 22458 thousand m³, and 22058 thousand m³ respectively (and 8.3%, 7.6%, 7.4% and 7.2% respectively of total Category A sand-gravel reserves of Latvia).

In 'Vesetas', which is another sand-gravel quarry of the national importance in Aizkraukle district, there are 6832 thousand m³ of Category A reserves, which equals to 30.4% of the total sand-gravel reserves of Aizkraukle district. In Tukums district, sand-gravel quarry of the national importance 'Ceres' has 12411 thousand m³ sand-gravel reserves, which equals to 56.2% of the total Category A sand-gravel reserves of Tukums district. Besides the quarries of the national importance Category A sand-gravel reserves in remarkable amounts can be found in the following quarries: 'Laukares' quarry in Jēkabpils district (16838 thousand m³), 'Lipusku' quarry in Rēzekne district (15787 thousand m³), and 'Aizkraukle – kreisais krasts' quarry in Aizkraukle district (7290 thousand m³).

There was a considerable increase in sand and gravel extraction between the years 2006 and 2008 in Tukums, Saldus, Jēkabpils, and Madona districts (Figure 3).

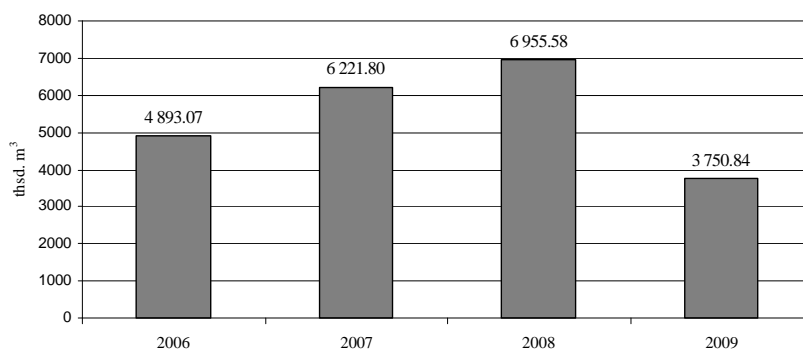
This can be explained by the increase of the construction volumes in the country. The construction volumes in Riga region explain the fast increase of sand and gravel extraction in Tukums district, since the quarries in Tukums district are in a relatively more attractive location from the view of delivery expenses.



Source: authors' construction based on the data from Latvian Environmental, Geological and Meteorological Agency

Fig. 3. Sand and gravel extraction in the regions of Latvia, thousand m³, 2006 - 2009

The increase of sand and gravel extraction in Saldus district can be explained by the construction of CEMEX cement factory at this time, but in Madona district – by the start of operation of the local CEMEX quarry and delivery of materials to different regions of Latvia. The increase of sand and gravel extraction in Jēkabpils district can be explained by the reconstruction of a sector of the A12 road between Jēkabpils and Varakļāni where 85% of financing were covered by the European Union Cohesion Fund and the total contract sum for this project was EUR 113 million. Reconstruction of this road also explains the fast increase of sand and gravel extraction in Rēzekne district in 2007. Due to the economic recession, sand and gravel extraction in 2009 has decreased by 46% in comparison with 2008 (Figure 4).



Source: authors' construction based on the data from Latvian Environmental, Geological and Meteorological Agency

Fig. 4. Sand and gravel extraction in Latvia, thousand m³, 2006 - 2009

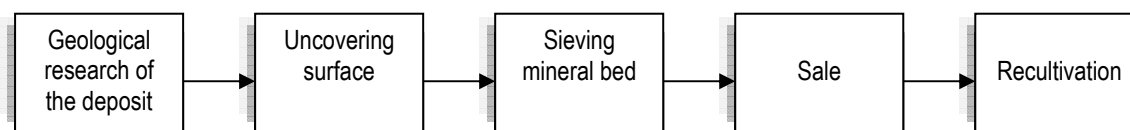
Objects that require gravel and sand are concentrated in Riga and its vicinity. Even though sand reserves in Riga region are remarkable, the number of quarries is insignificant and their capacity is limited. In addition, most of the quarries are located on the other side of the river Daugava, i.e. the Eastern side, thus, it is necessary to deliver mineral deposits from strategically more convenient locations in other districts, for example, Tukums district.

Often leaving the valuable entrails of the earth untapped is related to property rights over the earth entrails. It is determined by the legislation of Latvia that a landowner owns the whole earth underneath the land down to the core of the Earth. Therefore, the state has no right to intervene in research or extraction of mineral deposits. Other European countries give no such rights to landowners – entrails of the earth remain property of the state. In its turn, profiteering is made easy by the fact that entrails of the earth are not considered in land

cadastral value, even though, quite often they contain mineral deposits that are a value on their own (Golovko, 2008).

During the past few years, several foreign members have joined Latvia's industrial market of mineral deposit extraction. However, more often – 70% – they are hereditary companies from the Soviet times that are active in this sector. It is much easier for such companies to work in the mining industry because of the different researches carried out throughout the years and to foresee market changes. There are many changes among the companies taking part in sand-gravel extraction. Demand for these materials is closely related to the development of road construction, concrete production, and large state procurements.

According to the laws and regulations of the Republic of Latvia, starting from 1996 all actions related to the exploitation of entrails of the earth are regulated by the Law on the Entrails of the Earth. Sand and gravel belong to most common components of building materials and they are included in the list of frequent material deposits for which a simplified procedure of use has been determined by the laws and regulations. Entrails of the earth are non-renewable value that should be used for the profit of landowners, state, and society at the same time. Their value is not included in land cadastral value and one does not have to pay property tax on the earth. It is permissible to use them for profit if there is a respective permit from the local authorities and a license issued by Latvian Environmental, Geological and Meteorological Agency. A state tax is payable for the entrails of the earth exploitation license, license of extraction of frequent mineral deposit, and quarry passport. Passports are issued by Latvian Environmental, Geological and Meteorological Agency, and it is mandatory to have one to start extraction of mineral deposits. Entrails of the earth can be handed over for extraction of mineral deposits for a period of time up to 25 years. A simplified scheme of process of economic activities in a sand-gravel quarry is shown in Figure 5.



Source: authors' construction

Fig. 5. **Process of economic activity in a sand-gravel quarry**

A project of extraction of mineral deposits is needed for extraction of mineral deposits. Extraction of mineral deposits is carried out in accordance with this project or scheme in compliance with the laws and regulations on labour safety rules in the field of mineral deposits. In addition to project, an output plan of a year has to be created in which extraction volumes during the year and location of extraction places have to be indicated for extraction of sand-gravel.

To retrieve data on the mineral deposit extraction volume, extractor tallies cargo and registers data in a logbook. According to the Cabinet Regulations No. 779 of 19 September 2006 "Procedures for the Extraction of Mineral Resources" (hereinafter – Regulations No. 779), volume of mineral deposits extracted in 24 hours can be calculated using the following equation:

$$V_d = \frac{Qn}{qk}, \quad (1)$$

where,

- Q – carrying capacity of vehicle;
- n – number of loaded vehicles;
- q – density of mineral deposits;
- k – looseness coefficient.

Recultivation has to be started within a year of finishing extraction of mineral deposits. The purpose of recultivation is to secure wholesome usage of the territory after the end of extraction, to prevent threat to health and lives of people and environment as well as to

enable merging of the extraction site into landscape. Recultivation is carried out in accordance with a project or scheme, which has to be coordinated with the local authority. In accordance with the Regulations No. 779, extraction sites are recultivated in one of the following ways:

- 1) preparing for farming or forestry;
- 2) creating a water body;
- 3) preparing it for recreation;
- 4) preparing it for a different type of utilisation.

After their abandonment, quarries are filled with water thus increasing the number of water bodies in Latvia. Water bodies of such origin can be found near Jēkabpils, Pļaviņas, and Kalnciems. There is a small amount of sand and gravel in entrails of the earth in the vicinity of Riga; the closest deposits are near Garkalne.

Sand, gravel and sand-gravel mixture are important ingredients of a good quality road. Therefore, it is important for managers of quarries to evaluate the perspectives in relation to road construction. Many managers of road construction companies have identified several problems related to quality problems of road and materials. Geologists emphasise that the quality of Latvian sand is equivalent to foreign sand, but as it is said by Jānis Brambats, good quality sand is soon going to have to be imported because of material shortage like granite. Granite has been imported from the Scandinavian countries. Andris Garklāvs has mentioned that it is possible to produce granite also in Latvia by dividing granite boulders, but the produced volumes are relatively small and do not meet the standards of high quality road construction.

A serious problem is the nonconformity of roads with the requirements of road safety. Remarkable flow of traffic goes through the centres of towns and cities. This is an extremely pressing problem at Saulkrasti, Ķekava, Iecava, Bauska, and also on the route Riga – Jēkabpils. During the development of road safety programme for 2007-2013, statistical data were collected and the analysis showed the number of vehicles changes in the past 10 years. It was forecasted that continuous increasing in the number of cars and load on the existing road network might have a negative impact on safety where the situation now is not satisfactory. Only 11% of gravel roads under the care of government that are in good condition; satisfactory - 53%, but poor or collapsed - 36% or more than a third as recognised by Aldis Lācis. He suggests restoring the surface of gravel roads for at least 10 centimetres thick every 10 years to gravel road function normally. Gravel roads lose about one centimetre of surface per year on average. One of the tasks for the road quality is to improve building standards and to increase the building supervisor responsibility, said Uldis Augulis the Minister for Transport in Latvia. Modern high quality testing equipment shall be acquired by 2012, when Road laboratory will operate in full as it is provided in the Government Action Plan.

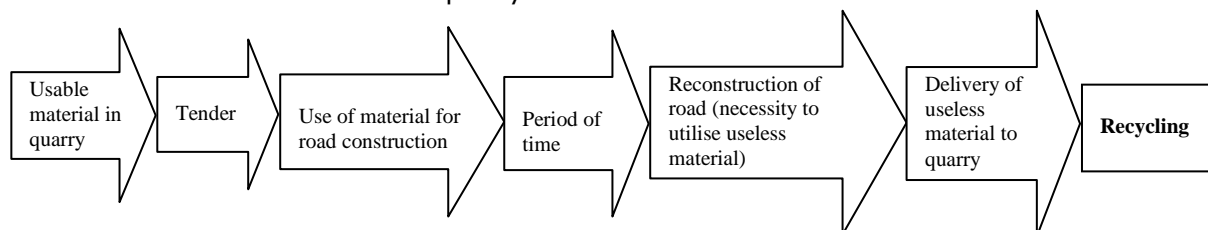
Biggest problems are related to the carrying capacity of road surfacing and bridges – roads have been constructed from the 1960s to the 1980s in accordance with the regulations in force at that time, which determined 10 t as maximum load on an axle of a vehicle, and 36 t maximum mass of the vehicle, but today's market demands and regulations of the European Union determine 1.5 t and 44 t respectively (Cabinet, 2010). As a result, quality of some roads cannot be maintained on a level using simple road surface repair methods. Maintenance of the main state roads is performed using resources from the European Regional Development Fund (ERDF). However, it is not sufficient to raise the quality of roads – during the past five years the proportion of road sectors of poor quality on the country's road network has increased by 10% and condition of roads in general continues to worsen (Cabinet, 2010). This is a result of insufficient funding of road maintenance. On average the indices of road maintenance funding in Latvia are lower than in other countries, and maintenance expenses per 1 km equal to LVL 1040 a year in comparison with Lithuania, where this is amount is twice that big and Finland – three times bigger (Cabinet, 2010). Fuel excise tax supplements the national budget, so the government and the Parliament make decisions on expenditure of these funds. According to the data of the Ministry of Finance, totally 37% of the collected excise tax in 2009 went to roads, 2010 – 25.9% were planned to roads. In 2005, this allocation was 50% of the collected tax.

Most of the participants of road construction, reconstruction, and regular maintenance market have their own quarries (in ownership or lease) where they can extract sand and

gravel. Presence of their own quarry near the object can give advantage in tenders to one applicant because quite often delivery expenses build up more than 50% of material price for the object.

The Ministry of Transport has approved "Road specification 2010" to be used in all new state road projects starting from 1 October 2009. The "Road specification 2010" remarkably expands possibilities to use local building materials. For example, granulometric composition of mineral material mixtures were revised and new ones developed according to natural qualities of local building materials. Resistance limit demands have been differentiated depending on base layer position of the planned road surface. Standards for the road surfacing base lower layer have been determined lower than the ones for the higher base layer. Possibilities to use gravel as local material has expanded in Latvia. Structure of defining qualities of component materials of mixtures has been changed, and mineral material strength classes have been introduced. Choice of sieves for defining the granulometric composition of mineral materials has been optimised as well as curves of composition of unbound mixtures have been remodelled and new mixtures have been developed. It has been determined that in base layers of bound surface maximum content of particles below 0.06 mm may not exceed 7% (Strežs, 2009).

Cost of mineral deposit will be highly affected by thickness of the deposit layer, i.e. how much of the volume has to be extracted from underneath the groundwater, since ground pumping equipment requires considerable amount of energy resources as well as fuel expenses for traffic movement inside the quarry.



Source: authors' construction

Fig.6. Authors suggested scheme of waste material recycling in Latvia

It is necessary in Latvia to develop a scheme of recycling process of used sand and gravel following the German example (an example suggested by the authors – Figure 6). While reconstructing roads, previously used material should be brought to a deposit quarry, recycled and after that reused, thus more efficiently using the non-renewable resources and taking care of the environment. Moreover, it would be possible to deliver materials using the same transport, and thus saving transport costs as truck returns to deposit without a load. In addition to this, recycler of the material is paid for collecting the material and converting it into a high quality material that can be used in construction again.

Conclusions, proposals, recommendations

It is necessary to find a way of optimising production process of aggregates to increase competitiveness. Observations show ineffective organisation of production process in quarries by choosing to use particular equipment without any economic calculations, also fuel expense proportions can reach 50% of total cost of aggregate production. The government should introduce a bill on non-excise fuel usage for quarry equipment used in aggregate production. Excise tax on diesel fuel is 22.3 santims per litre. Quarry equipment does not use roads, hence, excise tax exemption should be adjusted, and aggregate production expenses could be considerably decreased by using the non-excised fuel.

In order to produce aggregates more effectively, it would be helpful to know which type of production equipment should be used depending on thickness of the layer – stationary or mobile - an algorithm has to be developed by using which production expenses could be optimised and length of the production cycle shortened. To promote more honest and active tenders for road construction and consequently to make aggregate market more effective and develop production in the regions, the process of tenders for road construction, reconstruction and maintenance should be changed. It is necessary to find a way to separate tenders for

materials and for execution of work, and announcing several independent participants winners of the tender.

Recycling of material should be appointed by the law. During reconstruction of roads, useless material has to be brought to a quarry for recycling and possible reuse. Besides, useless material may be brought to quarry using the same vehicles that bring new materials to the construction site, thus saving on transportation expenses, since vehicles after delivering new materials return to quarry without a load.

Latvia needs a profound research on the aggregate market, since it is a sector with perspectives in the regions of Latvia. At present, only the Central Statistical Bureau of the Republic of Latvia presents superficial and incomplete information on the state resources and extraction in general.

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Possibilities of Business Diversification on the Farms in Subregions Zemgale-1 and Zemgale-2 of Zemgale Planning Region

Anna Liscova, *Mg.oec.*

Abstract. Diversification of rural businesses is intended for the purpose of sustainable rural development that is related to the diversity of rural environment, and helps preserve or diversify them. The main factor promoting diversification is the need for it. If a farm is assumed a basic unit of business diversification, combining such activities (agricultural and non-agricultural) is especially needed on farms having free resources – land, buildings, machinery, and human resources.

Income from producing and selling agricultural products dominate in the farm income structure in subregions Zemgale-1 and Zemgale-2 of Zemgale region, yet, the farms have free resources to introduce activities of employment diversification, which attracts the interest of farm managers.

Key words: farms, Zemgale region, subregions Zemgale-1 and Zemgale-2, diversification of economic activity.

Introduction

The real possibilities for **diversifying the types of occupation** depend on both local conditions and the readiness of individuals to change or diversify their occupations. Any individual can make such a decision in a favourable environment, and the existence or non-existence of this environment depends both on the national government's policy and the local government's policy in any particular situation. One of the tasks of Latvia's Rural Development Programme is to diversify the types of occupation in rural areas, and to increase the incomes and standard of living of rural individuals (LAP).

Business diversification may be interpreted as finding additional employment possibilities for farmers who retain their occupation and farm their disposable land. In the Western Europe, four types of additional agricultural employment are distinguished:

- the so-called *para-agricultural* activities on their own farm, for instance, milk processing into yogurt and cheese, not only grape production, but also grape processing into wine; and sales of these products;
- non-agricultural activities on their own farm, for instance, forestry, rural tourism, landscape preservation, and handicrafts;
- paid employment on another farm;
- off-farm activities in other industries of the economy – education, transport.

The potential of agriculture in Latvia and its regions, and the possibilities of rural employment diversification have been researched and the research results were published by L. Siliņa (2007), S. Čingule (2009), D. Saktiņa (2009.), S. Šķesters (2009.), and V. Boroņenko (2010).

Zemgale region has been a research in various aspects and periods by many scientists and their research results were published in scientific and other publications, and used also in elaborating several programmes and projects. Under the planned economy in the period of 1960-1990, K. Brīvkalns (1959), A. Boruks (1982), K. Špoģis (1974, 1987), and several other scientists or agricultural specialists published their research results on the soils and other agricultural resources of Zemgale as well as agricultural possibilities in this region.

The paper was developed based on the studies and experiences of rural employment diversification in Zemgale planning region as well as on the farms themselves. The main sources of information include a survey, discussions with respondents as well as interviews and conversations with farmers and agricultural and rural development specialists.

Farming conditions are very different in Zemgale region. Therefore, the author followed a solution offered by a researcher V.Bratka – Zemgale planning region is divided into 2

subregions for SUDAT studies: Zemgale-1 that includes the former districts of Bauska, Dobele, and Jelgava. In Zemgale-1 subregion, totally 343 land owners (59.9% of the respondents) were surveyed in the municipalities of Auce, Bauska, Dobele, Iecava, Jelgava, Ozolnieki, Rundāle, Tērvete, and Vecumnieki.

Zemgale-2 includes the former districts of Aizkraukle and Jēkabpils. In Zemgale-2 subregion, totally 230 residents (40.1% of the respondents) were surveyed in the municipalities of Aizkraukle, Aknīste, Jaunjelgava, Jēkabpils, Koknese, Krustpils, Nereta, Pļaviņas, Sala, Skrīveri, and Viesīte.

The **research aim** is to assess the possibilities of employment diversification in subregions Zemgale-1 and Zemgale-2 of Zemgale planning region.

The following **research tasks** are set forth to achieve the aim:

- to analyse the structure of farm income sources;
- to find out the opinions of farm managers on employment diversification;
- to ascertain the future plans of rural residents in relation to the income-earning activities of diversification of rural employment.

Materials and methods

The research object is farms in Zemgale region.

The sampled population consisted of 573 respondents or 2.34% of total number of the farms from all the twenty municipalities of Zemgale region.

The characteristics of the respondents were as follows: 62.5% of the sampled population were males and 37.5% were females; 20.2% of the respondents were under the age of 40, 45.9% were aged 41-55 years, 17.1% were aged 55-62 years, and 16.8% were aged 62 years and over. In the survey, a question on agricultural education was included – 26.2% of the respondents had practical experience, 29.5% had a vocational education, 11% had a professional education, and 33.3% were with a higher education.

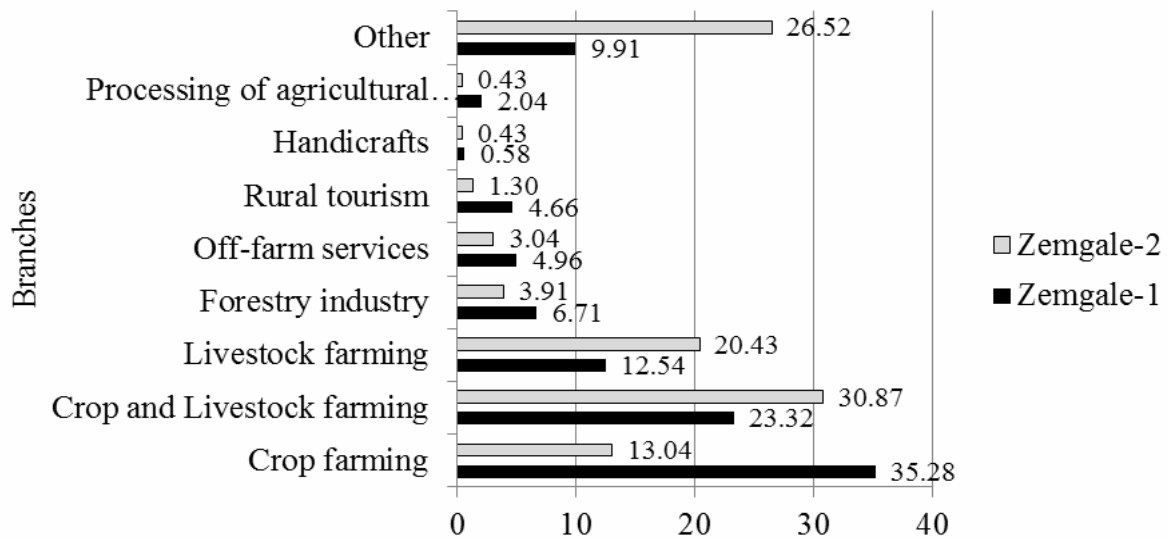
The methods used in the research are as follows: surveying as well as graphical, descriptive, and monographic methods. Computer programs MS Excel and SPSS 16.0 (Statistical Package for Social Sciences) were applied to process data.

Research results

The concept of rural development includes various industries of economy whose boundaries are clearly set. It is developed by means of an integrated approach based on equal legal and political structures, for instance, agricultural modernisation, diversification of economic activities, administration of natural resources, and promotion of cultural, tourism, and recreational possibilities. In the present research, the author investigated the situation regarding agricultural and rural diversification as well as the respondents' future plans.

According to the survey data, 26.4% of the respondents in Zemgale region are engaged in crop farming, 26.4% - in crop and livestock farming, and 15.7% - in livestock farming. The income from unidentified sources (answer option "other") was gained by 16.5% of the respondents. An insignificant proportion of the respondents in the structure of their farm activities belonged to the forestry industry – 5.6%, off-farm services – 4.2%, rural tourism – 3.2%, processing of agricultural products – 1.4%, handicrafts – 0.5%, wood processing – 0.3%, and retail trade – 0.2%.

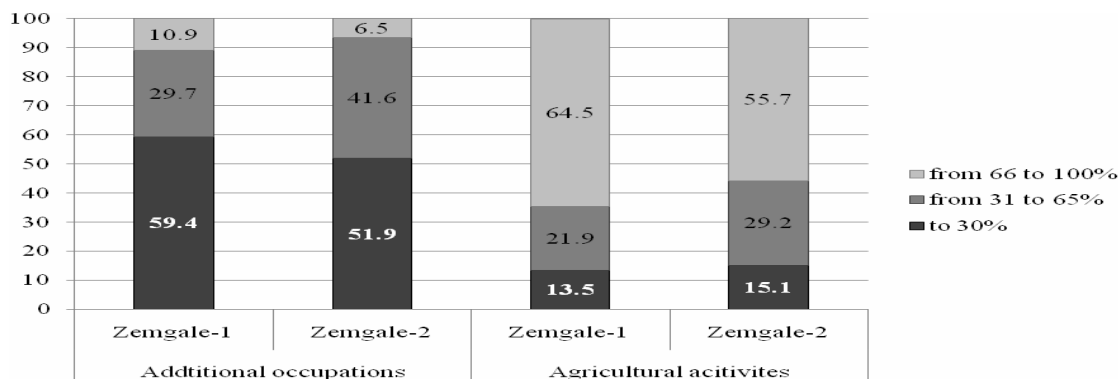
for crop farming – 35.28%, which is almost 60 times higher if compared with the lowest indicators for handicrafts. However, the indicators of Zemgale-2 differ, and the main attention is paid to crop and livestock farming accounting for 30.87% of the respondents' answers. Yet, the lowest indicators, in the same way as for the subregion Zemgale-1, belong to handicrafts as well as the processing of agricultural products – 0.43%.



Source: survey data, the author's calculations

Fig.1. Structure of the types of economic activity in subregions Zemgale-1 and Zemgale-2, %

The survey data showed that the highest indicators in the subregion Zemgale-1 are observed. To provide suggestions for diversifying the rural economy by type of economic activity, the author analysed the present income sources – the industries that generate income for the farms – by subregion.



Source: survey data, the author's calculations

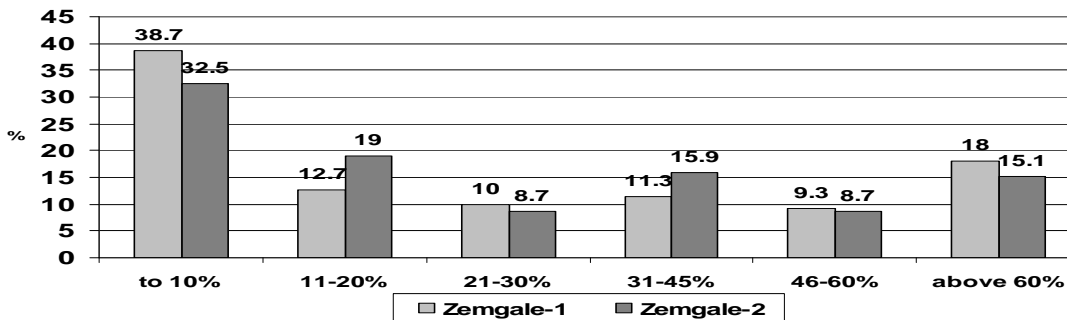
Fig.2. Structure of the incomes gained from agricultural activity and additional occupations on the farms in the subregions, %

The largest number of the respondents in the two subregions specified that agriculture is the main income source, accounting for 66-100% of total farm income. Agriculture is not the main income source, accounting for less than 30% of total farm income, for 13.5% of the respondents in the subregion Zemgale-1 and 15.1% in the subregion Zemgale-2.

The other farm incomes are comprised of pensions, wages, government benefits, and incomes from additional occupations (processing, tourism, handicrafts, non-traditional agriculture, forestry etc.).

The farms gain incomes by providing off-farm services. In the subregion Zemgale-1, totally 59.4% of the respondents said that these incomes accounted for up to 30% of their total farm income. In the subregion Zemgale-2, this indicator is similar to 51.9%. Off-farm services as the main income source were specified only by 10.9% of the respondents in the subregion Zemgale-1 and 6.5% in the subregion Zemgale-2.

The farms have free labour force that gains income from off-farm services, rural tourism, forestry, and other non-agricultural industries.



Source: survey data, the author's calculations

Fig.3. Farm incomes gained from wages, pensions, and government benefits, %

In the present research, the author specifies wages, pensions, and government benefits as an alternative source of farm income. To evaluate the efficiency of farm performance more unbiased, the incomes from wages, pensions, and government benefits are divided into smaller categories for the structure of total farm income (Figure 3). The research data indicate that the farm incomes from off-farm employment, pensions, and government benefits are gained by 43.7% of the farmers surveyed in the subregion Zemgale-1 and 53.4% – in the subregion Zemgale-2. In these subregions, respectively 38.7% and 32.5% of the respondents said that such farm incomes accounted for less than 10% of their total income. However, totally 18% of the respondents in the subregion Zemgale-1 and 15.1% – in the subregion Zemgale-2 specified that these incomes accounted for more than 60% of their total income. On average, wages, pensions, and government benefits account for 21-30% of the total farm income.

It is important to analyse the research results by subregions in the context of industries to identify the possibilities of employment diversification in Zemgale region.

Table 1

Income distribution by type of economic activity in the sampled farms in Zemgale region and its subregions

Income gained from	Subregions				Total in Zemgale region	
	Zemgale-1		Zemgale-2			
	Number of farms	as % of income	Number of farms	as % of income	Number of farms	as % of income
crop farming	121	35	30	13	151	26,4
livestock farming	43	13	47	20	90	15,7
crop and livestock farming	80	23	71	31	151	26,4
forestry	23	7	9	4	32	5.5
services	17	5	7	3	24	4.2
rural tourism	16	5	3	1	19	3.3
handicrafts	2	1	1	0	3	0.5
processing of agricultural products	7	2	1	0	8	1.4
another industry	34	10	61	28	95	16.5
Total	343	100	230	100	573	100

Source: survey data, the author's calculations

The analysis of income distribution by subregion affirms that the industries in which the farms are engaged are different. In the subregion Zemgale-1, in total 35% of the incomes are gained from crop farming, which is significantly different for Zemgale-2 where only 13% of the incomes are gained from it. The difference in the number of answers is significant (22 percentage points). However, the incomes from livestock farming and crop and livestock farming dominate in the subregion Zemgale-2. The difference in the number of answers is also significant (15 percentage points). Significant proportions belong to the other industries in the subregion Zemgale-2.

According to the survey results, the author concluded that crop farming dominates on the farms in the subregion Zemgale-1, whereas the agricultural production conditions provide advantages for crop and livestock farming, and livestock farming in Zemgale-2. The landowners in Zemgale-2 are certainly more engaged in diversifying the rural economy along with the traditional agricultural industries.

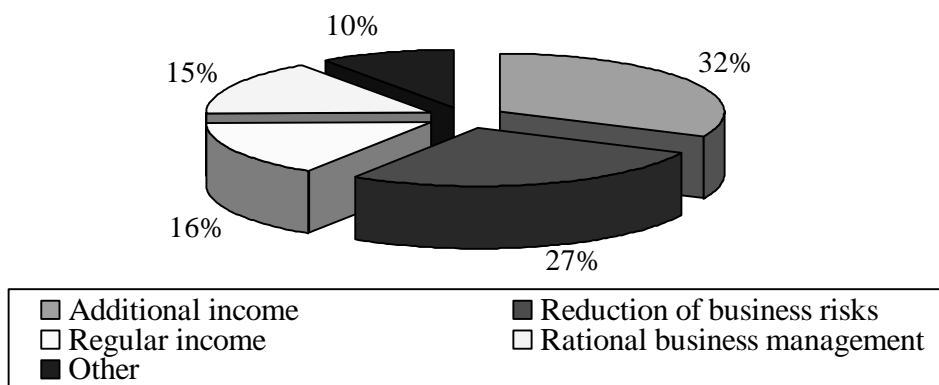
Rural employment diversification from the point of view of farm managers

Further, in the present research, the author analysed the views expressed by the respondents on employment, its diversification on their farms, and their plans by subregions. The analysis was based on the survey question **"What are farm development perspectives in the future?"** According to the result gained after processing the data by the SPSS program, in total 83% of the respondents answered the mentioned question.

The survey data showed that 231 respondents wish to continue to do their farm business as before, i.e. 43% of the sampled population. In the future, 28.1% of the respondents plan to introduce changes in their present business environment, i.e. to widen the assortment of their products, while 20.8% of the surveyed farmers want to specialise in their present businesses. Forty respondents or 8% want to stop their farm business. A detailed analysis showed that older individuals – aged 62 years and older – and the farmers who farm land up to 30 ha in size want to stop farming.

During the survey, the factors affecting the interest of farmers in diversifying their business were identified. The respondents' answers: 54% of the surveyed respondents confirmed that the economic processes motivated them to start multi-industrial business; in 25% cases, an impulse for it was given by their knowledge and skills, but the experience, knowledge, and suggestions of their relatives and acquaintances motivated 21% of the respondents to do it.

The factors promoting the diversification of farming are closely related to positive changes in the economic performance of farms. The author identified the main advantages of diversifying farming compared with traditional agriculture.



Source: survey data, the author's calculations

Fig.4. Main advantages of multi-industrial business compared with traditional agriculture, %

The respondents (32%) admitted their possibility to earn extra income as the main advantage of multi-industrial business. By doing multi-spectral business in rural areas, totally

27.3% of the respondents believe that their business risks decrease, 15.5% of them earn extra income, but 15.4% of them regard it as a rational activity. It was hard to 9.8% of the respondents to tell their opinion.

It is required to identify the factors hindering the development of innovative industries to analyse the situation in multi-industrial business on the farms more unbiased.

The main factors hindering the development of innovative industries, according to the owners of small land holdings and the farmers, are "**additional burden**" – 30.6% (173) respondents admitted it, "**lack of funds**" as well as "**lack of resources**", 24.2% (137) and 14.8% (84) respectively. Only 15% of the respondents mentioned "**lack of knowledge or skills**". As the least significant problem, "**lack of family support**" was mentioned by 8.8% of the respondents.

However, in total 28.6% of the respondents mentioned "**lack of funds**", while 21.2% of them specified "**higher probability of risk**" as the main factor when they were asked the question "**Why small farms do not diversify their business?**" The factor "**lack of courage and initiative**" was in the third position with 18.8%, but the other ones – "**lack of knowledge and skills**" and "**lack of family support**" were rarely mentioned 14.4% and 11.3% respectively.

The aim of the author was to ascertain the respondents' opinions on diversification perspectives on their farm as well. Their answers indicated that 488 respondents or more than 86% rated diversification as **positive** and as **more positive than negative**. Yet, a negative rating on diversification was expressed by 6 times fewer respondents than a positive opinion.

Table 2

**Perspectives of a multi-industrial business model rated by the residents
in the subregions of Zemgale**

Options of answers	Subregions		Total
	Zemgale-1	Zemgale-2	
Positive	97	89	186
More positive than negative	194	108	302
More negative than positive	36	22	58
Negative	10	5	15
Total	337	224	561

Source: survey data, the author's calculations

The survey results (Table 2) show that the multi-industrial business model's perspectives rated by the residents of Zemgale subregions are viewed as more positive than negative; it was the opinion of 86.4% of the respondents in the subregion Zemgale-1 and that of 88% in Zemgale-2. A negative attitude was expressed on average by 13% of the respondents in the subregions of Zemgale.

The main aim of the present research was to ascertain whether the rural residents want to engage in income-earning activities, thus, diversifying their rural economy and what exactly are these activities (Table 3).

The survey data analysis shows that of 631, only 161 respondents or 25.5% of them did not want to change anything in their farm business. There are agricultural processing enterprises in Zemgale planning region in which 90 farmers or 14.3% of their total number are interested in the rural economy's diversification. More than 10% of the answers relate to rural tourism – 86 (13.6%) and off-farm services – 71 (11.3%). More than 5% of the responses received belong to other industries – wood processing, including furniture production, and energy generation. A large interest is in handicrafts – 4.6% of the total number of received answers.

After analysing the respondents' answers by subregion, the author concludes that the respondents who do not want to engage in industries diversifying the rural economy in the subregion Zemgale-1 account for 26.9% of their total number, which is 3.3 percentage points less than in Zemgale-2. The residents of the two subregions were interested in processing

agricultural commodities, respectively 16.3% in Zemgale-1 and 11.5% in Zemgale-2. The rural tourism industry was also popular, respectively 14.8% of the respondents in Zemgale-1 and 11.9% in Zemgale-2 were interested in it.

Table 3

**Industries for farm diversification that have the interest
of Zemgale region's residents**

Options of answers	Regions		Total
	Zemgale-1	Zemgale-2	
No, I do not want	98	63	161
Wood processing, including furniture production	24	18	42
Rural tourism	54	32	86
Off-farm services	41	30	71
Energy production	25	11	36
Processing of agricultural commodities	59	31	90
Handicrafts	19	10	29
Retail trade	11	11	22
Fish, crawfish production	10	15	25
Logging	5	18	23
Another industry	17	29	46
Total	363	268	631

Source: survey data, the author's calculations

The data and results of calculations in Table 3 show that off-farm services were regarded by the farmers in the two subregions as a suitable business for their farms, which was 11.2% and 11.3% respectively. Yet, more rural businesspersons (6.9%) were interested in energy production in Zemgale-1 than in Zemgale-2 (4.2%). The respondents in Zemgale-2 were interested in logging (6.7%), fish, crawfish production (6.7%), and other industries (10.9%). The author assumes that such industries could be: production of Roman snails, red worms, mushrooms, large cranberries et al., non-traditional plants and wild animals. A significant proportion of the responses belong to handicrafts – 5.2% in Zemgale-1 and 3.7% in Zemgale-2.

An essential research task was to ascertain what businesses the respondents prefer to introduce on their farms.

- After analysing the survey result concerning the respondents' opinions on their possibilities to introduce activities for diversifying the rural economy in the subregion Zemgale-1, the author concluded that the larger were the farms, the more reluctant farmers were to introduce new businesses. The industries having the interest of farmers in the subregion Zemgale-1 were: processing of agricultural commodities (17.2%), rural tourism (14.3%), off-farm services (11.4%), bioenergy production (7.3%), wood processing, including furniture production (7.0%), and handicrafts (4.7%).
- After studying the respondents' opinions on their intentions to introduce activities diversifying the rural economy in the subregion Zemgale-2, the author concluded that attitudes were similar in all the groups. The industries having the interest of farmers in the subregion Zemgale-2 were: processing of agricultural commodities (13.5%), rural tourism (10.4%), off-farm services (7.8%), wood processing, including furniture production (7.8%), bioenergy production (4.8%), handicrafts (3.5%), and other industries (10%).
- In the two subregions, the most topical industries were: processing of agricultural commodities, rural tourism, off-farm services, wood processing, including furniture production, production of high-energy-value crops, biogas production, and home production.

Conclusions

1. Zemgale planning region is an agricultural region, but the subregion Zemgale-1 is more explicitly engaged in crop farming, whereas livestock farming is more developed in Zemgale-2.
2. The incomes gained from producing and selling agricultural products dominate in the income structure of farms in the two subregions. Nevertheless, the farmers are interested in the industries diversifying their business.
3. The farm manager's opinions on diversifying rural business on their farms are positive. The diversification of businesses in rural territories was mostly supported by the respondents in the subregion Zemgale-2.
4. The main factors hindering the introduction of new economic activities are the higher burden for farmers and the lack of funds.
5. A large part of rural residents does not want to introduce new and innovative income-earning businesses in their farming practice. A large interest is in processing agricultural commodities and in rural tourism, off-farm services, and wood processing, including furniture production as well as energy production.

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Significance of Demands Elasticity Analysis

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Abstract. The economic subjects of global and national markets, national economy, market sectors, and corporations are under a continuous development. It is possible to plan future initiatives (demand forecasting) by analysing the causes of relationship (demand elasticity) for the operating demand. The development of market, including demand and demand elasticity, flexibility in analysis evaluation, and prediction sets an action for each target participant (corporations, government leaders, and other professionals) due to its importance. Additionally, there has to be a desire to identify and promote the sector or the entire national economy with a current operational capability and a future direction.

The aim of this paper is to analyse and assess the significance of demand elasticity in the scope of consumer food products through the demand analysis and modelling. By assessing empirical demand elasticity coefficients, the author concludes and recommends the usage of empirical elasticity analysis, and assesses strengths and weaknesses of the methodology. The main conclusion suggests further research fields related to the efficient elasticity analysis for a company's activities analysis and planning, efficient collection and evaluation of the necessary information, complex of demand influencing assessment factors, and assessment of the average variation influence on empirical elasticity coefficients.

Key words: demand elasticity, significance of elasticity analysis, elasticity coefficient.

Introduction

Different segments of the market have different levels of competition. A key component in the success of a company is the ability to act and plan future activities based on demand analysis. The quality of results has high dependence on the latest information. Demand elasticity analysis is significant to assess demand according to a market situation, which is usually influenced by different factors. Empirical studies turn their attention to demand analysis to demonstrate a product demand reaction on these parameter changes defined by principles of demand law (Liebermanis G., 2006).

Various types of demand elasticity analysis include the analysis of goods or services, labour, and capital (investment) demand analysis (Hatzius J., 2000); production resources demand and semi-finished product analysis. There are three levels of demand elasticity analysis – a company level, an industry level, and the national economy level. Each level has its specific features, for example, the common goods and services demand in all sectors is analysed with an aggregate income.

The demand elasticity analyses and models have essential influence on the expected revenue. Moreover, its net sales result on overall economic action outcome. H.Kremer (2002) underlines that the price demand elasticity is the most important factor to understand the price policy influence on the demand. A practical use of elasticity is considerable. For example, it is applied to settle market conjuncture for different market types. Besides a relevant condition for a company is to assume qualitative marketing decisions based on a continuous connection between a company and the market. The decision can be made on 90% information, 10% of inspiration, and uninterrupted feedback between the company and its costumers (Šķiltere D., Krasts J., 2005).

There is a number of benefits from demand influencing factor analysis. One of those benefits increases competitiveness on the base of an adequate price policy. It finds aspects that determine consumer behaviour on the market as well as finds why some products are and some are not on demand. This analysis may promote the product quality increase and the demand structure improvement. Demand elasticity is an important factor for the demand forecasting. It is possible to improve the company financial result with demand elasticity evaluation, for example, the turnover and the market share growth.

Demand elasticity significance can also be analysed on the scale of the sector and the country, a price policy (Peltonen A., 2007) and tax rates for different products. It is critical to

know the elasticity level of excise goods, since the budget revenues depend on tax rates of excise goods.

To ensure a competitive advantage, a company has to plan its actions from a long-term strategic perspective. Demand elasticity analysis is an essential component to ensure the possibly highest level of demands, both, for mass and niche production. The demand elasticity is dependent on consumer readiness to accept compromises on product characteristics or service conditions. Here, important factors include production costs and consumer budget constraints, and the product consumption time and place (product delivery and consumption conditions) (Chen S., Tseng M.M., 2007).

Demand flexibility analysis in practice can be viewed in the extent of national economy and industry demand analysis. Scientific literature represents a wide range of research on demand elasticity for various industries. These sectors mostly are various natural resource industries and their refinement products, for example, natural gas (Erdogdu E., 2010), fuel (Gundimeda H., Köhlin G., 2008), electric energy (Inglesi R., 2010). There are also research data about transport economics (Yang H., Xu W., Heydecker B., 2010), agricultural production (Zhou H., 2008), and others.

The methodology of elasticity coefficient estimation can be applied to almost every commodity or service demand analysis. In reality, there can be found just a few examples when the company uses this valuable instrument for its products demand analysis and strategic planning, like different kinds of marketing policies that may affect consumer's behaviour.

Companies and market specialists have to consider the opportunity to use real market data based research for planning their further action and strategies. Otherwise, the economic downturns can more likely promote a business outcome failure, an insolvency cases, or even sector-wide stagnation.

The **aim** of this paper is to analyse and assess the demand elasticity significance in the scope of the consumer food products demand analysis and modelling. The following **tasks** are stated to achieve the defined aim:

- to study special and scientific literature on the demand elasticity significance selection and analysis;
- to analyse demand elasticity by means of empirical elasticity coefficients;
- to assess the obtained results;
- to assess further required research fields.

Special economic and scientific literature, and the Central Statistical Bureau databases on consumer prices, household budget, wages, and personal income were used in order to deal with the defined tasks. The empirical coefficient calculation and the statistical quality control **methods** were used for the research. Challenges for the research:

- What is better application on demand empirical elasticity analysis?
- What are the strengths and weaknesses of these techniques?
- What needs to be considered when making this kind of research and how to evaluate the obtained results?

Results and discussion

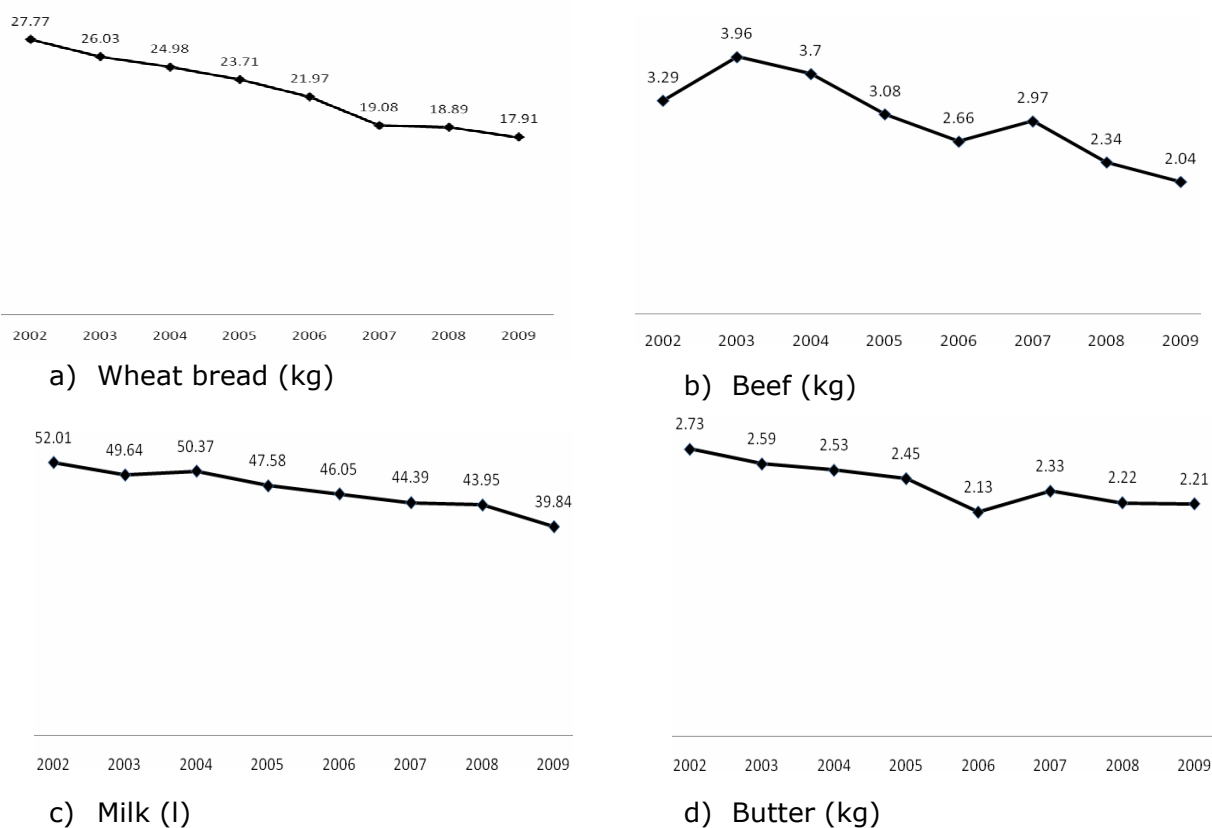
Demand elasticity analysis requires the calculation and estimation of elasticity coefficients, which are affected by different factors. Elasticity coefficients (elasticity quantitative measure) are used to assume coherence in time series and to analyse a regression equation. However, elasticity coefficient may have a positive or negative value. Elasticity analysis includes two types of elasticity coefficients – empirical and theoretical. In this research, the demand was analysed using empirical elasticity coefficients. Empirical elasticity coefficients are used for relatively simple dynamics characters.

The base of demand analysis is the elasticity coefficient calculation and economic interpretation of the obtained results. Research focuses on the analysis of demand of food products (wheat bread, beef, milk, and butter) with five influencing factors. Analogically, with the help of an appropriate data, demand elasticity can be analysed on the higher level – thus analysing an aggregate product on the national economic level, and on the lower level – product demand offered by a certain company.

Problems of empirical elasticity coefficient practical use

Product demand elasticity, its influencing factors, connections between factors and demand impact and a level of the demand elasticity may be reflected through the consumer products demand analysis. In the period from 2002 to 2009, the demand for all products had a downward trend (Figure 1). In general, the research analyses annual product consumption per one household member; yet in a narrower view it may be distinguished as the solvency demand.

The data on different factors are essential to estimate and analyse empirical elasticity coefficients. A researcher has to evaluate the available information and choose factors, which have information that addresses a fixed period of time and measurements. The researcher's professional experience, previously done researches, expert opinions etc. should be observed to evaluate the factors with the most significant impact on demand. One of the most frequently calculated coefficients is the empirical price elasticity coefficient. However, it is not enough to have one coefficient; it is highly required to calculate other elasticity coefficients as well, for example, dependency on income or expenditure. The paper analyses five types of elasticity coefficients, namely, dependency on an average consumer price, a consumption expenditure structure, an income level, wages and a substitute products price (Table 1). These factors were chosen relying on the author's professional experience, which was gained during the previous studies.



Source: <http://data.csb.gov.lv/DATABASE/>

Fig.1. Average annual consumption of food products per one household member

The influence of the average price factor on the product demand is different (Figure 2a and Table 2). They are smaller than 1 for all products (exception is beef) and in the entire period their price did not affect the demand. However, it is bigger than 1 for beef – the value of coefficients is 1.783; thus the beef price affects its demand. Although the average coefficients are mostly smaller than 1, in some periods they are greater; hence, the researcher needs to consider that the price can be a factor influencing demand (Figure 2a). Second assessed factor was the average household consumption expenditure per household member. This factor has a bigger impact on the demand (Figure 2b). The average wheat bread and milk consumption

expenditure coefficients are smaller than 1 (-0.659 and -0.014 respectively); this means they had no impact on demand. In some periods of analysis, the coefficient related to the price can be greater than 1. For beef and butter – coefficients exceed 1 (4.129 and 2.612 respectively); so they had impact on the demand (Table 2). The difference in those two types of elasticity coefficients can be seen as in most of the cases the consumption expenditure coefficients are greater than 1; while price – smaller than 1 (Figure 2a and b).

The income elasticity coefficients in the period of analysis have the common tendency for all products (exception is beef) (Figure 2c). The average elasticity coefficients for all products are smaller than one (exception is beef); this factor is inelastic. For beef, it is equal to 1 – the demand changes similar to the income changes (Table 2).

The wage elasticity coefficient in the period of analysis for all products in some years is greater than 1 – the demand is elastic to this factor (Figure 2d). Opposite results are acquired analysing the average wage elasticity coefficients – for all products they are inelastic (wheat bread -0.05, beef 0.53, milk 0.46, and butter -0.23) (Figure 2d and Table 2). The author concludes that a worker's annual net wage has a significant impact on the demand but there is necessity to analyse this factor in different periods and compare the obtained results.

Table 1

Factors influencing consumer food products demand in 2002-2009

Year	Wheat bread		Beef		Milk		Butter		Mean equalised disposable income per year (LVL)	Worker average annual wage, net (LVL)	White bread average consumer price (LVL, kg)	Pork average consumer price (LVL, kg)	Margarine average consumer price (LVL, kg)
	Average consumer price (LVL/kg)	Annual household consumption expenditure average per household member (LVL)	Average consumer price (LVL/kg)	Annual household consumption expenditure average per household member (LVL)	Average consumer price (LVL/l)	Annual household consumption expenditure average per household member (LVL)	Average consumer price (LVL/kg)	Annual household consumption expenditure average per household member (LVL)					
2002	0.31	13.56	1.62	5.39	0.24	9.61	1.67	4.08		1493	0.5	1.7	0.88
2003	0.30	12.58	1.51	5.89	0.24	8.95	1.70	4.06		1657	0.51	1.64	0.92
2004	0.31	12.94	1.62	5.81	0.30	11.11	1.98	4.57	1818	1802	0.55	1.72	0.98
2005	0.34	13.64	1.87	5.71	0.35	12.46	2.34	5.17	2 249	2112	0.6	1.81	1.08
2006	0.39	14.70	2.09	5.42	0.39	14.05	2.52	5.07	2 845	2599	0.69	1.88	1.20
2007	0.49	15.68	2.25	6.67	0.46	16.76	2.93	6.45	4 160	3431	0.85	2.02	1.28
2008	0.67	20.08	2.61	6.38	0.59	21.32	4.36	8.07	4 656	4202	1.15	2.42	1.18
2009	0.70	18.53	2.68	5.47	0.48	15.81	3.90	7.06		4104	1.17	2.53	1.16

Source: <http://data.csb.gov.lv/DATABASE/>

The average empirical substitute product price elasticity coefficient for wheat bread and beef is significant, i.e. elastic (-1.33 and -2.56 respectively), but for butter – inelastic -0.18 (Figure 2e and Table 2). The substitute product for wheat bread was white bread, for beef – pork, and for butter – margarine. The author did not calculate the substitute product price elasticity coefficient for milk because milk has no direct substitute.

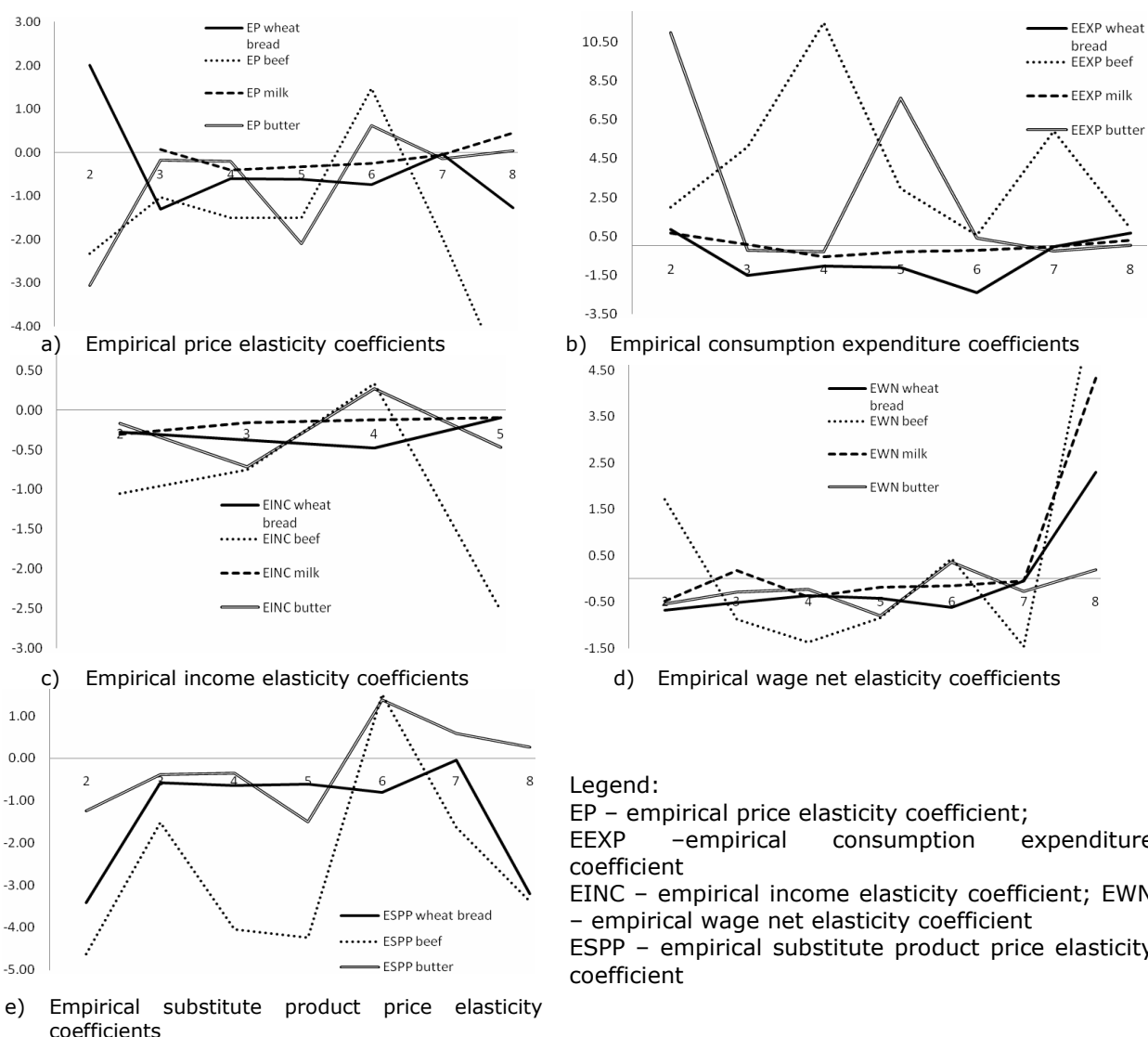
Table 2

Average empirical demand elasticity coefficients

	Average empirical price elasticity coefficients	Average empirical consumption expenditure coefficients	Average empirical income elasticity coefficients	Average empirical wage net elasticity coefficients	Average empirical substitute product price elasticity coefficients
Wheat bread	-0.368	-0.659	-0.31	-0.05	-1.33
Beef	-1.783	4.129	-1.00	0.53	-2.56
Milk	-0.084	-0.014	-0.17	0.46	-
Butter	-0.721	2.612	-0.27	-0.23	-0.18

Source: author's calculations

The results have to be evaluated critically. It is recommended to establish representative periods for the empirical elasticity coefficient analysis.



Source: author's calculations

Fig.2. Consumer food products empirical elasticity coefficients¹

¹ The numbers 2,3,4,5,6,7,8 on the horizontal axis of Figure 2 are used to mark the time period for elasticity coefficient calculation, i.e. the year 2002/2003 elasticity coefficient time period is the number 2, 2003/2004 – 3, 2004/2005 – 4 etc.

Overall, empirical elasticity coefficients are sporadic (in the range from -5.63 for the beef price elasticity coefficient in the year 2008/2009 to 11.49 – for the beef consumption expenditure elasticity coefficient in the year 2004/2005). Fluctuations of the empirical elasticity coefficients are their most significant weakness. It is crucial to select critical coefficients from redundant data. Consequently, the acquired results will be appropriate for objectivity.

Professor O.Krastiņš has suggested this method because of methodological problem analysis for empirical elasticity coefficients in the household budget research. Smaller elasticity coefficient value shows that this group consumption and demand is more dependent on the customer needs, but greater – on the purchasing power (Krastiņš O., 2000).

By assuming all four-product elasticity coefficients, the most representative years where fluctuations of coefficient values were smaller, are the following ones: for wheat bread - 2005 and the same kind of the coherence is seen in 2006; for beef – 2006 and 2007; for milk – 2005 and 2006 and for butter – 2005 and 2007. The author concludes that the years 2005 and 2006 are representative for these four products.

It was concluded that empirical elasticity coefficients are fluctuating. It is a necessity to undertake further research in order to find whether these fluctuations are unreasonable or in some period, they can be used for the demand analysis. To answer these questions, there is a need to extend the reasons for fluctuations – are they depending on the demand and its impacted factor fluctuations and/or on the variables average deviation and their fluctuations.

An empirical elasticity coefficient shows one factor influence on the demand, for example, price or income. Nevertheless, usually there are at least several factors on the market that may affect the demand. The assessment of complex empirical elasticity coefficient is useful for demand elasticity analysis. For example, purchasing power elasticity can be assumed together with an income level, a price and a consumer price index level; hence, one can estimate the factors complex impact. For this kind of research, one can use the empirical elasticity coefficient calculation methodology instead of the theoretical elasticity coefficient calculation methodology, which is more complex.

Conclusions, proposals, recommendations

By assessing the demand elasticity significance and analysing the empirical demand elasticity coefficients, the author proposes the following conclusions and suggestions.

- It is possible to get a quantitative, a qualitative empirical elasticity coefficients analysis, and an interpretation of the demand influencing factors analysis.
- The elasticity practical application areas – the market force calculation for different products; factors identification which have a direct impact on the competitiveness of the company; operating results and stability assessment in the market; the consumer behaviour influencing factors assessment; the demand quality and demand structure improvement; and elasticity usage for the demand forecasting.
- The empirical elasticity analysis can be used for almost every product demand analysis. The collection of the data for demand and its main influencing factors is necessary for an adequate research. The researcher needs to evaluate whether there are correlations between factors (otherwise the main aim of research will not be achieved, i.e. dependent attribute changes assessment depending on independent attribute changes).
- The author has analysed five demand-influencing factors - average consumer price, consumption expenditure structure, income level, wages, and substitute products price. It is recommended to view other factors impact and compare the obtained results. Different kinds of products are affected by various factors, and additional research is required to clarify these factors.
- The empirical elasticity coefficient for food product consumption analysis showed different factors with varied impact on the demand. All factors in some periods have important impact on the demand (elasticity coefficients were greater than 1 – they were elastic). The author concludes that the chosen factors are relevant to assess demand of these products and can be used for demand forecasting in further research.
- Adequate and qualitative information is one of the most important factors to achieve the valuable results. Topical question and base for the future research is effective collection, summarisation, and systematisation of this information.

- The future research connected with empirical elasticity analysis is to assess dependent and independent attribute average deviation and its fluctuation influence on the empirical elasticity coefficient value; to assess a complex factor influence with the empirical demand elasticity coefficient method, for example, purchasing power for different population groups (i.e. workers, retired people etc.).
- For wider demand elasticity analysis, it is necessary to analyse the theoretical elasticity coefficients the methodology of which include a complex factor influence on the demand, by using regression models. A quality level of all results obtained from an empirical and theoretical elasticity analysis shall be compared and analysed further.

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Characteristics of Actions on the Rural Development Programme for 2007-2013

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Abstract. The paper presents support instruments within the framework of the Common Agricultural Policy from the financial and material part, which Poland adopted within the scope of the Rural Development Programme for 2007-2013. The actions defined in the programme were divided into four thematic (priority) axes. In total, the support granted to Poland amounted to EUR 13.2 billion, out of which the largest funds were earmarked for the implementation of actions within Axis I. The material analysis of the actions demonstrates that in the course of 2007-2013 over 2.3 thousand different tasks (operations) will need to be performed, including the most numerous actions within the scope of Axis I.

Key words: rural development, support instruments, CAP, Polish agriculture.

Introduction

At the beginning of the 21st century, the European Union was working intensively on defining a new form of agricultural and rural area policy. The European Council decisions taken in Lisbon (2000) and Goteborg (2001) affected significantly on the matter. The guidelines set out in Lisbon aimed at transforming the EU economy into the most competitive and dynamic, knowledge-based economy in the world. Whereas a sustainable development strategy adopted in Goteborg extended the Lisbon Agenda by issues relative to the natural environment protection and social policy. The conclusions reached in Goteborg are further strengthened by the fact that in the context of Agenda 2000 the European agricultural policy has increasingly been focusing on satisfying the growing needs of the public in the areas of food safety and quality, product variety, animal well-being, environment quality as well as nature and landscape conservation.

The RDP 2007-2013 was adopted on 24 July 2007 at a meeting of the European Commission Rural Development Committee. Simultaneously with the RDP negotiations, drafts of detailed implementation regulation were being prepared on the grounds of the Act of Rural Development Assistance from the European Agricultural Fund for Rural Development (EAFRD) adopted in March 2007. The tasks were selected based on the National Strategic Plan and on the grounds of wide-ranging consultations conducted with other government departments, social and economic partners, trade unions, and non-governmental organisations. It has been agreed to continue those forms of assistance, which in the past drew a lot of interest and at the same time were beneficial to modernisation of agricultural holdings, processing plants, and services development. Such forms of assistance included investments into farm holdings, undertakings aimed at improvements in the facilities of processing plants, early retirement, support for groups of agricultural producers starting non-agricultural activity at farm holdings, and assistance for young farmers.

In Poland, the Act on Support for Rural Development from the EAFRD, adopted on 7 March 2007, served as the grounds for preparation of the RDP. The act lists 22 actions and technical assistance, which ought to be included in the Programme. The Council of Ministers authorised the minister responsible for rural development to issue executive regulations in all the actions specified in the RDP 2007-2013. The minister will act as a managing authority; whereas the Agriculture Restructuring and Modernisation Agency (ARMA) will fulfil the tasks and competences of a paying authority (the Act, 2007).

Financial assistance is granted upon an application submitted by a natural entity, a legal entity or an organisation without a legal personality. The assistance is granted up to a limit constituting an equivalent in zloty of an amount in euro specified in the programme for particular actions. The minister responsible for rural development by way of a regulation can define the distribution of funds per voivodeship or their division into the years of programme implementation. Beneficiaries may use the assistance once they have signed an agreement

which constitutes an administrative decision and in which the amount of the assistance is specified along with terms and conditions, dates and the location of an operation implementation.

Objective and scope of the paper

A fundamental objective of this paper was to present the Rural Development Plan for 2007-2013 in the context of thematic axes and the funds allocated to individual actions. The aim for the division into thematic axes and particular priorities adopted in the European Union was to focus on the areas, which ought to attract particular attention of agricultural producers.

The scope of this paper includes all the actions comprised in the RDP, taking into account all the changes introduced into the programme in the first years of implementing the RDP 2007-2013. A basic objective of the second part of the paper was to present the quantitative aspect of the actions.

Results and discussion

1. The actions in priority axes and the amounts of financial assistance

The RDP 2007-2013 is an EU programme focusing on a multilevel rural development, providing assistance for investments in agriculture, and processing industry aimed at improving the competitiveness of the agro-food sector. The programme also allocates funds for support to investors creating new workplaces, developing ecological farming methods and carrying out measures protecting the natural environment and rural landscape values. In pursuance of the executive regulation of the Ministry of Agriculture and Rural Development of 2007, teams were appointed for supervising and implementing the actions delegated (passed on) to voivodeship local governments. Voivodeship local governments acquired the status of a managing authority.

Table 1

Distribution of assistance funds within the scope of Axis I "Increasing the competitiveness of the agricultural and forestry sector" in the course of 2007-2013 (in thou. EUR)

Name of an action in Axis I	Public funds	Private funds	Total cost	Percentage
Vocational training for persons employed in agriculture and forestry	40 000	0.0	40 000	0.4
Setting-up young farmers	420 000	0.0	420 000	3.2
Early retirement	2 187 600	0.0	2 187 600	16.5
Use of advisory services by farmers and forest owners	350 000	87500	437 500	3.3
Modernisation of agricultural holdings	1 779 932	2 669 898	4 449 830	33.7
Increasing the value added of agricultural and forestry production	1 100 000	3 300 000	4 400 000	33.2
Improvement and development of infrastructure related to agriculture and forestry	600 000	0.0	600 000	4.5
Participation of farmers in food quality schemes	100 000	0.0	100 000	0.7
Information and promotion activities	30 000	12 857	42 857	-
Commitments from 2004-2006 for the action of "Support for small production farms"	440 000	0.0	440 000	3.4
Producer groups	140 000	0.0	140 000	1.1
Axis I in total	7 187 532	6070255	13 257 787	100.0

Source: RDP 2007-2013

The tasks passed on to voivodeship local governments were as follows: 1) "Improvement and development of infrastructure related to agriculture and forestry" (Axis I); 2) "Basic

services for rural population and economy" (Axis III); 3) "Village renewal and development" (axis III), "Implementation of local development strategies" (Axis IV), and "Implementation of cooperation projects" (Axis 4). The action of Axis 1 "Information and promotion activities" was delegated to the Agricultural Market Agency, while another action; also from Axis 1 "Vocational training for persons employed in agriculture and forestry sectors" was assigned to the FAPA (order of the Ministry of Agriculture and Rural Development No. 35, 2007).

The scope of financial aid for Axis I and the actions linked to it is to support economic and social development of agriculture through actions involving investments, actions supporting infrastructure and increasing competitiveness of the agricultural sector. The largest amounts were earmarked for the action of "Modernisation of agricultural holdings" (EUR 4.5 billion, i.e. 33.7%), as the objective of that action is to achieve a significant improvement in technical equipment and restructuring of farm holdings. The objective is justified by the fact that the productivity of Polish farm holdings is very low, whereas farm facilities need redevelopment. The second ranking action funds-wise is "Increasing the value added of agricultural and forestry production" (EUR 4.4 billion, i.e. 33.2%), because of the need to increase competitiveness by investing into new products, processes, technologies, and articles of higher value added. Another action "Early retirement" (EUR 2.2 billion, i.e. 16.5%) should contribute to the most substantial changes in the agrarian structure, as the action is to target farm holdings of a specific size as well as young people. The action is aimed at providing elderly farmers with additional economic incentives to cease production; while on the other hand the action is to support the enlargement of already existing farm holdings. The three actions described here will consume in total 83.4% of the entire budget earmarked for Axis I, and on that legal construction, it will operate in order to achieve the fundamental objective of the CAP.

The commitments shown in a budget estimate related to the previous RDP 2004-2006 under the title of "Support for Small Production Farms" arise from the fact that payments on that account were awarded for 5 years; whereas the implementation referred to only 3 years. A beneficiary who demonstrated the fulfilment of the conditions specified in an agreement received further support over the period of 2 years. The European Commission did not approve the action, which Poland proposed, involving support to small production farms in the RDP 2007-2013, as it was perceived as a kind of social assistance not conducive to restructuring farm holdings, or even petrifying the existing agrarian structure.

Among the 11 analysed actions of Axis I, as many as 7 actions (63.6%) do not require any private contribution of beneficiaries. While the beneficiaries are expected to make their own contribution for the following actions: "Increasing the added value of agricultural and forestry production" amounting to 75%, "Modernisation of farm holdings" amounting to 60% as well as "Information and promotion activities" (30%) and "Use of advisory services by farmers and forest owners" (20%).

Table 2

Distribution of assistance funds within the scope of Axis II "Improvement of the natural environment and rural areas" in the course of 2007-2013 (in thou. EUR)

Name of an action in Axis II	Public funds	Private funds	Total cost	Percentage
Support for farming in mountainous regions and other areas with less favoured conditions for agricultural production (LFA)	2 448 750	0.00	2 448 750	44.1
Agri-environmental programme (Agri-environmental payments)	2 303 750	0.00	2 303 750	41.5
Afforestation of agricultural land and afforestation of non-agricultural land	653 501	0.00	653 501	11.8
Restoring forestry potential destroyed by natural disasters and the introduction of prevention instruments	140 000	0.00	140 000	2.6
Axis II in total	5 546 001	0.00	5 546 001	100.0

Source: RDP 2007-2013

An analysis of the actions comprised in Axis II demonstrates an equal level of support both for the action of "Support for farming in mountainous regions and other areas with less favoured conditions for agricultural production" (EUR 2.4 billion, i.e. 44.1%) and the action of "Agri-environmental programme" (EUR 2.3 billion, i.e. 41.5%). The scope of support within the framework of the action for less favoured areas (LFA) aims to compensate farmers for difficult conditions of production in those areas. The objective is to boost further animation of farmers, maintaining landscape values and introduction of environment-friendly land management systems. LFA action will be applicable to approximately 60% of arable land in the scale of all of Poland. Agri-environmental programmes can be implemented within the entire territory of a certain country, additionally strengthening other environmental mechanisms, and they permit controlling the development of ecological production.

Table 3

Distribution of assistance funds within the scope of Axis III "Improvement of the quality of life in rural areas and diversification of rural economy" in the course of 2007-2013 (in thou. EUR)

Name of an action in Axis III	Public funds	Private funds	Total cost	Percentage
Diversification of economic activities	345 580	345 580	691 160	14.4
Creation and development of micro-enterprises	1 023 583	1 023 583	2 047 167	42.7
Basic services for rural population and economy	1 471 440	0.00	1 471 440	30.7
Village renewal	589 580	0.00	589 580	12.2
Axis III in total	3 430 183	1 369 163	4 799 347	100.0

Source: RDP 2007-2013

In light of the actions comprised in Axis III, it will be crucial that the objectives should be reached though an improvement of the quality of life in rural areas, promotion of diversified economic activities, establishment of non-agricultural sources of income and mitigating effects of unemployment. "Creation and development of micro-enterprises" is the first ranking action (EUR 2.0 billion, i.e. 42.7%), on which such emphasis was placed due to over-supply of the labour force in the countryside, high unemployment rate, and unfavourable labour market situation.

Table 4

Distribution of assistance funds within the scope of Axis IV "Leader" in the course of 2007-2013 (in thou. EUR)

Name of an action in Axis IV	Public funds	Private funds	Total cost	Percentage
Implementation of local development strategies	620 500	403 115	1 023 615	87.1
Implementation of cooperation projects	15 000	00.0	15 000	0.1
Functioning of the local action groups, skills acquisition and animation	152 000	00.0	152 000	12.8
Axis IV in total	787 500	403 115	1 190 615	100.0
Axes from I to IV in total	16 951 217	7 842 534	24 793 751	100.0
Name of an action	Public funds	Private funds	Total cost	Percentage
Technical assistance	266 600	0.0	266 600	1.1
RDP 2007-2013 in total	17 217 817	7 842 534	25 060 351	100,0

Source: RDP 2007-2013

The action "Basic services for rural population and economy" (EUR 1.5 billion, i.e. 30.7%) aims to support investments which enable improvement in living conditions and business operation in rural areas. Shortage of basic infrastructure, which is perceived as an obstacle to the development of rural areas, has justified the action.

Support within the scope of Axis IV takes on the form of actions fully delegated (passed on) to voivodeship local governments and they aim to strengthen local governance, formulation of development needs and objectives by referring to local conditions. The attention was placed on "Implementation of local development strategies" (EUR 1.0 billion, i.e. 87.1%) which was linked with the strategies included in Axis III and which are implemented by local action groups. The strategies may concern territorially cohesive rural areas comprising more than one commune.

The logic behind the creation of rural development programme relied on the implementation of specified priorities, which were supported by specific financial assistance. In this respect the CAP aimed, above all, to raise the competitiveness of agricultural sector and to achieve structural transformations by protecting the natural environment and then by increasing human capital in the countryside and boosting local community activity. Totally, 40.8% of all the funds have been earmarked for Axis I, comprising 50% of all the actions listed in the RDP. Natural environment protection defined in Axis II, constituting 18.2% of the number of actions, was allocated with 33.5% of all the funds. Action Leader received the least funds (4.8%) followed by technical assistance (1.5%).

Table 5

Funds divided into thematic axes in the course of 2007-2013 (in thou. EUR)

Axis	Public contribution			Axis percentage share in total budget
	Total public contribution	EAFRD contribution rate (%)	EAFRD amount	
Axis 1	7 187 532	75.0	5 390 649	40.8
Axis 2	5 546 001	80.0	4 436 801	33.5
Axis 3	3 430 183	75.0	2 572 638	19.4
Axis 4	787 500	80.0	630 000	4.8
Technical assistance	266 600	75.0	199 950	1.5
Total	17 217 817	76.8	13 230 038	100.0

Source: RDP 2007-2013

Considering the question of spending the programme funds in particular years, equal distribution of funds throughout 2007-2013 becomes a topic of interest.

Table 6

Annual plan of the EAFRD funds spending throughout 2007-2013 (in thou. EUR)

Year	EFROW in total	Convergence regions
2007	1 989 718	1 989 718
2008	1 932 933	1 932 933
2009	1 872 740	1 872 740
2010	1 866 783	1 866 783
2011	1 860 574	1 860 574
2012	1 857 244	1 857 244
2013	1 850 046	1 850 046
Total	13 230 038	13 230 038

Source: RDP 2007-2013

2. Directions of changes in financing the RDP 2007-2013

During action implementation in the course of the first 3 years of the RDP operation it appeared that the funds originally allocated to thematic axes and actions do not meet the criteria of all the assumed objectives and the tasks defined in the programme. A situation arose in which not all the assistance funds earmarked for specific actions were going to be fully consumed; while on the contrary, funds will be lacking for some actions. The Minister for Agriculture and Rural Development submitted a draft adjustment of the RDP 2007-2013 to the European Commission on 23 April 2009. On 17 December 2009, the European Commission issued its approval for the changes in the RDP 2007-2013 that Poland had applied for. As a result of the changes within the scope of Axis I the budget amount for action related to early retirement was increased from an initial amount of EUR 2 187.6 million to the proposed EUR 2 549.6 million (by +14.6%). The reason for the decision aiming to amend the budget was a discovery of a serious shortage of funds in relation to the amounts disclosed in financial tables. Moreover, the funds shortage was caused by variability of the exchange rate of the zloty to the euro as well as a change of national regulations concerning disability pension and pension indexation, and undervaluation of the scope of the commitments undertaken within the framework of the RDP 2004-2006. Public spending on implementing the commitments from 2004-2006 for the action of "Support for small production farm holdings" was increased as well (the action does not feature in the current RDP), from the amount of EUR 440 million to EUR 590 million (by +34.1%). In contrast, public spending on two actions was decreased, namely, "Use of advisory services by farmers and forest owners" (by -37.7%) and "Participation of farmers in food quality schemes" from EUR 100 million to EUR 80 million (by -20%).

The table below presents the view of the changes in some of the actions of the thematic Axis I.

Table 7

Amended distribution of assistance funds within the scope of Axis I "Improvement of the competitiveness in agricultural and forestry sector" in the course of 2007-2013 (in thou. EUR)

Name of the action/Axis I	Public funds	Private funds	Total cost	Percentage
Vocational training for persons employed in agriculture and forestry	40 000	0.0	40 000	0.3
Setting-up young farmers	420 000	0.0	420 000	3.2
Early retirement	2 549 600	0.0	2 549 600	19,4
Use of advisory services by farmers and forest owners	218 000	54 500	272 500	2.1
Modernisation of agricultural holdings	1 849 068	2 773 602	4 622 670	35.2
Increasing the value added of agricultural and forestry production	932 000	2 796 000	3 728 000	28.4
Improvement and development of infrastructure related to agriculture and forestry	637 531	0.0	637 531	4.8
Participation of farmers in food quality schemes	80 000	0.0	80 000	0.6
Information and promotion activities	30 000	12 857	42 857	0.3
Commitments from 2004-2006 for the action of "Support for small production farms"	590 000	0.0	590 000 00	4.5
Producer groups	140 000	0.0	140 000	1.1
Axis I in total	7 486 199	5 636 959	13 123 158	100,0

Source: RDP 2007-2013 from 2009

Within the scope of Axis II changes referred to two actions (bold printed), namely, "Afforestation of agricultural land and afforestation of non-agricultural land" where the aid was decreased from EUR 653 million to EUR 513 million (by -21.4%) and the action "Restoring forestry potential destroyed by natural disasters and the introduction of prevention instruments" from EUR 140 million to EUR 100 million (by -40%).

Table 8

Amended distribution of assistance funds within the scope of Axis II "Improvement of the natural environment and rural areas" in the course of 2007-2013 (in thou. EUR)

Name of the action/Axis II	Public funds	Private funds	Total cost	Percentage
Support for farming in mountainous regions and other areas with less favoured conditions for agricultural production (LFA)	2 448 750	0.0	2 448 750	45.5
Agri-environmental programme (Agri-environmental payments)	2 314 861	0.0	2 314 861	43.1
Afforestation of agricultural land and afforestation of non-agricultural land	513 501	0.0	513 501	9.5
Restoring forestry potential destroyed by natural disasters and the introduction of prevention instruments	100 000	0.0	100 000	1.9
Axis II in total	5 377 112	0.0	5 377 112	100.0

Source: RDP 2007-2013 from 2009

In the remaining thematic Axes (III and IV) the item of public funds underwent no changes. Overall, the general amounts of assistance funds for individual actions of rural development in 2007-2013 were not significantly amended, while the amounts remained at the same level as the funds allocated to Poland by the European Commission. A unified text, which takes into account the changes approved by the European Commission, was published on 29 March 2010 in the form of an announcement of the Minister for Agriculture and Rural Development.

3. Numerical scope of the tasks included in the actions and thematic axes

The construction of the RDP Axis II is directed at widely understood questions of natural environment protection, which are going to be implemented through different undertakings of variable qualitative scope. Three out of four actions provided for in Axis II were already implemented in the course of previous RDP 2004-2006. The largest action quantity-wise is the action related to supporting farming in less favoured areas. The selected territories of LFA comprise 9.2 million ha of arable land (54.2%) and they are addressed to 750.0 thousand beneficiaries who make up 53.6% of all the farmers taking advantage of direct payments. Another characteristic feature is the fact that a joint application is submitted when applying for direct payments. The information whether a farm holding lies within the territory of LFA is obtained from an annex to an order of the Ministry of Agriculture and Rural Development (MARD).

Table 9

**Number of actions (operations) to be implemented within the scope of Axis I RDP
2007-2013**

Name of the action of Axis I	Number of actions (operations) to be implemented	Groups targeted by the actions	Entity responsible for implementation
Vocational training for persons employed in agriculture and forestry	400 000	Training courses participants	FAPA
Setting-up young farmers	33 600	Young farmers who were granted assistance	ARMA
Early retirement	50 400	Agricultural producers who are going to take early retirement	ARMA
Use of advisory services by farmers and forest owners	600 000	Agricultural producers who were granted assistance	ARMA
Modernisation of agricultural holdings	59 378	Farm holdings which were granted assistance	ARMA
Increasing the value added of agricultural and forestry production	1 500	Enterprises which were granted assistance	ARMA
Improvement and development of infrastructure related to agriculture and forestry	1 150	Projects complying with Scheme I and II	Voivodeship local governments
Participation of farmers in food quality schemes	69 000	Supported farm holdings covered by quality systems	ARMA
Information and promotion activities	1 350	Projects complying with Scheme I and II	AMA
Commitments from 2004-2006 for the action of "Support for small production farms"	0	0	ARMA
Producer groups	350	Agricultural producers covered by assistance funds	ARMA
Axis I in total	1 216 728		

Source: RDP 2007-2013 from 2009

Agri-environmental programmes are one of the most challenging actions owing to a large number of packages, variants, and tasks, while all undertakings in a farm holding need to be conducted under a supervision of a licensed advisor. Certainly, that was the reason that the tasks comprised in the previous RDP had not been accomplished. Agri-environmental payments should persuade their beneficiaries to apply ecological methods of production. The actions target 200 thousand (14.3% of the total number of farmers) beneficiaries who will commit themselves to the programme for the period of 5 years.

The fact that Poland has a surplus of arable land of low soil quality was a reason for starting afforestation programmes. That way 150 thousand ha of land will be obtained for afforestation, which constitutes 0.9% of the arable land in the country. The action was directed at 52 thousand beneficiaries, which gives an average of 3.5 ha for afforestation by an individual farmer. The fourth action involves prevention and counteracting natural disasters.

Within the scope of Axis III of the RDP rural community are to be activated and persuading farmers to seek source of income unrelated to agriculture. The performance of the four actions was entrusted equally to the Agency and voivodeship local governments.

Table 10

**Number of actions (operations) to be implemented within the scope of Axis II RDP
2007-2013**

Name of the action of Axis II	Number of actions (operations) to be implemented	Groups targeted by the actions	Entity responsible for implementation
Support for farming in mountainous regions and other areas with less favoured conditions for agricultural production (LFA)	750 000	Supported farm holdings	ARMA
Agri-environmental programme (Agri-environmental payments)	200 000	Supported farm holdings	ARMA
Afforestation of agricultural land and afforestation of non-agricultural land	52 000	Beneficiaries	ARMA
Restoring forestry potential destroyed by natural disasters and the introduction of prevention instruments	1 000	Projects	ARMA
Axis II in total	1 003 000		

Source: RDP 2007-2013

For understandable reasons the number of actions concerning sustainable social and economic development of rural areas is limited and directed at communities or individual beneficiaries. The implementation of the actions aims to diversify the economy and improve the quality of rural life by supporting the establishment and development of activity other than agriculture. Out of the actions for which the MARD is responsible, one is targeted at beneficiaries who are not legal entities (19.7 thousand); while another is targeted at legal entities or organisations (27.5 thousand). The actions regarding basic services for the rural economy and population (21.2 thousand) and village renewal (9.7 thousand) were delegated to voivodeship local governments, which will be implementing them chiefly through communes.

Table 11

**Number of actions (operations) to be implemented within the scope of Axis III RDP
2007-2013**

Name of the action of Axis III	Number of actions (operations) to be implemented	Groups targeted by the actions	Entity responsible for implementation
Diversification of economic activities	19 750	Beneficiaries	ARMA
Creation and development of micro-enterprises	27 300	Micro-enterprises	ARMA
Basic services for rural population and economy	21 210	Projects	Voivodeship local governments
Village renewal	9 670	Beneficiaries	Voivodeship local governments
Axis III in total	77 930		

Source: RDP 2007-2013

Implementation of local rural development strategies can strengthen territorial cohesion and cooperation between the actions aimed at local communities. The fact that all the RDP actions can be implemented through local development strategies constitutes a characteristic feature of Axis IV. This means that Axis IV may be based on the actions defined in the first three priority axes, with a particular emphasis on the actions comprised in Axis III. During the first stage, the groups focused on the preparation and updating of local development strategies (7.3 thousand) and then on obtaining support for the operation of local actions groups (11.2 thousand).

Table 12

**Number of actions (operations) to be implemented within the scope of Axis IV RDP
2007-2013**

Name of the action of axis III	Number of actions (operations) to be implemented	Groups targeted by the actions	Entity responsible for implementation
Implementation of local development strategies	7 310	Projects	Voivodeship local governments
Implementation of cooperation projects	200	Projects	Voivodeship local governments
Functioning of the local action groups, skills acquisition and animation	11 200	Undertakings	Voivodeship local governments
Axis IV in total	18 710		

Source: RDP 2007-2013

Bearing in mind that individual beneficiaries cannot be compared with legal entities, enterprises, commune local governments or local action groups, still a trial was attempted to analyse a number of tasks (operations) that are to be implemented in relation to funds earmarked for that purpose. As far as the number of tasks (operations) is concerned, Axis I comprises their largest number (51.9%); while funds allocated for that purpose stand at 42.4%. Similarly, in Axis II the number of tasks (43.7%) does not correspond to the amount of assistance funds (32.7%). The situation seems to be the most favourable in Axis III where 3.5% of the number of tasks receives funds at the level of 20.2%.

Table 13

**General presentation of tasks to be implemented within thematic axes of the RDP
2007-2013**

Thematic axes	Number of tasks (operations) to be implemented	Percentage	Amount of assistance funds (in million EUR)	Percentage
Axis I in total	1 216 728	51.9	7 187.5	42.4
Axis II in total	1 003 000	43.7	5 546.0	32.7
Axis III in total	77 930	3.5	3 430.2	20.2
Axis IV in total	18 710	0.9	787.5	4.7
Total	2 316 368	100.0	16 951.2	100.0

Source: RDP 2007-2013

Conclusions

The RDP 2007-2013 is a document, which specifies actions that are going to be implemented in the incoming seven years, aimed at boosting the modernization of Polish agriculture and quicker rural development. The majority of actions set out in the Programme constitutes a continuation of the instruments implemented in the course of 2004-2006 in the

form of the RDP and the SOP (the Sectoral Operational Policy). The RDP also provides co-financing for village renewal, for actions improving the quality of life in rural areas, and for the implementation of initiatives of Local Action Groups. Among the 22 actions included in the RDP 2007-2013 most actions were focused on Axis I, namely 11 (50.5%), 4 actions on both Axes II and III (18.2% each) and 3 actions on Axis IV (13.6%). Out of the total number of programme actions the Agency for Restructuring and Modernisation of Agriculture (ARMA) conducted 14 (63.7%) actions from the programme, voivodeship local governments conducted 6 (27.3%) actions, while the Agricultural Market Agency and the Foundation of Assistance Programmes for Agriculture (FAPA) conducted one action each (4.5%).

An indicative financial programme of the RDP determined for 2007-2013 was the highest in the scale of the entire European Union. This means that the country was faced with the task of preparing an adequate programme, which would suit not only its beneficiaries, but which would also bring the best possible social and economic results.

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Programmes for Development of Small and Medium Enterprises in Rural Areas in Poland between 2007-2013

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Abstract. The economic transformation that took place in the 1990s contributed to the dynamic development of enterprises and growth in the number of numerous small and medium companies. Development of small and medium companies is one of the priorities of economic policy. In accordance with the renewed Lisbon Strategy, it has to contribute largely to the implementation of its goals and especially to creation of greater number of workplaces. The amendment of conditions for small and medium companies requires commitment of large public resources. However, resources from the EU funds resources can be used for this purpose. The condition for their use for small and medium companies is the development of operational programmes by the EU Member States, which shall consider the needs of the sector.

Key words: development, rural areas, small and medium enterprises (companies).

Introduction

The economic transformation that took place in the 1990s contributed to the dynamic development of enterprises and growth in the number of numerous small and medium companies (small and medium companies – SMC) in Poland. Five years after Poland's accession to the European Union (EU) this role is still in operation. SMC currently constitute 99% of overall number of companies in Poland, i.e. more than 1.7 million of active operators. This fact likens Poland to the majority of the EU Member States. Polish SMC sector is much diversified due to its size, industry specialisation, regional distribution, and export activity.

The definition of SMC sector was adopted in the Act on Freedom of Business Activity of 2 of July 2004 (*pol. ustawa o swobodzie działalności gospodarczej z dnia 2 lipca 2004 r.*), which clearly identified micro, small, and medium enterprises. The basic criteria for description are the level of employment and net turnover within a company. Similar criteria were adopted by the EU on 6 May 2003 and they are in force since 1 January 2005. The European Commission (EC) definition became binding in the process of applying for assistance and willingness to use the EU sources.

Table 1

Definition of SMC currently in force in the EU Member States since 2005

Category	Number of employees (yearly medium)	Net turnover	or	Total assets
Medium companies	< 250	≤ EUR 50 million		≤ EUR 43 million
Small companies	< 50	≤ EUR 10 million		≤ EUR 10 million
Micro companies	< 10	≤ EUR 2 million		≤ EUR 2 million

Source: B. Mikołajczyk, *Infrastruktura finansowa MSP w krajach UE, W-wa 2007 r*

Development of small and medium companies is one of the priorities of the economic policy. In accordance with the renewed Lisbon Strategy, it has to contribute largely to the implementation of its goals and especially to creation of a greater number of workplaces. Implementation of aims described in the strategy comes across the barrier, derived mainly from different economic policy priorities of certain Member States and attempts to exploit policies of other states for the sake of implementing their own goals.

Materials and methods

Statistic materials included in reports prepared by the Institute of Agricultural and Food Economics - National Research Institute (IAFE-NRI), the Agency for Restructuring and Modernisation of Agriculture (ARMA), and Central Statistical Office (CSO) were used as a source of data in this paper. In Poland, such programmes as Human Capital Operational Programme, Operational Programme Innovative Economy, Programme for Development of Rural Areas, and Operational Programme Infrastructure and Environment have crucial influence on the dynamics of companies' development.

It derives mainly from much lower costs of workplaces creation in small and medium companies. In the situation when many branches of the economy are held by dominating, large companies, the development of small and medium enterprises requires policy making friendly to their cause and efficient public administration as well as the commitment of public funds in order to improve their competitiveness. These conditions include possibility to raise the level of entrepreneurs' knowledge and qualifications of potential employees, access to new production technologies and management techniques, access to new information and communication technologies, and other elements of infrastructure, including support in acquisition of domestic capital. The amendment of conditions for small and medium companies requires commitment of large public resources. However, resources from the EU funds can be used for this purpose. The condition for their use for purposes of small and medium companies is the development of operational programmes by the EU Member States which shall include needs of the sector.

Human Capital Operational Programme

In accordance with the assumptions of Lisbon Strategy and goals of cohesion policy of the EU Member States, the development of human and social capital contributes to more efficient use of work resources and rise in the economic competitiveness. Implementation of the above goals required preparation of programme, which would concentrate support for the following areas: employment, education, social integrity, development of employees and companies' adaptative potential, and on issues tied to the creation of efficient and operable public administration on all levels and implementation of good management rules. Implementation of joint strategy for improving the quality of human capital led to the development of operational programmes by the Member States, which main aims at the growth in employment and social integrity. Higher and stable growth of employment level shall be obtained by the activities for:

- growth in the level of career activity and ability to employ unemployed and economically inactive people;
- reducing areas of social exclusion;
- improving adaptability of workers and enterprises to changes in the economy;
- dissemination of public education at every stage while increasing the quality of educational services and their stronger connection with the needs of the economy based on knowledge;
- increasing capacity of the public administration in policy making to provide quality services and strengthening partnership mechanisms,
- increase of territorial cohesion.

However, undertaking tasks in these areas requires considerable financial resources. Thus more than EUR 11.5 billion were allocated for their implementation. The input of the European Social Fund will amount to 85% of this sum, i.e. more than EUR 9.7 billion. Actions for the improvement of human capital were classified into 10 priorities, implemented both on central and regional levels. As a part of central component, resources will be allocated mainly to support effectiveness of structures and institutional systems, while resources from regional component will be used for support of people and social groups. In many activities of certain priorities, small and medium companies are the so-called target group i.e. economic entities that are going to experience measurable benefit from the action programme (Table 2).

In practice, all actions of Human Capital programme may affect further development of entrepreneurship in Poland. It seems however, that the influence of actions mentioned in Table 2 may be much more significant than others. It can be concluded that to support the development of

economic activity, including small and medium companies, relatively direct resources of EUR 2.3 billion were earmarked for, with around EUR 1.9 billion from the European Social Fund included in that sum.

Table 2

**Actions supporting the development of entrepreneurship within Human Capital
Operational Programme between 2007 and 2013**

No.	Details	Total sum (EUR)	Financial resources from the EU budget (EUR)
	HUMAN CAPITAL	11420 207	9 707 176 000
1.	Priority II. Development of human resources and adaptative potential of companies and improvement of employees health	778 011 906	661 310120
1.1.	Staff development for modern economy	504 224	428 590 438
1.1.1	<i>Development of human capital within companies</i>	373 970	317 875 011
1.1.2	<i>Partnership for improving abilities to adapt</i>	30 253 443	25 715 427
1.1.3	<i>System support for raising the adaptative abilities of employees and companies</i>	100 000 000	85 000 000
1.2.	Support for staff adaptative systems	168 074	142 863 480
1.2.1	<i>Improvement in quality of services delivered by institutions supporting development of entrepreneurship and</i>	142 433 656	121 068 607
1.2.2.	<i>Improvement in quality of training services</i>	25 641 026	21 794 873
2.	Priority VIII. Regional economic staff	1 588 479	1 350 207 670
2.1.	Development of employees and companies in regions	1 270 783 690	1 080 166 136
2.1.1.	<i>Support in development of professional qualifications and business advice</i>	902 256 420	766 917 956
2.1.2.	<i>Support for adaptation and modernisation in regions</i>	317 695 022	270 041 534
2.1.3.	<i>Support for local partnership for adaptivity</i>	21 603 323	18 362 825
2.1.4.	<i>Predicting of economic change</i>	29 228 025	24 843 821
2.2.	Knowledge transfer	317 695	270 041 534
2.2.1.	<i>Support for cooperation of science and enterprises</i>	127 078 369	108 016 614
2.2.2.	<i>Regional Innovation Strategies</i>	190 617 553	162 024 920

Source: Program Operacyjny Kapitał Ludzki, 2007-2013

Operational Programme Innovative Economy

Operational Programme Innovative Economy should play similarly important role like Human Capital programme. Its target is to support widely understood innovation, both through lending direct support to companies and to institutions from business environment, and to scientific bodies providing high quality services for companies. The key question of this programme is to elaborate system solutions, which ensure the development of institutional environment of innovative companies.

The main goal of Operational Programme Innovative Economy for the period between 2007 and 2013 is the development of Polish economy based on innovative enterprises. Implementation of this objective is in line with the revised Lisbon Strategy of 2005. In accordance with this strategy, higher levels of economic development shall be achieved through the following actions:

- increase of innovativeness of enterprises;
- increase of the competitiveness of Polish science;
- increase of the role of science in the economic development;

- increase of the share of innovative products of the Polish economy on the international market;
- creation of sustainable and better jobs;
- Increased of the use of ICT technologies in the economy.

Table 3

**Activities supporting the development of entrepreneurship in Operational Programme
Innovative Economy between 2007 and 2013**

No.	Details	Total sum (EUR)	Financial resources from the EU budget (EUR)
	INNOVATIVE ECONOMY	9 711629	8 254 885 21
1.	Priority I. Research and development of modern technologies	1299 270 589	1 104 380 0
1.1.	Support of target projects	390 352 176	331 210 0
2.	Priority III. Capital for innovation	340 000 000	289 000 00
2.1.	Initiating of innovative activities	110 000 000	93 500 00
2.2.	Support of higher risk capital funds	180 000 000	153 000 00
2.3.	Creation of system simplifying investing in MSCs	50 000 000	42 500 00
3.	Priority IV. Investing in innovative enterprises	3 429 710 500	2 915 254 00
3.1.	Support for implementation of results of research and development works	390 000 000	331500 00
3.2.	Stimulation of research and development activities of companies and support in the scope of industrial design	186 000 000	158 100 001
3.3.	Technological credit	409 850 588	348 373 00
3.4.	New investments with high innovative potential	1 420 000	1 207 000 00
3.5.	Support for investments with high significance for economy	1 023 860 000	870 28100
4.	Priority V. Diffusion of innovations	398 997 647	339 148 000
4.1.	Management of intellectual property	39 000 000	33 150 000
5.	Priority VI. Poland on international market	410 633 035	349 038 080
5.1.	Passport for export	121 840 000	103 564 000
6.	Priority VIII. Information Society – raising the economy innovativeness	1 415 864 941	1 203 485 200
6.1.	Support for economic activity in the field of electronic economy	390 635 294	332 040 000
6.2.	Support for implementation of electronic B2B	480 817 882	391 695 200
6.3.	Provision of internet access at the stage of "last	200 000 000	170 000 000

Source: Program Operacyjny Innowacyjna Gospodarka, 2007-2013

It should be noted that Operational Programme Innovative Economy does not continue Sectoral Operational Programme Improvement of Competitiveness, which was performed in the years 2004 – 2006, in which small and medium-sized enterprises could obtain subsidies. However, such possibility was maintained. Financial resources for this purpose were earmarked in the 16 Regional Operational Programmes. These actions directly aimed at entrepreneurs and they will also be complemented by the support system for network of business institutions and innovative business-related institutions (i.e. such as technology parks, technology incubators, Centres for Advanced Technology). However, the programme is focused on activities from the areas of research and development, innovation, and information and communication technologies allocating more than 90% of funds to them.

More than EUR 9.7 billion were earmarked for the implementation of the Operational Programme Innovative Economy for the period between 2007 and 2013, of which 85% will come from the EU budget as in the case of the Human Capital programme (Table 3). Planned amount of around EUR 5.6 billion were allocated for actions to support entrepreneurship development. The analysis of

the budget resulted in fact that the majority of supported activities enterprises are the target group and not beneficiaries of the programme. This means that, as in the Human Capital programme bulk of public funds are transferred to service sectors, which in the economic theory are classified as public goods. This means that distribution of public resources may better contribute to the development of small and medium enterprises, which will have a lasting character than was previously preferred aid in the form of grants. This is because it provides people with knowledge and skills in areas such as the taking up and management of economic activities, raising capital, or the possibility of using new technologies.

Programme for Development of Rural Areas

The support in development of SMCs is also the subject of influence of Programme for Development of Rural Areas for the years 2007-2013 (Table 4). Actions undertaken for economic activation of rural areas were concentrated in two axles of the programme, connected with improvement of the quality of life in rural areas and implementation of the Leader programme. For the purpose of their implementation, more than EUR 4.2 billion were allocated in total, of which 75% were financed by the European Agricultural Fund for Rural Development. The amount allocated to support rural entrepreneurship represents nearly 25% of the total sum for rural development programme for the years 2007-2013. It means that agriculture still plays a leading role in rural development.

Table 4

Activities supporting the development of entrepreneurship in Programme for Development of Rural Areas in the years 2007-2013

No	Details	Total sum (EUR)	Financial resources from the EU budget (EUR)
	Programme for Development of Rural Areas	17 217 817 440	13 230 038 1!
1.	Axle III. Quality of life in rural areas and differentiation of rural economy	3 430 183 920	2 572 637 94
1.1.	Differentiation in the direction of non-agricultural activities	345 580 000	259 185 00
1.2.	Creation and development of micro companies	1023 583 600	767 687 70
1.3.	Basic services for economy and rural community	1471440 320	1 103 580 24
1.4.	Renewal and development of rural areas	589 580 000	442 185 00
2.	Axle IV. LEADER	787 500 000	630 000 00
2.1.	Implementation of local development strategies	620 500 000	496 400 00
2.2.	Implementation of cooperation projects	15 000 000	12 000 00
2.3.	Functioning of local activity group, acquisition of abilities and activation	152 000 000	121600 00

Source: Program Rozwoju Obszarów Wiejskich, 2007-2013

However, inclusion of support for entrepreneurs in the programme has great significance due to the necessity of further structural changes in agriculture. The development of non-agricultural and near-agricultural economic activities in rural areas may in turn contribute to such changes. However, a significant proportion of public funds allocated to these activities will be transferred in the form of subsidies, and it does not ensure the stability of such process. Some concerns also result from the fact of aid dependency from the location of economic activity in rural areas and small towns, as in case of micro companies. The imposition of such localisation reduces competitiveness of company, for example, due to the access to new IC technologies and size of local market. However, negative results of such attitude can be alleviated by the implementation of Leader programme, mainly by the implementation of local development strategies based on rules of cooperation between local communities, entrepreneurs, and local authorities.

Operational Programme Infrastructure and Environment

Infrastructure and Environment programme does not relate directly to the development of small and medium companies, but its role in the development of this sector is in the same way important as in case of previously mentioned programmes. The primary objective of this programme is improvement of the investment attractiveness in Poland and its regions by the development of infrastructure with simultaneous protection and improvement of natural environment. Well-developed infrastructure, mainly technical, is considered in economic literature as one of the most important factors of economic development. On micro scale, good infrastructure is in turn considered as a factor connected with the success of enterprises. The connection of infrastructure with protection of natural environment is also important, as it allows for implementation of rules of sustainable development.

The total amount of financial resources earmarked for implementation of this programme will reach EUR 37.6 billion, of which 27.9 billion will be allocated from the EU sources. These funds will be allocated to the following areas of action:

- protection and preservation of environmental values – EUR 4.8 billion;
- improvement of transport network - EUR 19.4 billion;
- improvement of energy supply - EUR 1.7 billion;
- protection of cultural heritage - EUR 490.0 million;
- improvement of health protection- EUR 350.0 million;
- support for higher education - EUR 500.0 million.

The figures above clearly show that the priority of the programme is expansion and modernisation of transport network. This approach, however, is true both in terms of further economic and environmental development. In relation to the development of economic activities, particularly small and medium-sized enterprises, on the one hand, it will increase the attractive area from investment location point of view, on the other hand it will increase the resources of workforce available to entrepreneurs operating in large cities. But the development of transport network is not the only factor which has a significant meaning for the improvement of competitiveness of small and medium companies. The following activities may be mentioned of the 15 specified in the programme activities of the main significant effect on improving the situation in this sector:

- 1) water supply and wastewater treatment - EUR 3 275.2 million (including EUR 2 783.9 million from CF);
- 2) waste management and protection of the earth – EUR 430.3 million (including a EUR 215.7 million from the CF);
- 3) adjusting enterprises to the requirements of environmental protection - EUR 667.0 million (including EUR 200.0 million from the ERDF);
- 4) environmentally friendly transport - EUR 12 062.0 million (including EUR 7 from 676.0 million from the CF);
- 5) transport safety and national transport networks - EUR 3 465.3 million (including EUR 2 945.5 million from the ERDF);
- 6) environmentally friendly energy infrastructure and energy efficiency - EUR 403.0 million (including EUR 748.0 million from the CF);
- 7) energy security, including diversification of energy sources - EUR 693.2 million (including EUR 974.3 million from the ERDF);
- 8) culture and heritage - EUR 576.4 million (including EUR 490.0 million from the ERDF).

Tax policy in the development of small and medium enterprises

During the analysis of conditions for the development of small and medium-sized enterprises, one should pay attention to the issue of fiscal policy. Granting public support for the sector depends on the capacity to acquire financial resources in the form of taxes. On the contrary, enterprises are paying direct taxes, they also create value added which results in the national revenue from indirect taxes. Nevertheless, importance and the effects of taxation and public transfers are much broader than acquisition of positive balances in particular time perspective in the state budget from expenses carried out for the support and subsequent influences.

Economic literature presents common view that the tax must exist due to the presence of public goods and associated free rider problem. If funds from taxation necessary for the development of certain economic areas shall be used, i.e. transfers between certain groups, there should be a widespread acceptance for this type action. If support for small and medium companies is lent in the form of subsidies then these are transfers mentioned previously between taxpayers and this particular company. During the last few years changes in the EU and Member States policy are visible, which lead in the direction of financing public services responsible for the sectoral development.

Rates and methods of taxation binding in a particular country provide a major stimulus for undertaking economic activities and managing it under certain legal form. Decisions of people concerning the choice between being employed in the existing company and their own economic activity depend highly on how taxation system is constructed. A correctly prepared system shall include 5 universally accepted principles of taxation:

- the principle of effectiveness - the system should not cause a distortion of price signals and thus lead to changes in resource allocation and, if possible, be used to increase economic efficiency;
- the principle of administrative simplicity - the operation and management system should not generate excessive costs;
- the principle of flexibility - the system should easily adapt to changing conditions;
- the principle of political responsibility - the system should be transparent;
- the principle of justice - the system should justly treat people in similar situations.

Following the rules stated above is inevitable in creation of taxation system, because their results are felt in many areas. These can be previously mentioned changes in the economic effectiveness, which result from different allocation of resources. In addition, the accepted solutions for taxation cause a number of behavioural changes, for example, connected with an amount of time spent for acquisition of knowledge or choice of job. Consequently, there may be a row of different organisational and financial results. In this context methods of taxation and their rates decide to some extent about choice of the area for economic activity and its organisational form. It usually takes place in the situation when tax law applies different treatment to companies and economic activity of individuals.

In Poland, both individual operators and legal entities are subject to the 19% rate of income tax, even though their taxes are under separate laws. Income tax is in both cases linear. However, the use of this form of taxation by individuals is limited to several conditions. They must report their own business in the tax office and may not link this activity to the activities under employment contract. Failure to comply with the conditions specified in the income tax act from a natural entity results in progressive taxation.

Taking into account Polish membership in the EU and increasing possibilities of undertaking economic activity abroad, which is connected with it, it is worth noting that taxation system currently operating may be one of the decisive factors in choice of not only the area for activity but also the country where it is registered. The EU Member States are characterised by a number of different taxation rates, both direct and indirect. Results of the conducted research present that income tax from the economic activity is relatively low in Poland. In majority of the EU states, mainly in the Western Europe these rates are much higher and reach up to 34% in Austria. Some countries have introduced progressive tax. Different situation is met in Cyprus and in a number of the Eastern European countries, where lower rates were adopted compared with Poland. This means that rates of income tax are not the main barrier in undertaking of economic activity in Poland. One of them may be the VAT rate. Majority of the EU Member States adopted lower basic rates than ones in Poland. One of crucial factors may be the rate of social security contributions and health insurance premiums, and procedures related to payment of taxes and contributions to the budget.

Taxation system can be an important instrument, which stimulates development of economic activities, including SMC sector. However, it is worth to remember that in organising the optimal taxation system not only rates of taxes play a decisive role in question of economic activities. Costs of its functioning both carried out by the state and taxpayers are in the same way important. Adopted taxation solutions also cause many distortions in economy. They derive from activities undertaken by entities with purpose of reducing or avoiding taxation. Excessive taxation may even lead to the reduction of GDP. The decision to reduce working hours can be made by operators in

order to lower the rate of taxes. Only flat tax does not lead to such distortions. The crucial role in taxation system is also played by correction taxes, related to negative results of economic activity. Their implementation, even at cost of income tax, results in the growth of state income to the budget and economic effectiveness simultaneously.

Summary and conclusions

The economic transformation of the 1990s contributed to the dynamic development of entrepreneurship and increased the number of SMCs in Poland, likening Polish economy to those of the EU-15 countries. After the accession, it still constitutes a decisive majority of all enterprises functioning in Poland (close to 99% of overall number of companies in Poland, i.e. more than 1.7 million of active operators). Gradual increase of employment in an average company after the accession was a confirmation of concentration process among Polish enterprises. However, there was no differentiation of regional development in SMC sector, as five years is a too short period for significant changes to come.

The support of MSC development is one of the priorities of the EU economy policy. Such attitude is recognisable in the community law. It forms basis and creates framework of action undertaking for the stability of further development in this sector. Generally it states the rules of competition, which are inevitable for domestic market functioning. The EU law also describes forms of support, which can be adapted and exploited by authorities of the EU and individual Member States, which means that to some extent it subjugates their economic policy. It mainly takes place in situation of financial support use by a Member State for its SMC sector and is justified by creation of comparable conditions for operating the economic activity, in which competitiveness of enterprise will depend on decisions made on micro scale.

Continuous changes in the conditions for common functioning are forcing the EU authorities and governments of the Member States, including Poland, to undertake adjustments. Consequently, in the entire EU and in Poland the evolution of economic policy is visible in the scope of support instruments implemented to SMCs. This is due to the fact that direct subsidies are gradually withdrawn from this sector and resources saved in this way are used for improvement of business surroundings, increasing the professional qualifications of people, popularisation of creating own economic activity, and implementation of new innovative technologies. The support of development in the field of financial engineering also has crucial meaning, especially connected with higher risk capital. It provides entrepreneurs with possibility of acquiring funds for their activities from external sources.

Tax policy and organisation of taxation system play a crucial role in decision on establishing one's own economic activity and in situating it in a particular country and region. Identification of influence of these factors on the development of SMCs must be conducted in a complex way. From available research it is known that Poland, in comparison with other EU Member States, utilises relatively low level of income tax. Such solution does not significantly influence the dynamics of increase in the number of SMCs. However, it is assumed in economy that taxation does significantly influence the development of economic activity. It produces results, which influence the development of SMCs should not be limited only to rates of direct taxes like income tax. The basis of income taxation and adopted regulations in the field of indirect taxes also has great meaning. Burdens deriving from compulsory insurances – social and health may have similar influence on sectoral development.

Organisation of taxation system may be mentioned comparably important barrier for the development of small entrepreneurship. This should be understood as both methods of collecting taxes like also system of fiscal control. Inappropriate selection of procedures may generate significant growth of transaction costs, both on sides of entrepreneurs and the state budget. This leads to quite perilous situation, in which the dynamics of cost increase of taxation system functioning exceeds the dynamics of increase in the state income from taxes. It is important that principles of effectiveness, administrative simplicity, flexibility, political responsibility, and justice should be obeyed in the process of elaborating the taxation system or in implementation of changes to the functioning system.

Results of the conducted research state that quite significant transaction costs are generated not only by taxation system but also by the entire system of SMCs development

support. Level of these costs is conditioned mainly by adopted administrative procedures for certain instruments. Evolution of economic policy mentioned already, both on the EU and Poland's level, results in the necessity of changes in these procedures. The question appears – whether transition from direct subsidising the MSC sector to indirect forms of support can be justified by the changes in relation of costs of functioning of these instruments to income. New instruments of support, like instruments of financial engineering, have more advanced character. Due to that, it can be assumed that they may be responsible for generating higher transaction costs. However, justification of this hypothesis requires further research.

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Motives for Development of Cooperation Systems and its Results in Rural Tourism in Zemgale

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Abstract. The paper presents a justification of the methodology for studying cooperation systems in rural tourism. The methodology is based on system approach in the analysis of tourism industry, social network method, and a survey for identification of cooperation motives and results as well as application of statistical methods for detecting cooperation system variations. The methodology for studying cooperation was approbated in tourism research in Zemgale planning region during 2007 and 2008. The results of the research characterise development motives and results of cooperation between 28 social agents. Calculations of Cramer's V coefficient identified system variations that are typical to rural tourism involving social agents related to every motive and result. Estimations of utility of cooperation reveal that the gains of cooperation are bigger than rural tourism developers initially expected. The research identified multiplicative directions of rural tourism and specificity of operation of small and medium enterprises, which in the future may be used for evaluation of contribution of this economic activity.

Key words: tourism system, social networks, social agents.

Introduction

Recently, there is a growing interest in networking and partnerships; however, a number of studies focusing on tourism is relatively small. Studies of international tourism networks show that it is not easy to define precisely advantages and benefits of networks largely as they differ in organisational structures. International networks are based on learning and knowledge exchange where common aims are binding elements (Morrison A., et. al., 2004). Leiper stresses that a tourism system is partially industrialised and "tourism networks" is the best concept to express tourism's nature (Leiper N., 2005).

In studies of small tourism business networks in the Western seacoast territories of Scotland, a destination network map was developed based on individual network maps, and it was concluded that a network promotes the development of tourism destinations (Tinsley R., Lynch P., 2001). Network approach is recognised as the most appropriate approach for studying sustainability of tourism, since tourism involves a relatively great number of social agents with limited resources, and isolated activities hinder sustainability of development (Halme M., 2001). The author believes that the social network method should be used in studying cooperation between providers of tourism services to detect the tourism impact on the region. In Latvia, the impact of tourism is estimated by the expenditure of tourists during their travels, however, the impact of tourism businesses on the region's economy is not analysed at all. For starting an estimation of tourism impact, a qualitative study on the development of cooperation networks among tourism businessmen and their relation to other spheres is necessary. The author believes that studies on the tourism industry should be started exactly by examining the specificity of small and medium providers of rural tourism services, and its cooperation with other economic sectors. This should be reached by complementing the social network approach with the system approach in tourism analysis. A detailed analysis of cooperation could pay attention to the particular details of the industry, kinds of tourism, and their specificity in rural areas, particularities of cooperation between SME and microenterprises. The research object is the development of cooperation systems in rural tourism. The author derives a hypothesis: cooperation systems are results of motivated cooperation between social agents directly and indirectly involved in tourism.

The research aim is to identify variations of cooperation systems in rural tourism in Zemgale planning region. The main tasks of the paper are to justify the methodology for identification of cooperation systems in tourism, and to characterise the results of approbation

of this methodology in Zemgale planning region. For grounding and approbating the methodology, the following methods were used: system approach, social network analysis, and a survey – semi structured interviews and standardised interviews for identification of cooperation among providers of rural tourism services. The methods of explaining relationships between qualitative indicators were used for result interpretation purposes.

Results and discussion

Overview of the methodology for identification cooperation systems in tourism

Studying cooperation systems requires interdisciplinary studies because characteristics of cooperation involve also important qualitative aspects, which cannot be explained by economic theories. Necessity for interdisciplinary research has been updated in the recent years. Interdisciplinary studies are important in cases when knowledge about a problem or issues being investigated are not convincing enough within a framework of one discipline, and the problem shall be treated from every point of view involving both abstract and specific knowledge (Pohl C., Hirsch Hadorn G., 2007). Interdisciplinary studies are viewed as crucial in resolution and investigation of very practical issues, as problems of production and service industries often are complex and their resolutions cannot be easily found within one narrow discipline. The system approach has become an ordinary position for resolution of problems in all kinds of sciences (Heylighen F., Joslyn C. 1992; Hitchins D. K., 1993).

For a detailed analysis of tourism cooperation systems, the author chose the system approach as a scientific approach and used the concept of social agent for defining system elements. There are many definitions revealing the nature of social agents and most of them relate it with cooperation and interaction (Wasserman S., Faust K., 1994; d`Inverno M., Luck M., 2000). The author defines social agents as social or economic units, which form the tourism system through regular interaction and cooperation.

Tourism literature offers a variety of system approaches and all of them are based on system theory. For investigation of cooperation among rural tourism businessmen, the author uses a tourism system model elaborated by a German scientist W. Pompl (Pompl W., 1996), which **consists of two subsystems:**

- 1) nuclear system – enterprises of rural tourism, tourism agencies, tourists;
- 2) subsystem – *providers of services* (catering enterprises, hotels, transport, sport and entertainment enterprises), *suppliers* (advertising agencies, publishers, lease services etc.), *attractiveness of a place* (undertakings, leisure parks, museums, theatres, information centres, souvenir producers, sport centres, etc.), and *institutions* (organisations or interest associations, education institutions, mass media, local and national government institutions).

For the best results, the author suggests to use the system approach in the analysis of cooperation of developers of tourism services and to complement it with the social network approach. In economics, social networks can be distinguished between macro networks that are the carcass of society's economic structure, and micro networks that characterise an individual's business or occupation (Градосельская Г.В., 2004).

Integration of the system approach and social network approach in one methodology is justified by the author with the following argumentation.

1. Theoretical point of view on the nature of social networks allows deriving conclusions that networks involve connections in all human activities and they are informal (friends, neighbours, relatives) as well as formal (employment relationships).

2. Business is one of the manifestations of human activities where networks develop between clients and businessmen. Thus, businessmen get involved in a market and occupy its particular segment. Theories of economics also view industrial production as a system related to different economic activities (Портнер М., 2002).

3. In the social network approach, relationships between both methodological approaches are stressed by the statement that in modelling social networks a social object shall be viewed as a system within the context of a structure put under an analysis (Градосельская Г.В., 2004).

4. The social network approach is already successfully applied in cooperation studies within the context of economic activities related to tourism.

The study of tourism cooperation systems should be able to answer the following questions: What are the main cooperation motives?, Which social agents cooperate and how often?, and What are the benefits of cooperation? The nature of these answers is qualitative, and the author treats it seriously, as results of an initial study cannot be quantitative due to the lack of data. Qualitative cooperation data can serve as a starting point for later diagnostics. Therefore, sociological research methods were chosen as the most appropriate for gathering initial data, as a survey is applicable for obtaining all necessary information on real aspects of cooperation networks.

Results of approbation of the methodology for identification of cooperation systems in tourism

In order to identify the main cooperation indicators for studying cooperation systems, the qualitative research method – a semi structured interview was used in a pilot research in 2007. Later in 2008, in an empirical research the author used a standardised interview which, according to V. Jadov (Ядов, 1999), can be applied as a quantitative method in sociological research. During the interviews in the pilot research, the main indicators for the structured research instrument were identified and that allowed elaboration of the frame for a standardised interview and to survey quantitatively bigger part of providers of tourism services.

In total, 110 providers of rural tourism services who offered their services in a Zemgale tourism information brochure and a homepage in the Internet were identified within the research. Since rural tourism is defined as a kind of tourism, which provides accommodation in rural houses and visiting farms, the population sample was made of service providers of that type. The survey did not focus on museums, palaces, manor houses, catering enterprises, and managers of natural resources unless if they provided accommodation facilities. The survey also excluded providers of tourism services in the centres of districts and towns. The sample was made purposefully, as it was important to include all municipalities from Zemgale planning region where rural tourism services were available. Respondents were guaranteed anonymity.

A database comprising information about 75 tourism businesses in Zemgale planning region (i.e. 68.2% of all providers of rural tourism services) was created after the fieldwork. The general trends in answers of the respondents witnessed about a clutter of information that allowed deciding to stop expanding the size of the sample (Ядов В.А., 2003).

The research indicated different cooperation motives that are not measurable in figures but can be defined as qualitative indicators of cooperation. The social agents were grouped according to the division of subsystems proposed by W. Pompl, which, in Latvia's case, look as follows:

- service providers: rural tourism businessmen, tourism agencies, catering enterprises, hotels, transport, and developers of an additional offer;
- institutions: the Rural Support Service and agencies of the EU Structural Funds, tourism associations, non-governmental organisations (NGOs), mass media, municipalities, and cultural and educational establishments;
- developers of an attractiveness: museums and collectors, producers of souvenirs, organizers of undertakings, and sport organisations;
- suppliers: banks, insurance companies, security firms, developers of an additional offer, lease, customer service, advertising agencies, and publishers.

Cooperation regularity and a number of social agents in individual cooperation networks differed. However, the similarities in answers allowed analysis of development of cooperation systems and deriving conclusions about the character of cooperation and the results within a framework of one region. The cooperation systems were developed for each group of indicators based on the closeness of relationships with each social agent and the presence of cooperation in relation to this indicator. Nominal scale characterises categorical data and determines that traits or features qualitatively differ and no quantitative operations can be made. In order to find the closeness of relationships between variables (each indicator and the presence of cooperation with each social agent), a Cross tabulation was made (Analyse\Descriptive

Statistics\Crosstabs) for the calculation of Phi and Cramer's V coefficients that vary between 0 and 1 (1 is a maximum value) and appropriate experimental probability Approx. Sig. (Kraštinš O., 2003). In the cooperation system, cases having Cramer's V coefficient bigger than 0.5 and p value=0.000 were included, which meant that a particular cooperation indicator and the presence of cooperation were mutually dependent variables. In Table 1, those social agents are bolded, which fit the particular system variation after processing the data.

Table 1

Motives for development of cooperation systems with social agents and its characteristics in Zemgale region, 2008

Social agents	Identification		Knowledge		New offer		Increased profit	
	Phi Cramer's V	Asymp. Sig.(2-sided)	Phi Cramer's V	Asymp. Sig.(2-sided)	Phi Cramer's V	Asymp. Sig.(2-sided)	Phi Cramer's V	Asymp. Sig.(2-sided)
Rural tourism enterprises	0.648	0.000	0.334	0.039	0.689	0.000	0.417	0.005
Tourism agencies	0.759	0.000	-	-	0.819	0.000	0.430	0.001
Municipalities	0.752	0.000	0.190	0.439	0.430	0.001	0.315	0.059
Education institutions	0.681	0.000	0.526	0.000	0.681	0.000	-	-
Culture establishments	0.749	0.000	0.469	0.001	0.886	0.000	0.355	0.024
Tourism associations	0.968	0.000	0.704	0.000	0.764	0.000	0.549	0.000
Consultation bureau	0.889	0.000	0.537	0.000	0.675	0.000	-	-
Rural Support Service	0.662	0.000	0.406	0.006	0.922	0.000	-	-
Mass media	0.956	0.000			0.364	0.002	0.417	0.001
NGOs	0.803	0.000	0.649	0.000	0.869	0.000	0.653	0.000
Farms	0.237	0.123	0.135	0.243	0.973	0.000	0.604	0.000
Museums, collectors	0.743	0.000	0.507	0.000	0.913	0.000	0.538	0.000
Catering enterprises	0.151	0.192	-	-	0.974	0.000	0.436	0.003
Hotels	0.426	0.001	-	-	0.956	0.000	0.495	0.000
Transport services	-	-	-	-	1.000	0.000	-	-
TIC	1.000	0.000	0.361	0.007	0.399	0.001	0.299	0.087
Sport organisations	0.468	0.001	-	-	0.950	0.000	-	-
Craftsmen	0.422	0.001	0.296	0.010	1.000	0.000	-	-
Producers of souvenirs					1.000	0.000	-	-
Organisers of undertakings	0.299	0.087	0.257	0.084	1.000	0.000	-	-
Additional offer	0.443	0.002	0.274	0.059	1.000	0.000	0.443	0.000
Publishers	0.733	0.000	-	-	0.873	0.000	-	-
Security	-	-	-	-			1.000	0.000
Banks	0.117	0.312	-	-	0.299	0.087	1.000	0.000
Advertising agencies	0.864	0.000	-	-	0.688	0.000	0.339	0.003
Insurance companies	-	-	-	-	0.116	0.312	1.000	0.000
Lease	-	-	-	-	1.000	0.000	-	-
Customer service	-	-	-	-	0.456	0.000	0.915	0.000

Source: author's construction based on the research results in Zemgale region

The variations of the cooperation system obtained in the research characterise the motives for development of the cooperation system in rural tourism in Zemgale:

➤ *system formed by the motivation of providers of rural tourism services to cooperate for information purposes* - TIC (1.000), tourism associations (0.968), mass media (0.956), consultation bureau (0.889), advertising agencies (0.864), NGOs (0.803), tourism agencies (0.759), municipalities (0.752), cultural establishments (0.749), museums, collectors (0.743), publishers (0.733), education institutions (0.681), the Rural Support Service (0.662), and rural tourism businessmen (0.648);

➤ *system formed by the motivation of providers of rural tourism services to obtain knowledge* - tourism associations (0.704), NGOs (0.649), consultation bureau (0.537), education institutions (0.526), and museums and collectors (0.507);

➤ *system formed by the motivation of providers of rural tourism services to cooperate for development of tourism products* - craftsmen (1.000), organisers of undertakings (1.000),

providers of additional offer (1.000), producers of souvenirs (1.000), transport (1.000), lease (1.000), farmers (0.973), catering enterprises (0.974), hotels (0.956), sport organisations (0.950), the Rural Support Service (0.922), museums, collectors (0.913), cultural establishments (0.886), publishers (0.873), NGOs (0.869), tourism agencies (0.819), tourism associations (0.764), rural tourism businessmen (0.689), advertising agencies (0.688), education institutions (0.681), and consultation bureau (0.675);

➤ *system formed by the needs of providers of rural tourism services for security* – security firms (1.000), insurance companies (1.000), banks (1.000), customer services (0.915), NGOs (0.653), tourism associations (0.549), farms (0.604), and museums and collectors (0.538).

Motives for cooperation can be related to willingness to cooperate with other social agent, since their knowledge and experience is useful for the development of business. Similar motives are expressed by service suppliers: they cooperate for education, knowledge obtaining and experience exchange purposes. Thought knowledge and information theoretically are related to the development of tourism product, the providers of rural tourism services mentioned development of tourism products as a separate motive for starting cooperative relationships. Instead of selling a tourism product, providers of rural tourism services sell services that are developed by linking resources, knowledge, and innovative capacity.

Development of tourism products is more related to financial support, joint projects, or undertakings. Very rarely, it is related to the development of a very exclusive tourism offer (amphibious vehicle, exotic nosh, and activities). A factor of exclusivity allows differentiation between businesses as well as standing apart of competition, since a new product ensures better positions on the market in comparison with products offered by competitors.

The factor of stability and security is emphasised as a crucial motive for cooperation that characterises the specificity of business environment in rural areas. Security in economy is also related to avoiding risks. The author defines security within the context of particular economic activity and believes that this approach allows *viewing security as a resource of business: security is opportunities created for providers of rural tourism service to ensure their business in general and to develop a particular tourism offer.*

Finally, the author concludes that *the necessity for resources such as information, knowledge, and security is a basis for the development of cooperation for rural tourism businessmen, while the central activity remains the development of tourism products.*

The main results of cooperation, according to the answers of the respondents, were identification, knowledge, a new offer, higher profit, and security. The indicators that characterise cooperation results are shown in Table 2, where those Cramer's V coefficients are pointed out, which are significant for characterisation of cooperation closeness between each indicator and social agent.

In a result, five cooperation system variations were identified for characterising the cooperation results in tourism in Zemgale region:

➤ *developers of identification* - NGOs (1.000), organisers of undertakings (1.000), TIC (1.000), publishers (1.000), tourism agencies (1.000), sport organisations (1.000), museums and collectors (0.971), tourism associations (968), advertising agencies (0.966), cultural establishments (0.943), mass media (0.879), education institutions (0.875), consultation bureaus (0.862), craftsmen (0.818), rural tourisms businessmen (0.786), municipalities (0.676), the Rural Support Service (0.617), and developers of additional offer (0.573);

➤ *developers of new knowledge* – tourism associations (0.938), consultation bureau (0.862), NGOs (0.781), organisers of undertakings (0.734), museums and collectors (0.715), education institutions (0.702), TIC (0.697), tourism agencies (0.668), cultural establishments (0.620), the Rural Support Service (0.572), rural tourism enterprises (0.546), municipalities (0.545), craftsmen (0.520), and mass media (0.503).

Table 2

Results of cooperation systems for social agents and its characteristics in Zemgale region, 2008

Social agents	Identification		Knowledge		New offer		Increased profit		Security	
	Phi Cramer's V	Asymp Sig.(2-sided)	Phi Cramer's V	Asymp Sig.(2-sided)	Phi Cramer's V	Asymp Sig.(2-sided)	Phi Cramer's V	Asymp Sig.(2-sided)	Phi Cramer's V	Asymp Sig.(2-sided)
Rural tourism enterprises	0.786	0.000	0.546	0.000	0.257	0.026	0.577	0.000	0.477	0.000
Tourism agencies	1.000	0.000	0.668	0.000	0.346	0.003	0.939	0.000	0.572	0.000
Municipalities	0.676	0.000	0.545	0.000	0.160	0.167	0.382	0.001	0.299	0.010
Education institutions	0.875	0.000	0.702	0.000			0.545	0.000	0.345	0.003
Culture establishments	0.943	0.000	0.620	0.000	0.550	0.000	0.830	0.000	0.394	0.001
Tourism associations	0.968	0.000	0.938	0.000	0.553	0.000	0.909	0.000	0.808	0.000
Consultation bureau	0.862	0.000	0.862	0.000	0.508	0.000	0.675	0.000	0.346	0.003
Rural Support Service	0.617	0.000	0.572	0.000	0.973	0.000	0.848	0.000	0.324	0.005
Mass media	0.879	0.000	0.503	0.000	0.169	0.143	0.517	0.000	0.219	0.057
NGOs	1.000	0.000	0.781	0.000	0.692	0.000	0.948	0.000	0.725	0.000
Farms	0.275	0.128	0.192	0.097	0.675	0.000	0.555	0.000	0.895	0.000
Museums, collectors	0.971	0.000	0.715	0.000	0.743	0.000	0.715	0.000	0.405	0.000
Catering enterprises	0.436	0.003	0.243	0.108	0.786	0.000	0.587	0.000	0.875	0.000
Hotels	0.495	0.000	0.243	0.036	0.771	0.000	0.426	0.000	0.956	0.000
Transport services					0.853	0.000	0.336	0.004	0.773	0.000
TIC	1.000	0.000	0.697	0.000	0.159	0.168	0.619	0.000	0.422	0.000
Sport organisations	1.000	0.000	0.266	0.021	0.544	0.000	1.000	0.000	0.266	0.021
Craftsmen	0.818	0.000	0.520	0.000	0.881	0.000	0.752	0.000	0.422	0.000
Producers of souvenirs					1.000	0.000	0.692	0.000		
Organisers of undertakings	1.000	0.000	0.734	0.000	0.972	0.000	0.972	0.000	0.337	0.004
Additional offer	0.573	0.000	0.489	0.000	0.966	0.000	0.898	0.000	0.688	0.000
Publishers	1.000	0.000	0.395	0.003	0.825	0.000	0.711	0.000	0.467	0.000
Security							0.180	0.118	1.000	0.000
Banks	0.051	0.660	0.089	0.440	0.245	0.034	0.161	0.163	1.000	0.000
Advertising agencies	0.966	0.000	0.274	0.017	0.489	0.000	0.898	0.000	0.759	0.000
Insurance companies									1.000	0.000
Lease					0.822	0.000	0.806	0.000	0.755	0.000
Customer service	0.114	0.325			0.284	0.014	0.220	0.057	0.970	0.000

Source: author's construction based on the research results in Zemgale region

➤ *developers of new offer* – producers of souvenirs (1.000), the Rural Support Service (0.973), organisers of undertakings (0.972), developers of additional offer (0.966), craftsmen (0.881), lease (0.822), publishers (0.825), transport (0.853), catering enterprises (0.786), hotels (0.771), museums and collectors (0.743), NGOs (0.692), farms (0.675), tourism associations (0.553), sport organisations (0.544), cultural establishments (0.550), consultation bureaus (0.508), and education institutions (0.506);

➤ *developers of profit* – sport organisations (1.000), organisers of undertakings (0.972), NGOs (0.948), tourism agencies (0.939), tourism associations (0.909), developers of additional offer (0.898), advertising agencies (0.898), the Rural Support Service (0.848), cultural establishments (0.830), lease (0.806), craftsmen (0.752), museums and collectors (0.715), publishers (0.711), producers of souvenir (0.692), consultation bureau (0.675), TIC (0.619), catering enterprises (0.587), rural tourism enterprises (0.577), farms (0.555), education institutions (0.545), mass media (0.517) security (1.000), insurance companies (1.000), banks (1.000), customer services (0.970), hotels (0.956), farms (0.895), catering enterprises (0.875), tourism associations (0.808), transport (0.773), lease (0.755), advertising agencies (0.759), NGOs (0.725), developers of additional offer (0.688), and tourism agencies (0.572).

➤ *developers of security* – security (1.000), insurance companies (1.000), banks (1.000), customer services (0.970), hotels (0.956), farms (0.895), catering enterprises (0.875), tourism associations (0.808), transport (0.773), lease (0.755), advertising agencies (0.759), NGOs (0.725), developers of additional offer (0.688), and tourism agencies (0.572).

After a more detailed evaluation of variations of the cooperation systems, the author concludes that all 28 social agents can be included in the rural tourism

system model, since each agent fulfils specific tasks in activities of providers of rural tourism services.

Usefulness of cooperation in rural tourism may be characterised by the following causation (Equation 1):

$$aMi + bMz + cMtp + dMd < eRa + fRz + gRtp + kRd, \quad (1)$$

It is possible to detect values of indicators (a, b, c, d, e, f, g, h, k) due to the research carried out in Zemgale region.

where,

- Mi – motivation for cooperation to exchange information;
- Mk – motivation for cooperation to obtain knowledge;
- Mtp – motivation for cooperation to develop tourism product;
- Ms – motivation for cooperation to maintain security;
- Ri – cooperation result - identification;
- Rk – cooperation result - knowledge;
- Rtp – cooperation result - novel tourism product;
- Rp – cooperation result - higher profit;
- Rs – cooperation result - security.

Equation 2 shows a number of social agents that quantitatively characterises the indicator in cooperation.

$$14Mi + 5Mk + 21Mtp + 8Ms < 18Ri + 14Rz + 18Rtp + 21Rp + 14Rs \quad (2)$$

The evaluation of cooperation utility allows deriving a conclusion that the benefits from cooperation in rural tourism in Zemgale planning region are greater than the providers of rural tourism services initially expected.

Conclusions

The results of the methodology approbated in Zemgale planning region reveal the qualitative indicators of the development of cooperation and its results in a particular kind of tourism – rural tourism, and characterise the specificity of rural tourism in Zemgale.

The cooperation networks of providers of rural tourism services in Zemgale region reveal a cooperation system in rural tourism, involving 28 groups of agents. Nine variations of the cooperation systems were identified in the cooperation system in rural tourism:

- development of cooperation in rural tourism is characterised by four variations of cooperation systems related to cooperation motives of providers of rural tourism services, which are as follows: information, knowledge, development of tourism products, and security;
- cooperation results are characterised by five variations of cooperation systems that reveal social agents, which were useful for providers of rural tourism services: acquisition of identification, knowledge, new offer, higher profit, and security.

The main aspects of interaction in rural tourism are related to cooperation, where social agents cooperate in order to address particular tasks. The cooperation systems of providers of rural tourism services are not static; they are shaped by the socio economic rules and capabilities as well as new situations.

The gains of cooperation are greater than the providers of rural tourism services have initially expected; thus, cooperation in Zemgale rural tourism can be estimated as efficient.

Proposals

The results of cooperation system study in Zemgale region contribute to the social agents mentioned in tourism policy documents both on local and regional levels.

In regional economics, which involves studies on development peculiarities, opportunities and connections of the particular territories, there is a lack of scientific studies focusing on cooperation of the particular economic activities and their multiplicative contribution to the regional socio economic development. The methodology for studying the cooperation systems in tourism represented in the paper may be applied also in studies focusing on a detailed analysis of other kinds of tourism in all regions.

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Effect of Area Payments on the Regions of Latvia

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Abstract. Several authors have written about the problems they face when conducting studies on topics, which are related to the regional division of the country. There are several regional divisions in Latvia, which significantly hinders high-quality studies on the effect of support policies, implemented by the Rural Support Service, on regions. The Rural Support Service collects and compiles information. The present research describes the main regional divisions of Latvia's territory. While computing the effect of single area payments on the development of regions, data of the Rural Support Service were adapted to the division of planning regions, and the distribution of the area declared for area payments was presented according to the division of planning regions.

The paper presents a computation result regarding area payments, including the effect of single area payments on the main statistical indicators of the country.

Key words: regions, single area payment, agricultural area, financial support.

Introduction

The Rural Support Service's (RSS) regional officials point out that the problem that the regional division used by the RSS does not match the division of planning regions (Riga, Vidzeme, Zemgale, Kurzeme, and Latgale) hinders both development planning for Latvia's regions and assessments of the effect of the EU financial instruments on the development of regions.

Slavinska I. (2005) believes that the planning regions of Latvia are relatively homogenous in terms of size of their territory, yet their attractiveness from the point of view of residents is very different due to their economic opportunities, social infrastructure, and accessibility.

Saktiņa D., Meyers W., H. (2007), after completing a research on the policy of administration of the agricultural land, draw a conclusion that a support policy, especially regarding direct area payments, plays a significant role in the development of regions; thus reducing the migration of residents from rural areas to towns. The authors consider various scenarios that could affect the use of agricultural land in a positive way.

The fact that support payments promote the use of agricultural land is confirmed by Audsley et.al. (2006) saying, "decisions about agricultural land use are actually made by farmers, with the general aim of maximising the profit they achieve from the land, within the plethora of subsidies, support payments, grants, and restrictions that attempt to drive their decisions in particular directions...".

To make a more complete assessment of the situation in various regions, it is of great importance to pay attention to regional divisions. Defrancesco E., Zolin B. (2006) point that "classifying a region into different areas in order to better model rural development policies and to highlight the specific multifunctional roles played by agriculture in areas are characterised by different levels of rurality".

Various problems arise from dividing a territory into regions. While researching the structure of regions, an author from Poland comes to a conclusion that "...ranges were supposed to order the statistics and regional nomenclature; whereas, in fact, they have created a kind of chaos not helping at all in the real ordering of the regional issue. The main problem lies in the fact that the regions have certain historical, geographical, cultural, natural, spatial, social, and, finally, economic conditionings, which determine their delimitation" (Koreleski D., 2006).

While conducting her research "Alternative View on Economic Regions in Latvia", the author Boronenko V. (2006) faced a problem of what defines the term region. She stated "...with the development of macroeconomic and microeconomic theories in modern economics, the problems of regional economy become more urgent. In scientific literature, there is an opinion that these are regions (not the whole state itself), which become the subjects of competition on the conditions of modern economy globalisation. In this connection, and

especially because of the fact, that the concept of "region" is difficult to be defined...". The author points that various stakeholders understand the definition of the term region differently, which causes certain complications to conduct a study.

A discussion entitled "Possibilities and Threats for Development of Latvian Regions" was held by the Institute of Economics (IE), Latvian Academy of Sciences (LAS), on 23 November 2009. As result of the discussion, scientists concluded stating, "We have to speak louder and prove that the regions of Latvia develop more and more unevenly, and their differences increase from year to year". The significance of the discussion was stressed by an academician Tālavš Jundzis, a vice-president of LAS; Dr.oec. Helma Jirgena, a director of LAS IE; Andris Jaunsleinis, a chairman of Latvian Local Government Union; Jānis Vanags, an associate professor of Riga technical University; and also officials of the Regional Development Agencies as well as other participants of the discussion.

H.Jirgena reminded about 6 statistical and 5 planning regions of Latvia as well as she stressed the urgency of this problem. H.Jirgena also analysed the objective and subjective factors of emerging differences in regional development and compared Latvia with other European regions. In the discussion, scientists expressed their concern about the availability of statistical data after the administrative and territorial reform.

Several regional divisions exist in Latvia, which are used for various purposes. While conducting the research on the effect of area payments on Latvia's regions, the author got into a situation requiring data regrouping to make data comparable. A single regional division does not exist in Latvia, and the effect of area payments on the territories of planning regions is not researched so far.

A **hypothesis** is set forth in the present research – area payments have a positive and progressive effect on the planning regions of Latvia.

The research **aim** is to investigate interdependence of the regional divisions and their economic indicators.

The following research **tasks** are set forth to achieve the aim:

- 1) to analyse the most popular regional divisions in Latvia and to set one region as a basis for comparing information;
- 2) to review and analyse the main indicators characterising the planning regions;
- 3) to determine the potential impact of area payments on the indicators impacting regional development.

Statistical grouping and statistical analysis methods were applied to process the data. Conclusions were drawn using the logical and constructive methods.

Results and discussion

1. Division and characteristics of Latvia's regions

When compiling the information and data of various national institutions, several types of the regional division of Latvia were available to the author, which significantly hindered data processing. The term region and its understanding are differently interpreted in various data sources; it has to be viewed in the aspects of local conditions and practical goals as well as in the geographical aspect. There are three the most popular divisions of regions in Latvia:

- 1.1. The Rural Support Service (RSS), which is an institution under the supervision of the Ministry of Agriculture, Republic of Latvia, was established in Latvia to implement a single support policy of the national government and the European Union as well as to control the compliance with legislative acts in the field of agriculture and the functions related to implementing agricultural and rural support policies in the country. For the purposes of introduction and administration of policies and accountancy, the Rural Support Service used a **territorial division into regions** (TDR) that consists of nine regions:

- 1) Eastern Latgale TDR (municipalities of Rēzekne, Viļāni, Ludzas, Cibla, Zilupe, and Kārsava);
- 2) Southern Kurzeme TDR (municipalities of Alsunga, Kuldīga, Brocēni, Saldus, Skrunda, Aizpute, Durbe, Grobiņa, Pāvilosta, Priekule, Rucava, Nīca, and Vaiņode);
- 3) Southern Latgale TDR (municipalities of Aglona, Riebiņi, Līvāni, Preiļi, Vārkava, Daugavpils, Ilūkste, Dagda, and Krāslava);

- 4) Lielrīga TDR (municipalities of Lielvārde, Ķegums, Ogre, Ikšķile, Babīte, Mārupe, Olaine, Ķekava, Salaspils, Garkalne, Ropaži, Mālpils, Sigulda, Inčukalns, Carnikava, Ādaži, Saulkrasti, Baldone, Krimulda, Stopiņi, Sēja, Nereta, Jaunjelgavas, Pļaviņas, Koknese, Aizkraukle, and Skrīveri);
 - 5) Central Latvia TDR (municipalities of Aknīste, Sala, Jēkabpils, Viesīte, Krustpils, Cesvaine, Lubāna, Ērgļi, Madona, and Varakļāni);
 - 6) Zemgale TDR (municipalities of Jelgava, Auce, Bauska, Dobele, Iecava, Ozolnieki, Rundāle, Tērvete, and Vecumnieki);
 - 7) Northeastern TDR (municipalities of Gulbene, Balvi, Baltinava, Rugāji, Viļaka, Alūksne, and Ape);
 - 8) Northern Kurzeme TDR (municipalities of Talsi, Roja, Dundaga, Tukums, Jaunpils, Engure, Kandava, and Ventspils);
 - 9) Northern Vidzeme TDR (municipalities of Aloja, Amata, Beverīna, Burtnieku, Cēsis, Līgatne, Limbaži, Mazsalaca, Naukšēni, Pārgauja, Priekuļi, Rauna, Rūjiena, Salacgrīva, Smiltene, Strenči, Valka, Valmiera, Vecpiebalga, and Jaunpiebalga) (Bierande R., 2010).
- 1.2. The regional NUTS (Nomenclature of territorial units of statistics) classification is used to comply with the Cabinet Regulations No. 1059/2003 of 26 May 2003 and the Council of the European Union (EC) within the European Union regional policy. The regional division is set by the European Union Statistical Bureau Eurostat according to the institutional system of the Member States and it is oriented towards the establishment of a single classification of territorial units of statistics. The NUTS classification may be applied to the administrative and territorial division of Latvia. The statistical division of regions is regulated by the Cabinet Regulations No. 271 "On Statistical Regions of the Republic of Latvia and their Administrative Territories" of 28 April 2004. Taking into account the requirements set in the EC Regulation for establishing regions of various NUTS levels, six statistical regions were established in Latvia. From 1 July 2009, Latvia's territory consists of the following administrative units: Riga (includes the city of Riga), Pierīga (Jūrmala, and the municipalities of Limbaži, Ogre, Riga, and Tukums), Vidzeme (municipalities of Alūksne, Cēsis, Gulbene, Madona, Valka, and Valmiera), Kurzeme (Liepāja, Ventspils, and the municipalities of Kuldīga, Liepāja, Saldus, Talsi, and Ventspils), Zemgale (Jelgava, and the municipalities of Aizkraukle, Bauska, Dobele, Jelgava, and Jēkabpils), and Latgale (Daugavpils, Rēzekne, and the municipalities of Balvi, Daugavpils, Krāslava, Ludza, Preiļi, and Rēzekne) (Grozījums Ministru kabineta..., 2010).
- 1.3. The Cabinet Regulations No. 391 "Regulations regarding Territories of Planning Region", which came into force on 1 July 2009, classifies Latvia into five planning regions: Riga, Vidzeme, Kurzeme, Zemgale, and Latgale. Planning regions are derived public entities that are established in accordance with the Regional Development Law, and their operation is financed from the government's basic budget. The regions were established in August 2006 with a purpose of ensuring the development planning and coordination of Latvia's regions and cooperation among local governments and other national administration institutions. The Parliament of the Republic of Latvia passed amendments to the Regional Development Law in June 2006 (came into force on 1 August 2006) and the planning regions were assigned a legal status. There are five planning regions in Latvia that function under the supervision of the Ministry of Regional Development and Local Governments and in accordance with the Regional Development Law, the Territorial Planning Law, bylaws of planning regions, and other regulatory enactments. A planning region, within its competencies, ensures its development planning and coordination, and cooperation among local governments and other national administration institutions (Noteikumi par plānošanas..., 2009).



Source: Ministry of Regional Development and Local Government

Fig.1. Territories of planning regions in Latvia, 2010

Figure 1 illustrates the territories of planning regions in Latvia.

It is necessary to group the data according to a single system to make possible a complete assessment of the impact of rural support funds. Since the divisions of statistical and planning regions are different, the author assessed the territories of 5 planning regions and 6 statistical regions of Latvia. The statistical regions of Pierīga and Rīga correspond to the territory of Rīga planning region. Therefore, if assessing socio-economic processes, Rīga planning region comprises statistical information on the statistical regions of Pierīga and Rīga.

The Rural Support Service's operational information on the agricultural land declared for area payments is broken down by territories of civil parishes, meaning that it is possible to group information according to the needs.

To assess the regions, the author analysed the main indicators of the planning regions that impact socio-economic processes (Table 1). It includes information on the size of territory of regions, the area of agricultural land, the number of residents, and the density of population according to the data of the Central Statistical Bureau (CSB) for 2010.

Table 1

Main indicators of planning regions in Latvia for 2010

Indicators/regions	Unit of measurement	Rīga	Vidzeme	Kurzeme	Zemgale	Latgale	Latvia
Area of territory	thousand km ²	10.1	14.7	13.6	10.7	14.5	64.5
Proportion	%	15.7	22.8	21.1	16.6	22.5	100.0
Agricultural land	thousand km ²	3.3	5.0	4.5	4.8	6.5	24.7
of total territory	%	32.5	33.8	33.4	44.8	44.7	37.6
Number of residents	million	1.09	0.23	0.3	0.28	0.34	2.26
Proportion	%	49	10	13	13	15	100
Population density	people/km ²	105.6	15.5	22.2	26.3	23.6	35
as % of the average in Latvia	%	302	42	63	75	67	100

Source: author's calculations based on the data of the Central statistical Bureau and the State Land Service

According to Table 1, there are significant differences in the area of regions as well as in their numbers of residents and their densities of population.

The total area of Latvia is 64 589 km², of which internal waters occupy 2543 km² and dry land is 62 046 km², including 24 710 km² of agricultural land; forests occupy 29 503 km². The total protected area is 10 523 km² (Latvijas lauku attīstības..., 2009).

According to the data of the State Land Service, the territory of republican cities and the agricultural land located there are separated, but these data are not broken down on the level of towns so that they could be included in the regional data. According to the State Land Service (SLS), the area of the republican cities is 72 thousand hectares, including 2.2 thousand hectares of agricultural land.

In terms of area, Vidzeme is the largest region with an area of 14.7 thousand km² or 22.8% of the total area, slightly smaller regions are Latgale with 14.5 thousand km² and Kurzeme with 13.6 thousand km², ranging within 21-22% of the total area. The regions of Rīga and Zemgale, in terms of area, are the smallest regions of Latvia.

In 2010, the area of agricultural land in Latvia was 24.71 thousand km², which is 37.6% of total area of the country. If analysing the area of agricultural land in the planning regions, it is of great importance to mention that agricultural land in Zemgale region occupies 44.8% of the entire region's territory and accounts for 20% of total area of agricultural land in the country. It has to be admitted that historically and geographically Zemgale emerged as Latvia's "granary".

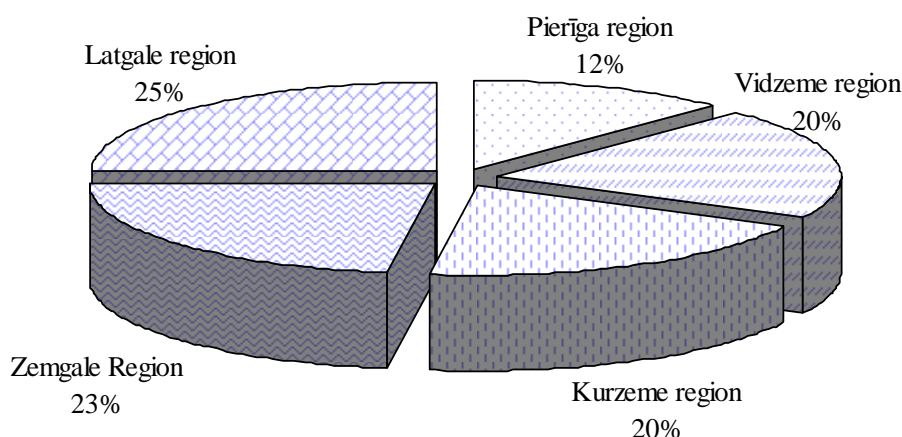
Agricultural land in Latgale planning region occupies 45% of its territory. The lowest proportions of agricultural land are in the planning regions of Rīga and Vidzeme, which can be explained by the fact that land is used for other purposes, especially in the vicinity of Rīga.

In total, 2.26 million residents lived in Latvia in 2010. The numbers of residents among the regions are very different. In Rīga region, 1.09 million residents live, which is 49% of total number of the country's population. The smallest number of residents live in Vidzeme region – 0.23 million or 10% of their total number; in terms of density of population, the lowest indicator – 15.5 residents per km² – is also observed in this region.

The highest density of population per km² of territory is in Rīga region – 105.6, which is 3 times higher than in Latvia on average.

2. Distribution and effect of area payments

To analyse the amounts of support paid within the Single Area Payment Scheme (SAPS), it is important to examine data on the areas of agricultural land declared for area payments. Figure 2 presents information on the distribution of the area declared for area payments in the planning regions in the period of 2004-2010.



Source: author's construction based on the RSS data, 2004-2010

Fig.2. **Percentage distribution of the area declared for area payments in the planning regions in the period of 2004-2010**

- Several conclusions may be drawn according to the data of Figure 2:
- on average, 1.48 million hectares of agricultural land were annually declared for the SAPS during the 7 year period;
 - the largest area or 369 thousand ha was declared in Latgale region, on average 336 thousand ha of agricultural land eligible for area payments were annually declared in Zemgale planning region. In the regions of Vidzeme and Kurzeme, it is approximately 300 thousand ha, and the smallest area or 181 thousand ha was declared in Pierīga region;
 - the area of agricultural land declared for area payments has to be also compared with the total area of agricultural land. On average, 60.35% of total area of agricultural land was declared for area payments in Latvia in the period of 2004-2010. Farmers in Zemgale region used to declare 70% of their agricultural land for area payments, in Kurzeme region it was 64%, and in Vidzeme region – 60%. As a percentage, the smallest area of agricultural land is declared for area payments in Latgale region – 57% and in Pierīga region – 55%. The relatively low activity in Pierīga region regarding area payments can be explained by the fact that land is used for other kinds of economic activity, not for agricultural production.

To assess the processes caused by single area payments (SAP) and their effect, a calculation was done and its results are presented in Table 2.

Table 2

Amounts of agricultural support and single area payments and their effect in Latvia in 2004-2010

Indicator/year	2004	2005	2006	2007	2008	2009	2010
Area eligible for SAP in Latvia, million ha	1.28	1.32	1.49	1.57	1.52	1.57	1.42
Number of residents, million	2.32	2.31	2.29	2.28	2.27	2.26	2.25
Area declared for SAP per capita	0.55	0.57	0.65	0.69	0.67	0.70	0.63
SAP rate, LVL/ha	13.64	18.40	22.10	25.57	32.60	39.08	44.35
Annual increase rate, %	X	34.90	20.11	15.70	27.49	19.88	13.48
Amount of SAP, mln.LVL	17.50	24.34	32.89	40.09	49.44	61.46	63.07
Annual increase rate, %	X	39.09	35.12	21.91	23.31	24.32	2.61
Amount of SAP per capita, LVL	7.54	10.55	14.33	17.57	21.77	27.18	28.05
Annual increase rate, %	X	39.86	35.82	22.62	23.88	24.85	3.20
GDP, million LVL	7434	9059	11172	14780	16188	13083	12736
SAP per 1000 LVL of GDP, LVL	2.35	2.69	2.94	2.71	3.05	4.70	4.95
Support payments in total, million LVL	110.50	219.60	213.30	191.50	299.30	293.00	369.60
Annual increase rate, %	X	98.73	-2.87	-10.22	56.29	-2.10	26.14
Support payments per capita, LVL	47.65	95.21	92.96	83.94	131.80	129.57	164.39

Source: author's calculations based on the CSB and RSS data

Based on the data included in Table 2 and the computation results, it is possible to make several conclusions and assessments.

The area of agricultural land declared for single area payments ranges from 1.28 to 1.57 million ha during the period of 2004-2010. The largest area declared for SAP was in 2009, which was 1.5727 million ha. A similar area was declared in 2007, amounting to 1.5679 million ha. In 2010, the area increased by 10.9% compared with the base year 2004.

The area declared for single area payments per capita fluctuated from 0.55 ha to 0.70 ha during this period.

The rate of single area payments in 2004 was 17.50 LVL; later this rate increased by 22-38% a year and reached the highest value of 63.07 LVL in 2010. The rate of SAP increased 260.4% compared with the base year.

The amount of SAP per capita increased along with the increase in the rate of SAP. If 2010 is compared with 2004, one can see that the increase was 20.71 LVL in absolute figures, but in relative figures, it was an increase of 271.8%.

Data on the changes in Gross Domestic Product (in constant prices) were also included in Table 2. It was observed that the GDP has increased until 2008 when its value was the largest, amounting to LVL 16188 million. A sharp decrease was observed later, and in 2010, it reached the level of 2006. The GDP has increased by 234.5% compared with its size in the base year.

The calculations show that SAP per 1000 LVL of GDP, in general, has steadily increased, and a slight decrease was observed in 2007. It was 2.35 LVL per 1000 LVL of GDP in 2004, while the sharpest increase in this indicator was observed in 2009, which can be explained by the sharp decrease in Latvia's GDP.

The Rural Support Service has paid out LVL 1696.80 million under various support schemes in the period of 2004-2010. Of the total sum, the SAP accounts for LVL 288.78 million or 17%. A slow, but stable increase in the support paid, with a few exceptions, is observed, which can be explained by different terms for different types of support.

The analysis of the support payments per capita show a 245% increase against the base year, which is a considerable increase. In 2004, the RSS paid out LVL 47.65 per capita, while in 2010 it was already LVL 164.30. Besides, it has to be mentioned that such a result for this indicator was obtained by taking into account the total number of Latvia's population according to the CSB data in the respective years.

Conclusions

1. The data on social and economic processes in the country that are available in data bases of various national and municipal institutions were grouped, taking into consideration the different regional divisions. A single system had to be established to group data from various sources and research their interdependence.
2. Since the divisions of statistical and planning regions are different, the author analysed the territories of 5 planning regions and 6 statistical regions of Latvia. The statistical regions of Pierīga and Rīga correspond to the territory of Rīga planning region. Therefore, if assessing socio-economic processes, Rīga planning region comprises statistical information on the statistical regions of Pierīga and Rīga. The operational data of the Rural Support Service on area payments were grouped according to the division of planning regions.
3. The total area of Latvia is 64 589 km², of which 24 710 km² is agricultural land. In terms of area, the largest region is Vidzeme occupying 14.7 thousand km² or 22.8% of total territory of the country. The regions of Rīga and Zemgale, in terms of area, are the smallest regions of Latvia.
4. In 2010, the area of agricultural land in Latvia was 24.71 thousand km², which is 38.31% of total area of the country. Analysing the area of agricultural land in the planning regions, it is of great importance to mention that agricultural land in Zemgale region occupies 44.8% of the entire region's territory and accounts for 20% of total area of agricultural land in the country. It is important to mention that the Rural Support Service has surveyed agricultural land in 2010. The survey data will be published until June 2011.
5. In total, 2.26 million residents lived in Latvia in 2010. The numbers of residents among the regions are very different. In Rīga region, 1.09 million residents live, which is 49% of total number of the country's population, and the highest density of population per km² of territory is also in Rīga region – 105.6, which is 3 times higher than in Latvia on average.
6. The largest area declared for area payments was in Latgale region, amounting to 369 thousand ha. On average, 336 thousand ha of agricultural land eligible for area payments were annually declared in Zemgale planning region. The area declared for area payments has to be analysed within the context of the total area of agricultural land in the regions. On average, 60.35% of total area of agricultural land was declared for area payments in Latvia in the period of 2004-2010. Farmers in Zemgale region used to declare 70% of their agricultural land for area payments, in Kurzeme region it was 64%. As a percentage, the smallest area of agricultural land is declared for area payments in the regions of Latgale and Pierīga – 57% and 55% respectively.

7. The rate of single area payments in 2004 was 17.50 LVL and it reached the highest value of 63.07 LVL in 2010. The rate of SAP increased by 260.4% compared with the base year. The amount of SAP per capita has increased along with the increase in the rate of SAP. In 2010, it increased by 271.8% compared with 2004. The amount of financial support per capita paid out by the Rural Support Service has also increased, amounting to LVL 164.30 in 2010.
8. The data provided by various institutions such as the SLS and the CSB differ not only among themselves, but also for a period of different years, and the exactness of these data are also doubtful, as there is no single methodology for obtaining and processing data. It is necessary to establish a single system in the country, resulting in correct information corresponding to the real situation.

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Open Economy and Protectionist Measures in Agriculture: South Korean Experience

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Abstract. Starting from very low positions in the 1970s South Korea has become the 14th world economy in 2010. In Korean modern knowledge-based economy the agriculture is still one of the main branches. Despite strong disagreements with the WTO and foreign trade partners the protectionist measures are still effective, like the protection of domestic rice market and the state support of fishery all over the world ocean. Small farms are encouraged by the state and they provide more than 90% of total agricultural production; though the bigger farms are also welcomed. In 2009, the Korean government announced a new international project New Asia Initiative, which implies conclusion of free trade agreements between Asian countries and development of the so-called Green Economy Belt in the Pacific-Asian region. The support measures also include tax incentives for farming households, direct financial support of farmers, assistance in foreign manpower supply, support of any forms of cooperation, diversification of international trade links, creation of the Korean National Food Cluster "Foodpolis", government efforts in quality control, political support of land leasing in foreign countries, defending of government positions on issues relating food security in the international arena, support of Korean fishing fleet all over the world, and new international political project New Asia Initiative. The experience in the development of a modern, open, sustainable economy, while maintaining protectionist measures for local agricultural producers, is interesting for studying and implementation in Latvia.

Key words: agriculture of South Korea, state support of agriculture, protectionist measures.

Introduction

Despite the fact that according to the data of the Bank of Latvia (November, 2010) in 2009 the agricultural sector of Latvia was estimated at only 3.8% of Gross Domestic Product (GDP) compared with industry – 21.9% and services – 74.3 %, it gave jobs to 12.1% of all economically active population (industry - 25.8%, services - 61.8% respectively) (Food and Agriculture Organisation of the United Nations (FAO), 2009). In addition, it should be mentioned, that Latvia is one of the few countries in the world, which covers its own needs in food and even has surplus to export, thus providing food security. Its food production index, which shows the growth of food production, is 117.4% (ranked the 23rd among 182 countries) (FAO, 2009). Taking into account the importance of food security for any country, sharp increase of prices for food products, which happened in 2009, and forecasted by some international experts serious shortage of food on the Earth in the near future, it is understandable that for Latvia its agriculture is one of the first priorities. Thus, the problems of its support and protection, development of favourable environment and increase of its productivity and competitiveness on the world market sharply face the Latvian economy. At the same time, Latvia is a member of the European Union acting in the stream of the EU agricultural policy, which implies strict limitations and responsibility for local governance of agricultural market. Considering the importance of agriculture for Latvia and its dependence on the EU and the WTO regulations, the following problem is examined in this article: what protectionists measures can be used by a country, acting on the conditions of the open market and external limitations? According to the hypothesis, one of the ways of solving this problem is the studying and adoption of the best world practices. In the author's opinion, the country whose experience in agriculture development and protection is worth to study and may be used in Latvia is South Korea.

The aim of the present paper is to study the South Korean experience and its latest government initiatives in protection, support, and development of agricultural sector in order to view its possible implementation in Latvia. The paper's objectives are: 1) to characterise the

agriculture of South Korea and its peculiarities; 2) to define and systematise official and non-official protectionists measures used by the South Korea government for agriculture support; and 3) to view the implementation of the South Korean experience in Latvia. The research results may be topical and useful for governmental and regional programs of agriculture support in Latvia. In Latvia, there have been no researches devoted to the South Korean latest government initiatives in agriculture support and protection yet; it is the novelty of this paper.

The research was carried out by studying and analysing the scientific monographs and articles, official documents of Korean government, documents and bulletins of the international institutions, statistical data, and articles of Korean and foreign publicists. The results given in the article are the part of a wider research devoted to the South Korean, Singapore, and New Zealand economies model and the use of their experience in Latvian regions.

The following reasons were considered to substantiate the choice of the studied country:

- the drastic increase of South Korean economy within historically short period of time from very low starting position and bright example of successful catching-up development. Its GDP was less than in Somalia and Afghanistan in the beginning of the 1970s; in the beginning of the 1980s the indicators of Industry and Agriculture of South Korea and Latvian SSR were comparable (DOCEX, 1992; Stat.Korea, 2010); already in 1996 the Republic of Korea became a member of the Organisation of Economic Cooperation and Development (OECD) and a member of G20 in 1999;
- ambiguous people's mentality (traces of Confucianism, Buddhism, Shamanism, Protestantism, Catholicism, Traditionalism, and Westernisation);
- possibility of successful use of Korean social and economic experience in other countries and regions, including Latvia.

Results and discussion

Some important data on South Korean and Latvia economies in 2009 are given in Table 1 (WEF, 2010; US Department of State, 2010).

Table 1

Comparison of countries

Statistical data	South Korea	Latvia
Territory, thousand sq.km.	99.7	64.5
Population, million people	48.3	2.2
Gross Domestic Product (GDP) at purchasing capacity, billion USD	832.5 (14 th in the world)	26.2 (105 th in the world)
GDP growth per annum	2%	-17.8%
GDP per capita, USD	17 074	11 607
GDP in industrial sectors:		
agriculture	3.0 %	3.8%
industry	39.5 %	25.8%
services	57.5 %	74.3%
Export, billion USD	355	6.7
Import, billion USD	313	8.8
Inflation	4.7 %	3.6%
Rate of unemployment	4.2 %	17%
Agricultural land, sq.km.	18 930	17 340
Arable land, hectares	1 635 000	1 092 000
Agricultural machinery/tractors	211 576	55 294
Meat production, metric tons	1614000	73000
Labour force occupied in agriculture	7.2%	12.1%
Ease of doing business, rank out of 183 economies	15	24

It is difficult to compare countries with big difference in population, although the territories of agricultural and arable lands in South Korea and Latvia are comparable. The main difference in agriculture of the two countries is in its structure. As one may see from the table

above the mechanisation and meat production in South Korea are much higher than in Latvia now. It is interesting to look at the history of South Korean development.

After the Second World War and Korean War (1950-1953), South Korea was an extremely poor country with a military type dictatorship, ruined industry, and agriculture based on manual labour.

In the middle of the 1960s, South Korea with the help of the United States had started the series of reforms in industrial sector. They were based on the following main elements: 1) democratisation; 2) development of free market; 3) education reform combined with 4) state support of big private corporations (chaebols), which were directed to develop exact branches of industries, like textile, chemical, ship-building, steel, electronic, automotive; 5) state support of all exporters, including agriculture producers; and 6) state-planning system (Ozols, 2010a).

Until the 1990s, the agriculture in South Korea had been based on the principle "only people who farm the land may own it". In the beginning of the 1990s there were more than 2 million farm households sized of 3-7 acres. The main cultures were rice, cotton, sugar beet, oat, and barley. There were no big mechanised cattle and pig farms in the country. The share of agriculture in GDP was 13.7% (Kuramochi, 2001). The central government carried out a policy of strict protection of local producers, especially the producers of the so-called "3 white gold": rice, sugar, and cotton.

However, in the middle of the 1990s the Government of South Korea held a series of the deepest reforms.

- The reform of industrial policy: instead of chaebols, the state support was directed to micro, small and medium enterprises (MSMEs) (Ozols, 2010b); instead of industrialisation, the new aim was proclaimed as a building of knowledge-based economy, with a priority of research and development (R&D) projects and science.
- Reform of legal and financial system: with the aim to make the country more open for foreign exchanges, investments, and labour inflow.
- Reform of higher education: in order to make it more competitive on the global market – this reform still continues (Ozols&Ozola, 2010).

At the same time the serious reform was held in South Korean agriculture. The agricultural markets were opened up, amid the internationalisation of the economy. The principle of "only people who farm the land may own it" was fundamentally abandoned and the government began actively support an increase in the scale of farming through the lease of land (Kuramochi, 2001). Until the middle of the 1990s, the most of farming households were ruled by couples or single people aged over 60 due to increasingly ageing population and a fall in the number of families (Kuramochi, 2001). The new rules have led to increased interest to the farming among younger generation of Koreans who came to agriculture with their own understanding of production and management processes, mechanisation, marketing, demand and offer, international trade, and IT-technologies. It resulted in the change of the structure of agriculture in South Korea. Instead of cotton, sugar beet and oat the new farmers began to grow fruit and vegetables. The growth of the number of greenhouses was enormous. Although the number of farming households keeping animals decreased many times, the number of cattle and pigs in general significantly increased due to the wide dissemination of large mechanised farms. The only crop, which remained in focus of Korean farmers, was rice. The reason is that the reverential attitude to the rice is passed in Korea from generation to generation. Being the substantial part of the national cuisine, only the locally grown rice is considered to be "real and healthful" (plus state subsidiaries). The change in the structure of agriculture respectively has caused the changes in the food structure. Having being mostly vegetarians two generations ago, now the Koreans consume meat on the same level as Americans and Europeans.

Nevertheless, the agricultural reform of the 1990s was not just a full liberalisation. At any situation, South Korea always tried to protect its own interests and supported its agricultural sector at a relatively high level compared with the policies of other member countries of the Organisation for Economic Cooperation and Development (OECD). Public intervention mainly consisted of high production prices supported by the government purchases, together with high tariffs that protected domestic producers from foreign competition. Korea only reluctantly

exposed its agricultural sector to the provisions of the Uruguay Round Agreement on Agriculture (URAA) (IATRC 1997). It kept very high tariffs in the rice, meat, and dairy sectors; high production subsidies in most other sectors; and significant non-tariff trade barriers on many commodities, including administrative barriers (import monopolies) and sanitary restrictions (Thornsby et al., 1997). Moreover, South Korea is one of the members of the World Trade Organisation (WTO), which consistently maintains its position about food security, insisting on the right of all countries to take measures for the support of domestic producers (Beghin et al., 2001).

The reform of the 1990s was the most serious one, but the reformation of agriculture in South Korea goes on. In 2009 the new Korean Government led by the president Lee Myung-bak has put forward a new official anti-crisis and economic programme called "Korean Government Initiative 2009". The aim of the programme is to turn South Korea into one of the world leaders (into the 7th economy of the world) within 10 years. It consists of three main projects: New Growth Engine Project, Green Technology Project and Green New Deal Project, and 22 subprojects. The programme is supported by USD 5.48 billion (Korean Government Initiative 2009).

Together with the creation of preferable conditions for large and small business (Ozols, 2010b) and the support of the Korean economy in whole, the program includes some special measures for the support of agriculture. In particular such as:

- establishment of a new state-owned investment fund for the support of farming households at the account of privatisation of state-owned companies (energy, mining, communication);
- building of a system of canals with a total length of more than 3,000 km for the providing of cheaper transportation throughout the country;
- increase of financial support to local administrations, investments to the development of infrastructure in rural areas;
- participation of farming households in 'High risk, high return' pioneer research project – government public investment in strategically important areas, especially basic research and advanced technology R&D in biotechnology;
- government financial support of innovative projects in agriculture and food production;
- government financial support of the development and production of bio-fuel;
- special government support programme in the working out of bio-fuel from the ocean resources;
- participation of farmers in the Green movement.

In the frame of the programme, it is planned to create about 880,000 new working places within 5 years (Korean Government Initiative 2009).

Small farms still provide about 90% of all agricultural production in South Korea (FAS, 2009). Continuing a policy of guardianship of farming households by the state, in 2009-2010 the South Korean government also has developed the following measures, which have not entered into the Korean Government Initiative 2009:

1. Tax incentives for farming households of 2009, including debts freezing (OCRA, 2009).
2. Direct financial support of farming households (Lee, J.-H., 2010).
3. Manpower supply. Permission for the migration of cheap labour force from abroad, mostly from China, Viet Nam, Philippines, and Bangladesh (The Financial Express, 2010).
4. Support of any forms of cooperation, including industrial unions, business and regional associations and small non-official conglomerates, commonly owned export brand-names of food producers, etc. (Lee, J., 2010)
5. Diversification of international trade links. Increase of number of intergovernmental agreements on trade preferences. Besides traditional partners like the USA, Japan, China, Australia, South Korean government have recently entered the trade agreements with Argentina, Mexico, Morocco, and South Africa (MOFAT, 2010).
6. Korea National Food Cluster "Foodpolis" – a new structure organised by the Ministry of Food, Agriculture, Forestry and Fisheries (MIFAFF). As it has been proclaimed, it is a newly

built city, which will be the hub of food industry of the North-East Asia, a new business and logistics centre using the convenient geographic situation of South Korea (Foodpolis, 2010).

7. Government efforts in quality control. Better quality control and more demand from abroad pushed South Korea's agricultural exports to a record USD 5.8 billion in 2010. MIFAFF cited the export of ginseng, dried laver, beverages and processed food as the main drivers of the 22.3% growth in exports. Tuna, sugar, and tobacco were among the Top 10 export products. Exports of such products as strawberries, flowers, mushrooms, and oysters also increased at double-digits, while traditional rice, wine makgeolli, traditional sour cabbage kimchi, and citron tea products also grew quickly. The ministry aims to grow exports again by 29 percent in 2011 to reach USD 7.6 billion, as confidence in South Korean product quality continues to improve (Financial Chronicle, 2011).

8. Political support provided by the government to some big Korean companies, like Daewoo, in their attempt to lease big territories in other countries (Madagascar, Tanzania) for agricultural use and support of Korean food safety (Walt, 2008, Rugonzibwa, 2011).

9. Solid defending of government positions on issues relating food security in the international arena, including serious controversy with the WTO and multi-year trade war with the United States on supplies of the US beef (Bennett, 2010).

10. Support of Korean fishing fleet all over the world, including bilateral agreements on fishing quotas with more than 30 states (MITAFF, 2010).

11. In 2009, Korean government announced a new international project New Asia Initiative, which implied the conclusion of free trade agreements between Asian countries and the development of the so-called Green Economy Belt in the Pacific-Asian region (Asia Times, 2009).

The reforms and activities taken by Korean government for the protection and development of agriculture have not only supporters but serious critics in South Korea as well. Especially with respect to such activities as direct financial support of producers ("it breaches the market rules"), change of traditional agricultural structure ("it was proven by centuries and nobody can forecast the results of changes"), support of bio-fuel programmes, and foreign initiatives.

The results of Korean reforms and activities are the subject to discuss from the point of view of their adaptation and usefulness in Latvia. Is Latvian agriculture competitive enough compared with other EU countries? Whether radical steps in agriculture are necessary for Latvia in order to take part in international competition? What niche Latvia may take on the world market? What new products may be implemented into Latvian agriculture? What modifications of Korean experience may be used in Latvia?

The study of foreign achievements, especially of those countries, which have successful results in social and economic life within historically short period of time and having started from very low position, may benefit Latvia without damages and losses inherent to pioneers. Some theorists of catching-up development noticed that the later a country steps onto the path of catching-up movement, the more is the volume of technologies accumulated by other countries, which may be used to faster the economic growth (Fagerberg, J., Godinho, M., 2003). This may be true for the administration of agriculture as well, especially if the administration is receptive, flexible, and decisive.

Conclusions, proposals, recommendations

After the Second World War agriculture in South Korea had been based on the principle "only people who farm the land may own it". The main type of agricultural production was small farming household. The main cultures were rice, cotton, sugar beet, oat, and barley. The central government carried out a policy of strict protection of local producers, especially of rice, sugar, and cotton. However, in the middle of the 1990s the wide reforms were held in Korean economy, including agricultural sector. The agricultural markets were opened up, amid the internationalisation of the economy. The principle of "only people who farm the land may own it" was fundamentally abandoned and the government began actively support an increase in the scale of farming through the lease of land. The new rules have led to increased interest to the farming among younger generation who came to agriculture with their own understanding of production and management processes. It resulted in the change of the structure of

agriculture in South Korea. The change in the structure of agriculture respectively has caused the changes in the food structure. The agricultural reform of the 1990s was not just a full liberalisation. South Korea conducted the policy of support of domestic producers. It kept very high tariffs and subsidies in some sectors; significant non-tariff trade barriers on many commodities, including administrative barriers (import monopolies), and sanitary restrictions. In 2009, Korean Government has put forward a new official anti-crisis and economic programme called "Korean Government Initiative 2009". It consists of three main projects: New Growth Engine Project, Green Technology Project and Green New Deal Project, and 22 subprojects. Some of the activities are directed to the support of agriculture competitiveness. Some other market and non-market, including protectionists, measures were taken at that time as well.

In the author's opinion, Latvian agriculture is not competitive enough compared with other EU countries. The radical steps in agriculture in order to proceed in international competition are possible but should be a matter of economic well-foundation and social discussion as well as the trust to the government. Besides pure ecological production, which is not enough developed yet, Latvian agriculture should look for special niche in the world market, including implementation of new products. Some modifications of Korean experience may be already used in Latvia, such as:

1) tax incentives for farming households, including debts freezing (Latvia as an independent state has a right to do it anytime). The profit received from recovered bankrupt farms may exceed the amount of debts, which is nominal;

2) direct financial support of farming households in the frame of the EU regulations with money received from privatisation of state ownership (if such decision is made);

3) support in foreign manpower supply. Although the EU has strict immigration regulation, each EU Member State has a right to participate in labour immigration process;

4) support of any forms of cooperation, including industrial unions, business and regional associations and small non-official conglomerates, commonly owned export brand-names of food producers, etc., which may need some amendments to the legislation;

5) diversification of international trade links. Perhaps, the rename of the Ministry of Foreign Affairs of the republic of Latvia into the Ministry of Foreign Affairs and Trade, providing it with additional functions and authority;

6) creation of "Latvian National Food Cluster" - a hub of food industry of the Northern Europe, using the experience of South Korean "Foodpolis". Latvia's geographical situation and logistics capacity might help do it fast;

7) support of Latvian fishing fleet all over the world as in the frames of the EU fishing policy, as with direct intergovernmental agreements on fishing quotas. Tax privileges for fishing companies working under Latvian flag abroad the EU fishing zones.

Studying of the best world practice, including the academic level, may result its faster implementation in Latvia and Latvia's regions, and thus accelerate their economic and social development.

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Economic Situation of the United States of America in 2009-2010 and the Condition of the US Agriculture

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Abstract. The two last years has been a very turbulent period for the United States. The slow-down in the world economy in 2009 proved to be deeper and more widespread than originally anticipated. Most branches of the US economy felt the economic recession very acutely. However, the recovery, which has begun in 2010, is projected to be the long-term real GDP growth of even 3.3 per cent reached by 2011. The year 2009 was also a very bad time for the US agriculture but the specific nature of the production showed that the last year was much better in the branch than in the other branches of the US economy. Despite the difficulties in 2009, this sector seems to be more resilient to the unfavourable financial phenomena than the other branches of the US economy.

Key words: economic situation, food prices, net farm income, loans.

Introduction

Agriculture is a specific branch of economy as natural and climatic conditions decide the quantity and quality of production. However, the economic situation of the country has a crucial impact on the condition of agriculture. The paper consists of four parts. The first theoretical part indicates the impact of the economic factors on agriculture. The next one, based on data available from the Food and Agriculture Organisation of the United Nations, shows the sources of the changes in prices of agricultural products in recent years. The third part, based on the US macroeconomic data presents the influence of the US economic situation in 2009-2010 on the position of the US agriculture. The last part, which uses the United States Department of Agriculture data, analyses the American farm situation. The latest US publicly available macroeconomic data and the measures, which describe the state of the US agriculture sector, were used in the article. There were also shown changes in prices of agricultural products in the world. For the purpose of analysis, statistical methods were used and the results were presented graphically. The main aim of the research was to present the link between the economic situation and the condition of the US agriculture in 2009-2010. The research tasks are as follows: 1) to review the economic factors which have an impact on agriculture; 2) to assess the sources of the changes in prices of agricultural products; 3) to analyse the relationship between the US economic situation and the condition of the US agriculture; and 4) to assess the American farm situation.

Results and discussion

Impact of the economic factors on agriculture

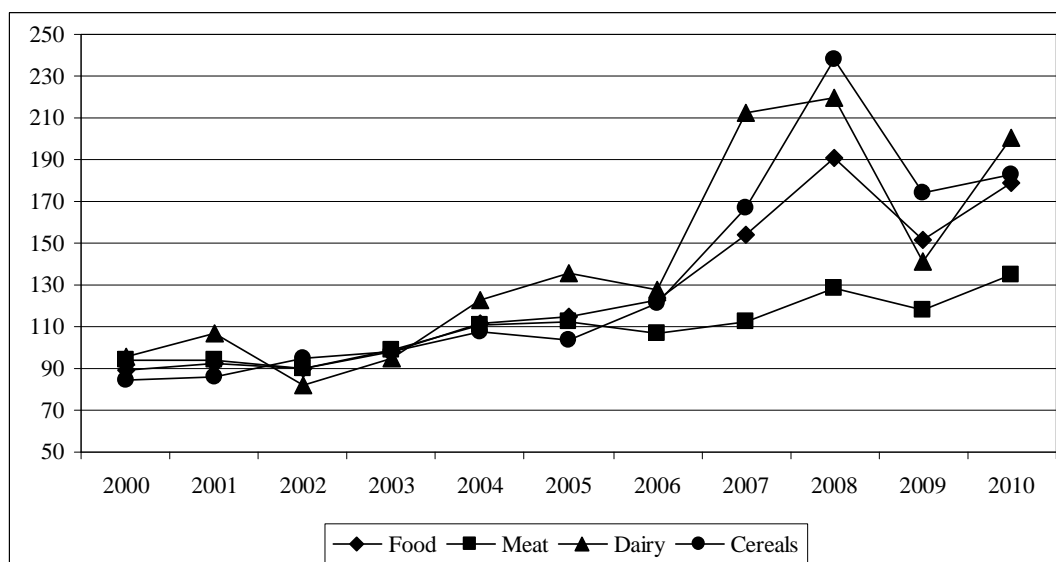
Trying to indicate the influence of the economic situation on agriculture one has to distinguish the factors being of great importance to the condition of agricultural sector. Agriculture is a specific branch of economy as natural and climatic conditions decide the quantity and quality of production. Considering changes in the agricultural sector, one cannot ignore the macroeconomic environment, shaped both on the global and national levels. The impact of the economy on agriculture may have a dual nature: direct and indirect. Direct effects result from changes in the national economy of a particular country, mainly from a decline in GDP; while indirect effects are the consequences of changes taking place abroad. Major world economies play the key role in shaping the situation in the world agriculture (Czyżewski A, Kułyk P., 2010).

The key economic factors, which determine the situation in agriculture, are as follows (Parlińska M., Wielechowski M., 2009):

- the rate of economic growth in the country as well as abroad which influences the demand for agricultural products;
- the level of exchange rate which is crucial for the terms of trade of a particular national economy;
- oil prices in the world determining the costs of production;
- the level of economy openness of the country in the international trade interchange of agricultural products, manifesting in the size, of export and import;
- the level of interest rates deciding the ease of gaining the foreign capital by farmers.

The changes in prices of agricultural products in recent years

For the last few decades, the prices of agricultural products have gone down in the real value. However, in the second half of 2000 one can observe a reverse tendency. The prices of almost all basic agricultural products went up rapidly (Figure 1). This phenomenon was influenced by many structural and economic factors, in some cases connected with the supply and in others with the demand. It is very difficult to estimate in numbers the exact participation of each factor because the degree of the price growth depends on the product and the region.



Source: authors' research based on the FAO data

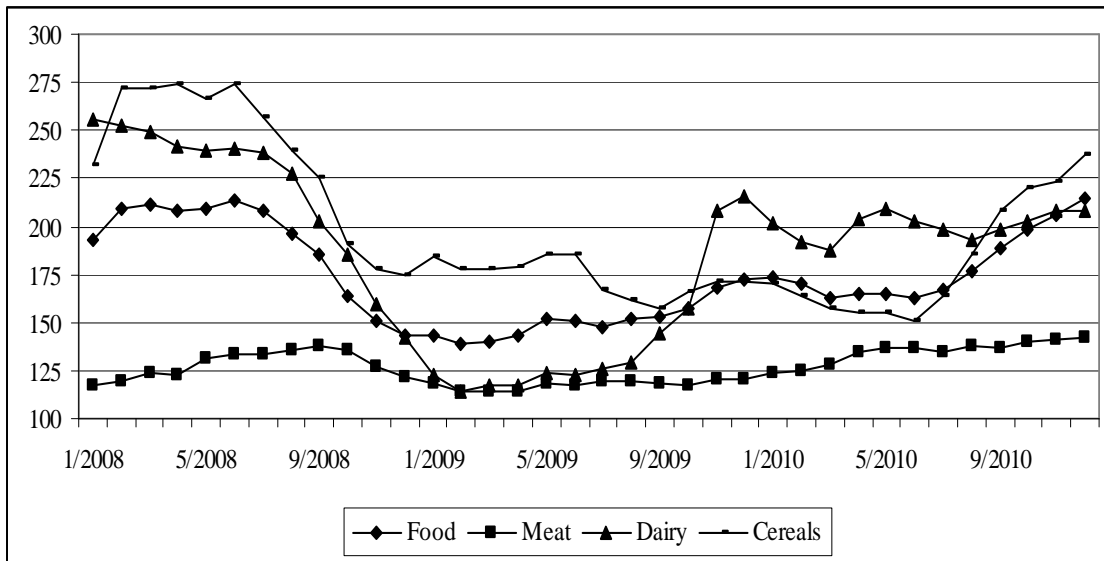
Fig. 1. Agricultural products world price indices, years 2000-2010, 2002-2004 = 100

The most significant factors, which caused such a rapid increase in prices of agricultural products, are as follows (Parlinska M., Wielechowski M., 2009):

- speculations on financial markets linked with agricultural raw materials;
- growing interactions between the markets of agricultural products caused by demographic growth, high rates of economic growth, the processes of urbanisation, and the changes in eating habits observed in many countries of emerging markets;
- blocking the growth of crops and systematic reducing the world grain supplies since the 1990s;
- restrictive export policy conducted by many countries, mainly from Asia, exporting agricultural products.

Negative changes, which caused global financial crisis, are considered the basic reason for the sharp drop in prices. The financial crisis eliminated the cash flows related to agricultural commodities derivatives markets virtually and cut the speculation in this financial segment. Apart from the economic factors, the drop of agricultural products prices was caused by the very favourable weather conditions in 2008, which resulted in increased yields of cereals. In

addition, rising grain prices in 2006-2008 led to the increased production of crops by American farmers.



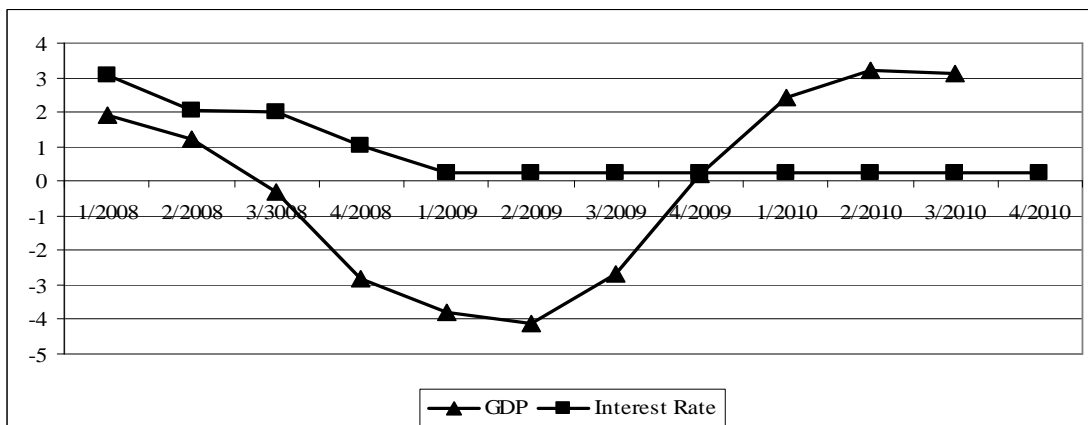
Source: authors' research based on the FAO data

Fig. 2. World price indices of agricultural products, January 2008 – December 2010, 2002-2004=100

The year 2010, and especially its second half, was marked by an increase in agricultural commodity prices on financial markets. This was due to such record-low harvest of wheat, caused by drought in Russia, heavy showers in Canada and export embargoes imposed by the Russian authorities on this grain. There was also a positive impact of global stock markets, which resulted in agricultural commodities market grows.

The impact of the economic situation in 2009-2010 on the US agriculture

Worse conditions of the American agricultural sector occurring in 2009 were associated with the occurrence of the crisis in the US financial sector generally. The next better year in the American agriculture is also visible in other branches of the US economy. This demonstrates strong relationships between different sectors of the national economy today.



Source: authors' research based on the data of Bureau of Economic Analysis, www.tradingeconomics.com

Fig. 3. The United States GDP annual growth rate and interest rate, years 2008-2010

Previous years (2003-2007) were a period of economic prosperity in the US. The GDP growth rate increased at an average rate of over 2.8% per year, which in the case of such a large country should be considered a remarkable success. The economic boom was translated into an increasing domestic demand for food. Unfortunately, the year 2008 brought a reversal of this positive trend (negative economic growth in the last two quarters of 2008). Recession, which appeared in the second half of 2008, lasted until the third quarter of 2009. The value of GDP declined in that year (2009) by 2.6 per cent. The last year (2010) brought economic recovery - the projected increase in the GDP growth rate is 2.7 per cent. However, the steps that had been taken to rescue the economy meant that the American state of public finances is in a deplorable situation. Economists talk about the real threat of bankruptcy of the American Government in the second half of 2011. The unemployment rate remained at a high level (9.8%). Its level has almost doubled in the last three years (2007-2010) (Bureau of Labour Statistics, 2011).

The state of the banking system affects the availability of credit, including loans for agriculture. In 2009, the financial crisis caused a decrease both in the efficiency of commercial banks and agriculture in the US. The recession from 2008 to 2009 made the agricultural loans become less available and riskier than in the previous years. The reasons for this were (Parlinska M., Wielechowski M., 2009):

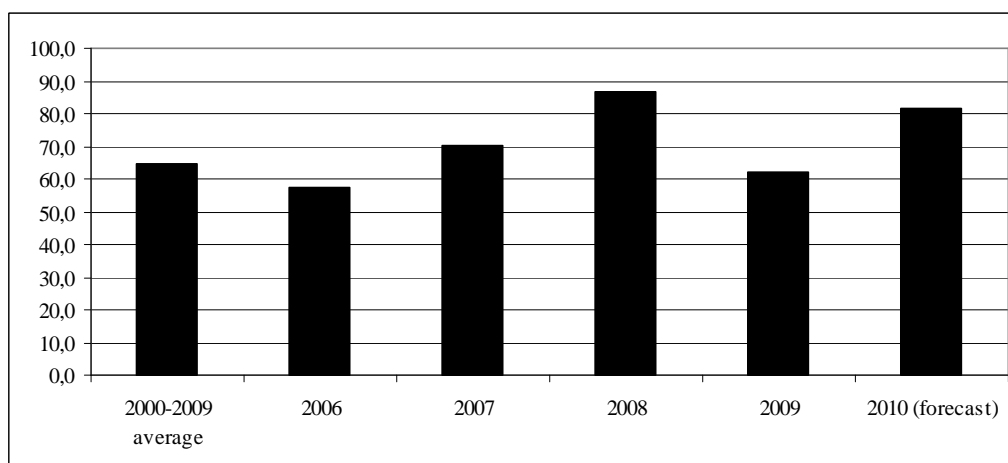
- more stringent credit standards;
- reduced availability of funds from which loans are granted to farmers;
- lower quality of loans;
- the falling value of the farm in 2009.

The year 2010 brought a reversal of the negative trend, however, the agricultural sector, that had richer negative experiences of the past, feared of excessive debt.

The world economic crisis has caused a significant drop in energy prices in the world. Over half a year, between July and December 2008 crude oil price on the world markets fell more than four times (to about USD 40 per barrel). Since the beginning of 2009, fuel prices had been rising steadily and at the end of December 2010, the price of a barrel of oil was more than USD 90 (Crude Oil Prices..., 2011). For American farmers an increasing fuel price has a negative impact on the cost of production processes. It is known that in case of the US grain producers energy-intensive means of production are from half to two thirds of the operating costs value. One of the most important indirect factors influencing the American agriculture is the exchange rate of the dollar against the currencies of the major trading partners, especially the Chinese Yuan. In the last few years (2005-2008) the US dollar depreciation has occurred. This situation has been very beneficial to the US agricultural producers exporting agricultural products. Paradoxically, the global financial crisis strengthens the dollar (Exchange rates..., 2011). This can be explained by the fact that although the crisis was born and developed in the US, the economy of this country is more reliable than the developing economies. This situation made exports of the US agricultural products more difficult in 2009. The year 2010 is a systematic depreciation of the dollar against the Chinese Yuan. This situation has a positive effect on the US export.

The US farms situation

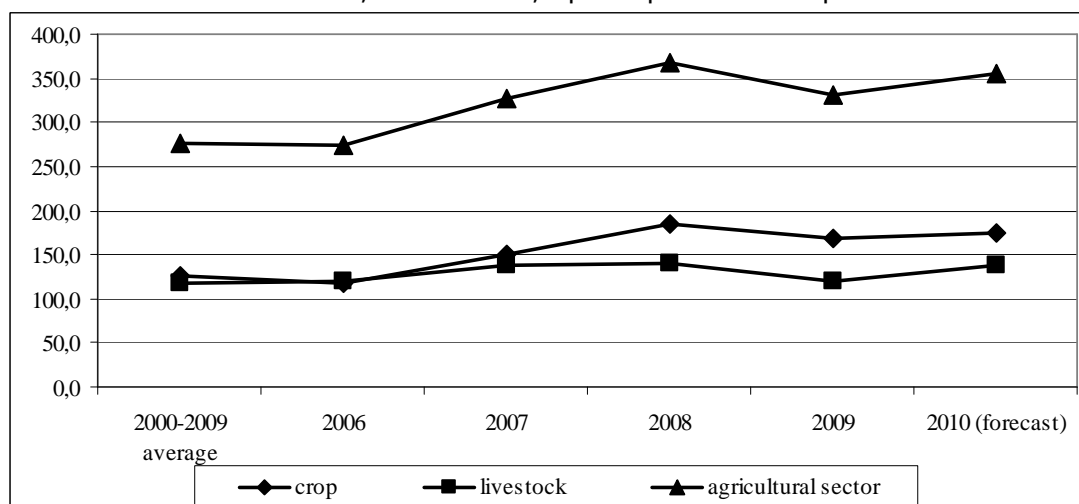
The two last years (2009-2010) were a very restless period for American farmers. The year 2009, due to the disruption on financial markets, has proved to be very negative.



Source: authors' research based on the United States Department of Agriculture data

Fig. 4. The US net farm income (agricultural sector), years 2006-2010, billions of USD

The net farm income has declined by almost 30% in comparison with 2008. Nevertheless, 2010 net farm income is forecasted at USD 81.6 billion; thus going up by 31 per cent from 2009 and 26 per cent higher than the 10-year average of USD 64.8 billion. An average farm household income of principal farm operators – from farm and off-farm sources – is forecasted to be USD 83,194 in 2010, up 7.8 per cent compared with 2009.



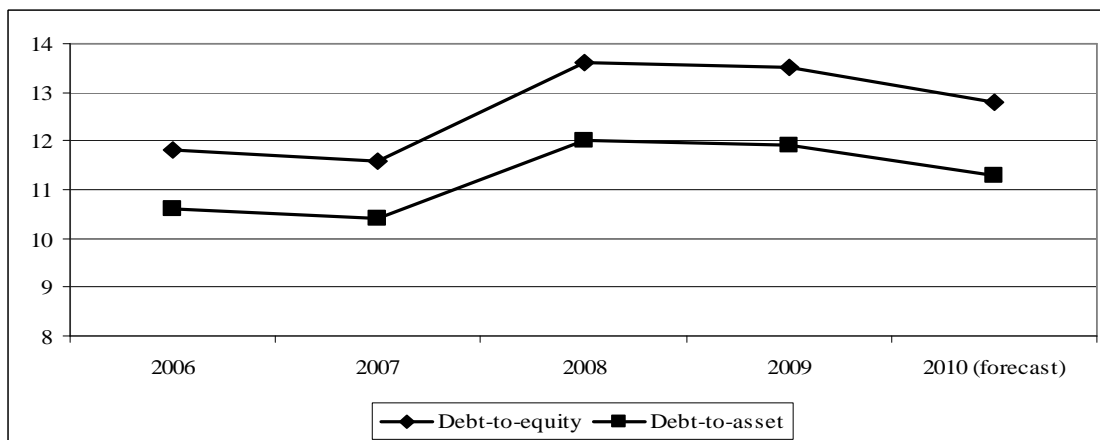
Source: authors' research based on the Farm Income and Costs: Farm Sector Income Forecast, USDA

Fig. 5. Value of the crop, livestock, and all agricultural sector production, years 2006-2010, billions of USD

The value of agricultural sector production in 2009 has declined by 10 per cent compared with 2008. The production in 2010 was forecasted at USD 356 billion, which was 7% higher compared with the previous year. Especially the livestock production was expected to increase by almost 17 per cent in 2010. Milk prices received by dairy farmers were projected to increase more than USD 3 per hundredweight (Agricultural Income and Finance Outlook, 2010). From 2006 through 2010, the nominal value of farm sector production of crops increased almost by 47 per cent. In 2009 the value of crop production declined by about 10 per cent compared with 2008. In 2010, this value should be slightly bigger. The crop production was about 50 per cent of the agricultural sector's total value of production.

Despite the recent world economic phenomena and continuing the US economy credit problems, the financial health of the agricultural sector has been very good in recent years.

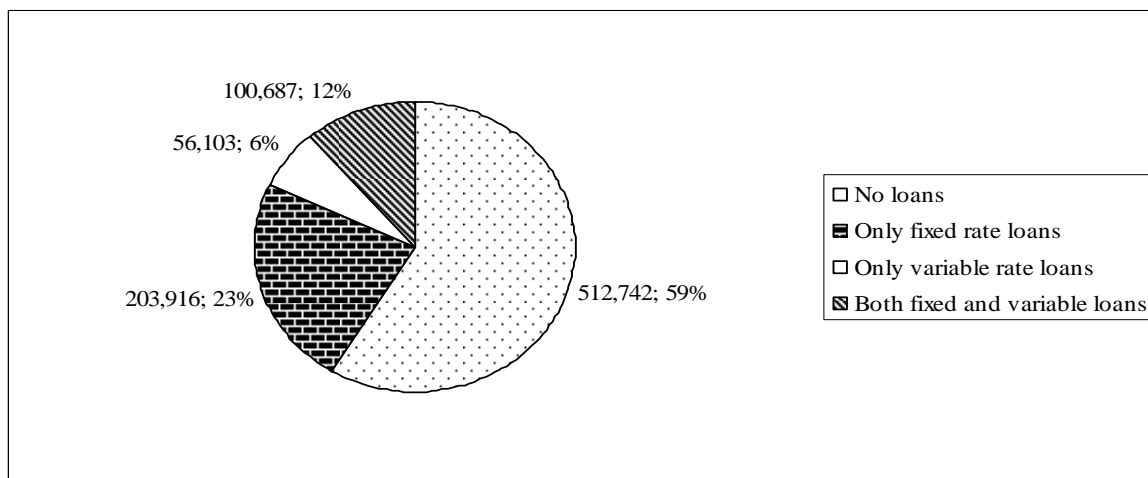
However, given the impacts of the global recession, there have been concerns raised about the debt repayment ability of farmers and the future stability of asset values – especially for livestock farmers, whose net farm incomes declined in 2009 due to higher costs and weakened demand.



Source: authors' research based on the Economic Research Service, USDA

Fig. 6. The US farm sector debt-to-asset and debt-to-equity ratios, 2006-2010, %

The US farmers are a bit conservative and use the credit financing very circumspectly. The levels of the debt-to-equity and debt-to-asset ratios show this situation very well. In the two last years these ratios had been even decreasing slightly (Figure 6).



Source: authors' research based on the Agricultural Resource Management Survey, NASS and ERS, 2009

Fig. 7. Number and share of farm businesses with fixed and variable rate loans, 2009

Figure 7 shows the number and share of farm businesses having received loans. Eighteen per cent of farms had a variable rate loans, 29 per cent had fixed rate loans, and 59 per cent of farms had no loans. The average interest rate for all loan types was 5.6 per cent in 2009.

Conclusions

The last two years were a very restless period for the United States agriculture. After few years of increasing indicators, the year 2009 brought a downturn in the agricultural sector. The main cause of this unfavourable situation was the US economic recession. There are some optimistic features of the US agriculture, which are visible in the growing value of agricultural production and net farm income in 2010. The analysis of the 2010 macroeconomic data shows

that situation of the US economy is improving. The forecasts say that the condition of the US economy should be better in the near future.

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Regional Differentiation in Uptaking the CAP Funds on Agri-environmental Programmes in Poland

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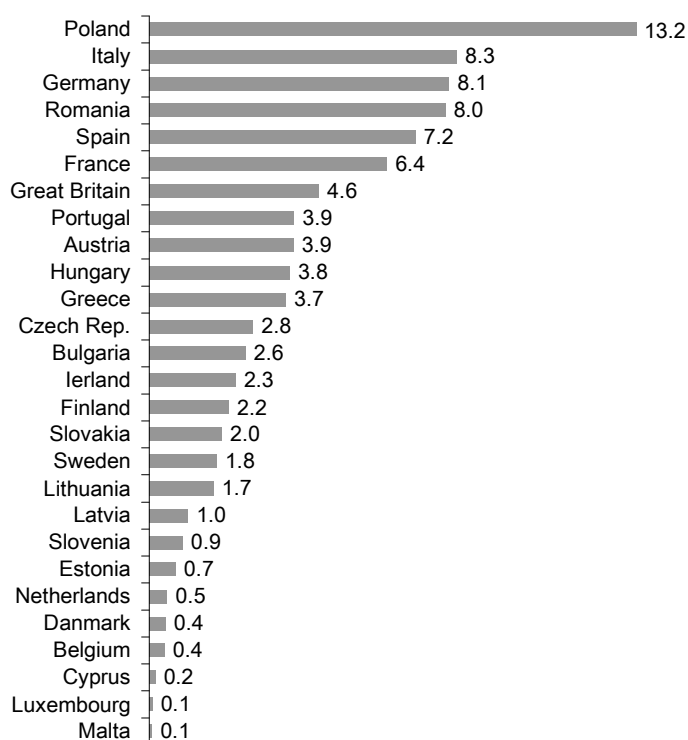
Abstract. This paper aims to present regional differences of the intensity of use of the CAP programmes dedicated to environment protection. The analysis covered the period of 2004-2009. The used data have been obtained from ARMA and CSO statistics. They are especially related to the implementation of particular programmes of Axis 2 of the Rural Development Programme (LFA, agri-environmental, afforestation). The study is based on the indicators as the number of applications per 1,000 farms, and the value of support for a one farm and per 1 ha of agricultural land. The cluster analysis method as well as Morgan spatial correlation coefficient was used for the division of provinces into groups. It was found that there were significant differences in the use of subsidies for agri-environmental programmes between the provinces in Poland. The lowest absorption of subsidies was in provinces in the South of Poland, and the highest in the provinces of Zachodniopomorskie, Pomorskie, and Lubuskie. In the latter, the number of applications per 1000 farm exceeded 800; whereas there were no more than 500 applications per 1000 farms in the group of provinces in the Southern part of Poland. The amount of subsidies granted exceeded PLN 200 per hectare in the provinces where the farmers very actively competing for the implementation of agri-environmental programmes; however, only about PLN 100 per hectare in such with low farmers activity. The main factors associated with the low use of subsidies for environment protection and conservation is the small acreage of farms and relatively high soil quality. The subsidies probably do not fully cover the costs of implementation of some of operations, especially in small farms. Only LFA subsidies have been used fully, since their uptaking does not involve any additional costs. The subsidies support environment protection mainly in the regions with larger farms.

Key words: CAP, Rural Development Programme, agri-environmental measures, spatial analysis, agriculture.

Introduction

The aims of the Common Agricultural Policy of the European Union cover many areas, including support of the environmental and landscape protection through activities at agricultural farms favouring the reduction of the negative impact of agricultural production on the environment. Within the framework of the European Agricultural Fund for Rural Development, the Rural Development Programme 2007-2013 is implemented in Poland, and the Rural Development Plan 2004-2006 was implemented in the period of 2004-2006. The total amount allocated for the implementation of RDP 2007-2013 from EAFRD funds is EUR 13.4 billion. This is the greatest amount among the funding allocated to 27 Member States (Figure 1). The large amount in comparison with, for instance, Germany or France also results from the fact that the "old" EU Member States allocate to the second pillar of the Common Agricultural Policy solely approximately 20% of total funds, while Poland allocates as much as 47% (Poczta W., 2010). The difference results from the fact that Poland still needs a long-term agriculture modernisation, which is supported by the second pillar of the CAP, while the "old" EU Member States have completed the intensive agricultural modernisation process, and now support income in the agriculture.

In Poland, the RDP 2007-2013 budget accounts for a total of more than EUR 17.4 billion, with EUR 4.0 billion from the domestic budget. As regards the division of funds into axes, the greatest amount, as much as 43%, is allocated for the agricultural modernisation,



Source: European Commission, Directorate-General for Agriculture and Rural Development, Directorate G, Horizontal aspects of rural development, AGRI/2009/412921-EN

Fig. 1. **Financial Plan of the European Agricultural Fund for Rural Development (EAFRD) for the Member States (in EUR billion)**

31% - for the improvement in the environmental quality, and 20% - for the improvement of the life quality in rural areas (Table 1).

The environmental protection is strongly supported by the CAP funds. It shows the significance assigned in Poland to the environmental protection. Rural areas occupy almost 60% of Poland's area, so agriculture shall adjust the scope of use of the environment to the limitations arising from the sustainable development paradigm. In addition, after 2013 the environmental protection is defined as one of the fundamental goals of the CAP until 2010 (European Commission, 2010).

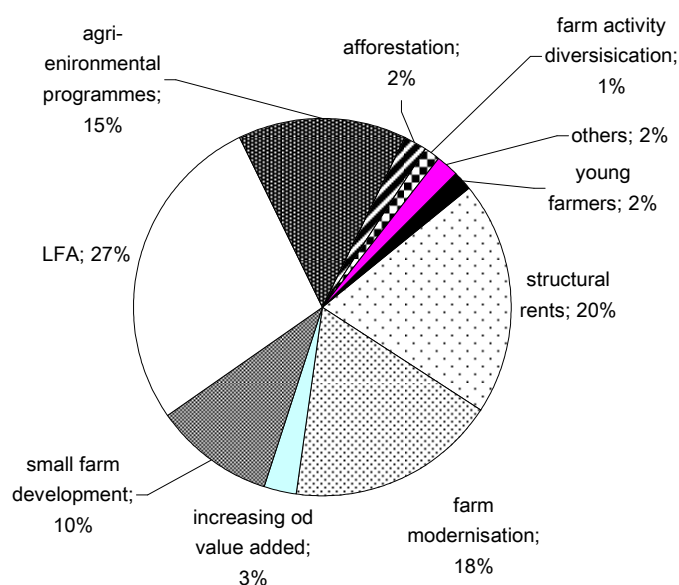
Table 1
Rural Development Programme 2007-2013 in Poland and budget breakdown by priority axes
(in EUR billion)

Item	EAFRD	State budget	Total	%
Axis 1: Improvement of competitiveness of agricultural and forestry sector	5.6	1.8	7.5	43.0%
Axis 2: Improving the environment and the countryside	4.3	1.1	5.4	30.9%
Axis 3: Improvement of the quality of life in rural areas and diversification of rural economy	2.6	0.9	3.5	20.1%
Axis 4. LEADER	0.6	0.2	0.8	4.5%
Technical assistance	0.2	0.1	0.3	1.5%
Total:	13.4	4.0	17.4	100.0%

Source: Commission Decision of 18 January 2010, the approval of amendments to the RDP 2007-2013 for Poland

Within the framework of RDP 2007-2013, the call for applications regarding activities of Axis 2 – environmental axis began in 2007 as regards LFA; while agri-environmental and afforestation programmes were launched in 2008. The delay resulted from the necessity to prepare new procedures for funds awarding.

Within the CAP mechanisms, also activities related to the environmental protection were performed in the period of 2004-2006. These were activities within the Rural Development Plan 2004-2006. The scope of activities involving the environmental protection significantly changed both, in the period of 2004-2006 and 2007-2013. The major directions include support of agriculture in LFA, agri-environmental, and afforestation programmes. Within the RDP 2007-2013, PLN 19 billion were spent by the end of November 2010, i.e. 27.5% of total funds under the programme. As regards programmes of Axis 2, the greatest amount of funds was spent on: LFA – 27% of total expenses under the RDP 2007-2013, agri-environmental programme – 15%, with only 2% spent on afforestation (Figure 2). In order to receive funds for activities involving the environmental protection, farmers shall be active, since they have to submit a relevant application and action plan. An exception includes support related to the location for an agricultural farm in the LFA. The recognition of areas with a higher or lower activity as regards the implementation of the agri-environmental programmes is necessary to establish the group of beneficiaries interested in a particular programme and the reasons for the interest, which will enable a more efficient implementation of the programme assumptions (Falconer, 2000).



Source: PROWieści no 12, 2010

Fig. 2. Structure of payments disbursed under the RDP 2007-2013 up to 30 November 2010

This article is to present the spatial differentiation of the farmers' activity in the uptaking of CAP funds on activities involving the environmental protection. Two research tasks have been carried out: one of them included the determination of the group of areas with a similar intensity of the use of funds, and the other, the determination of potential spatial relations between individual voivodships as regards the uptaking of the mentioned funds.

Data sources and research methods

The analyses use the statistical data derived from the Polish Central Statistical Office (GUS) regarding the number of farms and areas of arable land in individual voivodships. The data concerning the number of applications submitted, number of decisions issued and amounts paid are derived from the report of ARiMR (Agency for Restructuring and Modernisation of Agriculture). The analysis also includes data concerning the activities implemented under the RDP 2006-2006 and RDOP 2007-2013 until the end of 2009. Some spending from 2007 was made on the continuation of the financing of long-term activities commenced in the period of 2004-2006. The measures of intensity of the funds uptaking include: 1) the number of positively verified applications for payments under activities: agriculture support in LFA, agri-environmental programmes ([sustainable agriculture, organic farming, extensive meadow and pasture farming, ground and water protection, buffer zones](#)

protection of local animal species), and afforestation programmes for 1000 farms, which applied for direct payments in a particular year; 2) the amount of subsidies paid per 1 farm applying for direct payments; and 3) the amount of subsidies paid per 1 ha of arable land. All the analyses were carried out in voivodships.

The following statistical methods were used in the study: cluster analysis, and Moran's spatial correlation coefficient. The cluster analysis determines the methods of a multi-dimensional statistical analysis, which are used to identify homogenous observation groups (Seber G., 2004). Clusters are created through an assessment of a similarity or distance between the objects analysed considering the analysed features. The study applies the hierarchical method of data analysis using the Minkowski metrics as follows:

$$d(i, j) = \sqrt[q]{|x_{i1} + x_{j1}|^q + |x_{i2} + x_{j2}|^q + \dots + |x_{ip} + x_{jp}|^q}, \quad (1)$$

where:

p – number of variables;

q – number determining the metrics type;

x_{ip} , x_{jp} – determinants for the accomplishment of j-feature in i- object and p-object.

In the study, it was assumed that $q = 4$, and the Ward's method was used as a method of division, since the most transparent division of the objects analysed (voivodships) was achieved with such metrics value ($q = 4$) and applied method. The results of the classification of variables were traditionally presented on dendrograms and on a map of Poland. These variables were standardised due to the differences in their values. Three features in individual voivodships were analysed: the number of applications per 1000 farms, the amount of subsidies paid per 1 farm, and the amount of subsidies paid per 1 ha of arable land. At the same time, the divisions were made considering the afforestation rate, average LFA 2004 – 2009, and total R-S of operations 2007 – 2009 for each feature. The consolidated information for objects, with and without the LFA variable, was used to analyse spatial relations.

In order to determine spatial regimes for the features analysed, Moran's correlation coefficient was used (Upton G., Fingleton B., 1985) (global and local). Global Moran's correlation coefficient (I_g) is used to analyse the existence of a global spatial autocorrelation. The global spatial autocorrelation determines the extent of correlation of the value of a variable in a certain voivodship with the value of the same variable in a neighbouring voivodship. In consequence of the relation, similar values are subject to spatial grouping. There are two types of spatial autocorrelation: positive autocorrelation and negative autocorrelation. The positive autocorrelation involves spatial gathering of high or low values of the variables observed. Negative autocorrelation is the inverse of the positive autocorrelation. Moran's global statistics I_g are as follows:

$$I_g = \frac{N}{\sum_{i=1}^n \sum_{j=1}^n w_{ij}} \cdot \frac{\sum_{i=1}^n \sum_{j=1}^n w_{ij} (x_i - \bar{x})(x_j - \bar{x})}{\sum_{i=1}^n (x_i - \bar{x})^2}, \quad (2)$$

and in the case of rows standardisation

$$I_g = \frac{\sum_{i=1}^n \sum_{j=1}^n w_{ij} (x_i - \bar{x})(x_j - \bar{x})}{\sum_{i=1}^n (x_i - \bar{x})^2}, \quad (3)$$

where: w_{ij} – spatial weight for the interaction between areal item i and j ;

N – all objects covered by the analysis;

x_i – value of a variable of a particular object at i -location;

x_j – value of a variable of a particular object at j -location;

\bar{x} – average value of a variable for all objects.

Weight matrix **W** determines mutual relations between neighbours, their distances and interactions (Ramirez M., Loboguerrero A., 2002). In the study, the weight matrix was determined through a common border of regions and first order neighbourhood was achieved. Weight matrix is symmetric and square-shaped. Individual columns of the weight matrix

describe the neighbourhood of a certain voivodship with the other ones, due to which they determine the mutual neighbourhood structure. The study applies the rows standardised weight matrix, i.e. all components of a particular row summed up to one. Global coefficients of Moran's correlation were calculated in accordance with Equation 3. The spatial autocorrelation was also presented on a Moran's scatterplot. The standardised value of the variable analysed was presented on the horizontal axis of the diagram and the standardised value of delay based on weight matrix **W** was presented on the vertical axis. Moran's scatterplot is divided into four parts. Points in the right-hand upper quarter and left-hand lower quarter show a positive spatial autocorrelation, and points in the left-hand upper quarter and right-hand lower quarter show a negative autocorrelation. Moran's scatterplot presents also deviating values, i.e. values that explicitly stand out in the group of voivodships analysed. The classification of individual voivodships to four quarters of Moran's scatterplot was also presented on the map of Poland. In addition, local Moran's coefficient was used, which was calculated based on the following equation:

$$I_g = \frac{(x_i - \bar{x}) \sum_{j=1}^n w_{ij} (x_j - \bar{x})}{\sum_{j=1}^n (x_j - \bar{x})^2}, \quad (4)$$

where: all figures as in Equation 3.

The authors interpret local statistics similarly as global Moran's statistics, i.e. if it is negative, the i-object is surrounded by objects (neighbours) different from each other as regards the feature analysed. If it is positive, the i-object is surrounded by similar objects (neighbours). The analysis results for the local statistics were presented on spatial diagrams (map of Poland).

Results

The uptaking of funds within Axis 2 related to the RDP was different depending on the region. It resulted from the fact that individual voivodships are very different as regards arable land and the number of agricultural farms.

Table 2

Number of farms, agricultural land area and the use of the RDP Axis 2 programmes

Voivodship	Number of farms '000	Agric. land '000 ha	Number of application '000			Amount of subsidies paid [PLN million]		
			LFA (avg. annually)	agri-environmental programme	afforestation	LFA (avg. annually)	agri-environmental programme	afforestation
Dolnośląskie	57.6	951	20.4	5.8	0.5	45.9	109.4	13.0
Kujawsko-pomorskie	66.3	1087	30.3	9.0	0.7	66.9	86.2	10.9
Lubelskie	178.5	1584	64.1	21.9	1.1	84.7	145.5	14.1
Lubuskie	19.9	500	15.9	4.9	0.3	38.9	97.6	7.5
Łódzkie	126.4	1098	73.5	9.4	0.9	95.9	45.9	10.0
Małopolskie	127.4	691	54.4	7.9	0.3	50.1	40.7	2.8
Mazowieckie	209.0	2190	133.5	14.0	2.0	231.7	108.8	37.6
Opolskie	28.1	561	6.7	4.5	0.2	10.8	44.6	2.7
Podkarpackie	121.0	747	43.6	10.0	1.8	41.4	80.7	14.5
Podlaskie	81.5	1149	67.5	8.9	0.9	168.9	67.7	11.1
Pomorskie	38.3	772	22.9	9.1	0.5	61.5	116.0	15.4
Śląskie	50.0	454	18.1	2.5	0.2	19.8	25.1	4.8
Świętokrzyskie	89.4	578	37.3	12.8	1.0	34.8	51.1	8.9
Warmińsko-mazurskie	42.6	996	30.4	5.9	1.4	91.4	103.4	40.4
Wielkopolskie	121.0	1807	75.9	15.6	0.7	159.1	185.9	12.3
Zachodniopomorskie	28.0	952	18.2	8.3	0.3	55.8	234.1	10.9
Total:	1385.1	16120	712.7	150.6	12.8	1282.9	1542.7	216.9

EUR1 = approximately PLN 4

Source: authors' calculations based on ARMA and CSO of Poland data

In Mazowieckie voivodship, there are more than 200 thousand farms, and the arable land area accounts for nearly 2.2 million ha. The second largest voivodship as regards arable land area is Wielkopolskie voivodship, with a lower number of agricultural farms being merely 121 thousand. With only 19.9 agricultural farms, Lubuskie voivodship ranks the lowest as regards the number of farms. They use only 500 thousand ha of arable land (Table 2). The great differentiation renders it difficult to compare directly the voivodships in terms of uptaking the RDP funds. In the largest voivodships, also the number of subsidy applications and the amount of subsidies paid was high. In order to compare the intensity of utilisation of the funds, the number of applications and amounts paid had to be compared with the number of agricultural farms or arable land area (Table 3).

The greatest activity as regards applications for payments within Axis 2 – environmental axis of RDP was observed among farmers from Zachodniopomorskie and Lubuskie voivodships. In Lubuskie voivodship, the number of applications was higher than the number of agricultural farms, which means that, on average, each agricultural farm implements at least one programme within Axis 2. Less than 50% of farms applied for funds related to the environmental protection in Śląskie, Podkarpackie, and Opolskie voivodships. Śląskie voivodship is highly industrialised, and the two other voivodships are characterised by relatively good soils. The foregoing does not favour the extensification of production involving the implementation of agri-environmental programmes.

Table 3

The number of contracts per 1000 of farms and amount of subsidies paid per 1 farm and per 1 ha under Axis 2 of the RDP

Voivodship	Number of contracts per 1000 of farms	Amount of subsidies paid per 1 farm in PLN	Amount of subsidies paid per 1 ha of AL, PLN
Dolnośląskie	465	2922	177
Kujawsko-pomorskie	603	2473	151
Lubelskie	488	1369	154
Lubuskie	1063	7255	288
Łódzkie	662	1200	138
Małopolskie	492	734	135
Mazowieckie	715	1809	173
Opolskie	404	2068	103
Podkarpackie	457	1129	182
Podlaskie	947	3037	216
Pomorskie	850	5030	250
Śląskie	417	992	109
Świętokrzyskie	573	1061	163
Warmińsko-mazurskie	884	5519	237
Wielkopolskie	762	2952	198
Zachodniopomorskie	958	10751	316
Poland - average	633	2197	189

Source: authors' calculations based on data from ARMA and CSO of Poland

The value of subsidies per farm was correlated with the farm size and intensity of applying for funds. In the voivodships, where the average farm area accounts for or exceeds 20 ha, the average amount paid exceeded PLN 5 thousand per farm (Lubuskie, Pomorskie, and Zachodniopomorskie voivodships). The amount paid was only PLN 1000 per farm, where the average agricultural farm area was below 6 ha. Subsidies exceeding PLN 200/ha per 1 ha of arable land were paid in five voivodships: Zachodniopomorskie, Lubuskie, Pomorskie, Warmińsko-Mazurskie, and Podlaskie voivodships. These voivodships are characterised by large agricultural farms. The lowest amount of subsidies was used in Małopolskie, Śląskie, and Opolskie voivodships, i.e. those dominated by small farms and good soils.

The cluster analysis has been prepared in order to create uniform groups of voivodships characterised by different uptaking of funds within Axis 2 – environmental axis of the RDP. Figure 3 presents the division into three clusters and sub-groups. With such division, the following division of voivodships was created:

Group 1

Sub-group 1: Warmińsko-Mazurskie

Sub-group 2: Zachodniopomorskie, Lubuskie, Pomorskie

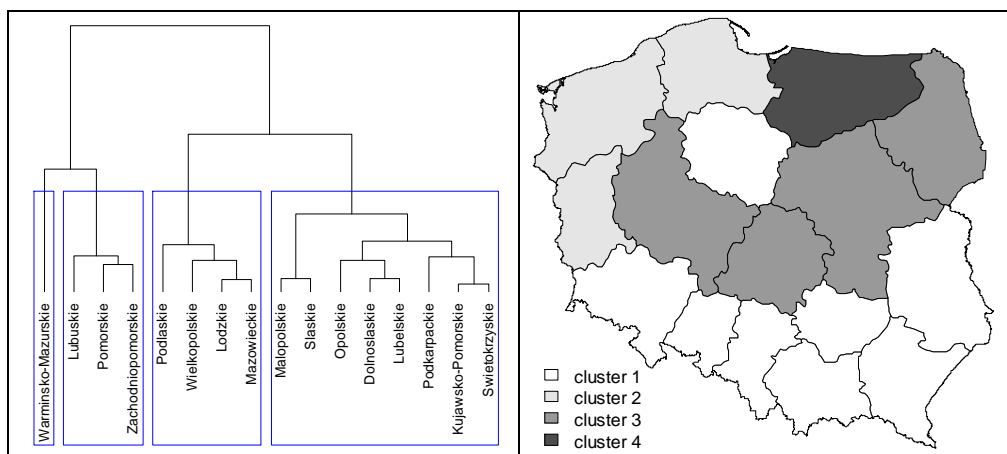
Group 2

Opolskie, Dolnośląskie, Podkarpackie, Świętokrzyskie, Śląskie, Kujawsko-Pomorskie, Lubelskie

Group 3

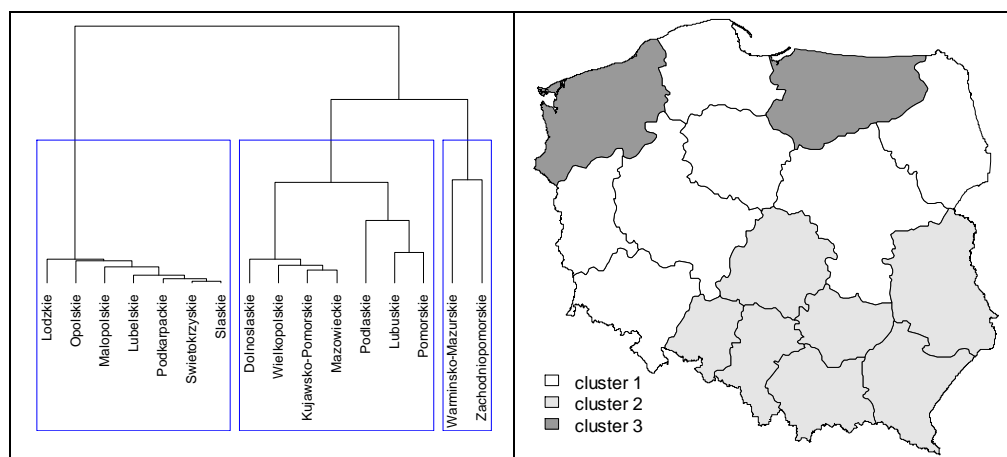
Sub-group 1: Wielkopolskie, Łódzkie, Małopolskie

Sub-group 2: Mazowieckie, Podlaskie



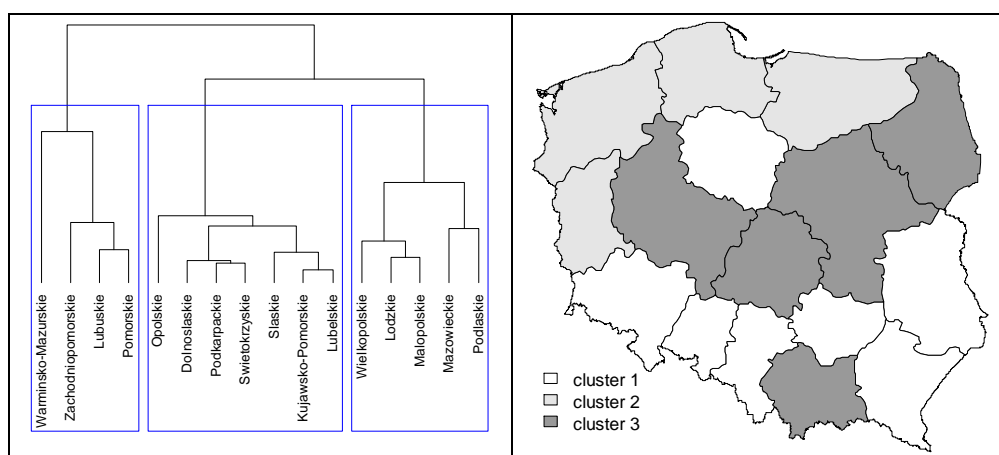
Source: authors' research

Fig. 3. Dendrogram (left) for the number of application per 1000 of farms for three variables and spatial distribution of clusters (right)



Source: authors' research

Fig. 4. Dendrogram (left) for the value of subsidy per one farm for three variables and spatial distribution of clusters (right)



Source: authors' research

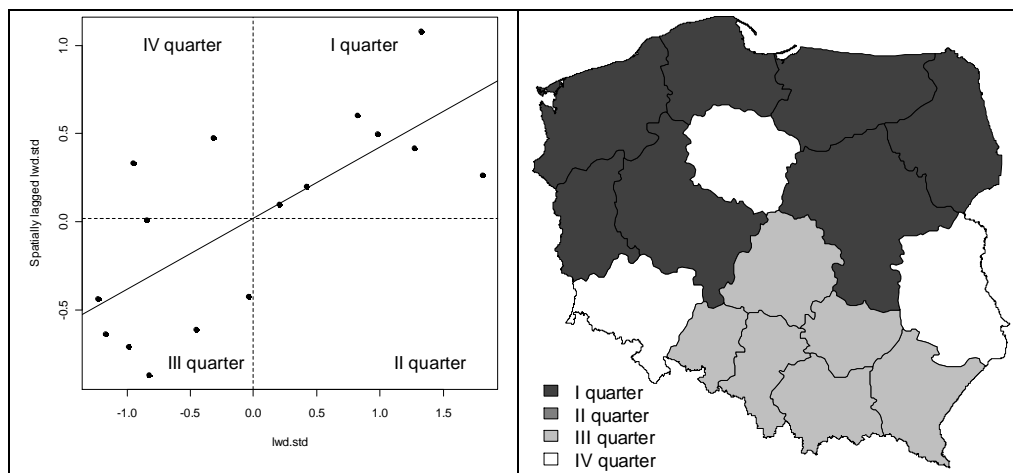
Fig. 5. **Dendrogram (left) for the value of subsidy per one hectare for three variables and spatial distribution of clusters (right)**

A similar number of applications per 1000 farms was submitted in individual groups. Only Warmińsko-Mazurskie voivodship was classified to a separate cluster (sub-group of Cluster 1). It resulted from the greatest number of afforestation decisions and a high number of applications for LFA and agri-environmental programmes.

According to the cluster analysis for subsidies per farm, the figures are strongly correlated with the farm size. Voivodships with the largest average agricultural farms form a separate cluster in the Northern Poland, and 7 voivodships in the South form a separate cluster characterised by a low amount of subsidies per farm (Figure 4). Another cluster analysis using the subsidy per 1 ha of arable land as a variable confirms the results obtained in the analysis based on the number of applications per 1000 farms. Funds within Axis 2 – environmental axis of RDP were most intensively used in voivodships situated in the Northern Poland (Figure 5). It may be concluded that the intensity of utilisation of the funds allocated to the activities involving the environmental protection was higher in voivodships characterised by larger agricultural farms. In such farms, inclusion of some of the land in the agri-environmental programme enables the owners to obtain considerable refunds and achieve production advantages due to a higher quality of field for next plants.

Moran's correlation coefficients were also used when assessing the spatial differentiation. Figure 6 presents spatial regimes for the number of applications or decisions per 1000 farms in LFA. A positive autocorrelation was shown ($I_g = 0.4038$, $p\text{-value} = 0.001801$), which may be also observed on Moran's dispersion diagram (Figure 6a), where the values for individual voivodship are located in the 1st and 3rd quarters. The map of Poland (Figure 6b) transparently shows spatial regimes connected to the positive autocorrelation, i.e. grouping of voivodships with a similar level of a feature analysed. The voivodships that form a cluster with high values, i.e., where the greatest number of applications or decisions per 1000 farms in LFA was observed, are marked grey. The lowest values were observed in the voivodships marked light grey. Figure 6a shows the direction of the spatial regime from the North to the South. Dolnośląskie, Kujawsko-Pomorskie, and Lubelskie voivodships achieved the worst results.

Figure 7 presents the results of the analysis of local coefficients of Moran's spatial correlation. Two voivodships stand out: Zachodniopomorskie voivodship in the North and Opolskie voivodship in the South. They were characterised by considerably different values of the variable (number of applications per 1000 farms) in comparison with those observed in adjacent voivodships. Zachodniopomorskie voivodship observed a very high and Opolskie voivodship observed a very low intensity of submitting applications for funds within Axis 2 of the RDP. There are no outliers on the map, i.e. regions surrounded by voivodships with other values of the variable analysed. Other voivodships were characterised by insignificant values of the local Moran's correlation coefficient, i.e. they may be considered similar in terms of the feature analysed.



Source: authors' research

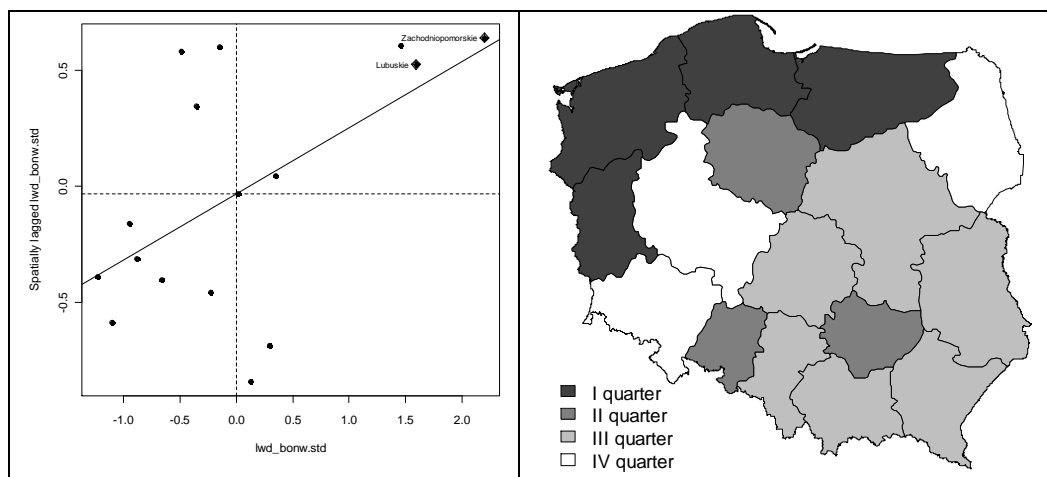
Fig. 6. Number of application per 1000 of farms (incl. LFA application): (left) global Moran's I_g scatterplot; (right) spatial distribution of the provinces by Moran scatterplot quadrant



Source: authors' research

Fig. 7. Local Moran's I_{ii} values of provinces calculated for variable: number of application per 1000 of farms (incl. LFA), Slaskie 0.7999 (p-value 0.0229), Zachodniopomorskie 1.5271 (p-value 0.0001)

In addition, the intensity of utilisation of the funds was analysed without taking account of the support for LFA, since subsidies related to LFA require farmers to show minimum activity only and it is easy to obtain them without the necessity to perform additional activities. Figure 8 presents spatial regimes for the number of applications or decisions per 1000 farms excluding LFA. The voivodships that stand out include Zachodniopomorskie and Lubuskie voivodships, where the values of the said feature were the highest (Figure 8 (left) – Moran's scatterplot). The value of Moran's correlation coefficient is positive and significant ($I_g = 0.2844$, p-value = 0.01489). It shows a similar distribution as in the case of activities with LFA.



Source: authors' research

Fig. 8. Number of application per 1000 of farms (excl. LFA application): (left) global Moran's I_g scatterplot, (right) spatial distribution of the provinces by Moran scatterplot quadrant

When analysing local Moran's coefficients, one may observe a visible cluster in the North-Western Poland including Lubuskie, Zachodniopomorskie, and Pomorskie voivodships. The said voivodships were characterised by the greatest number of applications or decisions per 1000 farms excluding LFA, and they are surrounded by voivodships with a lower value of the feature (Figure 9). A high activity of agricultural farms as regards the acquisition of funds for activities related to the environmental protection was observed in all the aforementioned voivodships.



Source: authors' research

Fig. 9. Local Moran's I_{ii} values of provinces calculated for variable: number of application per 1000 of farms (excl. LFA), (Lubuskie 0.8885 (0.02943), Pomorskie, 0.9408 (0.0085), and Zachodniopomorskie 1.4975 (0.0001))

Similar analyses using Moran's spatial correlation coefficient were carried out for the other two features: value of subsidies per farms and value of subsidies per 1 ha of arable land. The figures are annexed hereto. The said analysis shows that three groups of voivodships may be singled out. The first group includes voivodships in the North and North-West, which are characterised by the greatest uptaking of funds under RDP allocated to the environmental protection. The second group includes three voivodships situated in the South of Poland (Śląskie, Opolskie, and Świętokrzyskie voivodships). The said voivodships observed the lowest uptaking of funds under the programmes analysed. The third group includes all other voivodships. A similar division was created because of research concerning the technical efficiency of agriculture (Rusielik R., 2010).

The results of the analysis excluding LFA show even greater polarisation of regions as regards the intensification of utilisation of funds for the environmental protection. They were most intensively utilised in voivodships, where the largest agricultural farms are found. The foregoing means that the activities involving the environmental protection, in particular those requiring additional efforts at farms, are more efficiently performed by large agricultural farms. Small agricultural farms are not able to obtain significant benefits from the implementation of agri-environmental programmes due to their small arable land area, because they require additional outlays not covered by the subsidy. They allocate additional funds, in particular, to the consumption (Kokoszka K., 2010). The larger the agricultural farm, the easier it is to achieve economies of scale. The foregoing means that the effectiveness of the environmental protection may be greater in areas dominated by large agricultural farms, and the equalisation of the number of environmental programmes implemented would require a differentiation of amounts paid per 1 ha depending on the farm size or the area to participate in agri-environmental programmes within one farm. A more difficult access to the information at small agricultural farms may form an additional obstacle (Sadowski A., Czubak W., 2010).

Conclusions

In Poland, the uptaking of funds within Axis 2 – environmental axis of RDP is different depending on the region. The greatest uptaking of funds for pro-environmental programmes is observed in the Northern Poland. The analysis of the subsidy amount including LFA subsidies showed a smaller differentiation and less transparent voivodship clusters. A stronger differentiation is observed if only activities in which the obtaining of a subsidy must be preceded by an additional application and additional activities at a farm are taken into account. It confirms the results of other analyses showing that the environmental policy instruments, assuming that it is voluntary, shall be attractive from the economic point of view, and easy to obtain and implement for the beneficiaries (Defrancesco E., Gatto P., Runge F., Trestini S., 2008). Only in such case, the production-related goals (improvement in the soil quality) and general social goals (environmental protection) will be attained.

A higher intensity of acquisition and utilisation of funds for agri-environmental programmes was connected with a greater average farm area in a voivodship. The foregoing means that the interest in relatively expensive programmes involving a refund of costs incurred or loss of income is connected to the possibility of their full implementation with the use of the farms' resources. At small farms, which often do not have their own tractive forces, the cost of additional pro-environmental efforts may be higher than the subsidy obtained.

The results obtained show that it may be necessary to differentiate the action promoting agri-environmental activities financed by RDP depending on the region, and to analyse the costs of implementation of agri-environmental programmes by regions and farms with equal sizes.

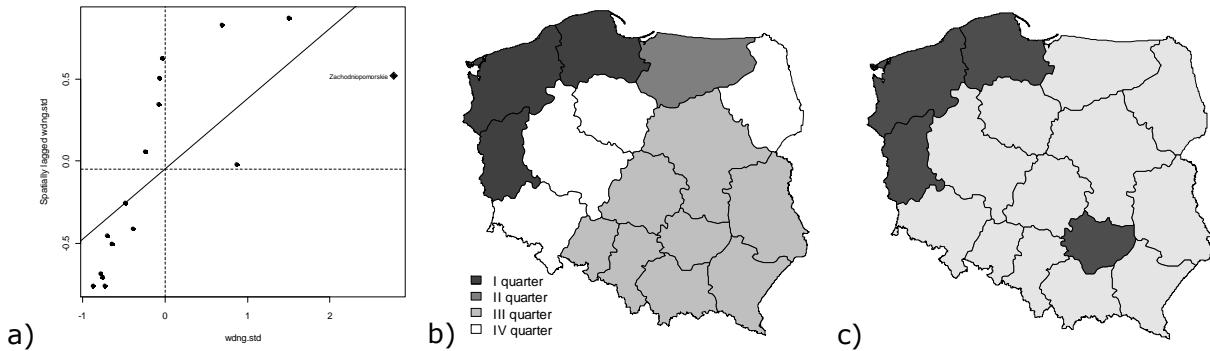
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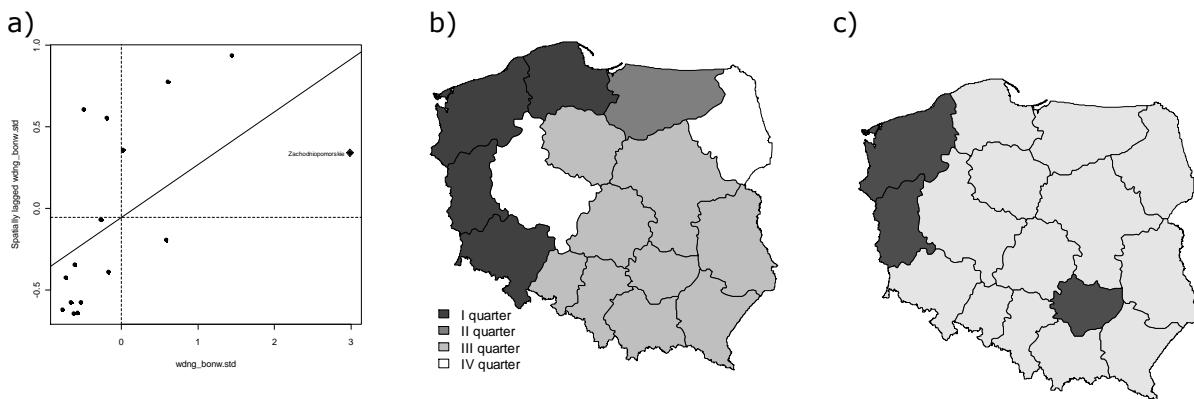
11.

Annex



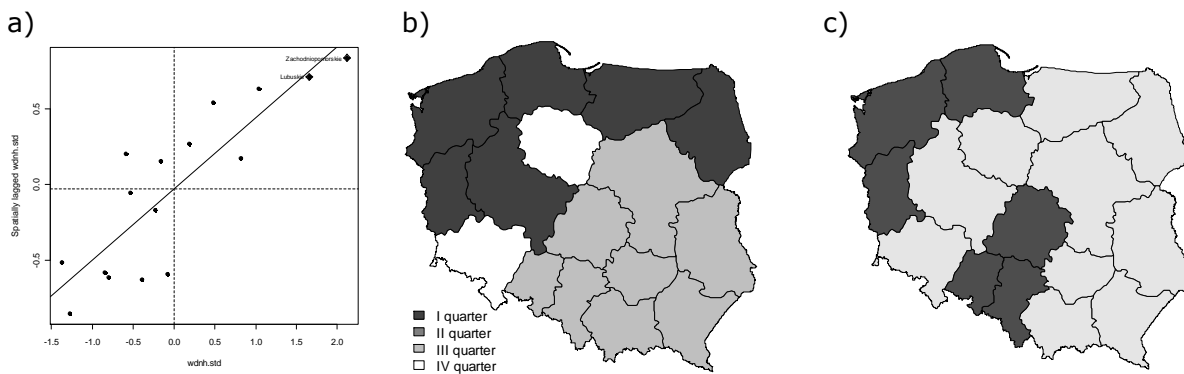
Source: authors' research

Fig. A1. Amount of subsidies per 1 farm (incl. LFA applications) a) global Moran's I_g scatterplot b) spatial distribution of the provinces by Moran scatterplot quadrant, c) local Moran's I_{ii} values of provinces



Source: authors' research

Fig. A2. Amount of subsidies per 1 farm (excl. LFA applications) a) global Moran's I_g scatterplot b) spatial distribution of the provinces by Moran scatterplot quadrant, c) local Moran's I_{ii} values of provinces



Source: authors' research

Fig. A3. Amount of subsidies per 1 hectare (incl. LFA applications) a) global Moran's I_g scatterplot b) spatial distribution of the provinces by Moran scatterplot quadrant, c) local Moran's I_{ii} values of provinces

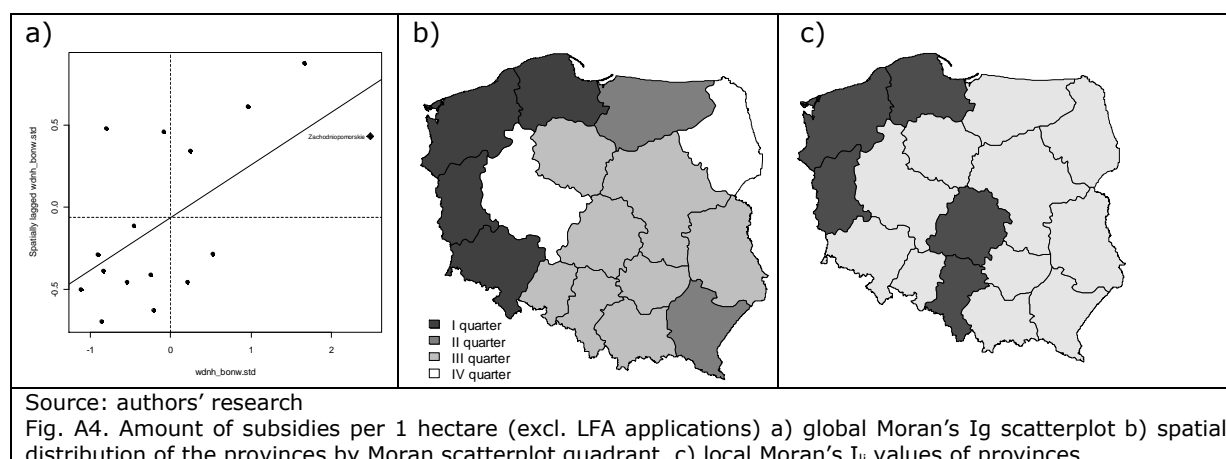


Table A1

Local Moran's I_{ij} statistics for provinces of Poland

Province	Local Moran's I_{ij} values			
	variable: subsidies per one farm		variable: subsidies per one hectare	
	incl. LFA	excl. LFA	incl. LFA	excl. LFA
Dolnoslaskie	-0.0297	0.0089	-0.0268	0.0891
Kujawsko-Pomorskie	-0.015	0.0202	-0.1268	0.0549
Lodzkie	0.3437	0.3283	0.5238*	0.5965*
Lubelskie	0.3473	0.3236	0.0318	0.108
Lubuskie	1.3931**	1.4395**	1.2601**	1.556**
Malopolskie	0.7094	0.5109	0.5287	0.2783
Mazowieckie	0.1322	0.2248	0.0413	0.3457
Opolskie	0.1714	0.0722	0.7546*	0.2639
Podkarpackie	0.5948	0.3929	0.0506	-0.1014
Podlaskie	-0.0259	-0.3197	0.2766	-0.4120
Pomorskie	0.6077*	0.4996	0.6991*	0.6302*
Slaskie	0.5711	0.4042	1.1639**	0.6368*
Swietokrzyskie	0.5705*	0.4306*	0.2627	0.1412
Warminsko-Mazurskie	-0.019	-0.1199	0.1527	-0.1592
Wielkopolskie	-0.0375	-0.1146	0.0524	-0.0435
Zachodniopomorskie	1.5316**	1.0785**	1.8929**	1.1424**

* significant for 0.05. ** significant for 0.01

Source: authors' research

Support Measures and Financial Sources for Fishery Policy in Latvia

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Abstract. There are long-lasting traditions in the fishery industry of Latvia, yet its significance in the country's national economy shrinks if its share in the Gross Domestic Product is computed. It is one of the industries in Latvia that has a positive foreign trade balance and a stable position in exports, accounting for 2.4% of the total value of exports. To support the fishery industry in Latvia, the Fish Fund (FF) financed from the government budget was established in 1995. After Latvia's accession to the European Union (EU), support instruments of the Common Fisheries Policy (CFP) are available from the Financial Instrument for Fisheries Guidance (FIFG) for the period 2004-2006 and the European Fisheries Fund (EFF) for the period 2007-2013. Thus, after Latvia's accession to the EU, a funding of LVL 140.5 million from the EU Funds is available to support the fishery industry. The measures and results of all these three funds are analysed in the present research.

Key words: fisheries, support measures, policy.

Introduction

Fisheries policy in the EU has been inserted in the Treaty of Rome. Initially it was linked to agricultural policy, but over time it became increasingly independent. The CFP was officially introduced in 1983, yet its origin is found in the beginning of the 1970s when fisheries were a component of the Common Agricultural Policy (Eiropas Komisija, 2009). Since the 1980s, the CFP underwent several reforms in 1983, 1992, and 2002. The CFP, as reformed in 2002, has the primary goal of operating in sustainable fisheries, and to guarantee incomes and stable jobs to fishermen and is an integral part of the Community's policy on sustainable development and gives equal priority to the environmental, economic, and social aspects (Olivert-Amado, 2008).

The EU provides approximately 4.6% of the world output of fishery and aquaculture products, and therefore is the fourth largest producer in the world. Over the recent twenty years, the annual total output slightly decreased in the EU if compared with the previous years. In terms of quantity, the three largest nations – producers – in the EU are Spain, France, and the United Kingdom (Eiropas Komisija, 2010). In Latvia, the fishery industry has long-lasting traditions and history as well. We are sure, that the fishery in Latvia has long term development possibilities, as fisheries are not only an integral part of Latvia's national economy, but also an identity feature for the nation. By making the fisheries policy in Latvia, the EU CFP has to be definitely taken into consideration. The most important areas of action of the CFP are (European Commission, 2011a):

- laying down rules to ensure Europe's fisheries are sustainable and do not damage the marine environment;
- providing national authorities with the tools to enforce these rules and punish;
- monitoring the size of the European fishing fleet and preventing it from expanding further;
- providing funding and technical support for initiatives that can make the industry more sustainable;
- negotiating on behalf of the EU countries in international fisheries organisations and with non-EU countries around the world;
- helping producers, processors, and distributors get a fair price for their produce and ensuring consumers can trust the seafood they eat;
- supporting the development of a dynamic EU aquaculture sector (fish, seafood, and algae farms);
- funding scientific research and data collection, to ensure a sound basis for policy and decision making.

Hypothesis of this research: Latvian fishermen successfully use the available support instruments for developing the fishery industry. Thus, the **research aim** is to analyse the main support types for the fishery industry and their sources of funding in Latvia. The following **research tasks** are set forth:

- 1) to summarise the assessments of fishery policy by other authors;
- 2) to characterise the main indicators of Latvia's fishery industry;
- 3) to analyse the available funds for financing the development of fishery industry and the results of their uptaking in Latvia.

Research subject: support payments in the fishery industry.

Research object: fishery industry in Latvia.

Methods of analysis and synthesis, statistical analysis, the logical and constructive **methods were applied** to solve the research tasks. To research the topic, the common indicators of fishery industry were analysed using the data of Latvia's Central Statistical Bureau (CSB), annual reports prepared by the Ministry of Agriculture (MoA), and information on support payments gathered by the Rural Support Service (RSS). Various documents of the European Commission were also used in the research. The discussion includes researches and conclusions on the situation in the fishery industry of other authors – T. P. Smith and M. P. Sissenwine (2001), Juan C. Surís-Regueiro, Manuel M. Varela-Lafuente and Carlos Iglesias-Malvido (2003), M. Sissenwine and D. Symes (2007), Jesper L. Andersen, Max Nielsen and Erik Lindebo (2009), U. R. Sumaila and G. R. Munro (2009), M. Roze (2010), N. Riekstiņš (2010), A. Afanasjeva (2010), and I. Āboliņš (2010).

Results and Discussions

1. Assessments of fishery policy by other authors

Fishery policies and their implementation were researched by many foreign scientists. Juan C. Surís-Regueiro, Manuel M. Varela-Lafuente, and Carlos Iglesias-Malvido (2003) are convinced that on the one hand, analysis shows that there is a positive correlation between the level of Structural Funds and the attainment of goals. On the other hand, it was found that the greater the relative availability of quotas, the poorer the countries performed in complying with the objective of reducing the fishing capacity, and the higher the expectations of achieving acceptable yields. These correlations, however, were not very strong.

Jesper L. Andersen, Max Nielsen and Erik Lindebo (2009) point out that fishing quotas are today exchanged between the EU Member States at a rate of 4% of total turnover in the EU fisheries. Germany, Belgium, Denmark, and the Netherlands are the most active. Only one fourth of these exchanges are permanent. With the management systems in the EU fisheries differing among countries, comparative advantages in fisheries exist in the Member States with the best management practices.

T. P. Smith and M. P. Sissenwine (2001) point that the world's fisheries are significant from many perspectives: biological, economic, cultural, and political. It is clear today that the world's fishery resources are not only exhaustible but also that, for many fisheries, current levels of fishing pressure are not sustainable. Stated more formally, for many of the world's fishery populations, demand at the current cost of production (taking into account the use of the best available technology) exceeds the rate of renewal of the fish population, thus resulting in overfishing (unsustainable fishing).

U. R. Sumaila and G. R. Munro (2009) emphasise that fish, being renewable resources, portray the following characteristics: 1) "utilization" of a unit of the fish resource implies its destruction, that is, the unit is completely and irrevocably lost; and 2) the fish stock can be augmented again to enable a continuing availability through time.

Michael Sissenwine and David Symes (2007) point out that fisheries policy in Europe is under scrutiny as concerns about the status of stocks mount and fisheries issues receive increasing attention as part of a broader environmental agenda. At the same time, traditional interests in fisheries are suffering from the negative impacts of stock declines and excess fishing capacity. Evolving attitudes about government institutions are also changing 1) the way fisheries are managed, 2) funding for fisheries programmes, and 3) public participation in governance. Its objectives are broad, and they do not provide much guidance on how to manage fisheries.

There are quite a few researches on the issues of fishery policy and support for it in Latvia. Mostly the employees of the Ministry of Agriculture and its institutions discuss about them. The conference "Introduction of Measures of the European Fisheries Fund and the Development of Fishery Industry in Latvia", in which policy makers and professionals assessed the development of this industry, was held in Latvia by the end of 2010. Director of the international organisation EUROFISH A.Afanasjeva (2010) emphasised that the output of aquaculture would reach 55700 thousand tons in the world in 2010, which was 3.7% more than a year ago, and the volumes of exports and imports might exceed LVL 100 billion, which was 6.5% more than in 2009.

N.Riekstiņš (2010) from the Ministry of Agriculture pointed that fish products were the third most significant product exported from Latvia, accounting for 2.4% of total exports. An interest in aquaculture is proved by the fact that 120 companies rear aquaculture animals out of 283 aquaculture companies registered by the Food and Veterinary Service. R. Joffe (2010) introduced the conference participants with the research activities performed by the Institute for Food Safety, Animal Health, and Environment in the fishery industry: producing young ones of fish to increase fish resources in natural water reservoirs, expert examinations to estimate any damage done to fish resources, and elaborating regulations for exploiting fish resources in water reservoirs. I.Āboliņš from the Rural Support Service (2010), in his turn, informed that more than EUR 112 million of the EU public funding from the EFF are available for Latvian fishermen, fish processors, and aquaculture producers in the period 2007-2013, which is a significant investment in developing the fishery industry.

2. Description of the fisheries sector in Latvia

The fishery industry is related to a rational and sustainable use of Latvia's living natural resources in its economic zone, territorial waters, and internal waters. The fishery industry in Latvia represents three main fields of activity: fishing, fish processing, and aquaculture that to a great extent also affects the development of rural areas. The share of fishery industry in the Gross Domestic Product (GDP) has decreased over the recent 6 years and in 2009 accounted for only 0.6% (Table 1). However, this industry's contribution to exports, which accounts for 2.4% of the country's total export of goods and services, has to be emphasised. The fishery industry is one of the very few industries in the national economy of Latvia that has a positive foreign trade balance over the analysed period regardless of the overall financial crisis in the world. In 2009, canned fish and other fish products were the third most significant food products exported from Latvia behind cereals, flour products and drinks, juices that had respectively the first and the second position (Riekstiņš, 2010). Opposite trends are observed in the EU foreign trade, as the EU together with Japan and the USA are one of the three main importers of products of fisheries and aquaculture in the world, and their total trade balance is negative, exceeding EUR 13.6 billion (Eiropas Komisija, 2010).

Table 1

Main fisheries indicators in Latvia for the years 2004-2009

Indicators/Years	2004	2005	2006	2007	2008	2009	Growth rate relative to the base year, %
Share of fisheries in GDP, %	0.9	1.1	0.9	0.8	0.7	0.6	67
Share of fisheries in total exports, %	2.8	3.1	3.1	2.1	2.4	2.4	86
Trade balance of fisheries, mln.EUR	57.6	74.4	88.9	29.7	36.6	33.9	58
Number of fishing vessels	942	928	897	n.d.*	794	796	84
Fish catch of Latvian fishing vessels (except internal waters), thou. t	125.0	150.4	137.5	153.8	156.9	162.2	129
Fish catch in internal waters, thou. t	0.4	0.4	0.3	0.3	0.3	0.3	75
Output of fish products, thou. t	166.5	213.7	179.0	170.0	191.1	183.0	109

*no data

Source: Zemkopības ministrija, 2006, Zemkopības ministrija, 2008, Zemkopības ministrija, 2009a, Zemkopības ministrija, 2010a, Ankviča, 2010, Riekstiņš, 2010, CSP, 2011a, CSP, 2011b and authors' calculations

The key goal of the EU CFP is to guarantee a sustainable use of fish resources. Management of fleet capacity is an important instrument in achieving it. Over the recent

seventeen years, an average annual decrease in the capacity of fishing fleet in the EU has almost been constant, approximately 2%, in terms of both tonnage and engine power. Over the recent six years in Latvia, the number of fishing vessels has decreased by 16% and accounts for only 0.9% of the total number of fishing vessels in the EU (Eiropas Komisija, 2010 and authors' calculations). The fishery industry in Latvia employs 1632 individuals, which is the 13th position in the EU behind such large countries in terms of fishery industry as Spain, Italy, Greece, Portugal, France, the United Kingdom a.o. Yet it has to be taken into consideration that the processing industry in Latvia additionally employs 6151 people (Eiropas Komisija, 2010).

The output of aquaculture products in the EU reaches 1.3 million tons and its value is approximately EUR 3.2 billion, accounting for 20.3% of the total output of fishery products in the EU. The EU share in the world's total output of aquaculture products is 2.6% in terms of volume and 5.1% in terms of value (Eiropas Komisija, 2010). Yet, in Latvia the output of aquaculture products constitutes an insignificant share – only 0.2% of the total fish catch and has been relatively stable over the recent six years. However, the fish catch of Latvian vessels in external waters shows a stable upward trend – an increase of 29% in 2009 compared with 2004 when Latvia joined the EU.

The output of fish products increases steadily in Latvia, amounting to 183 thousand tons in 2009, which exceeds the level of 2004 by 9%. Latvia should have taken into account the development trends in the world's fishery industry – stable quantities of fish catches, aquaculture as the world's fastest growing food industry, which accounts for 47% of the total output of fish products, factories of fish processing are outsourced to China, Vietnam and Russia as well as India and Thailand (Afanasjeva, 2010).

3. Support instruments for the fishery industry in Latvia

The support instruments available for the fishery industry in Latvia have a historical development and changes in their sources of financing. There were two main periods:

- pre-accession period to the EU when only support measures of the Fish Fund financed from the government budget were available;
- post-accession period to the EU when the EU Structural Funds – the FIG for the period 2004-2006 and the EFF for the period 2007-2013 – are available in addition to the FF.

Table 2

Support instruments for the fishery industry and their characteristics in Latvia

Indicators	Fish Fund	Post-accession period	
		FIG	EFF
Period of operation	Since 1995	2004-2006	2007-2013
Sources of financing	Government budget	EU and government budget	EU and government budget
Institution responsible for introduction	Ministry of Agriculture	Ministry of Finance and Ministry of Agriculture	Ministry of Agriculture
Administering institution	Ministry of Agriculture and the Fund's Council	Rural Support Service	Rural Support Service
Main documents	Cabinet Regulations	Development Plan of Latvia (SPD), Programme Supplement, Guidelines	Action Programme, Cabinet Regulations

Source: authors' construction based on Ministru kabinets, 1995, Finanšu ministrija, 2003, Zemkopības ministrija, 2009b

The FIG is designed to help achieve the aims of the common fisheries policy by providing structural assistance. It thus strengthens the competitiveness of the operating structures and the development of economically viable enterprises. The aims of the FIG's structural measures are to:

- contribute to achieving a balance between fisheries resources and their exploitation;

- strengthen the competitiveness of operating structures and the development of economically viable enterprises in the sector;
- improve market supply and the value added to fishery and aquaculture products;
- contribute to revitalising areas dependent on fisheries and aquaculture (European Commission, 2011b).

The FIGO existed till 2006. The EFF started its operation on 1 January 2007 and was created by the bottom-up approach to foster transition to a fishing fleet that actually corresponds to the present resources (Eiropas Komisija, 2009). The indicators characterising all sources of financing are summarised in Table 2.

It has to be taken into consideration that reforms of the CFP will take place. Thus, changes will also affect the support instruments and their sources of financing. In September 2008, the Council of Ministers of Agriculture and Fisheries of the EU started a discussion on the need of reforming the CFP. The basic issues of this reform are the structural imperfections, including support for the fishery industry, organisation of the common market, further improvements in the management of EU fisheries, foreign aspects (international organisations, agreements with the third countries) and aquaculture (Riekstiņš, 2010).

3.1. The Fish Fund

The Fish Fund in Latvia was created in accordance with Sections 27, 28, and 29 of the Fisheries Law of the Republic of Latvia. The FF consists of a subsidy allocated from the annual government budget for the subprogramme "Fish Fund" of the Ministry of Agriculture as well as of donations and contributions of individuals and legal entities (including foreign). The goal of the Fish Fund is to provide funds for scientific projects that relate to researching fish resources and impacts of pollution and various economic activities on fish resources as well as to activities for reproduction and preservation of fish. The procedure of collecting, managing, and allocating the Fish Fund's finances is set by the Cabinet Regulations No. 388 "Statute of the Fish Fund" of 19 December 1995 (Zemkopības Ministrija, 2010b).

An analysis was performed computing growth rates of dynamic time series data as a percentage change relative to the previously reached level (Balabka, 2008):

1) growth rate relative to the base year, %:

$$BGR_{m(b)} = (y_m / y_1) \times 100\% \quad [1]$$

2) annual growth rate, %:

$$CGR_{m(ch)} = (y_m / y_{m-1}) \times 100\%, \quad [2]$$

where

y_m – denotes any level of time series;

y_{m-1} – denotes the previous level of time series;

y_1 – denotes the beginning (*first*) level of time series.

Table 3

Government budget subsidies for the subprogramme "Fish Fund" in Latvia during 2005-2010

Year	LVL ²	Annual growth rate, %	Growth rate relative to the base year, %
2005	368 078	-	100
2006	361 652	98	98
2007	359 742	99	97
2008	353 265	98	95
2009	300 000	85	81
2010	204 457	68	55

Source: Zemkopības ministrija, 2010b and authors' calculations

After assessing the funding allocated for FF activities in Latvia, one can conclude that this funding has been reduced almost twice as much over the period since 2005. A substantial reduction of funding was observed during the recent 2 years, as revenues of the government

² Latvian lats

budget decreased due to the international financial crisis. Since 2010, the FF funds may be allocated for the following activities:

- financing scientific programmes and cooperation in researching the fishery industry;
- regenerating and reproducing fish resources;
- preserving fish resources, which is done by the government institutions or municipalities that are responsible for protecting fish resources;
- informing the public about the research on fish resources, a rational and careful use of fish resources, their reproduction and preservation;
- participating at international events, conferences, and training courses related to the research on fish resources, a rational and careful use of fish resources, their reproduction and preservation, except support for professional education, partner relations, cooperation, and exchange of experience;
- liquidating the consequences of natural disasters or accidents that have caused damages to young ones of fish reared for implementing the National Programme for the Reproduction of Fish Resources (Zemkopības Ministrija, 2010b).

3.2. Support measures of the FIFG

The support measures for agriculture and rural development during 2004-2006 were set by the SPD, Priority 4 "Promotion of Development of Rural Areas and Fisheries" that has 2 sub-priorities:

Sub-priority 4.1. Promotion of Development of Agriculture and Rural Areas;

Sub-priority 4.2. Promotion of Development of Sustainable Fisheries that is financed from the FIFG, the funding of which accounts only for 4% of the total structural funding in Latvia (Pilvere, 2007). The information on the support measures of the FIFG and their results are summarised in Table 4.

Table 4

Contracts financed from the Structural Funds – the FIFG – as of 10 November 2008

Measure and Activity	Implemented projects		Funding		On average per 1 project, LVL
	Number	Structure, %	LVL	Structure, %	
<i>4. Priority: Promotion of Development of Rural Areas and Fisheries</i>					
4.8. Measure: Adjustment of Fishing Effort	79	18	12 109 581	52	153286
4.9. Measure: Fleet Renewal and Modernisation of Fishing Vessels	61	14	308 049	1	5050
4.10. Measure: Development of Processing and Marketing of Fishery and Aquaculture Products, Fishing Port Facilities and Aquaculture	89	20	9 120 247	39	102475
<i>Activity 1 - Development of Processing and Marketing of Fishery and Aquaculture Products</i>	46	10	4129476	18	89771
<i>Activity 2 - Fishing Port Facilities</i>	15	3	3733565	16	248904
<i>Activity 3- Aquaculture</i>	28	6	1257206	5	44900
4.11. Measure: Development of Coastal Fishery, Socio-economic Measures, Aid for Temporary Cessation of Fishing Activities and Other Financial Compensation, Promotion of New Market Outlets and Support to Producer Organisations	217	49	1 904 150	8	8775
<i>Activity 1 - Development of Coastal Fishery</i>	5	1	253784	1	50757
<i>Activity 2 - Socio-economic Measures</i>	205	46	1 430 919	6	6980
<i>Activity 3- Promotion of New Market Outlets</i>	3	1	207 366	1	69122
<i>Activity 4- Support to Producer</i>	4	1	12082	0	3020
Total	446	100	23 442 027	100	52561

Source: Lauku atbalsta dienests, 2008 and authors' calculations

After analysing the information summarised in Table 4, one can make the following conclusions:

- during the period of 2004-2006, the FIFG funding for the fishery industry of Latvia amounts to LVL 23.4 million or annually LVL 7.8 million on average;
- totally 446 projects were implemented, 49% of which were implemented in Measure 4.11, 20% in Measure 4.10, and 18% in Measure 4.8;
- the structure of funding does not correspond to the structure of number of projects, as the majority of the total support funding or 50% was paid in Measure 4.8, 39% in Measure 4.10, and only 8% in Measure 4.11;
- thus, the largest projects were implemented in the support measures in which the largest funding was paid, i.e. Measures 4.8 and 4.10, LVL 153 thousand and 102 thousand respectively. Yet the largest projects are financed in the Activity "Fishing Port Facilities", amounting to LVL 249 thousand, whereas the smallest ones are financed in the Activity "Support to producer" with LVL 3 thousand.

The Ministry of Finance (2009) concludes that there is progress in terms of physical indicators within the FIFG measures:

- within Measure 4.8 "Adjustment of Fishing Effort", 70 fishing vessels were disposed of as well as 9 fishing vessels were assigned for use for other purposes;
- within Measure 4.9 "Fleet Renewal and Modernisation of Fishing Vessels", 57 fishing vessels were modernised;
- within Measure 4.10 "Development of Processing and Marketing of Fishery and Aquaculture Products, Fishing Port Facilities and Aquaculture", 28 fish processing enterprises and 5 fishing ports were modernised as well as 23 aquaculture enterprises were supported;
- within Measure 4.11 "Development of Coastal Fishery, Socio-economic Measures, Aid for Temporary Cessation of Fishing Activities and Other Financial Compensation, Promotion of New Market Outlets and Support to Producer Organisations", 205 fishermen received support.

3.3. Introduction of the EFF

The EFF will function till the year 2013. M.Roze (2010) believes that it is of great importance how reasonably we use natural resources and how efficiently we use the funds available from the EU Fisheries Fund together with national co-funding, but the EU funds are not sufficient for the fishery industry.

It was pointed out that the use of EFF funds was slow in the period of 2007-2013, as only 5% of the total amount was allocated from the EU budget by the middle of 2010. It can make problematic the justification of requests for necessary funds for the next EFF planning period (Riekstiņš, 2010). In Latvia, already 27% of the EFF funds have reached the bank accounts of project implementers (Table 5).

After analysing the data summarised in Table 6, one can find that:

- during the period of 2007-2013, the total EFF funding for the fishery industry of Latvia amounts to LVL 117 million or LVL 16.7 million a year. It is 2.1 times on average more than annually in the previous programming period;
- of the available funding, 36% are intended for the measures of Priority 2, 23% for Priority 4 that characterises the priorities of fishery policy in Latvia;
- till the end of 2010, the funding of approved projects accounts for 56% of the available funding; it can be regarded as a high rate compared with the EU average level;
- already 69% of the available funding has been paid in Priority 1, thus one can forecast that an additional redistribution of funds for this priority from the priorities in which funds have not been fully used will be necessary;
- it has to be emphasised that the funds in Priority 4 are slowly used. Taking into consideration the number of approved projects, one can forecast that the use of funds might increase, but the funding intended for this priority might be a source of additional funding for the support measures of other priorities.

Table 5

EFF funding in Latvia as of 1 December 2010

Priority axis	Short name of measures	Available public funding, LVL	Public funding of approved applications, LVL	Approved as % of available public funding	Paid public funding, LVL	Paid as % of available public funding
	Professional education	969 869	24 483	3%	24 483	3%
	Credit fund	x	5 000 000	x	5 000 000	x
I	Fisheries	19 421 701	13 482 704	69%	13 404 185	69%
II	Aquaculture, inland fishing, processing	43 015 119	25 523 759	59%	4 826 983	11%
III	Measures of common interest	22 000 576	14 107 378	64%	7 741 738	35%
IV	Fisheries areas	27 092 135	6 287 426	23%	206 487	1%
V	Technical assistance	4 649 185	1 003 487	22%	415 493	9%
Total		117 148 585	65 429 237	56%	31 619 368	27%

Source: Lauku atbalsta dienests, 2010a and 2010b and authors' calculations

After comparing the possibility of government budget to support the fishery industry in Latvia in 2010 or LVL 200 thousand with the average annual funding of the EFF during 2007-2013, one can conclude that no development is possible without the funding and support measures of the EU in the fishery industry of Latvia. The information on the number of projects submitted and approved for the EFF funding is summarised in Table 6.

The activity in receiving the EFF support has increased over 4 years (Table 6) if compared with the period of 5 years of FIGG funding (Table 4) when 446 projects were financed, as already 1001 projects are submitted, of which 712 or 71% are approved and 531 projects have received their funding, which is by 19% more than the number of projects financed during the previous period. The largest number of projects or 62% of their total number is financed in Priority 1, while 21% in Priority 2. Over this period, 44% of projects are financed in Priority 1.4 "Socio-economic measures" which is almost as many as during the previous period.

There are several priorities in which no application submission have been started, i.e. Priorities 1.2, 2.3, and 3.2.

The average size of projects is LVL 91895 which is by 74% more than during the previous period of programming. Like before, the largest projects are in Priority 3.3 "Investments in Fishing Ports and Landing Sites" – LVL 870 thousand or 3.5 times more than the average size of projects in the period of 2004-2006. It has to be noted that a new measure "Credit Fund" amounting to LVL 5 million has been established for the period 2007-2013. It was not initially envisaged in the Action Programme. The reason for it was the economic recession caused by the global financial crisis and the precaution of banks in granting loans. Therefore, the implementation of EFF projects will be promoted by means of this support measure, as it will be possible to receive a loan for implementing already approved projects.

Table 6

Projects submitted and approved for the EFF funding in Latvia as of 1 December
2010

Priority axis	Short name of measures	Number of registered applications	Number of approved applications	Number of paid applications	Approved applications as % of registered ones	Average funding of approved projects, LVL
	Professional education	4	2	2	50	12241
	Credit fund	x	1	1	x	5000000
	1.1. Permanent cessation of fishing activities	141	84	84	60	134694
	1.2. Temporary cessation of fishing activities	0	0	0	0	0
	1.3. Investment in fishing vessel equipment and selectivity of fishing gears	10	10	7	100	12940
	1.4. Socio-economic measures	259	236	236	91	8640
Priority Axis I	Fisheries	410	330	327	80	40857
	2.1. Productive investments in aquaculture	191	90	26	47	129129
	2.2. Aqua-environmental measures	73	68	68	93	24048
	2.3. Animal health measures	0	0	0	0	0
	2.4. Inland fishing	2	2	-	100	19224
	2.5. Processing and marketing of fishery and aquaculture products	61	37	21	61	330500
Priority Axis II	Aquaculture, inland fishing, processing	327	197	115	60	129562
	3.1. Collective operation actions	6	4	2	67	586293
	3.2. Development and protection of aquatic flora and fauna	0	0	0	0	0
	3.3. Investments in fishing ports and landing sites	22	13	11	59	869770
	3.4. Development of new markets and promotional campaigns	7	6	5	86	75867
Priority Axis III	Measures of common interest	35	23	18	66	613364
	4.0. Implementation of territorial development strategies (strategies)	24	24	9	100	205449
	4.1. Implementation of territorial development strategies	134	70	4	52	12424
	4.2. Ensuring the operation of the LFAGs, acquiring of skills, activation of territories	24	24	23	100	20291
Priority Axis IV	Fisheries areas	182	118	36	65	53283
Priority Axis V	Technical assistance	43	41	32	75	24475
Total		1 001	712	531	71	91895

Source: Lauku atbalsta dienests, 2010a and 2010b and authors' calculations

Conclusions

1. In Latvia, the fishery industry has long-lasting traditions and history. Yet its share in the GDP has decreased and in 2009 accounted for only 0.6%. It has to be noted that the fishing industry's contribution to the country's total exports has stabilised at 2.4% over the recent years and it has a positive trade balance which should be kept to a sustainable future.
2. The development of Latvia's fishery industry after the accession to the EU depends on the CFP and the limitations and support measures set by it. After joining the EU, additional funds to Latvia's fishery industry in addition to the FF financed from the national budget are

available from the FIFG for the period of 2004-2006 and the EFF for the period of 2007-2013.

3. Taking into account the limited national budget, the funding for Latvia's FF has decreased almost 2 times from LVL 368 thousand to LVL 204 thousand during 2005-2010, as a result of which the fishery industry can be very minimally supported from the national budget.
4. To solve the structural problems in Latvia's fishery industry, funds from the FIFG were available during 2004-2006, as a result of which:
 - LVL 23.4 million was paid in 4 key support measures and 7 additional activities. 52% of funding was paid in Measure 4.8 "Adjustment of Fishing Effort" which allowed to dispose of old and inefficient fishing vessels;
 - 446 projects were implemented with an average size of LVL 52.5 thousand. The average sizes of projects between LVL 3 thousand in the Activity "Support to Producer" and LVL 249 thousand in the Activity "Fishing Port Facilities".
5. As of the end of 2010, the following indicators characterise the use of EFF funds in Latvia during the period of 2007-2013:
 - 1001 projects were submitted, 712 were approved, and 531 were financed which indicates an increasing activity of fishermen in uptaking the EFF support measures;
 - over the entire period, a funding of LVL 117 million was intended for supporting the fishery industry, of which 56% was reserved for the approved projects, but 27% was paid which is a much higher rate if compared with the EU average rate regarding the use of EFF funds;
 - the average size of projects is 74% larger than that was during the previous period of programming.
6. Since Latvia joined the EU, an EU funding of LVL 140.5 million is available for the fishery industry. The EFF funding is LVL 16.7 million for the period of 2007-2013. It is 2.1 times more than during the period of 2004-2006 and 84 times more than the available funding from the FF financed from the national budget in 2010, pointing that the EU funding is significant for the development of Latvia's fishery industry.

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Research on the Preconditions of Land Consolidation in Rural Districts

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Abstract. The concept of land consolidation is new in Latvia. Its main tasks are to eliminate land fragmentation and to facilitate farms of optimal size. One of the most important preconditions of land consolidation is forming of optimal size farmland plots in property and use, and land fragmentation, which has a major impact on both the operating conditions and other rural development processes. Land fragmentation affects not only land management, but it also increases transport costs.

Already during the land reform in rural areas, land plots in property and land in use were divided per several land units. The other factor contributing to the fragmentation of farmlands is the development of land market, since it is not always possible to find land next to the owner's farmland for purchasing or leasing the land to increase the land area.

Within the course of the research, the analysis of the areas and fragmentation of economically active farms was conducted as well as the land owners were surveyed on variety of land use related and various rural environment characterising issues in Vircava parish. It was found that the growth of farm areas increases the fragmentation, and the results of the landowners survey show that the majority of the landowners are willing to expand their land plots in property, thereby increasing production rather than selling the land or leasing it to other farmers.

Consequently, preconditions for land consolidation are being formed in Latvia as well as in other countries. It is important to find the most appropriate and efficient methods for their implementation.

Key words: size of farms, land fragmentation, consolidation.

Introduction

Land use in agriculture occurs within particular farms, and the outputs depend not only on the work, materials, resources, and soil fertility but also on the farm area and the mutual arrangement of the land plots in use. The land size, its quality and geographical location of the farms affect significantly the choice of specialisation of production, productivity, production, and its competitiveness. The issue of land rational and efficient use arises, as an inefficient use of land and a surplus can be considered one of the problems in Latvia, while other countries are considering land shortage.

The land quality, climatic conditions, location of the land plot, and the level of its infrastructure are the main factors affecting the type and intensity of land use and its adequacy for a particular economic activity (The National Land..., 2008).

The latest land reform in Latvia has substantially altered the structure of use of farmland plots in property and in use. It resulted in the development of plenty of very small agricultural land properties. According to the authors' previous studies, which relied on the data of the State Land Service of the Republic of Latvia (LR), in 2001, the average total area of farmland plots in property and the land plots in use were only 5.14 ha; moreover almost one fifth of them was represented by farmlands of land area less than 2 ha (Jankava, 2003).

In practice, forming of farms was affected by various objective and sometimes subjective factors, so farmland plots in property were developed on several land units, thus resulting in land fragmentation and inter-areas (Jankava, 2003). Although in the beginning of the reform, the legislation provided favourable territorial preconditions for successful development of agricultural production, recommending to form compact farms and to avoid inter - areas (Nolikums par ..., 1991).

No competitive and efficient agricultural production is possible with that structure of rural land property; thus, large areas remain raw in rural districts. However, along with the

processes of land privatisation, the land market has evolved gradually on more favourable conditions for agriculture. As result, larger farms are being formed through the sale and leasing, or other transactions. This is indicated by the results of the authors' (Янкава, Менготс, 2009) research on dynamics of land areas of the economically active farms (2003 - 2007), derived from the data of the Central Statistical Bureau of Latvia. The average size of farms in total area, in land used for agriculture, and in arable land is increasing over the years.

However, the average area is still very small. A significant proportion of all the farms are represented by very small farms. In 2007, division of farms of Latvia by their land area was as follows - nearly 80% of their total number and more than 30% of their total area was represented by farms in area of up to 2 ha (Янкава, Менготс, 2009).

The development of land market contributes to the fragmentation of farm areas, because it is not always possible to find land next to the owner's farmland for purchasing or leasing the land to increase the land area. Land fragmentation makes the farming and land management difficult, and increases transportation costs. Similar processes are going on also in rural areas of Latvia's immediate neighbouring countries - Lithuania (Lankelis, 2002) and Estonia (Maasikamae, 2005) as well as in other Eastern and Western European countries. Consolidation is used as one of the measures for farmland usage optimisation abroad, which is known in the Western Europe already since the end of the 18th century.

The first land consolidation initiatives were implemented in Denmark in the 1750s, in years when obligations of citizens to land owners were simplified and private family farms were created as result of important social reforms. At that time, the consolidation of the fragmented land plots did not lead to increase of agricultural production, although it was not the only aim of these reforms (The Design of ..., 2003).

The first legislative act in the field of land consolidation was adopted in England in 1801. The agricultural lands (land property) registry was developed and implemented based on the measures of land survey towards the land consolidation.

In the Netherlands, there is one of the highest activity levels of land consolidation measures in Europe, because, three agricultural land consolidation programmes have been developed since 1924 until nowadays.

Extensive experience and methodology in carrying out the land consolidation projects are also possessed by Germany, where the Law on Land Consolidation is in force since 1998 (Flurbereinigungsgesetz, 1998). Several methods of land consolidation are listed in the law and used successfully in the production; their choice depends on each particular case.

Latvia's neighbouring country Lithuania has relatively extensive experience in the development of land consolidation projects. More than 10 land consolidation projects have been developed during the recent 10 years with help of Danish colleagues and support of the European Union.

Being acquainted with the results of the land consolidation project development in Lithuania, Germany, Moldova, and other countries, it can be concluded that land consolidation has a very important role in agricultural development, and it can be used as a high performance tool for rural development providing land users with new opportunities to improve the situation. Land consolidation may contribute to the creation of competitive agricultural businesses, forming larger farms with less isolated land plots and better location, as well as to the extension of properties.

However, the land consolidation projects in Latvia, with some minor exceptions, have not received any response compared with the above-mentioned countries. Of course, taking into consideration the current situation in the country, the management of measures of land consolidation is not a low cost event. Therefore, in order to handle these large and expensive projects in rural development, first, it is necessary to assess their necessity, i.e. there has to be a system of indices and their numerical data on the land fragmentation and other factors delaying the development of competitive farming. Only comprehensive information on it could justify the efficiency of the land consolidation projects.

Nevertheless, there are a number of information sources in Latvia, like the Real Estate Cadastre Information System (IS RESC), the Central Statistical Bureau, and one may have an overall view of farmland sizes, fragmentation, the number of land-forming land units according to their data, each of them has also its disadvantages. According to the IS RESC data, it is not

possible to clarify the exact areas of farms, since not all rural farms' owners register the lease lands in the information system. Yet, the latest data of the Central Statistical Bureau is only for the year 2007.

Therefore, in the summer of 2010 the Department of Land Management and Geodesy of Latvia University of Agriculture conducted an inspection and a population survey with assistance of students within the framework of the research at Vircava rural territory of Jelgava district in order to clarify the real situation in the countryside. The land areas and locations of the economically active farms (*the economically active farms are defined to be the farms, which are producing agricultural produce, regardless of production quantity and its type of use*) were identified, and a population survey was conducted along with the other issues related to land use.

The data obtained during the territorial inspection and the population survey, and the analysis of the situation determined the choice of the subject. Therefore, the following **aim of the research** was set: to explore the preconditions for carrying out land consolidation in rural areas and to clarify the importance of land consolidation nowadays.

Tasks to accomplish the aim are set as follows:

- 1) to conduct a theoretical analysis on land consolidation and its role in creating competitive farms and rural development;
- 2) to analyse the size of economically active farms by their land areas and land fragmentation in Vircava rural territory;
- 3) to assess the results of Vircava rural territory population survey on future opportunities of use of their land properties.

There are two similar terms used in the paper- land fragmentation and inter-area. The term *land fragmentation* describes the situation where farm plots in property or land in use consists of a number of land units that are separated by other owners' lands. *Inter – area* is defined as *a separately situated land plot, which is separated from the main land plot by land owned by another person* (Law on Land Survey, 2006).

The research is based on monographic, analysis and synthesis, deductive and inductive, statistical data study, and graphical representation methods.

Results and discussion

1. Land consolidation and its role in competitive farms and rural development

The term "*consolidation*" comes from the Latin word "*consolidation*", which means stabilisation, strengthening, and amalgamation.

In Latvia, the concept of land consolidation appeared in the 1990s. One of the first scientists who mentioned this concept was a doctor of agricultural sciences J. Zuševics who considers land consolidation as a certain type of agrarian reform, arguing that it should not be confused with collectivisation in his book "Introduction to Agrarian Policy". Consolidation, according to the professor, is not expropriation of land, but its joining in the collective, more useful, and manageable object (Zuševics, 1994).

Professor M. Locmers (Locmers, 1999) has also pointed out that in order to create a compact rationally sized farm, it is necessary to form new lands in property and in use, taking into consideration all requirements of rational territorial organisation and performing consolidation of the existing lands in property and in use. The professor together with his colleagues (Locmers, 1999; Butāne Lasteniece, 2000) has attempted to define the land consolidation, thus determining its content: the farm consolidation should be understood as the systematic elimination of inter-areas, border regulation, business transactions dealing with the land and its buildings to develop a compact rationally sized farm with the land and its building owned by a single individual or legal person, or several persons as intercommunity.

Although the concept of land consolidation is new in Latvia, its aim and tasks - to eliminate land fragmentation and inter-areas, and to contribute to the optimum size farms - has been well known in the Republic of Latvia already during the first Agrarian Reform (1920-1937). Then, farmland fragmentation was eliminated by land survey projects. The so-called land survey works among the collective farms was carried out to remove inter-areas. In addition, other land use disadvantages were known in the Soviet times.

However, as A. Auziņš (Auziņš, 2008) has indicated, in Latvia, the concept of land consolidation is not really used, even though for the first time it was included in the legislation by adopting the Law on Land Survey (Land Survey Law, 2006) on September 14, 2006, in which *land consolidation* is included as one of the land survey project development tasks of and *interpreted as package of implemented events proposed by individuals or legal persons, state or local municipality to optimise the land use in the public interest*. However, further development of land consolidation has not yet been made in the legislation of Latvia.

Acquisition of experience of the Western countries could help in solving the situation. Within the methodological material prepared by the UNO Food and Agriculture Organisation (FAO) on the designing of the land consolidation experimental project concept (The Design of ..., 2003), agricultural land consolidation is defined as the social, economic, legal, and technical event package with the main basic aim, considering respect to the interests of residents:

- improvement of structure land properties;
- development of rural areas;
- consolidation of too fragmented land plots;
- increasing of agricultural enterprises until their optimum sizes;
- implementation of modern technologies and techniques;
- developing of sustainable agricultural and socio-economic infrastructure in the countryside;
- nature protection and creation of sustainable ecosystems.

Land consolidation is sometimes understood incompletely just as a mere redistribution of land plots, which is performed to prevent consequences of land fragmentation. In fact, land consolidation is associated with major socio-economic reforms already since its initial implementation in the Western Europe.

Mainly, land consolidation is carried out on purpose to develop a territory for sustainable use of land resources, and to provide rational and sustainable use and protection of the land and natural resources. It is necessary to meet the following principles of land consolidation (The Design of ..., 2003):

- not only improvement of raw food production but also facilitation of food production of rural residents;
- preservation or restoration of the rural environment as well as environmental protection;
- state institutions have to intervene in the process of land consolidation in order to ensure the use of resources and control as well as to downstream spatial elements;
- the land consolidation process shall be democratic, an active participation of involved landowners and other rural residents is an essential condition;
- the approach shall be comprehensive, combining rural and overall regional development elements, and incorporating rural and urban inter-linkages.

In some countries, the preparatory works have started including land consolidation action plans - outlines and implementation of the pilot projects to test problem solutions and to establish a link between the administrative and local institutions that is of great importance. For instance, in Lithuania, the land consolidation projects are already known since 2000. Alike, projects are already developed and implemented in cooperation with experienced Danish colleagues. One of the key terms of the process in the implementation of projects of land consolidation is that it includes at least five landowners with the total land area of not less than 100 hectares (Leimontaite, 2006).

The Danish colleagues are certain that the state aid is required addressing the issues of land consolidation. In Denmark, LVL 4 million are spent for this purpose each year (Čepāne, Rumbēna, 1998). They believe that minimum size for dividable land plots as well as the ceiling of land areas owned by a single owner have to be defined.

Considering the above, it can be concluded that one of the most important preconditions for land consolidation is the development of optimum size farms and land fragmentation of land in property and in use, which has major impact on both the farming conditions and other rural development processes. Therefore, the land structure of farms in Vircava rural territory of Jelgava district has been analysed further within the article.

2. Sizes of the farms and land fragmentation in Vircava rural territory

Vircava rural territory is located in one of the most favourable regions for agricultural production in Latvia. The analysis includes 16 farms that are economically the most active farms in Vircava rural territory. Their total area is 4021.3 ha (Table 1), representing about 40% of total land area of the rural territory. The largest part of the total area is utilised agricultural area, as percentage of forests is small in the rural territory - about 10%, which is mainly the land under the competence of the state.

As it is shown in Table 1, the range of the farms area is comparatively large - from 36.4 ha to 1117.3 ha, besides the owner of the largest farm (according to the information by the land surveyor of the rural territory) has the land also in other territorial units. The average area of these farms is 251.3 ha, the majority (6 farms) of them ranging between 200 and 300 hectares in size by the total land area.

Table 1

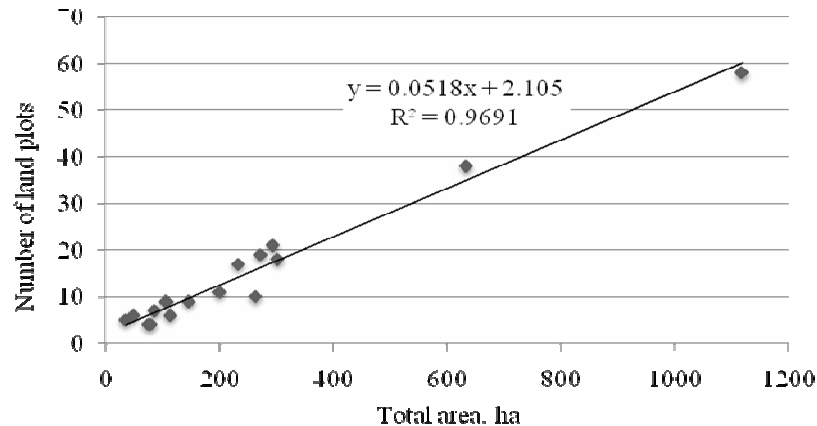
Total area and number of land plots of economically active farms in Vircava rural territory on 1 September 2010

No. of farm	Total area, ha	Number of land plots	Land plots in property				Land plots in use (lease)			
			number	area			number	area		
				ha		%		ha		%
				total	average per unit of land			total	average per unit of land	
1	36.4	5	5	36.4	7.3	100	0	0.0	0.0	0
2	49.9	6	2	10.1	5.1	20	4	39.8	9.9	80
3	76.8	4	2	53.8	26.9	70	2	23.0	11.5	30
4	80.5	4	1	36.5	36.5	45	3	44.0	14.7	55
5	87.4	7	5	32.1	6.4	37	2	55.3	27.7	63
6	107.5	9	3	54.3	18.1	51	6	53.2	8.9	49
7	114.5	6	4	63.9	16.0	56	2	50.6	25.3	44
8	147.1	9	5	74.7	14.9	51	4	72.4	18.1	49
9	200.9	11	6	159.7	26.6	80	5	41.2	8.2	20
10	233.5	17	6	85.1	14.2	36	11	148.4	13.5	64
11	264.4	10	4	26.3	6.6	10	6	238.1	39.7	90
12	273.1	19	7	114.5	16.4	42	12	158.6	13.2	58
13	295.1	21	7	71.6	10.2	24	14	223.5	16.0	76
14	302.9	18	16	255.0	15.9	84	2	47.9	24.0	16
15	634.0	38	19	306.0	16.1	48	19	328.0	17.3	52
16	1117.3	58	33	612.0	18.5	55	25	505.3	20.2	45
Total	4021.3	242	125	1992.0	255.7	x	117	2029.3	268.2	x
Average	251.3	15	8	x	16.0	51	7	x	16.8	49

Source: authors' calculations

All farms, with the exception of one - the smallest analysed, use lands in lease besides the lands in property. On average, almost half (49%) of the farms are increased by leasing. As illustrated in Table 1, the leased land ranges from 16% of the total land area of Farm 14 up to 90% of Farm 11 with the total area of 264.4 ha. Both owned and leased lands are located on several land units.

A strong correlation between the land areas of the farms and the number of land units was found - the larger the land areas of the farms, the greater the number of their constituent land units (Figure 1).



Source: authors' construction

Fig. 1. The correlation between the total land area and number of land units of economically active farms in Vircava rural territory

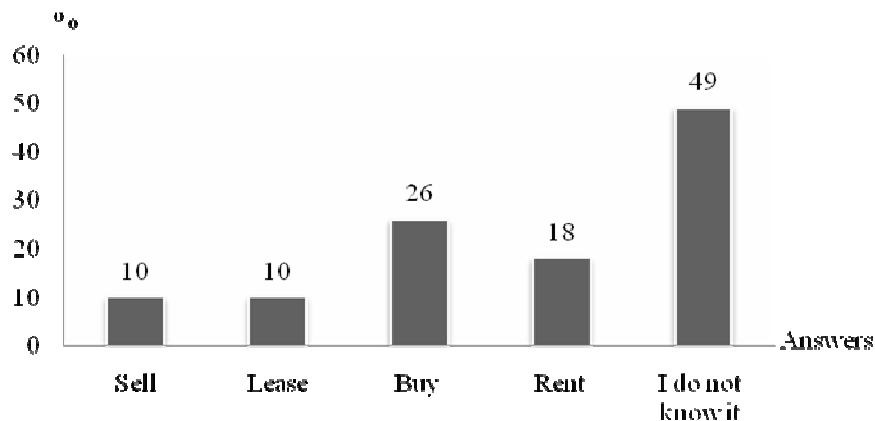
The results of the research show that rural farm production expansion, and thus an increase of the land areas are associated with land fragmentation, and formations of new inter - areas.

3. The results of the landowners survey of Vircava rural territory

Performing the inspection in Vircava rural areas, one of the tasks was to survey the landowners for a variety of characterising issues on land use and the rural environment. Totally, 142 landowners were surveyed, but regarding the land consolidation preconditions only 39 of the questionnaires could be selected (27% of all respondents), since there no answers on these questions were given in the rest of the questionnaires. The land areas owned by respondents of unanswered questionnaires were negligible, mostly below 10 ha.

In a result of the inquiry, it was found that 23% of the surveyed landowners are retired persons. When analysing the surveyed landowner education, it was found that 31% of them have a university education, 56% - secondary, while 13% - basic education, so the education level is relatively high. It is generally known that, in the result of the land reform and land transactions, there are many land properties in Latvia, which landowners do not reside in their properties. Therefore, the question arose about Vircava rural territory, which is highly suitable for agricultural production.

The analysis revealed that the majority of surveyed landowners - 30 of them or 77% - live on their owned farms, 5 (13%) landowners live elsewhere in the selected area of the research, i.e. in one of the largest population centres of the rural territory - villages, 1 (2%) landowner lives in Riga, and 3 (8%) landowners live in other city or rural area in Latvia. Hereof, it can be concluded that the place of residence for almost a quarter of the landowners is not in their land properties.



Source: authors' construction

Fig. 2. The answers given by landowners in Vircava on future use of their lands

The landowners were enquired about the future use of their lands in property. This question was given in multiple choices of answer: to sell their land, to lease their land, to buy land; to rent land, not sure about their intentions (do not know). It was possible to respond "yes" or "no" to each option. Every respondent could choose a number of affirmative or negative responses (Figure 2).

The proportion of affirmative answers is in Figure 2. There are more landowners, who want either to buy (10 respondents or 26%) or to rent (7 or 18%) lands, thus extending their property, than those who would like to sell (10%) or let (10%) their lands. A little more than a half (20 or 51%) of respondents are not sure about their intentions, which shows the current volatile situation in rural areas affected by the economic crisis. However, positive responses in terms of land expansion are more, and it confirms the previously mentioned tendency of rural farmland growth.

Conclusions, proposals, recommendations

- 1 Land consolidation can be used as a high performance tool in rural development that may promote economic development, preventing excessive fragmentation of rural farmlands, increasing the land area and thus, generating greater income and opportunities to extend the types of farming.
- 2 Land consolidation is one of the most complex, time consuming and costly land management measures, but as a result, it is possible to build territories that would serve to the sustainable use of land resources.
- 3 One of the most important preconditions for land consolidation is the structure of rural land in property and in use – building the farms of optimal sizes and land fragmentation, which has a large impact on both the farming conditions and other rural development processes.
- 4 There is a strong correlation between farmland areas and land units in Vircava rural territory - an increase of the farmland areas leads to the increase of land fragmentation.
- 5 Almost a quarter of landowners in Vircava do not live in their owned property.
- 6 There are more landowners in Vircava rural territory, who want to expand their lands in property, thereby, increasing production, than those who are willing to sell the land or lease it.
- 7 Taking into consideration the previous trends and results of the research in Vircava rural territory, the obtained conclusions can be generalised and it is relatively precise to state that the preconditions for the land consolidation are being formed in Latvia, alike with other countries, - land fragmentation is increased as the farms are seeking to reach an efficient size. Further, it would be important to find the most appropriate and effective methods for its performance.

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Entrepreneurial Activity in Rural Municipalities of Three South-Eastern Estonian Counties in 2005- 2009: a Cluster Analysis of Rural Municipalities

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Abstract. The aim of the paper is to study entrepreneurial activity in rural municipalities in the South-Eastern Estonia. The 36 rural municipalities of Põlva, Võru and Valga County have suffered a fair share of socio-economic problems since the beginning of transition in the 1990s, among them the low entrepreneurial activity, population loss as the more active population migrated from the area, ageing of population, higher rate of inactivity, unemployment, and considerably lower wages than Estonian average. The paper compares different social and economic data of the three counties with the national average indicators. An overview is given on the entrepreneurial activity rate of rural municipalities in the three counties from 2005 to 2009. A hierarchical cluster analysis is conducted in order to study the differences between the rural municipalities. Based on the entrepreneurial activity rate per 1000 inhabitants, and different economic and social indicators, the 36 rural municipalities in three counties are divided into 4 clusters.

Key words: entrepreneurial activity, rural municipalities, cluster analysis, Estonian regional development.

Introduction

The South-Eastern region of Estonia, including Põlva, Võru, and Valga Counties, has suffered a fair share of socio-economic problems since the 1990s. The area has been characterised by lower entrepreneurial activity, population outmigration, ageing of population, higher rate of inactivity, unemployment, and considerably lower wages than Estonian average. The present paper studies the entrepreneurial activity in rural municipalities of these counties in 2005 – 2009.

The high regional inequalities appeared in the transition process during the 1990s (Terk E., Raagmaa G., 2004; Jauhiainen J. S., Ristkok P., 1998; Tamm M., 2002; Kuura A., 2006; Pöder A., 2008). The rural areas were considered mostly to be the "losers". As M.Tamm (2002) points out, the success of the economic development of a rural municipality depended on its location, its Soviet legacy (e.g. the level of economic development of the former collective farm etc), also on the level of diversification of local economy (Terk E., Raagmaa G., 2004), and especially the availability of non-agricultural jobs (Lõo A., 2002, 2005). The location of municipalities studied in the present paper means that there are considerably less employment opportunities for locals, and thus it is highly relevant to study the establishment of local enterprises in the region.

Entrepreneurship. There is a huge body of literature offering different definitions of entrepreneurship and entrepreneur, starting with A.J. Schumpeter (1934) who described the entrepreneur as an innovator who implements change within markets through carrying out of new combinations. Many researchers (e.g. Vesper K.H., 1983; Low M.B., MacMillian I.C., 1998; Learned K.E., 1992 etc) emphasise entrepreneurship as the creation of new businesses. Entrepreneurship contributes to the economy through the creation of new businesses and jobs, economic growths, and innovation (Fayolle A., 2007). D.F. Kuratko (2008) defines an entrepreneur as "an innovator or developer who recognises and seizes opportunities; converts

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those opportunities into workable/manageable ideas; adds value through time, effort, money, or skills; assumes the risks of the competitive and marketplace to implement these ideas; and realises the rewards". A. Fayolle (2007) points out that in economic literature the definition of entrepreneur is presented with multiple facets and combines the roles of capitalist, innovator, opportunist, and even coordinator and organiser of resources. K.D. Glancey and R.W. McQuaid (2000) divide the perspectives on entrepreneurs in literature into the following five sets: first set focuses on the role or function of entrepreneurs in the economy; the second set - on entrepreneurs as those who exhibit particular forms of behaviour; the third set - on the characteristics of entrepreneurs; the fourth set - on the particular events such as creation of new firm or organisation; and the fifth set - on an entrepreneur as an owner and manager of a business.

The legal definition provided by the Estonian Commercial Code (1995) is that an enterprise is a natural entity who offers goods or services for charge in his or her own name where the sales of goods or provision of services is his or her permanent activity, or a company provided by law. As the official data on Estonian enterprises are based on this definition, in this paper, the term "enterprise" implies to natural entities and commercial companies in Estonia and entrepreneurial activity rate implies to the rate of enterprises per 1000 inhabitants.

Entrepreneurial intentions of Estonians. People's willingness to establish enterprises and to become entrepreneurs depends on many different aspects (entrepreneurial intentions, e.g., studied among other researchers by Kruger N.F., Carsrud A.L. 1993; Utsch A., Rauch A., 2000; Kruger N.F. et al, 2000; Gurel E. et al, 2010), like personality characteristics (e.g. Vesper K.H. 1990; Koh H. C. 1996 etc), culture (Mueller S.L., Thomas A.S., 2001; Pillis E., Reardon K.K., 2007 etc), and environment (Vesper K. H. 1990; Minguzzi A., Passaro R., 2000; Lu J., Tao Z., 2010 etc). D.R. Gnyawali and D.S. Fogel (1994) define entrepreneurial environment as a combination of factors: the overall economic, socio-cultural, and political factors that influence people's willingness and ability to undertake entrepreneurial activities; and the availability of assistance and support services that facilitate the start-up process. The results of Eurobarometer studies (Flash EB No. 160, 2004; Flash EB No 283, 2009) have indicated that in international comparison Estonian people are not very willing to become self-employed and prefer the employee status. The lack of entrepreneurial spirit (Eesti Konjukturiinstituut, 2004; Kolbre E. et al, 2006) poses a problem to the development of Estonia, and so the topic of the present paper is highly relevant.

The aim of the paper is to study entrepreneurial activity, and its characteristics in rural municipalities in three South-Eastern counties of Estonia from 2005 to 2009. Totally 36 rural municipalities of Põlva County, Valga County, and Võru County were studied in the paper. The paper is organised as follows. After the introduction, the results part is divided into two subparts: an overview on the socio-economic situation of the three counties and the results of the cluster analysis. The results are followed by conclusions. The paper has the following **research tasks**: to give an overview on the socio-economic situation of the region; to study the entrepreneurial activity in the rural municipalities of three counties in 2005-2009; and to cluster the rural municipalities in order to study the differences between the municipalities. The **following methods** have been used in the present research: a hierarchical cluster analysis is conducted based on data on the entrepreneurial activity rate per 1000 inhabitants and different economic and social indicators of the 36 rural municipalities in three counties as well as monographic, analysis and synthesis; and time series analysis.

Results and discussion

1. An overview of the socio-economic situation of Põlva, Valga, and Võru Counties

Location and administrative division. Estonia is administratively divided into 15 counties (Figure 1). The counties are in turn divided into the local government units: towns and rural municipalities. Põlva County, Võru County, and Valga County are situated in the South-Eastern part of Estonia bordering with Russia and Latvia. In 2011, the three counties were divided into the following administrative units (Statistics Estonia, 2011): 4 towns and 36 rural municipalities. Three rural municipalities in those counties include also a town without

municipal status – it means that since the 1990s some former towns have been joined to the neighbouring rural municipalities into one local government unit.

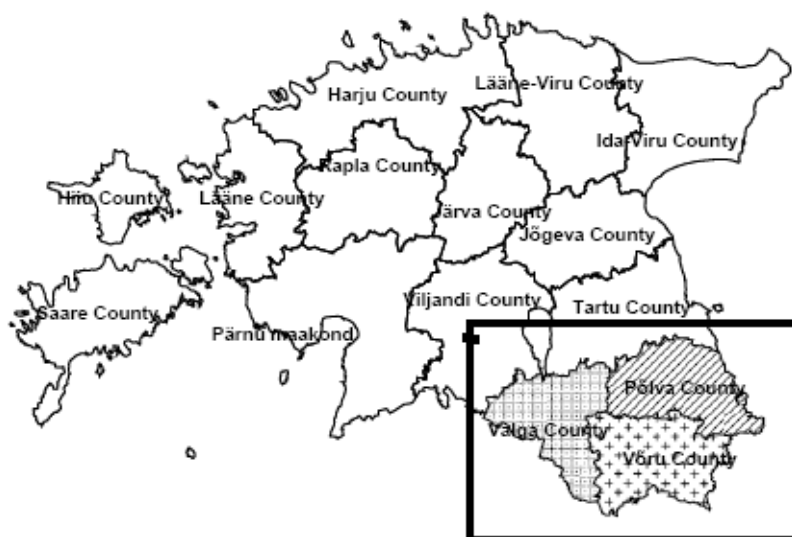


Fig. 1. Estonian Counties in 2011 and three counties studied in the present paper

Population. The location of the counties means they are farther away from economic centres and the larger towns of Estonia. The local towns that are the regional centres are small (table 1). The rural population of the counties was 65229 in 2009 (4.8% of Estonian population; Statistics Estonia, 2011).

Table 1

Population and labour force of Põlva, Valga, and Võru Counties between 2005 and 2009

	Estonia	Põlva			Valga			Võru		
	Total	County total	Towns	Rural municipalities	County total	Towns	Rural municipalities	County total	Towns	Rural municipalities
Area, km ²	43432	2165	5	2159	2044	21	2022	2305	13	2292
Local government units 2009, No.	226	14	1	13	13	2	11	13	1	12
Population 2009, No.	1340415	31002	6533	24469	34135	16839	17296	37888	14424	23464
Share of Estonian population 2009, %	100	2.3	0.5	1.8	2.5	1.2	1.3	2.8	1.1	1.7
Population 2005, No.	1347510	31752	6506	25246	34867	17104	17763	38677	14609	24068
Population gain/loss from 2005 to 2009, %	-0.5	-2.4	0.4	-3.1	-2.1	-1.5	-2.6	-2.0	-1.3	-2.5
Density 2009, inhabitants per square kilometre	30.9	14.3	1194.3	11.3	16.7	789.1	8.6	16.4	1089.4	10.2
Demographic labour pressure index 2009	0.81	0.83	0.98	0.8	0.92	0.92	0.92	0.88	0.96	0.83
Demographic labour pressure index 2005	0.96	1.1	1.35	1.04	1.03	1.0	1.06	1.08	1.17	1.03

Source: Statistics Estonia, 2011

It has decreased from 67077 people in 2005. In comparison with 2005 by 2009 the rural municipalities of Põlva County has lost 3.1% of their population, the rural municipalities of Valga County and Võru County have lost 2.6% and 2.5% respectively of their previous population. Demographic labour pressure index² has changed considerably over the 5-year period. As it exceeded 1 in 2005 indicating that the number of people entering the labour market was bigger than people retiring in the next 10 years, by 2009 it has fallen below 1 in all the counties. It is even smaller in rural municipalities.

Table 2

Labour force and average monthly wages in Põlva, Valga and Võru County 2005 and 2009

	Estonia	Põlva			Valga			Võru		
	Total	County total	Towns	Rural municipalities	County total	Towns	Rural municipalities	County total	Towns	Rural municipalities
Labour force 2009, no.	690900	12100	5000	7100	15600	10300	5300	17400	8600	8800
Share of Estonian labour force 2009, %	100.0	1.8	0.8	1.0	2.3	1.5	0.8	2.5	1.2	1.3
Labour force 2005, no.	659600	12700	4200	8500	13900	9000	4900	153000	8300	7000
Labour force participation rate 2009, %	66.5	51.4	60.5	46.6	60.4	65.2	53.0	60.8	70.8	53.4
Labour force participation rate 2005, %	62.9	53.2	56.1	52	53.5	57.6	47.3	53.4	62.6	45.5
Employment rate 2009, %	57.4	45.2	56.4	39.3	49.7	52.8	44.8	51.0	59.0	45.2
Employment rate 2005, %	57.9	46.6	50.8	44.7	51.5	54.6	46.8	51.1	61.4	42.3
Unemployment rate 2009, %	14.4	12.6	n/a	n/a	18.2	n/a	n/a	16.1	n/a	n/a
Unemployment rate 2005, %	8.3	13.0	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Average monthly gross wages 2009, euros	783.8	640.7	n/a	n/a	573.7	n/a	n/a	646.7	n/a	n/a
Share of Estonian average wage 2009, %	100	81.7	n/a	n/a	73.2	n/a	n/a	82.5	n/a	n/a
Average monthly gross wages 2005, euros	516	396.9	n/a	n/a	388.7	n/a	n/a	401.6	n/a	n/a

Source: Statistics Estonia, 2011

Labour force. Estonian labour force numbers have increased from 2005 to 2009 and one reason behind this is that large birth cohorts of the beginning of the 1990s started entering the labour force. However, the economic inactivity has been higher and the labour force participation rate³ lower in the studied rural areas (Table 2). In rural municipalities of Põlva County, the labour force participation rate dropped from 52% in 2005 to 46.6% in 2009 even though the average participation in Estonia and in Võru and Valga Counties increased during this period. The complicated socio-economic situation in the rural areas of the region is illustrated by the employment rate⁴ that has been under 50% for the rural municipalities of the counties and has even decreased to 39.3% in 2009 in rural municipalities of Põlva County.

Wages in Põlva, Valga and Võru Counties have been amongst the lowest of Estonian counties since the 1990s. As the data are not available on the local government level, they are presented on the county level (Table 2). In 2009 the average monthly gross wage in Võru County was 82.5%, in Põlva County was 81.7% and in Valga County just 73.2% of Estonian average.

² Demographic labour pressure index — ratio of the persons (aged 5-14) who will enter the labour market to the persons (aged 55-64) who will exit the labour market during the next ten years because of ageing. If the index is bigger than one, the number of persons entering the labour market is larger than the number of persons potentially leaving it because of ageing. (Statistics Estonia, 2011)

³ The share of the labour force in the working-age population

⁴ Share of the employed in the working-age population

Enterprises and entrepreneurial activity rate. In 2005 there were 65362 enterprises in the statistical profile in Estonia and the number increased to 81909 in 2009 (Table 3). In 2009, thus 5.4% of Estonian enterprises were located in Põlva, Valga, and Võru Counties and 3.6% of Estonian enterprises were located in the rural areas of those three counties.

Table 3

Enterprise in statistical profile in Põlva, Valga and Võru Counties from 2005 to 2009

	Estonia	Põlva			Valga			Võru		
	Total	County total	Towns	Rural municipalities	County total	Towns	Rural municipalities	County total	Towns	Rural municipalities
Number of enterprises										
2009	81909	1333	311	1022	1385	526	859	1732	617	1115
2008	77948	1251	279	972	1301	480	821	1671	587	1084
2007	76159	1235	295	940	1297	474	823	1631	570	1061
2006	71012	1200	286	914	1292	446	846	1506	514	992
2005	65362	1147	264	883	1232	419	813	1428	476	952
Share in Estonian enterprises 2009, %	100	1.6	0.4	1.2	1.7	0.6	1.0	2.1	0.8	1.4
Entrepreneurial activity rate per 1000 inhabitants										
2009	61.1	43.0	47.6	41.8	40.6	31.2	49.7	45.7	42.8	47.5
2008	58.1	40.1	42.8	39.4	38.0	28.4	47.3	43.9	40.6	45.9
2007	56.7	39.3	45.3	37.8	37.6	27.9	47.1	42.6	39.3	44.7
2006	52.8	38.0	43.9	36.5	37.3	26.2	48.0	39.1	35.3	41.5
2005	48.5	36.1	40.6	35.0	35.3	24.5	45.8	36.9	32.6	39.6
Enterprise birth rate										
2008	10.8	7.9	5.1	9.5	12.0	13.1	10.8	10.2	9.2	11.6
2005	13.8	13.1	11.3	14.2	13.6	11.8	15.7	15.1	12.0	19.3
Enterprise death rate										
2008	10.0	6.7	6.0	7.2	10.8	10.8	10.8	8.7	8.1	9.3
2005	6.7	6.3	5.2	7.0	6.8	5.4	8.4	5.3	4.1	6.9

Source: Statistics Estonia, 2011

The entrepreneurial activity rate (enterprises per 1000 inhabitants) has been calculated for the studied region. On the country level, an interesting fact is that the entrepreneurial activity rate in rural municipalities of Võru County and Valga County is higher than that in the towns. In Põlva County the rate is lower for rural municipalities. This indicated to large regional discrepancies that a more specifically studied with cluster analysis. There is also another explanation if one looks at the average size of the enterprises. For example, in 2009 the share of microenterprises (0-9 employees) was 86.6% for towns in Põlva, 87.8% in Valga, and 86.5% in Võru County, while for the rural municipalities the indicator was 94.5%, 93.7%, and 95.5% respectively. Statistical data on enterprise birth rate⁵ and enterprise death rate⁶ are available only for the years 2005- 2008. In 2008, the enterprise birth rate was lower in the counties studied compared with 2005. One exception was the rate for towns in Valga County. The enterprise death rate was higher on the county level in 2008 than in 2005. In 2008 in the rural municipalities of Põlva County and Võru County it was higher than in towns.

2. The results of the cluster analysis of rural municipalities of Põlva, Valga and Võru Counties

In order to study similarities and differences between the rural municipalities of three counties, a hierarchical cluster analysis was conducted using SPSS. The following economic and social variables were used: entrepreneurial activity rate for 2009, entrepreneurial activity rate for 2005, population in 2009, demographic labour pressure index for 2009 and demographic labour pressure index for 2005, share of primary sector enterprises in 2009,

⁵ Enterprise birth rate — the share of newly born enterprises in the number of active enterprises

⁶ Enterprise death rate — the share of dead enterprises in the number of active enterprise

population density in 2009, and annual enterprise birth-rate from 2005 to 2008, and annual enterprise death rate from 2005 to 2008. The indicators on the county level have been described in the previous tables. The reason why the aforementioned indicators were selected from all the indicators described in the previous tables is that their data are available for the individual rural municipalities, while most of the statistical data are only available on the county level or urban/rural distinction. The selection of economic indicators for the analysis was complicated as more specific data on enterprises (e.g. financial data, assets, employment etc.) are not available on local municipality level, but on county level. Therefore, it was decided to include some population data to the cluster analysis.

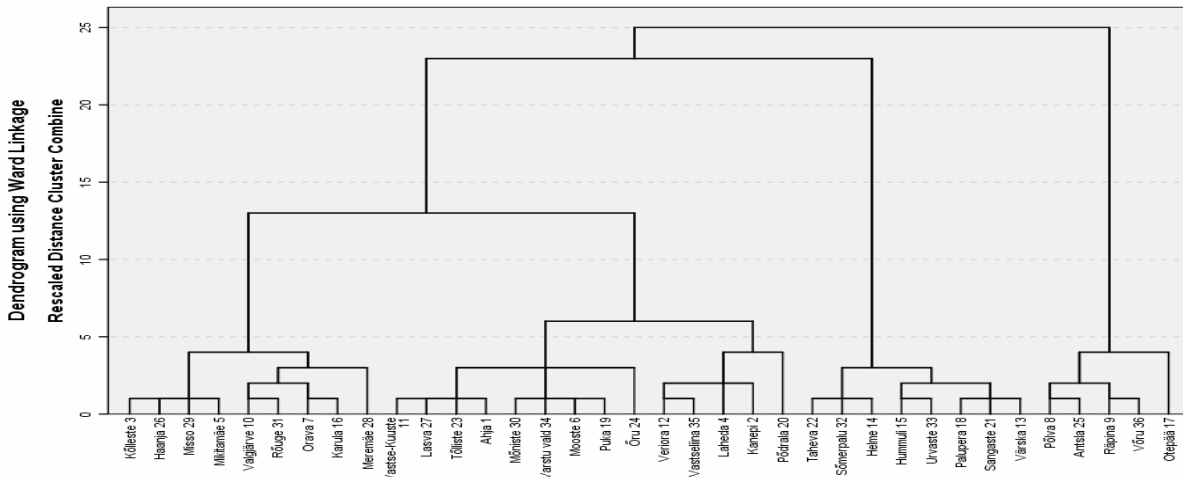


Fig. 2. Dendrogram of the clusters

The variables were standardised for the analysis to ensure the comparable scales. Squared Euclidean distance was used to compute the distances between the studied municipalities. Ward’s method was chosen as the cluster method. At first different solutions with different number of clusters were studied and it was decided to proceed with 4 clusters. The dendrogram is presented on Figure 2.

In the analysis, 14 municipalities were grouped into Cluster 1; Cluster 2 consisted of 9 municipalities; Cluster 3 had 5, and Cluster 4 had 8 municipalities (Figure 3).

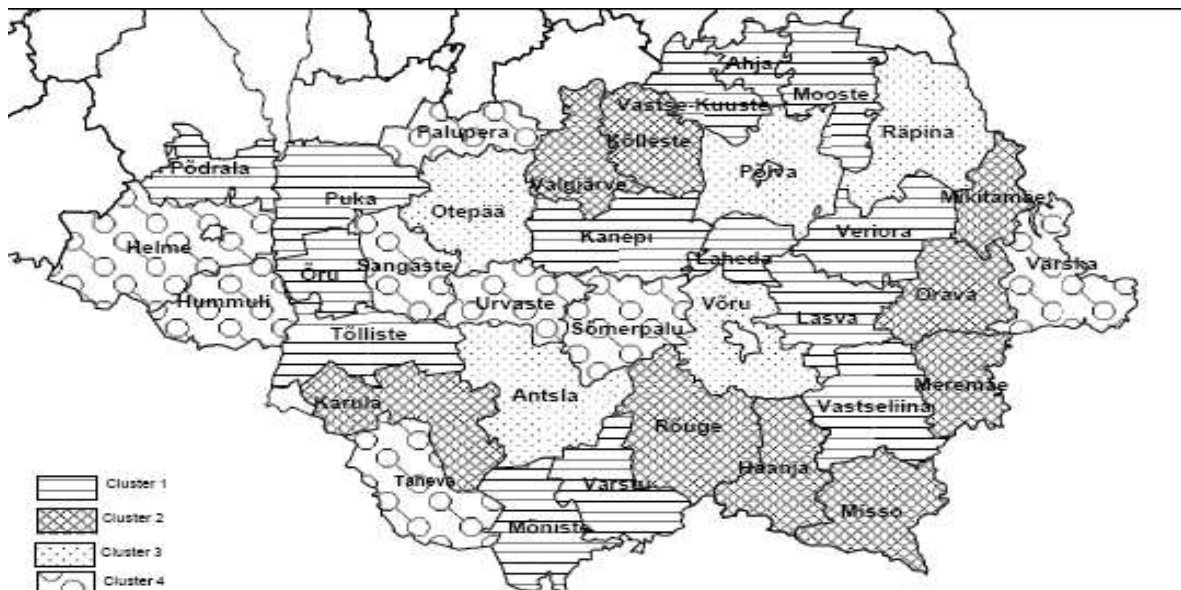


Fig. 3. The division of the rural municipality units into 4 clusters

The 14 municipalities (Tables 4 and 5) in Cluster 1 have the lowest entrepreneurial activity rate. The average population in the cluster is close to that of Cluster 4 and is higher than in Cluster 2, but lower than in Cluster 3. The demographic labour pressure index indicates that the demographic situation has worsened over the period as the share of young people entering the labour market has decreased, but its mean value is close to the average of all clusters. The annual enterprise birth rate and death rate are higher in this group. From the population point of view, the municipalities in this cluster share similarities with those in Cluster 4, but with lower entrepreneurial activity rate, it could be described as medium size (population wise) municipalities with lower entrepreneurial activity.

The nine municipalities in Cluster 2 have the highest average entrepreneurial activity rate, yet the smallest population, lowest population density, and lowest demographic pressure index. The share of primary sector enterprises was close to the average, and annual enterprise birth rate and death rate a little lower than the average. This cluster could be characterised as small, but highly entrepreneurial. One interpretation is that the high entrepreneurial activity is born out of necessity. With lack of other employment opportunities in small municipalities, people are forced to become self-employed.

Cluster 3 consists of group of 5 municipalities and the rural municipalities with the largest population in this region are in this group and for this reason, the average population and population density is so much higher in this group. All the municipalities either include a city without municipal status or are adjacent to local towns. This can also explain the lowest share of primary sector enterprises. The nearness of local towns can be considered as one factor that causes lower entrepreneurial activity as the towns provide employment opportunities for rural residents. This group could be characterised as the largest rural municipalities in good location, but with lower entrepreneurial activity rate.

Table 4

Mean values for the four groups of municipalities

	Clusters				Total
	1	2	3	4	
Entrepreneurial activity rate, 2009	38.9	56.1	45.0	51.1	46.7
Entrepreneurial activity rate, 2005	33.9	48.0	37.1	49.5	41.3
Population in 2009	1463.4	1175.3	4482.0	1469.3	1811.9
Demographic labour pressure index, 2009	0.8	0.7	0.8	1.1	0.8
Demographic labour pressure index, 2005	1.0	0.9	1.0	1.3	1.1
Share of primary sector enterprises in 2009	54.2	55.0	39.8	61.4	54.0
Population density in 2009	9.3	7.1	19.1	8.3	9.9
Annual enterprise birth-rate from 2005 to 2008	15.2	13.3	14.3	12.8	14.1
Annual enterprise death rate from 2005 to 2008	9.4	5.3	6.5	7.3	7.5

Eight municipalities in Cluster 4 are in some respect similar to those in Cluster 1, but the economic activity rate is higher for Cluster 4 and the population density somewhat lower. One distinctive trait is highest share of primary sector enterprises.

Table 5

Local rural municipalities of Põlva, Valga, and Võru Counties by the cluster

Clusters			
1	2	3	4
Ahja	Kõlleste	Põlva	Värskla
Kanepi	Mikitamäe	Räpina	Helme
Laheda	Orava	Otepää	Hummuli
Mooste	Valgjärve	Antsla	Palupera
Vastse-Kuuste	Karula	Võru	Sangaste
Veriora	Haanja		Taheva
Puka	Meremäe		Sõmerpalu
Põdrala	Misso		Urvaste
Tõlliste	Rõuge		
Õru			
Lasva			
Mõniste			
Varstu vald			
Vastseliina			

The demographic labour pressure index has decreased between 2005 and 2009, but in comparison with other clusters, this group is in better situation as the share of 0- 14 year olds is larger than that of 55- 64 year olds. This group could be characterised as medium sized municipalities with higher entrepreneurial activity.

Conclusions

The aim of the paper was to study entrepreneurial activity in 36 rural municipalities in three South-Eastern Estonian counties. Different socio-economic data were studied and a cluster analysis to group municipalities based on their entrepreneurial activity rate and other economic and demographic data was conducted in the study. As the availability of data on the local municipality level are limited, the overview on different socio-economic indicators concentrated on the more general county level.

The hierarchical cluster analysis offered a more specific opportunity to study the differences between the 36 rural municipalities in the area. In the analysis, the rural municipalities were divided into 4 groups. The largest group of 14 municipalities (Cluster 1) could be described as medium size municipalities with lower entrepreneurial activity. Cluster 2 consisting of 9 municipalities could be called small, but highly entrepreneurial. Five municipalities in Cluster 3 could be characterised as largest municipalities that include city without municipal status or neighbouring local towns, in good location, but with lower entrepreneurial activity rate. The eight municipalities (Cluster 4) are medium sized municipalities with higher entrepreneurial activity.

The results show that the entrepreneurial activity within a region and even in neighbouring municipalities can be very different. Low population density, the distance from larger centres and their employment opportunities can be regarded as one factor that forces the local people to become self-employed. The nearness of larger centres can cause lower entrepreneurial activity in the neighbouring areas as the bigger enterprises in the centres provide sufficient employment opportunities.

Entrepreneurial activity rate provides one possibility to compare economic conditions in regions as it provides information on the variety of economic, social, and cultural factors that influence the development of entrepreneurship. The differences in the entrepreneurial activity rate between regions in the same society and cultural background, and in the same kind of general economic conditions indicate to the more specific local factors that cause the regional discrepancies.

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Innovation Policy in Latvia: an Overview of the Issues

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Abstract. Innovation policy is one of the main policy priorities in the European Union (hereinafter - EU) and at present several challenges drive policy activities in this area: funding of innovation, global technology trends, education system, and industry-science linkages. This paper focuses on the current trends in Latvian innovation policy and their linkage with the above-mentioned challenges. The present paper contains the main results of study regarding the latest innovation policy in the EU and innovation's regulatory and programmatic framework in Latvia. The research was based on study of the EU and Latvian regulatory enactments, strategic and planning documents, scientific publications, and special literature related to the research topic. In order to carry out this study adequate research methods were used – analysis and synthesis, logical and abstract constructive, data interpolation, and expert. The research results showed that Latvia's legal framework of innovation is fragmented and incomplete. The current regulatory enactments lack a clear definition and national position on key issues, such as the national innovation policy, innovation funding and implementation mechanisms, rights of innovative enterprises and guarantees for small and medium-sized enterprises which are substantial obstacles for the development of innovative activities in Latvia. It was also concluded that a series of programmatic documents were [should be???] developed for the development of Latvia's innovation policy. However, their practical implementation occurs on a very small scale, since the state lacks the necessary funding. This paper offers some suggestions for solving problems that hamper further and more rapid development of innovation's policy and strategy in Latvia.

Key words: innovation, policy, issues, Latvia.

Introduction

The innovation is considered worldwide as an important driver of national growth and prosperity (OECD, 2009), because innovation enables individuals, communities, and countries to affect business, politics and society (Klein, Knight, 2005). Therefore, the increasing role of innovation in the national economic growth and development can be clearly marked.

The EU Council notes that in today's situation there is a need to take full advantage of innovation in their broadest sense in order to solve such issues as increasing pressure of global competitiveness, social and environmental challenges, climate and demographic changes as well as the decline of resources. Similarly, the EU Council stresses that the use of innovation is economic and financial crisis management strategy as well as a tool for the EU economic transformation and strengthening of leadership in the future markets (Latvijas Republikas Ekonomikas ministrija, 2010).

However, under the influence of the current global economic slump, some changes in innovation policy are expected to occur in the near future. The European Commission notes that the economic recession may accelerate the efficiency of innovation support mechanisms in Europe as the economic crisis puts increasing pressure on state budgets, forcing the government to review the lack of financial resources, and find new and better ways to support innovation (European Communities, 2009).

Only in the last decade, the numbers of countries worldwide have come to the message [implementation??] that stimulation of innovation should be the main component of the economic development strategy (Ezell, Atkinson, 2010). For example, in 2009 the United Kingdom decided to focus on innovation development in its national economic development strategy (Malins, 2010). Nowadays many countries globally have established national innovation agencies and implemented national strategies for innovation in which science, technology and innovation are coupled with the economic growth (Grupp, Schubert, 2010). Also scholars argue that investments in technology and knowledge stimulate country's economic growth and create more capital (Andes, 2010). However, the focus on innovation as on economic development trends creates global level opportunities and threats as national

innovation policies can be implemented both efficiently and inefficiently (Ezell, Atkinson, 2010). Therefore, more than ever, in the current global economic situation policy makers and business leaders need to create policies that are favourable to innovation creation and distribution of all levels of the society.

Such evaluation of the current situation encouraged to carry out the present research and highlight the following **hypothesis**: Latvian innovation policy is implemented inefficiently; it requires radical improvements and better long-term planning.

The defined hypothesis emphasised the **aim** of the study – to analyse innovation policy in the EU and innovation regulatory and programmatic framework in Latvia. According to the research theme, the **research object** is regulatory and programmatic framework in the innovation area.

The following research **objectives** were defined in accordance with the set aim:

- to characterise shortly EU innovation policy and its implementation issues;
- to describe Latvian innovation regulatory and programmatic framework;
- to summarise the problems that hinder the development of innovation in Latvia and work out recommendations for their solution.

The EU and Latvian normative acts, strategic and planning documents, scientific publications and special literature related to the research topic were used in order to meet study objectives. To carry out this study adequate research methods were used – analysis and synthesis, logical and abstract constructive, data interpolation, and expert.

Results and discussion

European Union innovation policy

Innovation has been a key priority for the EU over the last decade, supported by a number of strategies, financing programmes and various kinds of political documents (Commission of the European Communities, 2009; European Communities, 2009; Eiropas Parlaments un Padome, 2008). According to the European Innovation Scoreboard (PRO INNO Europe, 2009), the EU has made significant progress in the field of innovation since 2004. This progress is attributable to three main axes:

- human resources (availability of highly qualified and educated people);
- funding and support (access to funding for innovation projects and national support measures);
- throughputs (technology balance of payments and on the research based intellectual property rights).

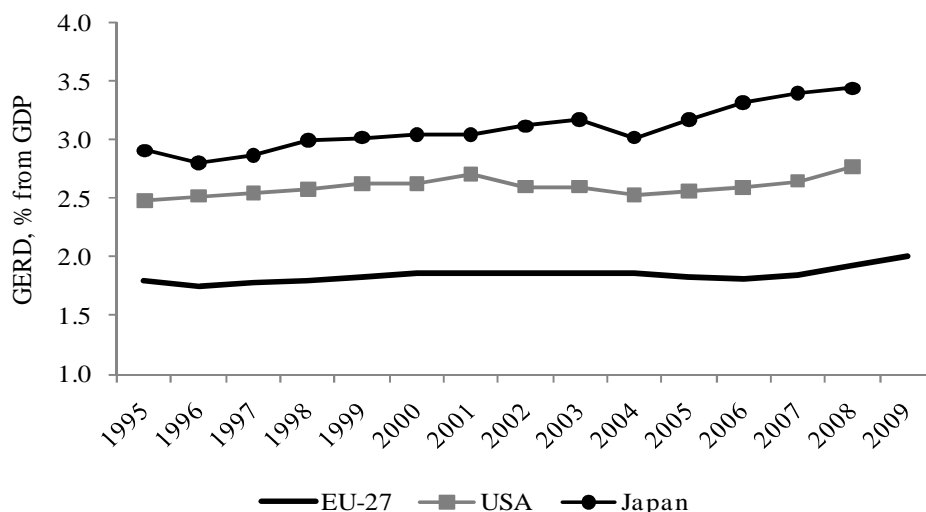
The growth trends of innovative activities in the EU Member States show that in some regions innovation area is well developed, but overall business efforts and investments in innovations are still considered to be relatively small (Anvret et al., 2010; European Communities, 2009). Similar observations can be found in other studies (Latvijas Republikas Reģionālā attīstības un pašvaldību lietu ministrija, 2007) which stress that regional imbalance characterises the current state of innovation. For example, the leading regions regarding innovation, and Research and Development (hereinafter – R&D) infrastructure are located almost exclusively in the old Member States (EU-15), while such structures are much less common in the new EU Member States.

Therefore, it can be concluded that despite some progress in the development of innovation, Europe has not yet fully achieved its objectives as defined in the Lisbon strategy – to become the most competitive and dynamic knowledge-based economy (European Community, 2007).

It is assumed that the development and marketing of new products and services, as requisites to maintain and increase the competitiveness of countries and regions, seems to be tightly linked to significant inputs in R&D and innovation activities (Muñoz et al., 2000). Traditional input indicators such as the percentage of GDP devoted to R&D (hereinafter – GERD) has been the first criterion for comparison of the scientific and technological capabilities of Europe in relation to the other economies in the world. However, the statistical data show that EU has considerable deficits in R&D and innovation activities as compared with the United States of America (hereinafter – USA) and Japan (Figure 1).

The data summarised in Figure 1 may lead to the conclusion that the GERD has been constantly growing in the USA and Japan since 2004 while in Europe similar GERD growing trends can be observed only from 2007. However, the EU-27 is still largely lagging behind the USA and Japan. Such circumstances widen the so-called "innovation gap" between the EU and the USA and Japan which also indicates relatively low efficiency of the EU for the development of new products, services, and patent development.

Many EU technology companies indicate that the chief obstacles hampering introduction of innovation in enterprises are excessive bureaucracy, problematic access to finances, and small venture capital market (European Research Area Board, 2010). As a result, people, entrepreneurs and companies with ambitious and creative ideas are confronted with many obstacles and lack of support for their ideas.



Source: authors' calculation and construction based on the data from EUROSTAT data base¹

Fig. 1. **Contribution of business sector to R&D expenditure (GERD) in the three main economies of the world**

According to the latest studies (European Research Area Board, 2010; Business Panel on Future of the EU Innovation Policy, 2009), the principal problems in the current EU innovation policy are as follows:

- limited understanding of innovation – the current EU policy is based on supporting business innovation;
- fragmented bureaucracy – lack of unified and flexible approach to innovation policy;
- lack of targeted and strategic investments in the future;
- innovation is not open to a wide range of people and creative ideas;
- it is not designed for new institutions and processes that encourage future innovation.

Furthermore, the current economic situation and looming new realities – like Europe's rapidly ageing, increasingly intercultural society and fast developments in other regions of the world – only amplify these weaknesses and make the need for radical change more urgent.

Anvert with the co-authors (Anvret et al., 2010) suggests that the new EU innovation policy should focus mainly on market and public demand, because science cannot be the sole innovation driving force.

This means that innovation policy must take into account the entire cycle of innovation, including a variety of innovation chain participants: industry, scientists, public and private funding organisations, non-governmental organisations, community and citizens, policy makers, etc. Also, the EU Council agrees that innovation policy should take a broader context, providing a closer cooperation between different policy areas and stakeholders (Latvijas Republikas Ekonomikas ministrija, 2010). Taking into account that the development of national innovation policies and innovation programmes is based on the common EU innovation policy,

¹ http://epp.eurostat.ec.europa.eu/portal/page/portal/statistics/search_database

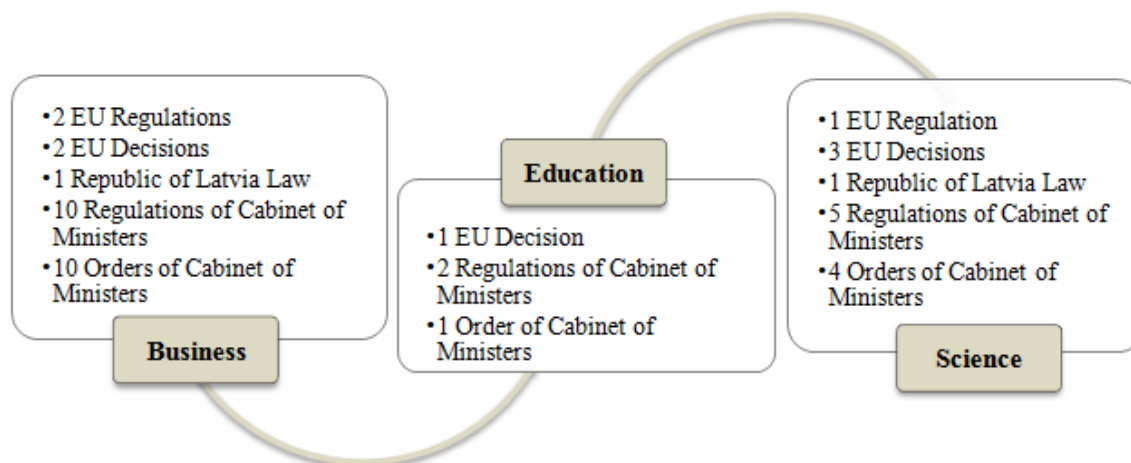
such considerations should be respected by all EU Member States in developing or improving their national innovation policies.

Latvia's innovation regulatory and programmatic framework

One of the most important immaterial assets to achieve the objectives of national economy in the innovation area is arranged regulatory framework which is harmonised with the EU regulations and directives.

The views of scholars and experts differ on this issue. For example, Swedish legislation experts (Marklunda, 1997) argue that legal documents can act as incentive for innovation, since companies based solely on their own initiative cannot always make optimal decisions. However, practice shows that the implementation of laws and regulations in the dynamic competitive environment is often impeded by changing technological opportunities, lack of information, organisation, and control problems. On the contrary, several studies (Belin et al., 2009; Horbach, 2008; Jänicke, Jacob, 2002) have predicted that the strict regulatory requirements, such as environmental protection, can facilitate development of innovation.

Latvia's innovation regulatory framework consists of documents adopted in different time periods – the EU regulations, decisions, laws of the Republic of Latvia, regulations and orders of the Cabinet of Ministers. Knowing that innovation can take place on different levels, innovation regulatory framework may be divided according to its areas of activity: business, education, and science (Figure 2).



Source: authors' construction

Fig. 2. **Innovation regulatory framework in Latvia, 2010**

Although information summarised in Figure 2 shows that more than 40 regulatory documents are acting for the development of innovation policy and for meeting the national objectives, still Latvian innovation regulatory framework can be characterised as incomplete. Several signals may be found which indicate that the present regulatory system shall be improved:

- presently, most of the national regulatory documents (67%) are governing the operational programme of the European Regional Development Fund "Entrepreneurship and Innovation" and its activities. At the same time, the other regulatory documents that affect the innovation area lack clear definitions and national position on key issues such as – the national innovation policy, funding of innovation and implementation mechanisms, rights and guarantees of innovative companies – which significantly hamper the development of innovative activities in Latvia;
- in the current regulatory documents insufficient attention is being paid to innovation in education and education role in fostering innovation development. Already in the 1980s scholars have recognised that innovation in social sectors, like education, is just as big as in business and economics (Drucker, 1985);
- the current regulatory documents do not provide sufficiently favourable legal framework for support of small and medium sized enterprises (hereinafter – SMEs) innovative activities. The experience from around the world shows that most attention in the innovation system formation should be paid to the establishment and development of

SMEs, creating a supportive regulatory environment, contributing to security in the appropriate infrastructure and funding opportunities (Deniņš, 2007).

Parallel to the regulatory documents, Latvia has developed a number of different programmes, through which the government is planning to implement innovation policy in Latvia. Figure 3 reflects the development of innovation programmatic framework in Latvia.



Source: authors' construction

Fig. 3. **Development of innovation programmatic framework in Latvia, 2001 - 2010**

According to Figure 3 the first progress towards innovation development in Latvia was started in 2001 with the adoption of the National Innovation Concept. Then in 2003 the National Innovation Programme for 2003 – 2006 was developed on the basis of the National Innovation Concept. However, all the necessary financial resources were not provided for implementing programme's measures and consequently, this programme did not yield the expected results and the Latvian national innovation development was still significantly below the EU average.

In order to implement the Lisbon strategy guidelines, National Lisbon Programme of Latvia for 2005 - 2008 was adopted in 2005. This Programme identifies innovation as one of the key priorities that can foster Latvia's competitiveness. However, Latvia failed to fully achieve the objectives laid down in the National Lisbon Programme and still showed signs of lack of cooperation between research institutions, educational institutions, and business. The main reason of this failure was the lack of systematic approach to innovation and development of weak inter-institutional coordination.

In order to achieve closer Latvian economic policy coordination, policy that so far was implemented through several programmes (National Innovation Programme for 2003 - 2006, Small and Medium Sized Enterprises Development Programme for 2004 – 2006, Industrial Development Guidelines of Latvia) was continued in a single Programme for Promotion of Business Competitiveness and Innovation for 2007-2013. Overall, thanks to the EU Structural Funds, some progress can be observed in the last three years regarding the promotion of innovative economic development in Latvia. However, this path must be pursued, since many Latvian SMEs still face difficulties in accessing information, networking and finding partners, receiving funding for innovative activities, and developing innovative activities in the enterprise.

The role of innovation in the development of state is particularly highlighted in the national medium-term strategic planning document – Latvian National Development Plan for 2007 - 2013. Until 2010 little progress has been achieved to reach the set aim – creating conditions for the development of a knowledge-based economy. One of the main reasons why National Development Plan fails is the lack of bond between implementation measures specified in the Plan and financing from national and the EU Structural Funds. Although, a series of good and innovative ideas to

improve the situation in innovation area was developed in the National Development Plan, this Plan did not offer practical solutions for implementation of these ideas. Latvian economists hold similar opinion, pointing out that in order to achieve targets of the National Development Plan, allocation of adequate financial resources is required, i.e. national and the EU funding, to fulfil the specific tasks (Latkovskis, 2008). They also believe that the National Development Plan shall specify who exactly is responsible for the implementation of a particular measure as well as the implementation dates, outcomes (performance criteria), and the necessary financial resources, human and material resources.

Latest programmatic document which marks the progress of Latvia in the innovation area is Sustainable Development Strategy of Latvia until 2030. Five priorities are defined in this Strategy which both directly and indirectly relate to the scope of innovation and serve as the basis for creation and development of innovative environment in Latvia.

Overall, Latvia has sufficiently broad and detailed programmatic framework that clearly outlines the direction of innovation. However, the previous experience shows that Latvia's innovation potential can fully develop only if the government provides budgetary and financial capabilities for the implementation of measures and activities defined in different programmes.

Problems hindering the development of innovation in Latvia

Analysing the information on the innovation regulatory and programmatic framework it was recognised that several support structures are created for the implementation of national innovation system, like human capital formation, financing, infrastructure, and information. However, despite the fact that a vast enough support structure for the development of innovation, innovators, in particular SMEs, has been created in Latvia, its application is incomplete. The authors have summarised the essence problems that hinder innovation development to show the current situation in innovation policy:

- financing – one of the main reasons that has hindered the effective implementation of various programmes in Latvia is the lack of financing. However, improvement of innovation financing is not only the increased level of funding – it is largely a matter of redistributing the existing financial instruments and coordination;
- information – one of the main problems not resolved in the regulatory and programmatic documents is the lack of cooperation between enterprises and scientists. Other Latvian scholars have presented similar findings (Grēns, 2007; Deniņš, 2007), stressing that the distance between scientific research institutions, and the producing and service sectors, as well as the enterprises which are unable or unwilling to invest in research hamper the development of innovative environment in Latvia;
- human capital formation – serious efforts are required to develop understanding of SMEs on the role of innovation in enhancing the competitiveness of the enterprise, emphasising not only the product and technology innovation, but also the process, organisational and marketing innovation and role of the user-driven innovation.

Conclusions and proposals

Innovation has been a central EU priority over the last decade and it has been supported by many strategies, financing programmes and various political documents. However, the EU's innovation policy is acting incomplete, since it lacks targeted and strategic investment in the future and there is a limited understanding on innovation and unnecessary bureaucracy.

Innovation regulatory framework in Latvia is fragmented and non-systematic. The current national regulatory documents lack clear definition and national positions on key issues such as the national innovation policy, financing of innovation and implementation mechanisms, rights and guarantees for innovative SMEs, and the importance of education in innovation development which significantly hamper the progress of innovative activities in Latvia.

A series of programmatic documents has been developed for the development of the National Innovation Policy, but their practical implementation has occurred on a very small scale. Innovation progress in Latvia began only in 2007 after receiving financing from the EU Structural Funds and implementation of a number of innovative measures defined in the Programme for Promotion of Business Competitiveness and Innovation for 2007 - 2013.

Although in the current economic situation Latvia's government possesses limited available financial resources for the development of innovation, the authors believe that it is possible to implement a number of measures that can both directly and indirectly promote the development innovative society:

- the government should provide regulatory framework and market enabling enterprises and other actors to engage in creation and development of innovation;
- the government should enforce structural reforms in education and business policies;
- the government together with enterprises should impose changes in product and services markets;
- structural reforms in scientific and research institutions should be applied;
- the government should create policies helping develop knowledge networks and markets as well as improve the innovation environment;
- the government should implement tax reforms that could help strengthening the country's growth and developing innovation.

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Regional Differences in Labour Market Relations

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Abstract. The article is devoted to the study of relations among employers and employees in the labour market with the aim to find out how the relations between employers and employees differ in the regions. The regional differences are analysed in urban/rural perspective. The author uses the Workers' skills flexibility appreciation theory of Michael Handel to define the regional differences in the labour market relations. The concept of "insufficient employment" characterises labour market relations in Latvia, and particularly in rural areas. The analysis of previous studies emphasises the main focus of the current article: the differences in flexibility of labour market relations in regions according to rural/urban perspective. The secondary data analysis of employers' survey is carried out in the article. At the end, the author concludes that regional spatial belonging plays an important role in the determination of labour market relations.

Key words: flexibility of relations in the labour market, external and internal flexibility, insufficient employment.

Introduction

The labour market relations among employers and employees are relations in all processes of labour market functioning. The labour market is a research area of interests for economics as well for sociology. The sociological approach has assumed *that* labour market is not a real market (universal, impersonal mechanism, which is not taking into account such aspects as gender, age, colour, and ethnical belonging of agents) (Streeck, 2005; Swedberg 2005). The main focus in sociological perspective is paid either to agents of labour market (employers and employees, intermediates) or social processes in the context of formation and functioning of labour market relations. The author analyses labour market relations using the secondary data from the survey "Specific Problems of Latvia and its Regions' Labour Market" (2007; N=6066) (Latvijas un tās reģionu...,2007). An analysis is carried out from the sociological perspective by using secondary data analyses and methods of mathematical statistics. The main focus of analysis is to clear out regional differences in labour market relations. The concept of flexibility in labour market relations is used in order to define regional differences in labour market relations. The attention is paid to the particular dimensions of flexibility: type of employment agreement and various modes to attach employees.

The social meanings of labour market relations and power dimensions are aspects of labour market relations to be worth a whistle in sociological analysis. The necessary attention is not always paid to power dimension in labour market relations due to the unequal position of labour market agents. The power dimension could be expressed in employers' authority to accept employees' participation in employment relations and demands in implementation of these relations. The issues of differences in labour market relations could be analysed from the perspective of economic sociology, labour market sociology, and regional sociology as well. The regionalisation issues are actualised due to the processes of globalisation in labour market. Concept "region" is used relating to diverse territorial units with specific economic, cultural, and political features.

The concept "labour market" can be associated with certain geographical area as well as different segments of labour market. The labour market is an area where employees are exchanging their working force for money, status, and other benefits acquired by paid work (Kalleberg, Sorensen, 1979). The concept encompasses institutes and practices that determine the processes of change and reception of services between employees and employers. The core and periphery of the labour market could be used both in the geographical meaning, and to describe the segmentation of labour market in primary and secondary segments (various segments differ in security level, salary, demands for qualification etc.) (Lamote, Zubirirey, 2008). The division in "rural" and "urban" areas results in different interpretations of "rural and urban labour market's" identity (Copus, Hall, et. al. 2006). Urban and rural regional differences could be interpreted as a long-term result of social inequality in remote rural areas (far from

central urban region, difficult to access) (Bird, et. al., 2003). The rural/urban regional division theoretically could be interpreted from a wider perspective of cultural and social theories (Ferdinand Töennies, Luis Wirth) about source of differences in urban and rural areas (Wirth,1938).

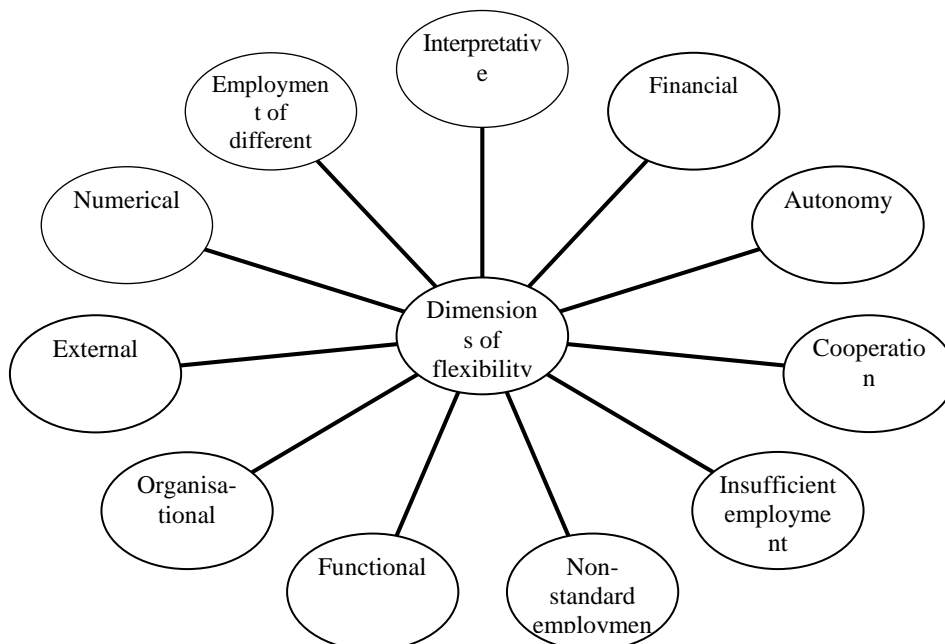
The main tasks of the article are: 1) to construct theoretical frame for the analysis of regional differences in labour market relations; 2) to make consistence for use of the "flexibility" concept in the analysis of labour market relations; 3) to analyse secondary data of employers survey in order to find out regional differences in labour market relations; and 4) to identify the differences in flexibility dimensions (external and internal/functional) in regional context.

The American representative of neo-institutional theory Julie Battilan has developed a theory that tries to explain why agents with different social positions support or do not support institutional changes based on social trajectories theory by Pierre Bourdie. The model explains negative and positive attitude towards the changes of relations between employers and employees in different branches, sectors, territories etc. (Battilana, 2006).

As follows, post-fordism and neo-fordism represents two approaches in post-industrial labour market theories for explanation of changes in labour market relations among employers and employees. Post-fordism emphasises the role of information and knowledge-based demands for qualification as beneficial for both employers and employees. Michael Handel proposes four factors affecting labour market relations among employers and employees financial assistance, non-financial benefits, work conditions, and inter-personal relations in work. Neo-fordism stressed the intensification of work in service sector and shortage of qualification development for low and semi-skilled employees (Handel, 2005). Some sociologists argue that post-fordist changes in labour market are applicable only to small proportion of all employees (Bradley, Ericson, Stephenson, Williams, 2000). The current article pays attention to regional differences in employer's survey data about assessment of labour market relations.

Results and discussion

Flexibility means adaptation and diversity in market economy; at same time, the perception of it differs accordingly to its localisation in labour market system (employee, employer, or government etc.).



Source: author's construction based on Watson, 1996; Gouliquer, 2000; Bradley, 2004; Akiyoshi, 2003; Cadili, 2005; Strangelman, 2008; Handel, 2005

Fig.1. Dimensions of labour market relations flexibility

The concept of flexibility is connected with particular understanding of historical or theoretical labour market relations: mainly regarded to adaptation problems of labour market agents and relations.

Adaptation means an answer to the challenges on different level in global, national, or local scale. It means new initiatives in labour market and an inclusion of social differences in the process of changing labour market. "Flexicurity" means a balance between "flexibility" and "security" in labour market relations (Wilthagen, 2004). Flexicurity lets to realise the flexibility in labour market relations without an enormous risk for position of employee. Insufficient employment means flexibility without security. Insufficient employment includes insufficient salary level, use of qualification, time of work and so on, it means working more for the same wage, intensification of work, more hours, more formal control (Edgell, 2006). The concepts "short time work", "long-term employment", and "temporary working agreement" can characterise different aspects of flexicurity.

The author analyses secondary data from the year 2007 employers' survey in regions of Latvia. Two dimensions of flexibility are analysed there: preference of employment agreement as element of external flexibility, and modes for attachment employees. The main method used for data analyses is the cross tabulation and evaluation with Chi-square test. The regional differences in labour market relations are discussed according to the answers to four questions: 1) on stability of enterprise; 2) on forms of employment agreement used in regional units, 3) addressing employers by employees; and 4) modes for attachment of employees in different regional units.

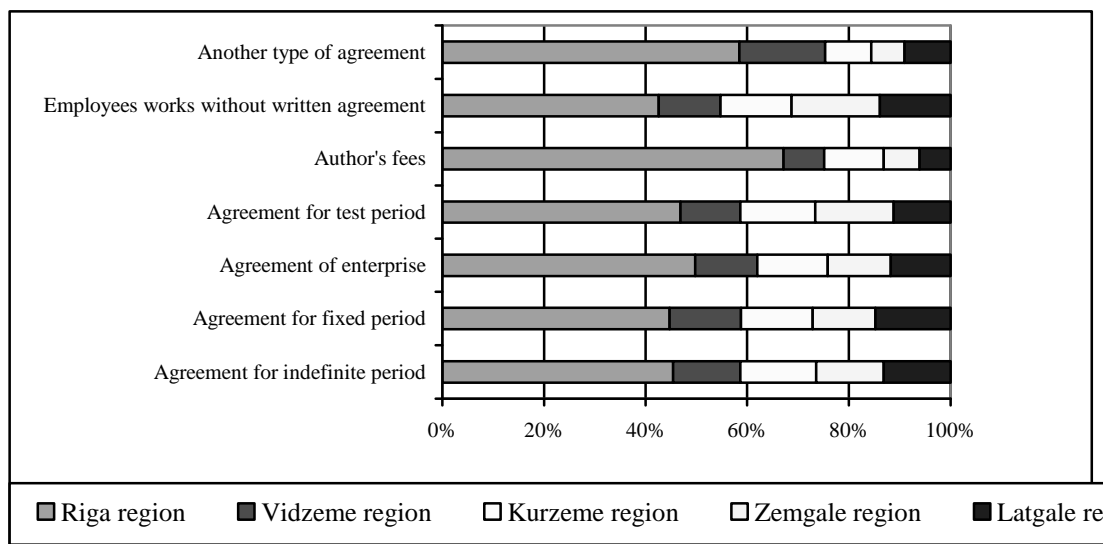
Table 1

Offer of various labour contract forms in different types of settlement (%), N=6066

	Riga	Major towns	Small towns	Rural areas	X ²
Agreement for indefinite period	89	88	90	87	<0.05
Agreement for fixed period	29	26	26	28	>0.05
Agreement of enterprise	28	19	22	22	<0.05
Agreement for test period	29	29	28	28	>0.05
Authors' fees	7	3	3	2	<0.05
Employees work without a written agreement	1	0.5	2	4	<0.05
Another type of agreement	2	0.5	1.2	1.2	<0.05

Source: author's study based on the secondary data analysis of employers' survey from "Specific Problems of Labour Market in Latvia and its Regions", 2007

The absolute majority of employers evaluate the situation of their enterprises/offices as stable now and in future (54%), 37% - considers the enterprises/offices as stable now but are not convinced about the stability in the future. The part of the respondents draws attention to the difficulties of functioning of the enterprise or even being in the phase of liquidation (7%). The proportion of enterprises/offices with difficulties of functioning and being in phase of liquidation are higher in rural areas and in small towns, but relatively higher proportion of employers considering themselves as stable now and in future can be found in Riga region. This means that employers in rural areas meet higher difficulties of functioning and are at greater risk of liquidation. The values of Chi-square criteria let to summarise that the regional differences in various types of settlement offering such forms of agreement - agreement for indefinite period, agreement of enterprise, authors' fees, employee works without a written agreement, or another type of agreement - are statistically valid.



Source: author's study based on the secondary data analysis of employers' survey from "Specific Problems of Labour Market in Latvia and its Regions", 2007

Fig. 2. Offer of various types of labour contracts in regions (%), N=6066

The statement mentioned by 2% of employers that "employees are working without any written agreement" has to be regarded as complete lack of any understanding about principles of employment law. It shows tradition of ignoring legal demands and has to be considered as a violation of law (the results of other researches indicates much greater, roughly ~20% proportion of usage of unregistered workforce). There are more employers declaring their ignorance to Labour Law norms in rural areas (4%). According to the opinion of experts of State Labour Inspection, during the time of economic crisis of 2010, the proportion of unregistered workers has rather increased (Pasākumu ...2010). The greater differences can be found in the usage of author's fees and entrepreneur's agreements: forms are more often used in Riga, more seldom in other areas (Table 1).

Figure 2 shows the differences in the offer of working agreement forms in regions. Similarly as in settlement types, differences in offering author's fees and entrepreneurs' agreements are statistically important; additional feature is differences in offer of agreements for test period.

Table 2
What are you doing to attract a good worker in your enterprise/organisation?/Type of settlement (%), N=6066

Ways of employees attraction	Type of settlement				X ²
	Riga	Major towns	Small towns	Rural areas	
Offer of higher salary for the same work	65	66	65	66	>0.05
Offer of another job with better pay	22	19	16	14	<0.05
Offer of flexible work time schedule	40	38	37	38	>0.05
Offer of professional qualification on enterprise's resources	35	32	34	33	>0,05
Assistance to solve social issues of employees	37	43	45	46	<0.05
Offer of additional benefits (insurance, transport service etc.)	40	33	36	37	<0.05
Offer to do less amount of work	10	13	10	11	>0.05
Improvement of workplaces	41	39	43	42	>0.05
Nothing of the above mentioned	6	6	7	7	>0.05
Difficult to answer	5	5	5	5	>0.05

Source: author's study based on the secondary data analysis of employers' survey from "Specific Problems of Labour Market in Latvia and its Regions", 2007

The employers in regions do not show statistically significant differences in offering agreements for indefinite period, engagement workers without a written agreement and agreements for fixed periods. The authors' fees and agreements of enterprise are more often offered in Riga and Riga region. Diversity of working agreements characterises a potential flexibility in the relations among employers and employees that refers to external flexibility. Diversity in the offer of working agreement forms show a higher flexibility (external) in labour market relations in Riga and Riga region in comparison with other types of settlement and Latvia's regions outside Riga. Labour market relations are also characterised by the interaction patterns among employers and employees; it relates to functional flexibility of labour market relations. There are statistically significant differences in frequencies how often employees' address their employers about work issues in different types of settlement. Rural areas and small towns are places where employees address their employers more infrequently. The regional belonging also plays a significant role as a factor affecting interaction patterns among employers and employees.

Table 3

**What are you doing to attract good worker in your enterprise/organisation?/
Regions (%), N=6066**

Ways of employees attraction	Regions					χ^2
	Riga	Vidzeme	Kurzeme	Zemgale	Latgale	
Offer of higher salary for the same work	66	61	66	69	65	>0.05
Offer of another job with better pay	20	14	15	17	19	<0.05
Offer of flexible work time schedule	39	36	39	39	36	>0.05
Offer of professional qualification on enterprise's resources	33	35	32	37	33	>0.05
Assistance to solve social issues of employees	39	47	45	49	44	<0.05
Offer of additional benefits (insurance, transport service etc.)	38	36	33	39	32	<0.05
Offer to do less amount of work	10	10	11	12	13	>0.05
Improvement of workplaces	41	41	40	44	40	>0.05
Nothing of the above mentioned	6	6	7	5	7	>0.05
Difficult to answer	5	6	5	4	5	>0.05

Source: author's study based on the secondary data analysis of employers' survey from "Specific Problems of Labour Market in Latvia and its Regions", 2007

The Chi-square criterion shows a statistical significance in employees addressing differences in regions. The employees from Riga region more frequently interact with their employers about work issues; at the same time, the employers in Zemgale and Kurzeme regions are rarely addressed.

There are only three ways of worker attraction that differ statistically significant in different types of settlement (Table 2). The ways for attachment of employees used by employers in different types of settlement with statistically significant differences are: offer of another job with a higher salary; an assistance to solve social issues of employees, and offer of additional benefits. The limited offer of another job with better pay in rural areas could be interpreted as a lack of employers and work places in rural areas. Assistance to solve social issues of employees and offer of additional benefits are proposed more often in rural areas in comparison with urban types of settlement. The most unpopular way to stimulate attraction of

“a good worker” is an offer to do less amount of work (average 11%); but most popular way is the offer of higher salary for the same work (average 65%).

The analysis of employers’ offer to “good workers” in regions to strengthen their attraction to enterprise/institution show similar division of answers in the rural/urban areas. The statistically significant differences in answers of employers from regional units are observed on three items: offer another job with better pay; assistance to solve social issues of employees; and offer of additional benefits. The similarity in differences of usage of different ways for employees’ attraction in regional and urban/rural settlements division could be described as an impact of rural/urban belongings of employers.

Conclusions

1. The labour market relations among employers and employees could be analysed as an expression of flexibility in labour market relations.
2. The results of the secondary data analysis show rather uniform approach of employers in offer of employment agreements in urban /rural settlements as well as lack of external flexibility in labour market relations among employers and employees.
3. Statistically significant differences are observed in offering three forms of working agreement in different types of settlement: author’s fees, entrepreneurs’ agreements, and offer to work without any written agreement.
4. Similar differences as in types of settlement can be observed in the offer of working agreement forms in regions. Additional feature is that the contract for test period is more often used in Riga region.
5. The use of different ways in order to attract “good workers” to enterprise/institution is an expression of functional flexibility in labour market relations. The uniform approach to usage of attraction patterns show lack of functional flexibility in labour market relations.
6. Statistically significant differences are observed only in the usage of three ways for “good workers” attraction: offer of another job with better pay; assistance to solve social issues of employees; and offer of additional benefits. The results show differences in financial and functional flexibility in regional units.
7. Similarity in differences of flexibility in labour market relations in regional and urban/rural division let to come to conclusion that regional differences are impacted by urban/rural influence.

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Development of Housing Fund in the Regions of Latvia

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Abstract. The article focuses on the research results of differences between the number of dwelling houses and the total area of housing fund in the regions of Latvia. The aim of this paper was to compare and describe development of the housing fund in the regions. The investigation has showed that the development of housing fund was multiform in various regions of Latvia. The reasons for these differences are well-being and the standard of living, the economic development in the regions and other causes. The unemployment that caused migration from one region of Latvia to another with higher well-being has changed the quantity of residents or emigrants.

The issues of development of the housing fund in various regions of Latvia still have not been analysed and described widely in scientific literature. The research was carried out employing the method of abstract - logical analysis, the graphical methods, the historical research as well as other well-known methods of economic research.

Key words: dwelling house, statistical region, migration, total area of housing fund.

Introduction

The transformation from planned economy to free market economy in Latvia was one of the most important activities of the general reform of real property, including land reform and privatisation of the housing fund. The aim of this privatisation was to transform the state and the government property into private property and to develop the property market. Twenty years ago, only 16% of buildings were owned by individuals and legal entities. The rest was the property of state and local authorities. As result of privatisation, 54% of inhabitants of apartments and home sites became the owners of their dwellings (Datubāzes, b.g.). The processes of economic development started simultaneously with the privatisation process. One of them was construction, including building of new dwelling houses.

There are studies on Latvia's housing fund, its development, and the results of the privatisation process as well as on the development of housing issues in Riga; yet there exist no analysis of the situation in individual regions of Latvia. Just a few authors (Grūtups A., Krastiņš E., 1995; Rozenfelds J., 2002; Paršova V., Zvaigznons T., 2006; Auziņš A., 2004) have investigated and scientifically grounded problems and solutions in relation to housing fund. The analysis and disposition of the housing fund, the problems of its privatisation, and the privatisation process of apartment properties in Latvia are studied by several authors (Paršova V., Sidejska A., 2010; Сидельска А., Паршова В., 2010; Сидельска А., 2009).

The single housing fund privatisation process in the whole territory of Latvia is prescribed by the laws and regulations. However, the activity of inhabitants in different regions of Latvia was significantly different and the number of acquired dwellings in regions has widely varied as well. The situation with construction of new dwelling houses was the same. The aim of the research was to compare and describe the development of the housing fund in regions. The tasks of the study were to research the development of housing fund in regions; to analyse the scope of building new dwelling houses in regions; and to investigate the factors that influence the development of housing fund.

The subject of the research was the housing fund of statistical regions (hereinafter – regions). The following research methods were used to carry out the investigation – the graphical method for reflecting statistical data, methods of analyses and induction for interpretation of the results as well as the monographic and abstract-logical methods for analyses of the laws and regulations, and scientific literature.

Results and discussion

All people are supposed to have property rights. An active construction of dwelling houses has generated a growth of area of living space in Latvia. An increase in emigration and a decrease of the birth rate had a strong impact on the situation with the dwelling houses in all regions of Latvia.

Dwelling plays an essential role in every person's life. It is necessary for existence, it enables individual development, and its improvement provides succession as well. Dwelling or living accommodation is "one or more living rooms with auxiliary premises provided for living throughout the year" (Definīcijas, s.y.). The entirety of dwelling houses creates a housing fund including "a house, an apartment, one or more rooms (such as corridors, hallways) in building for living throughout the year, not taking into consideration whether they currently are or are not inhabited, and it is used as a universal value for statistics or other inventory" (National Glossaries, s.a.). Information on housing fund is registered and maintained in the Information System of the State Cadastre of Real Estate (hereinafter – the Cadastre Information System). Therefore, for the purpose of the Cadastre the housing fund can be defined as the entirety of dwellings, which consists of:

- dwelling houses undivided in separate apartment properties;
- apartment properties; and
- living-space groups in non-residential buildings.

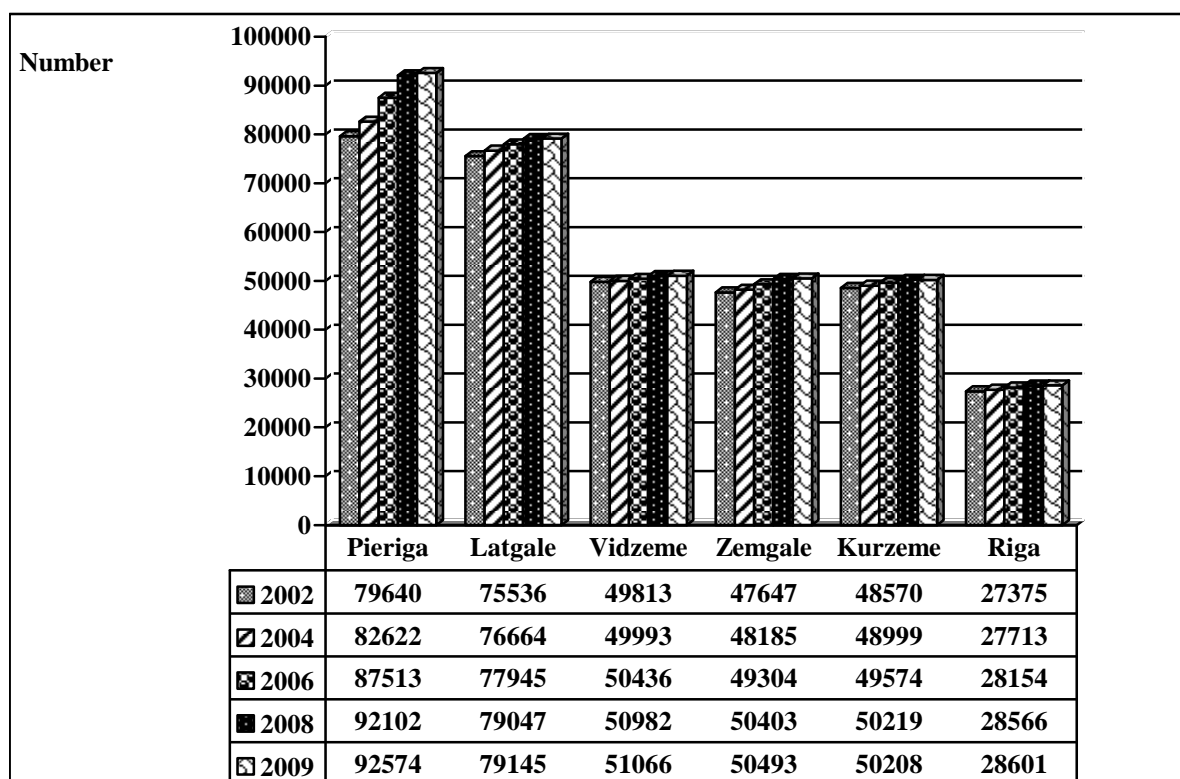
The dwelling house is a building in which at least half of its area is used for residential purposes. Other buildings are considered non-residential; although some part of them (less than a half) is used for living. Depending on the number of apartments, dwelling houses are divided in single, two and three, and more apartment houses. A single apartment house is an openly standing private house. A villa, a country house, a summer cottage, a garden-house etc. as well as a semi-detached house and a terraced house is considered a single apartment house, where each apartment has its own roof and a separate entrance. If in an openly standing private house (also in a semi-detached and a terraced house), there are two apartments sharing one roof but there are separate entrances, it is considered a two apartment house. Three or more apartment houses are all other dwelling houses including modular type houses and all apartment houses with three or more apartments. Shared houses of various social groups and old people's houses including orphanage and shelters for homeless etc. (Ministru kabinets, 2009) are also considered dwelling houses.

According to the Cadastre Information System on 1 January 2010 there were more than 352 thousand dwelling houses registered in the territory of Latvia, 300 thousand of which were single apartment houses. The largest number of dwellings is located in Pierīga region (27%) and Latgale region (23%), while the smallest number of dwellings (8%) - in Rīga region. This can be explained by the fact that 41.7% of dwelling houses in Rīga region are three or more apartment houses while outside Rīga their proportion is within 6-9%. The number of dwellings reaches 14.0% only in Kurzeme region (Valsts zemes dienests, 2010). Breakdown of the number of dwelling houses in the regions is shown in Figure 1.

Historically, the territory of Latvia was inhabited mostly by farmers due to the lack of natural resources, which limited the development of large industrial centres. Already in the late 19th century and early 20th century, farmers began to buy out the farms. Still the purchasing process of the houses was slow, because of the high price of land and heaviness of buying rules. The majority of all the farmers' houses were bought out in the late 19th century in Kurzeme region (85%). However, the number of paid-off houses was insignificant (Latvijas Zinātņu akadēmija..., 1968).

The establishment of the Republic of Latvia in 1918 and overcoming of the consequences of the war stimulated industrial development. Former servants and landless peasants moved from the countryside to towns. As a result, urban population increased and a necessity for new accommodation increased. Private rent houses – one or two storied wooden houses were built to provide all workers with a dwelling place. Three or six storied masonry buildings, which perform their function even today, were only in the town centres. In the period of 1920-1940, apartments with a total area of approximately 930 thousand m² were built in the towns of Latvia and the housing fund reached 11.8 million m². Since 1958, building of 4-5 storey

masonry buildings and slab buildings with several sections (usually 2-4) was started in towns and cities. Yet, 9 and 12 storey dwellings were also built at the end of the 1960s. In 1990, the total area of the housing fund was 53 million m² (Latvijas Zinātņu akadēmija..., 1968).

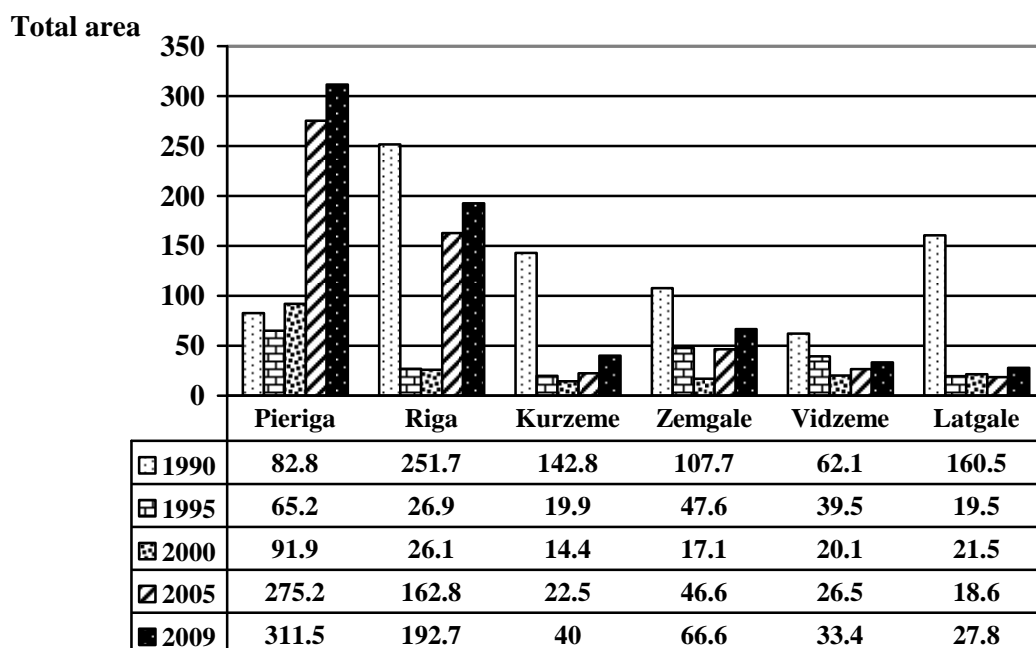


Source: Central Statistical Bureau of Latvia. Dwelling Houses in the Statistical Regions at the End of the Year, 2002-2009

Fig.1. Breakdown of the housing fund in regions of Latvia

The speed of construction declined after the renewal of independence in the 1990s. Until 1990, the biggest number of dwelling houses was apartment houses. They had been built in the major cities of Latvia like Riga, Daugavpils, Rēzekne, Liepāja, Ventspils, and Jelgava. After the year 2000, the building of dwellings was renewed and reached its maximum in 2007 - 1.188 thousand m². The biggest increase of the dwelling space was in Pierīga region (311.5 thousand m²) and Rīga region (192.7 thousand m²). Pierīga region is the only region, which in 2009 had a positive migration balance of 4 057. It was very different in Rīga region - the balance was with the highest negative value -4 842. However, it should be taken into consideration that there is a large number of people living in Rīga and have declared themselves in other regions, but in fact, they live and work in Rīga. The lowest increase in the housing fund was observed in Latgale and Vidzeme regions. These were regions with a negative migration balance in 2009: in Latgale it was -1 126 and Vidzeme -712. If in 2009 the average density of population in Latvia was 34.8 people per km², then in Vidzeme it was the lowest -15.3 people per km², while in Latgale - 23.4 people per km² (Datubāzes, s.y.). The area of newly-built dwelling houses has decreased more than four times in comparison with 1990, and in the year 2009 the area of dwellings was only 191.1 thousand m² (Figure 2).

The evaluation of the previously mentioned facts on the total area of the housing fund in individual regions shows that the situation varies greatly. The largest area of the housing fund is in Rīga region (29.8%) and Pierīga region (18.4%). The number of population in these regions is also the largest, since 31.5% of all Latvia's population lives in Rīga region, but 17.1% - in Pierīga region (Datubāzes, b.g.).



Source: Central Statistical Bureau of Latvia. Dwelling Houses in the Statistical Regions at the End of the Year, 2002-2009

Fig 2. Total area of living space in m² in newly constructed dwelling houses of regions

Therefore, in these regions the area of the housing fund per capita is smaller than the average area per capita in all the country (Table 1).

Table 1

Breakdown of dwelling houses

No	Region	Dwelling houses (number in thousands)						Area of housing fund average per capita (m ²)		
		Private houses			Inter alia apartment houses			2002	2006	2009
		2002	2006	2009	2002	2004	2009			
1.	Rīga	15.45	16.12	16.54	11.81	11.91	11.94	22.3	24.2	25.7
2.	Pierīga	74.09	81.50	86.32	5.44	5.89	6.11	23.8	27.2	29.0
3.	Vidzeme	45.34	45.72	46.34	4.44	4.58	4.57	24.7	26.4	27.8
4.	Kurzeme	41.54	42.37	43.07	6.92	7.09	7.02	25.8	27.5	28.6
5.	Zemgale	43.16	44.47	45.64	4.38	4.71	4.73	23.5	25.5	26.4
6.	Latgale	70.82	73.08	74.27	4.63	4.76	4.77	23.5	25.3	27.1

Source: Central Statistical Bureau of Latvia. Dwelling Houses in the Statistical Regions at the End of the Year, 2002-2009

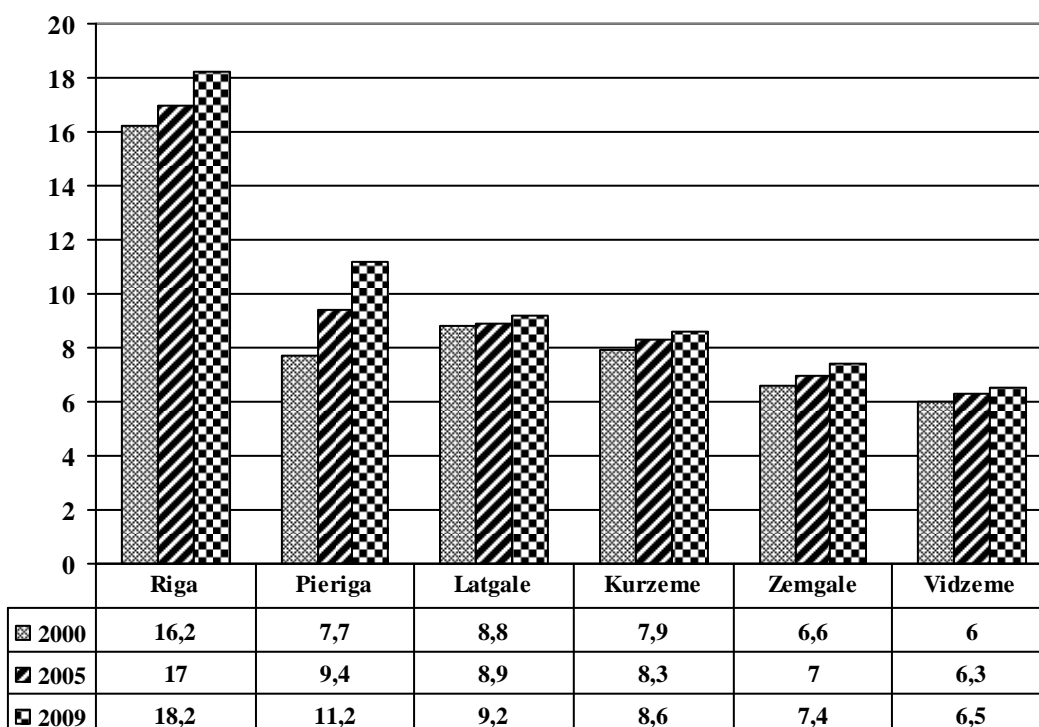
There have been developed separate districts of private houses in the cities, for instance, Mežaparks, Čiekurkalns, and Mežciems in Rīga. In these districts, the historical lives alongside with the modern. However, the highest intensity of private house building was observed close to large cities; thus maintaining a link with nature and becoming part of the landscape. This desire to cultivate land and make gardens was supported also by big enterprises that established gardening and building cooperatives of summer cottages. They allocated land for usage that was divided among cooperative members. The land that was given to members of cooperative could be used to develop an allotment or to build a summer cottage on it.

Nowadays, part of these summer cottages have been heat- insulated and accommodated to live there throughout the year.

The changes also affected Latvia's countryside. Already at the end of the 1940s, the Soviet government resolved to collectivise the farms as well as it adopted several other decisions about winding-up of farmsteads and moving the inhabitants to the centres of farms. Agriculture gained a nature of large-scale production and was concentrated in producing units - such as collective and state farms. The largest populated areas depending on their geographical position and infrastructure became centres of these farms or their teams. Education institutions, production and construction companies, dehydration and service of agricultural techniques as well as dwelling houses were built in these centres. If historically individual single-family houses were located in these centres, then later there were built not only the individual and blockhouses - the so-called "Livanu mājās", but also apartment houses. Dwelling houses for their inhabitants were built by agricultural enterprises like collective farms, state farms, experimental farms, plant-breeding stations, state-owned enterprises, and subsidiary farms. During the period between 1946 and 1964, totally 24.9 thousand dwelling houses were built and created 33 urban villages in rural areas. Meanwhile, the rise of new ones began alongside with the already existing rural villages. The first village of this kind was created in the collective farm "Nakotne" in Dobele district (Latvijas PSR Zinātņu..., 1968).

The previously mentioned allows concluding that quantitative and qualitative indicators of the housing fund change depending on the country's economy and its political system as well as on the standard of living of its inhabitants. However, the housing has always been one of the most important factors ensuring individual existence, creating positive conditions for formation of a family, individual development, and spending leisure time. Figure 3 shows the dynamics of total area of the housing fund in the statistical regions over the past decade.

Total area



Source: Central Statistical Bureau of Latvia. Dwelling Houses in the Statistical Regions at the End of the Year, 2002-2009

Fig.3 The dynamics of total area of the housing fund in regions (million m²)

As it is shown in Figure 3, the largest increase of the housing fund area over the past ten years has been in Pierīga region (3.1 million m²) and Riga region (2.0 million m²). Compared with the previously mentioned, the increase in the housing fund area is 0.5 -0.8 million m² in other regions, while in Latgale region - only 0.4 million m². The emergence of this kind of situation has been influenced by economic changes in the country – in the 1990s, industrial enterprises and collective farms of agriculture and fishing were liquidated or transferred to privatisation. Hence, people lost their jobs and were forced either to start their own businesses or to look for work elsewhere. At first, they initiated migration between regions and the main attraction was Riga thanks to its guaranteed job possibilities. The demand for dwellings increased with the influx of labour. The notable increase of the housing fund area in Zemgale region (0.8 million m²) can be explained by its good infrastructure – in case of necessity, there is an opportunity to work in Riga without any need to change the place of residence. A different situation developed, for example, in Latgale region, which is located 200 and more kilometres away from Riga. Therefore, job seekers from their region wanted to rent or to own a dwelling in or close to Riga.

The author considers that people who had managed to keep their jobs or to create a successful business did not want to live in small space apartments of the apartment houses any more. Due to availability of bank loans, they began an intensive construction of dwelling houses. The selection of the site for building a house was determined by the price of land and availability of financial resources. Territories in the city of Riga as well as in Pierīga region - Garkalne, Stopiņi, Babīte, Mārupe and others were considered prestige places. An important site selection criterion was the proximity of water - access to the sea, a lake, or a river. Therefore, after the year 2000 Pierīga region had the highest increase of the housing fund area – 3.1 million m² (Figure 3).

A third part of all Latvian dwellings has been built before World War II. Totally 86% of all the housing fund area is located in apartment houses built before 1990 (Сидельска, А., Паршова, В., 2010). In Latvia, new dwelling houses with a total area of 7.6 million m² have been built over the past decade. The growth of the housing fund is based only on newly built houses, but the already existing and unused houses are not being restored or rebuilt. For example, the opportunity to transform the former industrial territories into a kind of original multi-functional areas that would minimise the emergence of new slum areas is not being used. It would help to maintain the historically developed architecture, which is typical only of Latvia and at the same time to solve the housing problems.

Conclusions, proposals, recommendations

Having discussed the present situation and the historical aspects of the development of the housing fund, its tendencies of development and other factors that influence it, one can conclude:

- 1) the development of the regional housing fund has been irregular;
- 2) the development of the housing fund depended on the field of economic activities of the respective region and its level of development;
- 3) construction of new dwelling houses was influenced by the level of infrastructure in the region;
- 4) job-seekers increase the demand for housing in regions with a lower level of unemployment.

To ensure a stable and economically grounded development of the housing fund, it is necessary to work out a sustainable national and regional housing policy, to receive state and municipal support in creating new working places and raising the employment level and to have a well-developed infrastructure, which provides access to work and services. It will diminish inhabitants' willingness to change the place of living and will create a basis for sustainable development.

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Challenges for SMEs Development in Salaspils Municipality

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Abstract. Small and medium sized enterprises play an important role for the development of Latvia. In Latvia, SMEs produce more than a half of GDP and employ more than a half of employees. SMEs development has a special importance in the situation of economic downturn and increase of unemployment. It is necessary to support the development of SMEs to ensure a well-balanced development of all regions in Latvia and to reduce social and economic differences. Establishment of small and medium sized enterprises depends on business environment they operate. The state and local municipalities support is important for the development of small and medium sized enterprises. In 2010, there have been introduced several state support activities and the EU funding for entrepreneurship development has been used more actively. The establishment and development of SMEs in Latvia is promoted by the possibility to create enterprise with small capital; support of microenterprises through the support programme for microenterprise development; and introduction of the law "On Micro-enterprise Tax"; reduction of enterprise development fees; and introduction of patent-fees in several professions. The article studies problems met by Salaspils entrepreneurs and analyses proposals for business environment improvement. Some of problems are as follows: disordered legislation, unstable economic environment, shortage of finances, and discouraging business tax policy.

Key words: SME, sustainable development, external environment, region, rural municipality.

Introduction

Business development, especially activities of small and medium size enterprises, is one of the most important preconditions for the economic development. This question is of special importance right now, when many enterprises are liquidated, companies closed, and people lose their working places, thus, increasing the unemployment rate. According to the data of Enterprise Register, totally 12677 new enterprises are registered in Latvia compared with the previous year. The number of registered enterprises has increased by 37.4%. However, the number of liquidated enterprises, i.e. 8645 has also increased in comparison with the previous year. It has increased by 51.3%. In 2010, total difference is positive equalling to 4032 companies (*Lursoft, Enterprise Register, 2011*). In December 2010, the registered unemployment level was 14.4%. The smallest unemployment level was in Riga region – 10.9% and Riga – 9.9%, while the biggest - in Latgale region – 22.3%. The unemployment rate in Latvia has not changed in comparison with November of the previous year, but it has decreased by 1.7% in comparison with December of the previous year (*State Employment Agency, 2011*).

A lot of academic research has been done related to issues of efficient work of small and medium sized enterprises. Business environment where the respective company operates has a big influence on entrepreneurship development. State with its legislation, tax policy, and support system significantly influences the development of small and medium-sized enterprises (Smallbone, Welter, 2001). State support has an important role on innovations facilitation, and cooperation with education and research institutions (Yokakuland, Zawdie, 2009). Often there is no enough information on possibilities for companies to find innovations in rural areas and this leads to lose of competitiveness, productivity, and development as a whole. Cooperation with research centres can solve these problems (Cannarella, Piccioni, 2005). Region can support innovation processes of enterprises by creation of adequate business environment, stimulating and supporting cooperation with higher education institutions and research institutions, and supporting creation of technology centres (Todtling, Kaufman, 2001). Education level of employees and training activities make significant influence

on the increase of productivity, innovations enforcement, company long-term activities, and development. Academic research results show that in many cases managers of SME often do not have enough means for training implementation; they often do not see the training role in SME development. State support has big importance for education and training support (McDonald, Assimakopoulos, Anderson, 2007; Hoque, Bacon, 2008). Often job seekers do not have adequate professional skills, especially those who are looking for a job in a long-time period. Lifelong learning provision, flexible training system, which concentrates on existing skills, and work experience corresponding to the requirements of labour market allow people to obtain the necessary skills for labour market, find job as well as provide entrepreneurs with skilled labour force (Lindsay, McCracken, McQuaid, 2003). In rural areas, SME development often is slower than in cities and towns, which could be explained by concentration of labour force, market, support activities, and consultation services in cities and towns (Miller, Besseer, Malshe, 2007). Interrelations of entrepreneurs, integration into networks and cooperation with similar companies in cities and towns can contribute to the development of companies (Kalantaridis, 2009). Importance of knowledge and skills are underlined in many academic researches, including Robert Watson (Watson, 2010).

Hypothesis: the development of small and medium sized enterprises is slower in rural areas than in cities and towns, since they are more experienced with the lack of skilled labour force, undeveloped and weak market, lack of financial resources, and lack of business support.

The aim of the article is to analyse problems of small and medium sized enterprises in rural areas, devoting detailed attention to Salaspils municipality.

The following tasks are covered to reach the aim:

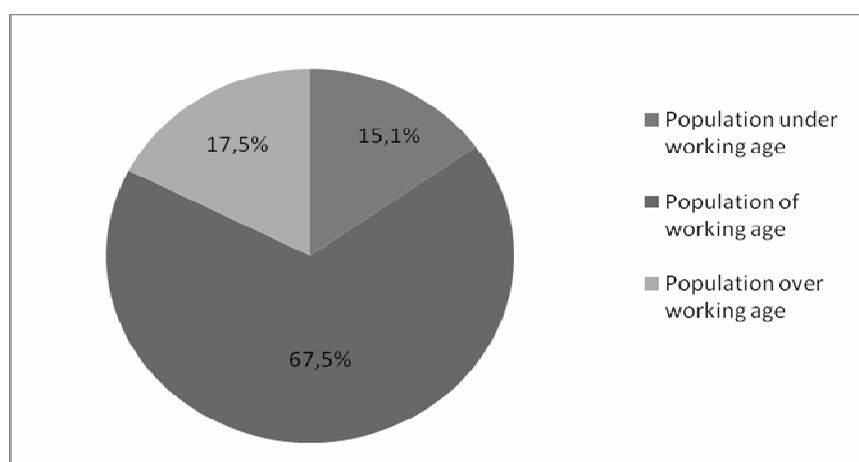
- to analyse scientific literature on the issues of SME activities in rural areas;
- to update information on entrepreneurship activities in Salaspils municipality;
- to analyse problems entrepreneurs are facing in Salaspils municipality;
- to present some recommendations for problem solution.

Methods used in this research: monographic method, analysis of statistic indicators, and statistical analysis methods.

It is important to support entrepreneurship development in rural areas to ensure a well-balanced development of all regions in Latvia and to prevent too big concentration of people in big cities. Local municipality administration can support entrepreneurship activities differently: arranging district infrastructure, simplifying administrative procedures, hearing out problems of entrepreneurs and assisting them in finding ways to solve the problems, and supporting entrepreneurs in different ways. The location of Salaspils district – close to the capital of Latvia influences also problems faced by entrepreneurs in this district. All entrepreneurs have similar problems: changing taxation system, tax rates, and administrative procedures where entrepreneurs have to spend a lot of time. The World Bank publication *Doing Business* index "Ease of Doing Business 2011" has ranked Latvia on the 24th place among 183 countries (Doing Business, 2011). Latvia in comparison with the previous year has stepped up by two positions – it has improved in trading across borders and closing of business. In Latvia, it is necessary to make significant improvements in such fields as start of entrepreneurship by reducing registration time, simplifying tax payments, reducing tax rates, protecting investors, and dealing with construction permits.

Results and discussion

Salaspils municipality is located close to Riga; it influences entrepreneurship activities, choice of living place and involvement in the labour market. Many of Salaspils municipality inhabitants are employed in Riga. On 1 June 2010, there were 23219 inhabitants in Salaspils municipality; there were 15664 or 67.5% of working age population of which 12% were unemployed (*Office of Citizenship and Migration, 2011; State Employment agency, 2010*) (Figure 1.).



Source: authors' calculations based on the information from the Office of Citizenship and Migration Affairs

Fig. 1. **Share of population under working age, of working age, and over working age in Salaspils municipality, 2010**

In 2009, there were 191 economically active statistical units per 1000 inhabitants, 237 or 28.1% self-employed persons, 48 or 5.7% individual merchants, 547 or 64.8% commercial companies, and 12 or 1.4% peasant and fishermen farms in Salaspils district. By size group, there were 773 micro, 57 small, and 14 medium-sized enterprises. Main entrepreneurship activities relate to wholesale trade and retail trade, repair of motor vehicles and motorcycles, services, professional, scientific, and technical activities (*Central Statistical Bureau, 2011*) (Table 1).

Table 1

Market sector economically active statistical units by main kind of activity (NACE rev 2.) in Salaspils county in 2009

No.	Kind of activity (NACE Rev 2.)	Number of economically active units	Share (%)
1.	Agriculture, forestry and fishing (A)	38	4.53
2.	Mining and quarrying (B)	4	0.48
3.	Manufacturing (C)	86	10.26
4.	Electricity, gas, steam and air conditioning supply (D)	1	0.12
5.	Water supply, sewerage, waste management and remediation activities (E)	7	0.84
6.	Construction (F)	86	10.26
7.	Wholesale and retail trade; repair of motor vehicles and motorcycles (G)	196	23.39
8.	Transportation and storage (H)	49	5.85
9.	Accommodation and food service activities (I)	14	1.67
10.	Information and communication (J)	27	3.22
11.	Financial and insurance activities (K)	6	0.72
12.	Real estate activities (L)	54	6.44
13.	Professional, scientific and technical activities (M)	79	9.43
14.	Administrative and support service activities (N)	45	5.37
15.	Education (P)	9	1.07
16.	Human health and social work activities (Q)	34	4.06
17.	Arts, entertainment and recreation (R)	11	1.31
18.	Other service activities (S)	92	10.98
	Total economically active units	838	100

Source: authors' calculations based on the information from the Central Statistical Bureau databases

Salaspils has its specifics, since historically several scientific institutes were located there. Currently they are not as big as they were thirty years ago, but still having some research and creative potential. Many of employees of those institutions live in Salaspils. Salaspils location near the capital of the country was one of the reasons for the establishment of Innovations Centre or Technology Transfer Centre, since the government of Latvia has given the priority for establishment of such centres more distant from the capital city (Prescription of the Cabinet, Republic of Latvia, 2005). With the EU support such centres as Business Incubators were established in several places in Latvia (LIAA, 2011). Besides the information and support for entrepreneurship start-up in business incubators, wide business supportive start-up information for entrepreneurs is available on the web page of Investment and Development Agency (LIAA, 2011). Several Business Incubators are operating in Latvia's regions, also in Riga region, but this incubator provides support to entrepreneurs from Tukums, Limbaži, and Ogre (not Salaspils). Higher education institutions and research institutes can get support from Technology Transfer Centres (LIAA, 2011). Knowledge transfer (higher education institutions/research centres and business co-operation) was possible and successfully implemented there. There are no such centres in Salaspils. However, the municipality has expressed a wish to support research institutes and business co-operation as well as the development of new products. The academic research has pointed out good results on the role of the region for innovation activities of SMEs (Todtling, Kaufmann, 2001); knowledge building in rural areas: experience from a research centre – rural SME scientific partnership (Cannarella, Piccioni, 2005); studies of important factors for knowledge – management adoption in the SME sector (Wong, Aspinwall, 2005); role of entrepreneurs' innovativeness and personality in the adoption of innovations (Marcati, Guido, Peluso, 2008); importance and role of personal contacts for export success (Andersen, 2006); importance of SME networks (Kirkels, Duysters, 2009); role of the institutional environment and SME size (Dickson, Weaver, Hoy, 2006); role of training and consultancy investment in SME (Koh, Gunasrkar, Cooper, 2009); and importance of qualitative marketing in SME performance (Merrilees, Thiele, Lye, 2009). Salaspils municipality may use the good examples of the developed world as well as good cases performed also in Latvia.

In Latvia, good examples often are implemented with the support of the EU funding and priorities were given to the regions located in a bigger distance from the capital city. Big advantage of Salaspils is its very well educated, experienced and towards development focused management, and possibilities to attract young people living already in Salaspils to undertake their entrepreneurial activities there. Therefore, it would be useful to study deeper the experience of other countries and research results (Szamosi, 2006), and find the expectations of young people. Thus, it is very useful to study two projects implemented in Salaspils: the EU ERDF project "Together With Territories for Co – responsibility" (URBACT, 2010) and "Drafting of Salaspils Development Plan" (Salaspils Development Plan, 2010) where young people take an active part. They have expressed their views and expectations on the development of the municipality.

The focus group discussions were organised to get views of several homogenous groups from Salaspils. The representatives of young people have shown that they are interested in Salaspils development and that they are ready to contribute for that. In the current economic situation, problems for entrepreneurs acting in trade could appear as consumer prices rise, but purchasing power is lowering. Unemployment, poverty, segregation of people, and health care are not the only social problems they are related with the country economics and entrepreneurship development (Porter, 2005). Despite the decline of the unemployment rate in Latvia and also in Salaspils district, still the unemployment rate is high. The number of unemployed persons of working age decreased by 381 persons or by 19% in November 2010. Totally, 36.4% of population are long-term unemployed (registered as unemployed for more than 12 months) of all the registered unemployed people in November 2010. Persons with higher education level are registered less (14%) than persons with lower education level – with professional education – 42.1%, with secondary education – 27.8%, and with primary education or lower – 20%. It is hard to find the job, as working places are limited. It is possible to start entrepreneurship or become self-employed and return to labour market, get subsistence means and support family with financial resources. The State Employment Agency

of the Republic of Latvia (NVA) performs the employment activity "Support for Entrepreneurship or Self – Employment Start" to encourage the unemployed persons to start entrepreneurship. In 2009, in Salaspils municipality 27 unemployed persons (in the whole country - 266 persons) received support for the start-up of entrepreneurship: business plan development. The State Employment Agency organises training of unemployed persons to update their skills and digest new ones. In Latvia, during 11 months of 2010 (no data are available for the whole year) in total, 5.1% of registered unemployed persons have participated in qualification increasing activities; 23.9% - in informal education; 33% - in competitiveness increase activities; 0.5% - in training at employer; 31% - in work practice with scholarship; and 9.5% - in complex support activities. Totally, 57091 registered unemployed and job seekers have received career consultations. Training, qualification increase, new skills adoption are especially necessary for long – term unemployed as well as for those whose professions are not required on the labour market. In Salaspils district, the State Employment Agency also offers training to obtain new skills and to enter quicker the labour market and provide employers with labour force (State Employment Agency of Republic of Latvia, 2011).

The academic research results show that entrepreneurs have to be active in solution finding for important business development questions and looking for business support services (Boter, Lundström, 2006). Since April 2010, the Society of Salaspils Entrepreneurs, which represents interests of entrepreneurs, prepares proposals for problems related with the entrepreneurship solutions, creates co-operation with other societies and organisations of entrepreneurs, and provides support for new entrepreneurs has been operating in Salaspils district. The Society of Salaspils Entrepreneurs communicates with local municipality on the issues of for improvement of business environment in Salaspils.

As mentioned above, Salaspils has rather big problem – high unemployment rate. Unemployed persons may be expected as labour force for business development. The authors have participated in the survey of local municipalities on issues of long-term unemployed persons who participate in activities of work practice with stipends (in 2009 and 2010 it was LVL 100, since 2011 it is LVL 80 per month). One of questions was "Are persons involved in work practice with stipends ready to start entrepreneurship or become self-employed?" The main statistical indicators are reflected in Table 2. The responses of local municipalities representatives clearly show that long – term unemployed persons are not a source for entrepreneurship or self – employed: evaluations are very low: the arithmetic mean is only 2.12 (in scale 1 – 10) and the most representatives have evaluated that with the lowest possible evaluation (mode =1).

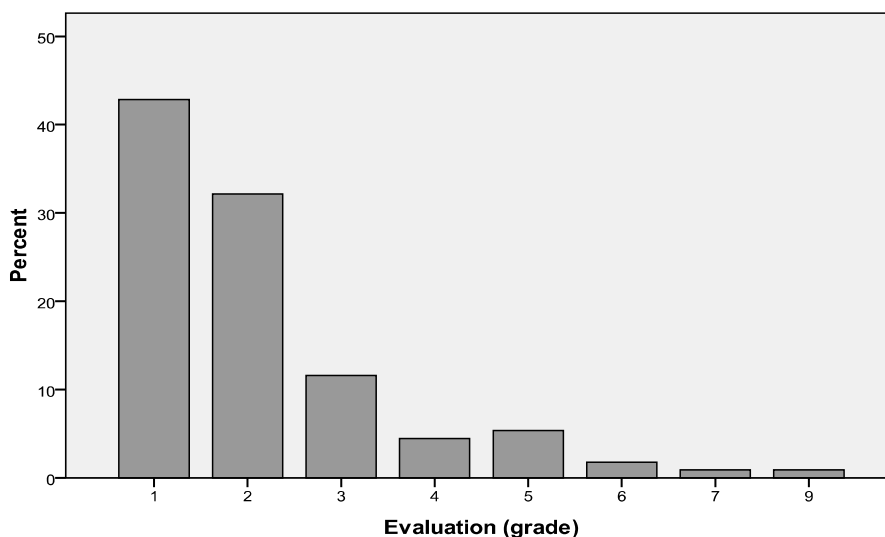
Table 2

Main statistical indicators of responses of local municipalities' representatives on the question "Are persons involved in work practice with stipends ready to start entrepreneurship or become self-employed?"

Number of local municipalities	112
Mean	2.12
Standard Error of Mean	0.139
Median	2.00
Mode	1
Standard deviation	1.469
Range	8
Minimum	1
Maximum	9

Source: local municipality representatives survey conducted by the authors in November and December 2010 (n=116). Evaluation scale 1 – 10, where 1 – are not able; 10 – are able very well

Distribution of responses of local municipalities' representatives on the question "Are persons involved in work practice with stipends ready to start entrepreneurship or become self-employed?" is reflected in Figure 2.



Source: local municipality representatives survey conducted by the authors in November and December 2010 (n=112). Evaluation scale 1 – 10, where 1 – are not able; 10 – are able very well

Fig. 2. Distribution of responses of local municipalities' representatives on the question "Are persons involved in work practice with stipends ready to start entrepreneurship or become self-employed?"

It means that people being long term without work are not ready to contribute to their well-being and are not able to start their own activities to support themselves and their families. They had better rely on the society support. The responses were very alike in all municipalities: more than 70% of evaluations were not bigger than 2, nobody gave the highest evaluation. Comments to the above-mentioned question of local municipality representatives was that long – term unemployed do not have enough financial means to start entrepreneurship.

Conclusions, proposals, recommendations

Salaspils municipality is located near Riga and it has some advantages and some disadvantages for entrepreneurship organisation. The advantages are as follows: location, availability of co-operation with researchers, since several research institutes are located there; different kinds of entrepreneurship activities; active municipality in participation in different kinds of co-operation and development projects. Yet, the disadvantages are rather big share of unemployed and old age inhabitants; and possibilities for skilled labour force find jobs in the capital of the country.

There is no reason to expect that long- time unemployed will be creative and will start their businesses or will become self-employed.

Salaspils municipality may use the existence of research institutes in the municipality territory, good experience and practice of other municipalities, and develop research/business co-operation.

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Aspects for Assessment of Sustainable Rural Development in Latvia

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Abstract. The research aim is to identify and to systemise into a unified system the main criteria for the assessment of sustainable rural development in Latvia. It is necessary for the achievement of complete awareness of the opportunities for improvement rural competitiveness as well as attractiveness and economic importance. The research hypothesis – rural development assessment is a strategically important tool for the prevention degradation of human settlements in rural areas, for the strengthening and improvement of the existing socio-economic potential of the rural areas as well as for the management of rural infrastructure. Sustainable development in the scientific paper is considered as a continuous process to reach sustainability on a global level. In order for this transition to take place, human societies need to deal with new complex problems demanding the adoption of new principles, new ways of thinking and new tools. This challenge will have to be met by all levels of society, including organisations such as government bodies and private companies. The authors present a model for diagnosing rural development based on a set of different criteria. The developed model could be applied for the socio-economic and spatial planning of rural areas in the context of sustainable development. It will provide the planning and implementation of scientifically based rural management policy oriented on the sustainable development.

Key words: rural areas, rural development, rural space indicators, sustainable development.

Introduction

Sustainable development approaches the life quality concept in all its complexity, from the economic, social, and environmental point of view, promoting the idea of balance between the economic development, the social equity, the efficient use, and preservation of the environment. The essence of sustainable development process is the reconciliation between the promotion of integrated process of designing the development strategies and maintaining the environment quality and the decision making for their application, both on global and regional, and national or local level. The sustainable development strategy highlights the interdependence between the local and global issues, between the developed and developing countries, underlying the need for cooperation within and between the economic, social, and environmental sectors.

Rural areas represent about 80% of the European Union territory and an important part of its population. Agriculture and forestry are the main users of land in the rural areas and, as a result, they play an important role for the rural communities; they represent the foundation of a strong social structure and economic viability as well as of the management of natural resources and landscape. Consequently, rural development is regarded as one of the European Union's Common Agricultural Policy development pillars. It is important to note that the current policy of the European Union is oriented at providing support to rural areas and to the people living and working in them. The main goal of the European Union Rural policy is to promote the attractiveness and sustainable development of rural areas as well as broadening of the rural economic functions. It will positively stimulate multi-functionality of rural areas, family enterprise, and rural industry, thus promoting employment and preventing rural depopulation. This means that today's rural development policy should serve the public and promote viability and social cohesion of the Member States of the European Union (Bastiaansen A., 2004). Development of the rural community will contribute to the strengthening of sustainable development of rural areas. All the European Union Member States including the Republic of Latvia are interested in the economic growth and prosperity of rural areas.

According to the Central Statistical Bureau in October 2010, 64 559 km² large Latvian territory was inhabited by 2.248 million of residents. The average population density is 35 inhabitants per 1 km² of the area of Latvia – it is lower than in the most European Union countries but higher than in Scandinavia and Estonia (Central Statistical Bureau, 2010). In accordance with the administrative territorial reform Rural Development Programme of Latvia 2007 - 2013 determines that from 1 July 2009 rural area is all Latvian territory, excluding the cities and counties territorial units – towns with a population over 5000 (the Ministry of Agriculture, 2006). This means that currently in the cities of Latvia that represent only 3% of the territory of the country live 1.521 million or 67.7% of the total population of the country. On contrast rural areas, which cover about 97% of the national territory are inhabited by 0.727 million or 32.3% of the total population of the country (Central Statistical Bureau, 2010). All the above-mentioned facts inevitably show the high degree of urbanisation in the country. The main characteristics of long-term socio-economic and spatial urbanisation process – the increase of urban population, the growth of cities, and the urban sprawl – is obvious in the Republic of Latvia. Despite the currently prevailing scientific view that the urbanisation, and hence the spreading of urban lifestyle in the world is inevitable, sufficient attention should be paid to the challenges and trends of rural development in the context of sustainable development. As world practice shows socio-economic prosperity and spatial growth is impossible without the harmony and mutual supportive cooperation in achieving common goals between the two constituent elements of the space of the country – urban and rural areas. It requires a topicality of the research.

The informative materials comprise reference scientific studies from international special literature, documents and reports of different research projects, own research papers inclusively, statistical data, and information. The methodological instruments used in the research include the analysis and synthesis of the information collected during the inventory regarding the conceptual definition of sustainable development and integration into rural development as well as of the data and information on the non-farm component of rural economy, with the development promoting role, including the determinants of activity diversification, economic potential to generate non-farm rural activities, and human potential size for rural economy development. The research is based on three methods: 1) monographic method – interpretation of data based on the knowledge on the importance of strategic planning and management of rural development for the state sustainable development; 2) document analysis method – study and evaluation of the normative documents and scientific researches on rural development assessment in the context of sustainable development; and 3) logically constructive method – logical interpretation of the already published data by other authors on the assessment of rural development. The research results present the rural assessment model, conclusions on the importance of rural development planning and management for the socio-economic prosperity and competitiveness of the country as well as recommendations for implementation of the developed model on Latvia's conditions.

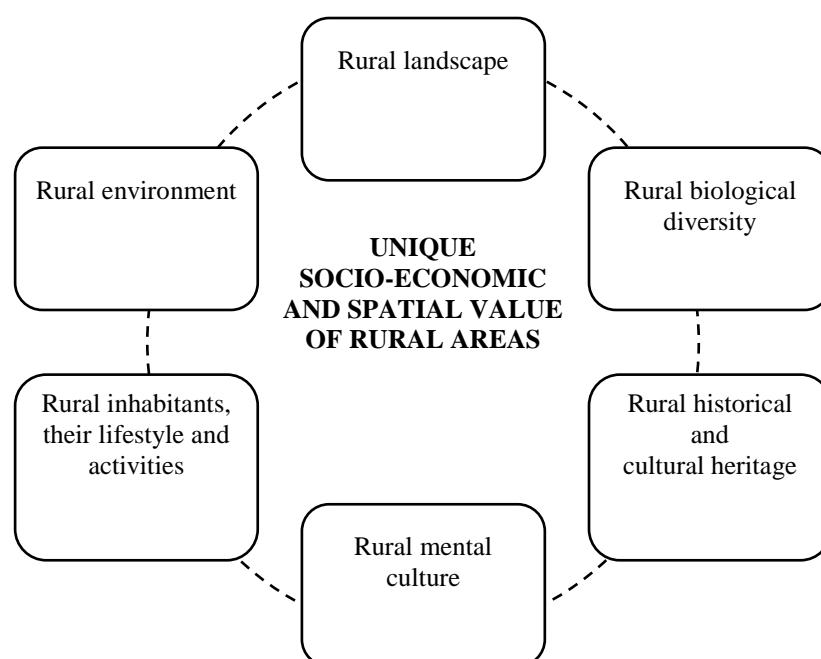
Results and discussion

Rural – the heart of Latvia

"Rural – the heart of Latvia," – the following words are said by Kazimirs Špoģis a habilitate doctor and a professor of Latvia University of Agriculture (Špoģis K., 2002).

The priceless value and importance of rural in the past, present and hopefully in the future of Latvia are reflected in the above-mentioned words. Latvia's countryside is the repository of the history and identity of the state. It has a unique socio-economic and spatial value. Components of the unique value of rural areas of Latvia are shown in Figure 1.

As shown in Figure 1, the main components of the unique socio-economic and spatial value of the rural area of the Republic of Latvia are rural environment, landscapes and biological diversity, rural inhabitants, their lifestyle and day to day activities as well as mental culture, historical and cultural heritage of rural areas.



Source: authors' construction based on the Consultant for sustainable rural tourism entrepreneurs in areas NATURA 2000 (2010)

Fig.1 **Components of the unique value of rural areas of Latvia**

Rural cultural value represents the glory and diversity of the relationships between a person and society, and between a person and nature. Despite the relatively small territory rural areas of each region of Latvia – Kurzeme, Zemgale, Vidzeme, and Latgale – are very distinctive. Rural areas differ from each other with their inherent lifestyle, living and working items, interior décor, traditions, customs, and beliefs. Cultural diversity of local rural community is an important resource for the national growth. Nowadays it more often attracts the interest of local population and tourists. The following opportunities of rural tourism are offered in Latvia thanks to the accumulation of rural values during the centuries (Ministry of Economics, 2009):recreational rural tourism;

- curative rural tourism;
- cultural and ethnographical rural tourism;
- educational rural tourism;
- ecotourism;
- seminars and corporate activities rural tourism;
- active or sport rural tourism;
- exhibitions and farmers' market tourism;
- specific interests rural tourism;
- archaeological rural tourism;
- culinary or gastronomic rural tourism;
- hunting tourism etc.

The main resources for the development of rural tourism in Latvia are villages, rural estates, pubs, old schools, churches, mounds, museums, collections, memorials, rural artisans, a variety of rural traditions, language, dialects and oral oeuvre and its daily use in the context of Latvian territorial areas (Latvian Rural Tourism Association, 2010). The soul of Latvia is revealed in the typical rural farmyard where one lives in harmony with nature's laws and

rhythms. It is a place where ancient traditions are respected and annual festivals are joyously celebrated. On *Jāņi* (Summer solstice) the traditional bonfire is lit in almost every farm.

Līgotāji (the celebrants of the festival) who, during the day have gathered colourful *Jāņu zāles* (field flowers), head off in pairs to seek the legendary secret fern blossom that blooms only once a year on this night. The single-family farm is an integral part of the Latvian landscape. Many still look just as they did centuries ago. The Latvian landscape is also unimaginable without its stately old trees; oaks that are several hundred years old can be found in farmyards as well as in the fields. Here as well, Latvia has become home to 9 000 – 10 000 pairs of white storks. Today, an increasing number of farmers are opening their farms to tourists. More than 140 farms offer bed-and-breakfast services and a variety of leisure activities (Latvian Institute, 2008).

Latvian countryside has always been a place where the magic of nature has been reflected. Latvian rural areas are the mirror of the country's natural beauty and biodiversity consisting of the following components (Latvian Rural Tourism Association, 2010):

- the mosaic type of landscapes that alternates with forests, rivers, lakes, marshes, sea coasts;
- agricultural lands, farms, etc.;
- elements of biodiversity – habitats, plants, animals, and species of other organisms;
- specially protected nature territories and NATURA 2000 areas, and micro-reserves that are designated for the protection of specially rare species and their habitats.

With over 44% of its territory covered by forests, a vast network of free flowing rivers and thousands of lakes, Latvia is one of Europe's best preserved havens for a wide variety of wildlife. Over 27 thousand species of flora and fauna thrive in natural settings that are still relatively undisturbed by human. Many rare species, such as the black stork and lesser-spotted eagle, make their homes in Latvia's mixed forests, marshes, and meadows. There is also an abundance of otters, beavers, lynx, and wolves as well as great concentrations of deer, elk, fox, and wild boar. Bird watching is particularly rewarding in Latvia, especially in the coastal areas and wetlands during annual migration periods. Latvia's territory comprises all the relief types: 36% hills, 33% plains, in a concentric disposal and with an amphitheatre aspect regarding the major relief forms. Agricultural land occupies 39% of Latvia's territory. In the last decade, with the dismantling of collective farms, the area devoted to farming has decreased dramatically – now farms are predominantly small (Latvian Institute, 2008).

The natural environment of rural area is generally characterised by a good preservation condition of the natural soil and water resources, by a variety of traditional landscapes and by a high bio-diversity level, associated with a diversity of habitats and ecosystems, forests and valuable agricultural landscapes (Rural Development Programme of the Republic of Latvia 2007-2013). Particular value of Latvian rural areas is a picturesque landscape that is a human living environment, resources for tourism development, and foundation for the diversity of population business activities in rural areas (Nikodemus O., 2001). A typical Latvian landscape is a mosaic of vast forests alternating with fields, farmsteads, and pastures; amid arable land and birch groves and wooded clusters, which afford a habitat for numerous plants and animals. Very often, it is difficult to mark a boundary between meadows and forests in the mosaic of the Latvian rural landscapes. Old oaks, limes, pines growing at the meadows complement the mosaic of the rural landscapes. These trees form natural parks and forests. Territories that now are officially registered as a forest mostly are meadows converted to forestry areas during the last century. Currently an overgrown scrub, grassland, oxbow lakes, elongated lakes, and wooded quaking complement mosaic (Lārmanis V., 2006).

Nowadays the landscape is an important part of the quality of life for people everywhere: in urban areas and in the countryside, in degraded areas as well as in areas of high quality, in areas recognised as being of outstanding beauty as well as everyday areas. It is stressed in the European Landscape Convention that the landscape contributes to the formation of local cultures and that it is a basic component of the European natural and cultural heritage, contributing to human well-being and consolidation of the European identity (Council of Europe, 2000). This means that providing rural development assessment and management special attention should be paid to conservation and protection of the biodiversity of rural landscape. As the world practice shows development in agriculture, forestry, industrial and

mineral production techniques, and in regional planning, town planning, transport, infrastructure, tourism and recreation and, on a more general level, changes in the world economy are in many cases accelerating the transformation of landscapes. Diversity and attractiveness of the rural landscapes of Latvia can serve as a tool for attraction of local residents and tourists. The system of nature protection and conservation was established and is managed in Latvia to achieve this goal.

Management of the rural development process

The new European Union rural area development philosophy emphasises that the rural area in Europe represents a precious landscape resource, fruit of a long history, the survival of which is a lively concern for the society. The rural area can carry out its supply, recreation, and equilibrium functions, increasingly desired by the society, only if it remains an attractive and original living area endowed with: a good infrastructure; a viable agricultural and forestry sector; local conditions favourable for the development of non-agricultural economic activities; an intact environment, and a well-cared landscape (Otiman P.I., 2008). At the same time, this new philosophy should be based upon the sustainable local development concept, which presupposes both an agricultural (or forestry) component and a strong non-agricultural economic structure, generating jobs in the rural areas. The sustainable local rural development issue represents the quintessence of the economic and social policies targeting the development of local (rural) communities under a harmonious framework.

It can be mentioned that the great variety of definitions attributed to the sustainable development concept in time implies economic, social, political, and ecological factors, with a relatively high convergence level. These factors impose different analysis criteria and the need to combine them in the reconsideration of the development strategies from the perspective of simultaneous satisfaction of the ecological requirements by the socio-economic requirements, through an adequate allocation of the ownership rights and by a correct price establishment. From the rural area perspective, the design of development strategies and policies shall have the sustainable development as a key-component, which presupposes complying with the following requirements:

- sustainable development of agriculture – the main component of rural area and diversification of economic activities, of those related to agriculture inclusively;
- economic growth in correlation with the reasonable use of resources and focusing upon the quality aspect;
- poverty alleviation by satisfying the basic needs related to jobs, food, energy, dwelling, and health;
- demographic acceptability (population increase in number and increase of the demand of subsistence goods create pressure upon the stocks of renewable resources, resulting in the intensification of the demand for non-renewable resources);
- ownership right establishment, public property, and facilitation of access to resources;
- protection and increase of natural resources, reorienting the technologies and risk control in their use;
- democratisation of decisions on the environment and economy.

The management of rural development process in Latvia is implemented in accordance with the rural area development philosophy of the European Union. For the acceleration of rural development process, the government of Latvia has implemented Rural Development National Plan and the Strategic National Plan for 2007 – 2013. These plans contain an analysis of economic, social, and environmental systems, and they establish the basic development indicators. The general strategy of rural development for 2007 – 2013 is presented following the presentation of general aspects (nature, environment, and rural infrastructure: technical – public utilities and education, culture, economic activities, tourism and agro-tourism, S.M.I.). It also presents the concordances of the national strategic plan with some communitarian programmes, the organisation of rural national network, and a SWOT analysis.

Rural space represents a characteristic area with a relative small inhabitancy and a reduce density with dominating agricultural activity. In rural space, human concentrations are limited to the village dimensions. The Recommendation No. 1296/96 of the European Council

Parliamentary Assembly has adopted a definition of rural space as being an interior zone (villages, small cities) in, which the largest part of terrains is utilised for agriculture, forestry, and fishery; economic and cultural activities of inhabitants (handicraft, industry, services); arrangements for free time and distractions; and other uses (with the exception of residence). The new concept on rural space in Europe refers to rural space as to a precious landscape space. Rural space is also the result of a long history which rescue is a preoccupation for the society. Rural space can be defined as a particular way of using the space and social life characterised by some factors. These factors are:

- small density of inhabitants and constructions leaving place for vegetal landscape;
- economic use with agro-forestry-pastoral dominance;
- inhabitants way of life is characterised by their belongingness to small communities and a special report with space;
- an identity and a strong and specific representation of village's culture.

Rural development has in view the fact that the amelioration of alimentary stocks and nutrition as well as basic services (health and education) cannot only determine the progress of physical welfare and inhabitants life quality. In an indirect way, rural development tries and shall intensify the productivity and the aptitudes in order to contribute to the national economy. Rural development shall be preoccupied by the modernisation and monetisation of rural society and by its passing from traditional isolation to the integration in the national economy. The rural development objectives include productivity amelioration, rising of labour force occupation degree, and in consequence, growing of beneficiary groups income as well as the acceptable minimum level regarding the food, housing, education, and health. The concept of integrated rural development was debated almost thirty years ago in the frame of this international organisation. Integrated rural development means the set of measures – governmental and non-governmental –, which has the spreading of modern techniques among rural populations and their adoption facilitation by the interested people as target. These techniques aim at increasing production, productivity, and income. Life standard rising from social and economic point of view, the utilisation, development, and protection of environment is another target of integrated rural development. The purpose is to offer living and work places, delectable and permanent; rural training at which the villagers participate together with the townspeople at social, political, and economic country life.

Elaboration of the rural development assessment system

For a complete, as possible, characterisation of Latvian rural space, the supervising includes the most important dimensions of rural life frame, quantified through the set of criteria analysis. The authors selected these criteria, and other instruments for the analysis, in concordance with the European methodological frame. The aim is to assure the consistence of Latvian rural space diagnosis with the supervision from the European space. The total consistence was not performed because Latvia's statistic system does not contain information of some basic social and economic indicators of rural space needed for the computation. Basic social and economic indicators characterising rural space are as follows: GDP/per capita, sectoral contribution to the GDP, housekeeping incomes, utilisation structure of non-agricultural lands, population education level, unemployment rate and structure on regional, zonal, or local level.

The criteria used in the analysis: physical-geographical, demographical, economic, house and residence type, technical equipment of localities, social, and ecological. These criteria allow the identification of rural development state and rural space resources (which assure sustainable development). For a complex analysis, with a high degree of objectivity, each criterion was detailed in a group of 3 – 8 sub-criteria.

The main condition for sub-criteria selection was to express the problems faced by rural space inhabitants. Criteria and sub-criteria were analytically classified through a number of 45 indicators. These indicators measure the intensities of phenomenon and processes, and the identification of evolution tendencies from rural space.

It is important to mention that the multitudinous elements characterisation of rural space together with technical problems regarding information processing have imposed a judicious selection of sub-criteria and indicators. The presence or the absence of some of them was

conditioned by the existence or absence of some adequate statistical information allowing their quantification.

In order to facilitate the understanding of diagnostic process in the following table the authors present the indicators system used for rural space monitoring according to the accepted methodology in the most of similar studies from other countries.

Table 1

List of criteria, sub-criteria, and indicators used in rural space analysis

Criteria	Sub-criteria	Indicators
1. Physical-geographic	1. Relief forms	1. Main relief forms
	2. Natural protected zones	1. Main categories of protected areas
	3. Natural risk factors	1. Main areas obedient to natural risk factors
2. Demographic	1. Population volume	1. Number of inhabitants
	2. Population density	1. Inhabitants/km ²
	3. Population evolution	1. Population evolution during 1991-2010
	4. Population growth factors	1. Average birth rate in 1991-2010
		2. Average death rate in 1991-2010
		3. Clear migration average rate in 1991-2010
5. Labour force ageing	1. Population ageing indicator (60+ / 0-14 years)	
6. Labour force renewal	1. Labour force renewal indicator (15-29 / 30-44 years)	
3. Economic	1. Agricultural potential	1. Agricultural land/inhabitant
		2. Agricultural uses structure
		3. Animal density / 100 ha
	2. Forestry potential	1. Forest surface/inhabitant
	3. Tourist potential	1. Tourist attractiveness degree
	4. Industrial potential	1. Complexity degree of industrial activity
		2. Agricultural products processing
	5. Agricultural exploitation potential	1. Average surface of individual exploitation
2. Average surface of juridical associated exploitation		
3. Average surface of family associated exploitation		
4. Association degree in land exploitation		
6. Property structures	1. Percent of private agricultural surface of total agricultural surface	
7. Occupation degree of population	1. Actively occupied population per 1000 inhabitants	
	2. Active population in agriculture /100 ha agricultural land	
8. Economic activities diversification	1. Share of non-agricultural active population of total active population	
4. Living	1. Living surface	1. Living surface/inhabitant
	2. Construction materials	1. Share of houses built of sustainable materials
	3. Age of buildings	1. Share of houses built after 1990
	4. New houses	1. Share of new houses built in the period of 2005-2010
	5. Houses equipped with water installations	1. Share of houses with interior water installations
5. Localities technical equipment	1. Water supply in centralised system	1. Drinking water distributed to consumers cm./inhabitant/year
	2. Electrical energy supply	1. Electrification degree of housekeeping
	3. Natural gas supply	1. Natural gas distribution
	4. Telephone network connections	1. Villages connection degree to telephone network
	5. Access to transport roads	1. Access to roads and railways network
6. Social	1. Health	1. Inhabitants No./medic
	2. Education	1. Pupils number/professor
	3. Communication	1. Subscription TV No./1000 inhabitants
		2. Subscription Internet No./1000 inhabitants
4. Babies death rate	1. Babies dead (< 1 year)/1000 born live	
7. Ecologic	1. Air	1. Air quality (overrun frequency on polluting substances)
	2. Water	1. Water quality (overrun frequency on polluting substances)
	3. Soil	1. Soils affected by limitation quality factors
	4. Forests	1. Forests affected by dryness phenomenon and deforestation of total forest area

Source: authors' construction

The authors suggest to perform rural space diagnosis for each locality (micro or macro zone of development), with the help of one synthetic indicator resulted from the computation according to the algorithm of seven criteria: physical-geographic criterion – 8 points; demographic criterion – 30 points; economic criterion – 30 points; living criterion – 10 points; technical equipment criterion – 30 points; social criterion – 8 points; ecologic criterion – 4 points, which totally equals to 100 points.

Each criterion is divided into sub-criteria supplemented by 45 quantifiable indicators. For example, the economic criterion is composed by 8 indicators and 10 quantifiable indicators, each of them having a minimum and maximum value. Each analytical indicator can be attributed to a specific category through which it is possible to define the state or resources of rural space (locality, area, etc.).

Conclusions, proposals, recommendations

Rural areas are the socio-economic and spatial planning framework of the human life. The main task of this framework is – creation of the necessary circumstances and settings for the life and growth and, accordingly, for human welfare. How harmoniously and contently the framework of the human life and activities is created and filled, depends on the human who lives and works there. Latvian countryside and its main components – rural environment, landscapes and biological diversity, historical and cultural heritage of rural areas and especially rural inhabitants, their lifestyle and day-to-day activities as well as mental culture is a unique reflection of Latvian national identity. The research aim was to identify and systemise into a unified system the main criteria for the assessment of sustainable rural development in Latvia. The developed system of indicators could be applied for the socio-economic and spatial planning of rural areas in the context of sustainable development.

The analysis of sustainable rural development in the world and in Latvia shows that long-term, steady, and sustainable development of the society harmonises the processes of rural areas development. In its turn rapid transformations of the social, economic and political conditions provide significant changes in the rural development process. These trends are attributed to the formation and development of the interactions between human and nature. The list of criteria, sub-criteria, and indicators summarised into a unified system could be used for the protection of the diversity and attractiveness of the typical Latvian rural landscapes, development of sustainable management of the natural heritage, and improvement of the natural resource efficiency – all these points show how constructive and creative are the cooperation between human and nature. Most importantly, it indicates whether these relationships are focused on the sustainable development. It is important to note that protection of the natural resources and values, rural environment and cultural traditions promote the significance of Latvia's countryside in the development of tourism industry.

Latvia's countryside holds a special place and performs specific functions in the country's population life and the national economy. Rural areas in Latvia tend to follow the ongoing demographic, social, economic, ecological, political, and cultural processes in the state. Economic features typical for rural areas become more expanded, the economic structure of countryside becomes more complex, changes in lifestyles and life circumstances of rural dwellings occur more quickly. Unfortunately, the level of socio-economic and spatial rural development does not fully meet the requirements of the modern quality of life. It is necessary to note that the quality of life in this context is regarded as one of the indicators for the evaluation of the most significant trends as well as reference point of sustainable development of the society. The criteria, sub-criteria, and indicators identified in the research could serve as methodological substantiation for the promotion of rural development assessment model in the future.

Due to the bio-geographical conditions, Latvia has a diversified and balanced environment, in which vast rural areas are integrated generally standing out by a good preservation of the natural soil and water resources, the variety of traditional landscapes and a remarkable biological diversity. In the rural area, agriculture is the main occupation for the majority of inhabitants. This occupation serves as determining factors for the quality of the rural zones and the natural environment. The efforts of increasing the competitiveness shall take into

account the need to reduce the negative effects upon the natural environment and to increase the benefits brought to it. The improvement of the balance between the economic development of rural areas and the sustainable use of the natural resources is an important objective of the Rural Development Programme of the Republic of Latvia for 2007-2013. The support to agriculture in less favoured area is envisaged as well as diminution of land abandonment phenomena in order to improve the environment and the rural area. A special focus is laid on the support provided to farmers and foresters to be able to manage the disadvantages and obligations coming from the implementation of NATURA 2000 network.

The sustainable use of natural resources raises common problems in all countries, and this responsibility is reflected in several international environment protection agreements. Sustainable development is a complex, laborious and expensive process, which means the management and preservation of the basic natural resources – land, water, air, plants, and animals through the orientation of the technological and institutional changes so that they could meet the human needs both for the present, and for the next generations.

The diagnosis and quantification criteria of Latvia's rural development used until present allowed the implementation of a typological zoning of communes and zones. They reflect the reality of actual situation in Latvian rural space. The authors have selected a set of indicators that could help analyse and diagnose the researched rural areas from social-economic point of view and to draw the most adequate development trends in the future. The main purpose of such kind of researches is represented by the harmonious development of rural areas. The target could be touched with the help of these indicators (well arranged with proper objectives and well organised). It is possible to use the identified indicators on the base of some mathematic models and estimate different rural zone development.

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Alternative Territorial Development Index of Planning Regions

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Abstract. The aim of the article is to describe the proposal of alternative Territorial development index for planning regions, which is based on findings of the research on development indicators. Experience of composite indicators and their calculation is analysed and described in the article. The research object is current Territorial development index and its indicators, which are analysed, taking into account their reliability, availability, and economic logic. The method for calculation of alternative index values is described and alternative index values are calculated and compared with the current Territorial development index values per each planning region. Main impacts of development factors on planning regions characterised by indicators of alternative Territorial development index are described in the research.

Key words: Territorial development index, indicators, planning regions.

Introduction

Wide scope of indicators is available for use to perform an evaluation of the development of particular territories and regions. Nowadays in Latvia, territorial development index is used as complex development evaluation indicator. Initially, the main task of territorial development index when it was created in 2000 was to identify disparities of development between territories to make decisions on territories of special support. Two indexes - Human Development Index (HDI) and Adjusted Net Savings (ANS) index will be reviewed to achieve better understanding of such composite indexes.

HDI is one of the best-known complex development indicators, which characterises national development level quantitatively. During the 1960s, many scientists concluded that GDP could not be considered as an absolute indicator of development and its achievements. Reason for such conclusion was that GDP is shaping from very high number of dimensions and it does not include distribution of wealth. These reasons led to efforts to create the HDI. HDI includes three principal indicators – life expectancy at birth, average level of education, and GDP per capita. By this the HDI covers basic preconditions of sustainable development both of the state and society, such as availability of human capital, education, and meanwhile opportunities of people to reach the level of life quality they deserve as well as economic potential for development of the state (Institute of Social and Political Research of the University of Latvia, 2007). Some authors are of opinion that HDI is not perfect national development indicator either, because the average value of this indicator does not provide an awareness concerning disparities by region, gender, and income group. Even more, the HDI does not touch upon issues of environmental impact and sustainable development, which are important in the context of balance between economic policy and environmental quality (Cypher J.M., Dietz J.L., 1997). These problems are also noted by Latvian researcher O.Lavrinenko saying that HDI does not show the distribution of benefits of economic development (Lavrinenko O., 2010).

Another well-known index is Adjusted Net Savings (ANS) index, which was developed by the staff of the World Bank. Idea of the index is that only resource savings can provide real increase of welfare. The ANS index includes fiscal aspects of governance of environmental resources because taxes of pollution and taxes of natural resources are transferred for the needs of development and efficient environmental protection. The World Bank calculates ANS index for more than two hundred countries. Initially difference between created value and cost of spent resources is calculated. To this difference, investment into education is added but cost of depletion of natural resources and environmental pollution is subtracted. Percentage of this result from Gross National Income of the state is calculated, which is a value of ANS index (Bolt K., Matete M., Clemens M., 2002). One important conclusion from calculations of the ANS

index is that some countries become poorer despite the growth of their GDP. If ANS index is negative, it means that the wealth is decreasing and state policy is not sustainable.

Methodology for calculation of the current territorial development index for planning regions initially were included into the Cabinet Regulations No. 124, which stated that indicators characterising socio-economic development of the territories as well as their respective weights of significance are used to calculate territorial development index (Noteikumi par kritērijiem..., 2004). Planning regions were added as territories to the regulation in 2005 and indicators with their respective significance weights, which were used for the district level territorial development index were also used for planning regions. Nowadays, the Cabinet Regulations No. 482 are enforced; however, the purpose of territorial development index remains to characterise the socio-economic development (Noteikumi par teritorijas ..., 2010). Methodology for calculation of the territorial development index for planning regions does not change despite the fact that the Regulations have been changed several times.

Results and discussions

One of the aims of this publication is to assess robustness of territorial development index indicators and their appropriateness for evaluation of development of planning regions. It is important to ensure trust of development planners, politicians, experts, and the whole society into territorial development index and belief that the chosen indicators are best suited to characterise the level of development in planning regions. Territorial statistics are not wide enough and it is mentioned also by O.Krastins and E.Vanags that "in this particular case limitations are put by the possibilities to obtain necessary statistical data. Taking into account also limitations of time and financial resources it is necessary mostly to stay within limits of data, which are already collected by the Central Statistical Bureau (CSB) or other institutions" (Krastiņš O., Vanags E., 2008). Such conclusion is, of course, logical; however, it should be noted that such a "today's data availability" approach will never allow to create new indicators, which could be tested and could pretend to be included into a territorial development index.

There are several issues and reasons, which create demand for improvements of the current territorial development index. During the previous years, the socio-economic situation in Latvia has changed dramatically due to the global economic crisis. Administrative territorial reform was implemented and new municipalities substantially different by size of the territory and population were established in Latvia. Some indicators of the territorial development index lack sufficient timeliness and not all of them were discussed within a broader audience of experts and development planners. There were no attempts so far to create better indicators due to the problem of data availability. Necessity to reconsider indicators of Territorial Development Index recently is mentioned also by scientists who were involved in creation of index such as E.Vanags and O.Krastins. They state that changing or supplementing indicators of the territorial development index can be useful from time to time. The set of indicators as well as their respective weights of significance are the main factors, which influence values of index and sometimes even conclusions in a broader sense (Krastiņš O., 2009). Necessity to re-examine indicators and their weights of significance is again confirmed in an article of O.Krastins "Tree of Targets for Improvement of Territorial Development Index", where implementation of administrative territorial reform and necessity to arrange corresponding territorial statistics, require the involvement of known experts respected on the municipal level. In addition, economic crisis is mentioned as one of the most important reasons for this review. O.Krastins has also noted that so far economic aspects are prevailing in territorial development index, less social and demographic aspects what was also noted by some local leaders (Krastiņš O., 2010).

When looking at weights of the territorial development index it should be noted that the highest weight is given to an indicator of GDP per capita. Data on GDP per capita on regional level are available with a large delay (about almost three years). Therefore, the use of this indicator is rather problematic. In addition, the dramatic decrease of GDP of more than twenty per cent in Latvia during the economic crisis poses a question about the reliability of GDP as an indicator on regional level, if it is delivered for regional level with such a large delay. A publication "Regional Accounts – Finland Leads the Way" of the Eurostat journal "ΣSigma – the Economy by Numbers, Focus on National Accounts" describes and analyses the problems of

GDP per capita calculation on regional level. In addition, it emphasises that the main obstacle to obtain GDP data more rapidly is a complicated and work-intensive procedure of its calculation, since most countries do this calculation by the method of production amount and partly by the method of income. Therefore, no all-necessary data available on regional level to ensure calculation by all three methods – production amount, income, and spending. Largest problems are how to calculate import and export from and to the region, and how to register and attribute income to particular region (Ostergren Pofantis A., 2008). Impact of the gray economy on GDP figures also should be taken into account as it has grown considerably during the economic crisis. It should be noted that O.Krastins and other authors also conclude that calculation of GDP per capita is done by a complicated methodology, which demands a lot of information and data. Therefore, GDP per capita for territorial statistics can be used for larger territories only. Based on abovementioned arguments it can be concluded that possibilities to use GDP per capita as an indicator for territorial development index are rather problematic.

Unemployment rate is included into territorial development index as the second most important indicator and it is calculated by the State Employment agency (SEA). Unemployment rate is an indicator of total population and timeliness of this indicator is very high. Problem of this indicator is related to non-registered unemployment as many persons who did not find a job and do not anymore receive unemployment benefits reject from their status of unemployed person because there are no any benefits to keep this status. Therefore, unemployment rate registered by the SEA may differ substantially from that obtained from the survey of the CSB. Another problem is that a person can register as an unemployed person at any of offices of the SEA irrespective of his/her place of living. This can cause significant differences between the number of unemployed persons registered by the territorial SEA office and unemployed persons who live in the respective territory. Despite these deficiencies the unemployment rate should be considered as an important indicator of the regional development, which can be combined together with an employment rate to ensure better understanding of situation on the labour market.

Personal income tax (PIT) per capita has a significance weight 0.1, which is similar to all the rest of indicators of the territorial development index, except population density, which has a significance weight 0.05. Data on this indicator for planning regions are available for the year 2009, so the timeliness of data is sufficient. This indicator covers all kinds of personal income, thus it can be considered as important economic activity and wealth indicator. However, it should be again noted that the value of this indicator is influenced by the rate of the gray economy that means a certain part of total income is not registered and taxes from this income are not paid. Therefore, the value of this indicator will be always more or less artificially decreased; however, it is considered the most relevant indicator of welfare level on regional level.

Non-financial investment per capita is an indicator, which demonstrates the dynamics of regional economy and indirectly attractiveness of business environment, and availability of resources. Despite that, one can say that a region is able to attract considerable investment, other economic indicators will not grow substantially, or their growth will not sustainable. Even if all economic indicators demonstrate growth it does not guarantee that, the growth is stable and sustainable. A new example from the recent economic history is real property bubble in Latvia and its burst, which has large adverse consequences for the national economy.

Indicator on the number of individual merchants (IM) and commercial enterprises (CE) per one thousand of population is available for the year 2009 and timeliness can be considered as decent. This indicator demonstrates the economic activity of population and its involvement in business activities. However, it does not show a real quality of business activity, which is better demonstrated by turnover, size of enterprises, competitiveness of enterprises, and their profits.

Demographic pressure is an indicator, which can be a subject for thorough discussions. It is wrong to consider higher proportion of children as a factor, which decreases the level of development. Vice versa, it shows that the development of particular territory and the development potential is positive if there are young families with children living there. O.Krastins and others authors also note that the indicator of demographic pressure should be discussed in more details and it rather has more analytical meaning (Kraštinš O., 2008).

Population density and population change are closely related to the indicators of total population. Data on these indicators are available as of 1 January 2010. Therefore, data timeliness is high. Use of population density as development indicator is however questionable as the value of this indicator has evolved in a long period and is not subject for rapid and dynamic changes. Moreover, high population density cannot be considered as proof of high development level and quality of life, but rather as a precondition for that. Indicator of population change consists of three main parts – number of births, number of decreases, and migration balance. Numbers of births and deaths can be considered as such indicator, which can be highly trusted, as registration of these facts should correspond to the real life situation. The registration of birth allows parents of children to obtain the state budget financed economic benefits. The only one, but nevertheless, a difficult problem to ensure trust to the numbers of population change and subsequently population density is the non-registered migration. Many people who due to different reasons have left the country for a longer period do not inform the respective state authority – the Department of Citizenship and Migration Affairs, and thus they are not included into the official statistics.

O. Krastins and other authors consider that on local level, the indicators of unemployment rate, personal income tax per capita and population change should be kept as territorial development indicators but their pertinence of all other indicators is disputable (Krastiņš O., 2009). Survey on regional development indicators done previously by the author of this article also confirms this opinion, since the abovementioned indicators are considered as most important by the survey respondents (Vesperis V., 2010).

Possible calculation methods of territorial development index can also be discussed further. Historically, the method of standardisation of values, which allows changing units of different indicators to standardised units that are mutually comparable, was used for calculation of the territorial development index. HDI, however, is calculated by using a linear scale method (Lavriņenko. O., 2010). The value of HDI may range from zero to one. If the index value is closer to zero, it means larger difference between the current level of development and the potential maximum level as well as less opportunities for population of the country and lower level of human development.

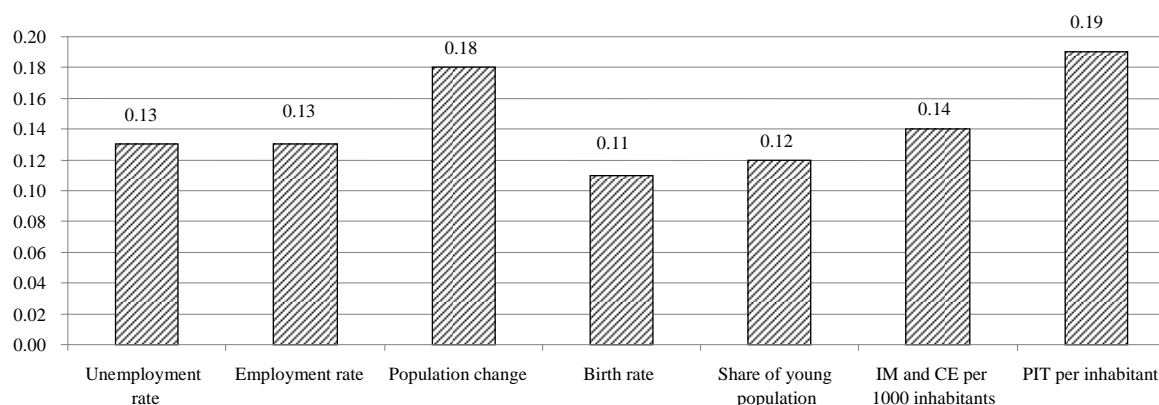
Similar approach was used by Latvian researchers I. Judrupa and M. Senfelde who recognise that a synthetic index (this time – index of competitiveness) is the best way to measure the level of development and competitiveness on different territorial levels. They have used 54 indicators and min-max normalisation method to transform units of indicators to one single unit as they consider this method relevant and allowing to keep relationship between the original data. Regions are compared against strongest and weakest, and the transformed values are easy to use and to interpret (Judrupa I., Šēnfelde M., 2010). Nevertheless, the authors of territorial development index consider the change of calculation method of the territorial development index to be redundant by saying: "to change the mathematical part of territorial development index is not only useless but even impossible until some new alternative and better method is available in Latvia or abroad" (Krastiņš O., 2009). As the aim of the article is to compare the values of alternative index with the values of current territorial development index, a decision was made to select the method of standardisation for calculation of alternative index values. This would allow for more impartial comparison of both indexes.

Alternative territorial development index values are calculated using a set of indicators chosen based on arguments in this study as well as based on results and findings from the opinion survey of personnel of municipalities and planning regions (Vesperis V., 2010). Therefore, a list of indicators for the calculation of alternative index includes four indicators from the territorial development index, namely, unemployment rate, personal income tax per capita, number of individual merchants and commercial enterprises per thousand inhabitants, and population change. Besides these indicators three new indicators are included into the alternative index – employment rate, births per thousand inhabitants and share of young (of age between 15 and 30 years) population.

The standardisation method was used to calculate standardised value of each indicator to ensure comparability of different indicators. Arithmetical mean, deviations from arithmetical mean, and standard deviation were calculated in the study. Deviation from arithmetical mean

is divided by standard deviation and by this operation standardised values of each indicator are obtained. Such a calculation is performed per each planning region and each indicator for a period from 2002 to 2008. After that, standardised values of each indicator are multiplied by the significance weight of respective indicator, thus obtaining the final value of each indicator. Finally, all seven final values are summed up to calculate the index value per each planning region and per each year.

Significance weights were set by using an expert survey. Altogether 17 experts were asked to fill in the questionnaire on weights of indicators and they represented planning regions, the University of Latvia, the Ministry of Regional Development and Local Government as well as Latvian Association of Local and Regional Governments. Calculated significance weights are shown in Figure 1.



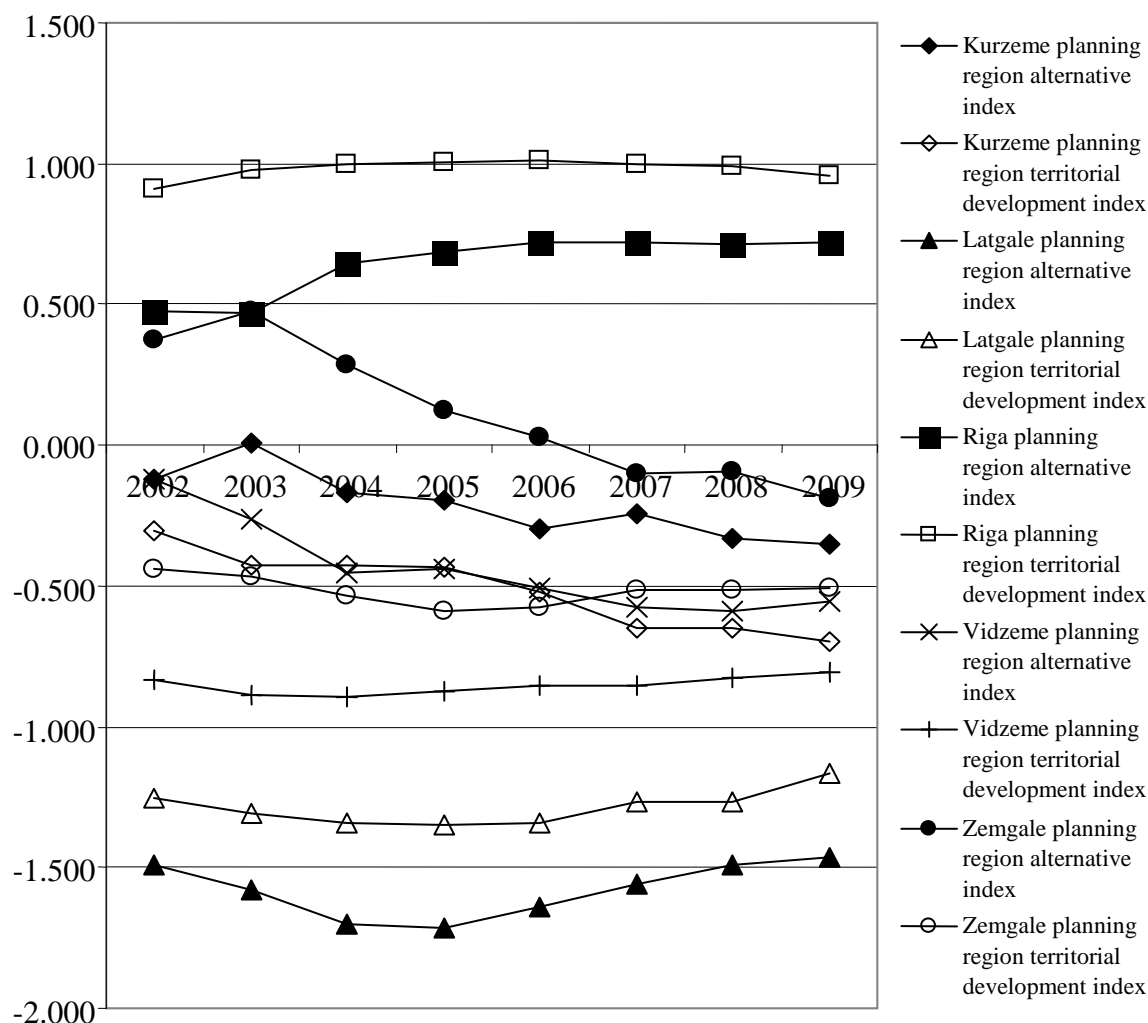
Source: expert survey and author's calculations

Fig. 1. **Significance weights of the chosen development indicators**

Significance weights determined by expert survey are rather equally distributed. Population change and personal income tax are considered the most important indicators, which can be easily interpreted by traditional concept about income as the main source of well-being. Yet, population change is considered important in a light of high emigration numbers, low birth rate and comparably to the EU average low population density. All other five indicators have approximately the same weights and the number of individual merchants and commercial enterprises is recognised as the most important out of these five. Significance weights are used to do the final calculation of alternative index values using the same principles as territorial development index.

Values of alternative territorial development index are compared with values of territorial development index values to analyse their differences as well as positive and negative values of indicators. Change of values of the both indexes is demonstrated in Figure 2.

It is evident that Riga planning region is the most developed region in Latvia. Moreover, growth of the alternative territorial development index value is even more rapid than that of territorial development index. It should also be noted that Riga region is the only one, which demonstrates growth of the alternative index value. All other planning regions face decrease of the alternative index value and most rapid decrease is fixed in Vidzeme planning region (about three and a half times) and Zemgale planning region (about two times). However, territorial development index does not fix such decreases. It is also important to note that alternative territorial development index values in comparison with territorial development index values are lower in Latgale and Riga planning regions but higher in Vidzeme, Kurzeme, and Zemgale planning regions. It means that despite some slightly little improvement of alternative index value during the previous three years in Latgale planning region socio-economic disparities between Latgale planning region and other planning regions are even wider than it is considered according to the territorial development index.



Source: author's calculations

Fig. 2. Change of values of alternative index and territorial development index in the planning regions from 2002 to 2009

When estimating the values of indicators in planning regions it can be concluded that in the year 2009 indicators of personal income tax per capita, population change, and the number of individual merchants and commercial enterprises had most negative influence on values of the alternative index. In particular, it is of the highest relevance for the weakest planning regions because only in Riga region the share of young population is an indicator with a negative value. Latgale planning region, where all alternative territorial development index indicators have negative values is the antipode of Riga planning region. There, the most problematic aspects are population change, personal income tax per capita, and unemployment rate; while the share of young population is the most promising indicator.

Conclusions, proposals, recommendations

1. Values of alternative index in the year 2008 are not radically distinctive from those of territorial development index. However, the dynamics of values of both indexes differ substantially in Vidzeme and Zemgale planning regions.
2. Socio-economic disparities between Latgale planning region and other planning regions are even larger as it is considered according to the territorial development index. The most problematic aspects in Latgale planning region are low income of population and rapid decline in population – indicators, which are considered by experts to be the most important development indicators.

3. It is necessary to promote creation and attraction of new high value added production enterprises in weaker planning regions, which would allow to increase income of population and to slow down if not to stop the current decrease of population. The state economic and regional policies should be as much as possible oriented towards improvements in employment and new economic activity on regional level.

4. Alternative territorial development index of planning regions proposed by this study can be considered as a good starting point for discussion on weaknesses of the current territorial development index. Further analysis and thorough expert discussion is necessary to make the next steps towards improvement of proposed alternative territorial development index, in particular, possible complementary indicators and inclusion of both employment rate and unemployment rate as well as both indicators of birth rate and population change might be discussed in future studies.

5. A set of indicators proposed by this study for the regional level could be also modified according to the availability of data on local municipalities and tested for calculation of alternative territorial development index on the local level.

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Actual Clustering Paths of Economic Sectors in Latvia by the Labour Flows

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Abstract. The empirical research of actual clustering paths of economic sectors in Latvia was carried out on the methodological statement that employment mobility constitutes a channel for knowledge and technology diffusion between economic industries/sectors/branches/segments, creating clusters at its level. The focus in this research is, in addition to empirically measuring the intensity of inter-sector labour mobility in the economy of Latvia, in establishing the employment transition linkages (or labour flow paths) between economic sectors. The authors use the experience of the Research Institute of the Finnish Economy (ETLA) – the quantitative measuring of the patterns of worker flows between industries as well as anonymous individual data from the Labour Force Survey 2008-2009 of the Central Statistical Bureau of the Republic of Latvia to implement a Finnish research tool in Latvia. Within this empirical research the directions of the labour flows, i.e. from where to where the transitions are made as well as the strength of these linkages, namely, how common it is in relative terms that a worker in an industry moves to a different economic sector (or to non-employment). The method of labour flows explains partly the state and dynamics of some sectorial clusters as well as the modern performance of Latvia's economic sectors in the human capital aspect.

Key words: economic sectors of Latvia, clusters, labour flow, labour mobility.

Introduction

The composition of economic sectors, branches, or industries and a life cycle in a national economy is usually determined by final products in researches of economic science. There are quite a lot of scientific literatures in which linkages among the sectors, branches, or industries of a national economy are analysed using the input-output approach which analyses the quantities of raw materials or semi-finished products that are received by a sector, a branch, or an industry from other ones and the quantities of products produced in this sector, branch, or industry and transferred to other sectors, branches, or industries as a raw material or a semi-finished product. This approach was applied to research how technologies and along with them productivity effects flow among economic sectors, branches, or industries, and how technologies relate to the economic growth (Domar E.D., 1961; Jorgenson D.W. et al., 1987; Oulton N., 2001; Daveri F., Silva O., 2004). Input-output tables were also used to identify industrial clusters by analysing the advantages of competition in the process of production (Feser E.J., Bergman E.M., 2000; Hill E.W., Brennan J.F., 2000). The basic task of this research was to find inter-sectorial, inter-branch, and inter-industrial linkages by product flow, ignoring the labour flows in the linkages.

However, ignoring the process of inter-industrial clustering that is based on human capital is a serious disadvantage at least because the productivity potential included in labour is an important factor for the economic growth (Corrado C.A. et al., 2005). So far the inter-sectorial labour flows have not been systematically researched. Yet a few results that are scientifically justified and empirically verified in relation to labour flows are available in the publications by Professor Mihails Hazans. The economic sectors producing the largest flows to unemployment, i.e. the largest unemployment risks in the Baltic countries (Hazans M. et al., 2003) were identified by a multifactor regression analysis as well as the labour flows among employment, unemployment, and economic inactivity were researched based on the data of labour surveys (Hazans M., 2005).

The authors of the present research managed to find two methodologies for determining inter-industrial labour flows in the infrequent scientific publications of foreign

scientists. The first one was described and applied by the US researchers of Russian origin who analyse inter-sectorial labour flows in the Russian economy (Ахмедов А. et al., 2006). Yet the authors' empirical research was based on the methodology for determining the intensity of labour flows developed by the Research Institute of the Finnish Economy (ETLA) and approved in ETLA researches on Finland's industries (Maliranta M., Nikulainen T., 2008).

The research aim is to empirically determine the linkages among the sectors of Latvia's economy by labour flow intensity. The following research tasks are set forth to achieve the aim:

- 1) to describe the methodology for determining the intensity of labour flows developed and approved in Finland;
- 2) to identify and graphically illustrate the sectorial clusters in Latvia's economy by using anonymous individual data from the Labour Force Survey in Latvia.

The research hypothesis is: Latvia has poor developed actual clustering paths of economic sectors measured by the flows of human capital. The method of calculating the ratio of the relative transition probability (*rtp*) of labour force between economic sectors of Latvia has been used to prove the hypothesis.

The empirical data base in the present research is the Labour Force Survey data for 2008 and 2009 provided by the Central Statistical Bureau of Latvia. The data are grouped according to the NACE classification into 10 economic sectors: agriculture, forestry, and fisheries (A); manufacturing and energy (B-E); construction (F); trade, accommodation, and public catering (G, I); transporting, storage, information, and communication (H, J); financial, insurance, real estate services, scientific and administrative activities (K-N); state administration and defence, mandatory social insurance (O); education (P); health and social care (Q); and other economic activities (R-U).

Results and discussion

Anonymous individual data from the Labour Force Surveys for 2008 and Quarter 1 of 2009 (information for two years was obtained, in each case, for the same individual of working age, in total 10941 individuals) to apply the approach of Finnish researchers to the empirical data of Latvia. The data were selected according to the following criteria (LR CSP, 2007):

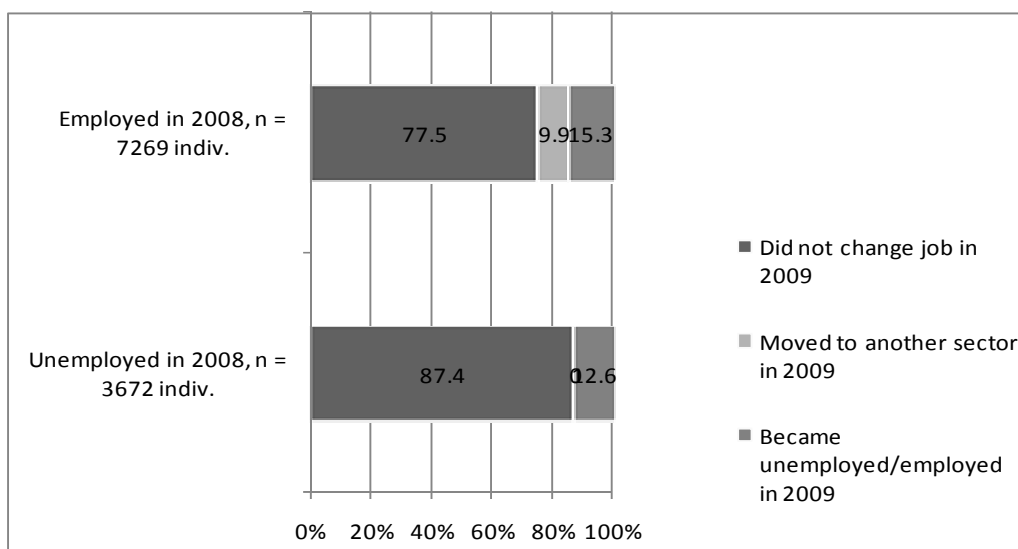
- Indicator C31: during a survey week, a job has been done for pay or for the purpose of gaining profit – one hour or more (including those working for their family, but excluding those serving in the army or doing public services), responses – *yes* or *no*;
- Indicator D39k: the type of economic activity of the main workplace, the code of NACE 2.

The following algorithm was used to research the inter-sectorial labour flows in Latvia:

- 1) all respondents were classified into two categories – employed and unemployed individuals (according to Indicator C31);
- 2) employed individuals are classified by type of economic activity (according to Indicator D39k);
- 3) intensity of inter-sectorial labour flows is computed taking into account the individual data for two periods;
- 4) composition of Latvia's sectorial clusters by labour flow is graphically illustrated.

When comparing Latvia's results with the Finnish data, a problem emerged that the Finnish statistics enable researchers of labour flows to construct clusters at the inter-industrial level, as the Finnish data were grouped into 38 industries. Yet, the data of Latvia's Labour Surveys do not allow researching the labour flows on such a detailed level. Therefore Latvia's researchers of clustering had to conduct their research only on the sectorial level which significantly reduced the quality and scope of the present research.

The first descriptive result of the authors' empirical research, shown in Figure 1, is the movement of Latvia's working-age population in the labour market during the period of 2008-2009 for the group of employed and unemployed individuals.

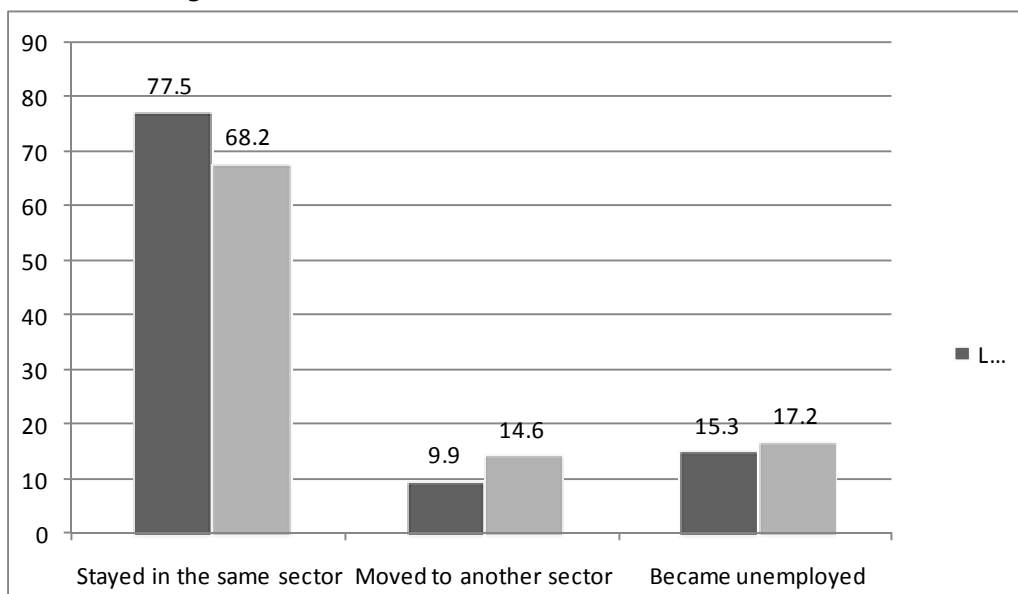


Source: authors' calculations based on Latvia's Labour Survey data, 2008, 2009

Fig.1. Movement of Latvia's working-age population in the labour market in the period of 2008-2009 for the group of employed and unemployed individuals, n=10941 individuals

A general analysis of Latvia's Labour Survey data allowed to find out that over the period from 2008 to 2009, the majority of individuals – 77.5% of employed and 87.4% of unemployed individuals – did not move to another economic sector or did not change their status of unemployed and had the same job or retained the same status, as it was in 2008. Yet, one employed individual out of ten has moved to another sector of Latvia's economy, and 15.3% of employed individuals in 2008 lost their job within the next year (although 12.6% of unemployed individuals got a job and became employed individuals).

A comparison of this common situation with the Finnish data for the period of 2000-2004 is presented in Figure 2.



Source: authors' calculations based on Latvia's Labour Survey data, 2008, 2009; Maliranta M., Nikulainen T., 2008.

Fig. 2. Comparison of the common structure of labour movement for 2008-2009 in Latvia and Finland in 2000-2004, %

If compared with the Finnish data, the situation with the labour flows in Latvia is not unique, although it has to be taken into consideration that the research on the labour flows in Finland was attributed for a longer period and was conducted on the level of industries. Yet, in general, one can confirm that nothing unique occurred to the labour flows in Latvia even during the period of crisis. A more detailed analysis of data was done for the sectors of Latvia's economy to identify the specifics of Latvia in labour movement. The result of analysis is shown in Table 1.

Table 1

Movement of Latvia's working age population in the labour market in 2008-2009 by economic sector, n=10941 individuals

Sector of main workplace according to NACE classification in 2008	Situation with employment in 2009, %			In total in 2008, %	Employment growth, 2009/2008, %
	Stayed in the same sector	Moved to another sector	Became unemployed /employed		
Agriculture, forestry, and fisheries (A)	85.8	2.9	11.3	100	-7.6
Manufacturing and energy (B-E)	73.0	8.2	18.8	100	-18.2
Construction (F)	62.4	7.4	30.2	100	-32.7
Trade, accommodation, and public catering (G, I)	79.5	5.0	15.5	100	-16.2
Transporting, storage, information, and communication (H, J)	81.8	6.1	12.1	100	-11.2
Financial, insurance, real estate services, scientific and administrative activities (K-N)	76.4	7.0	16.6	100	-15.5
State administration and defence, mandatory social insurance (O)	72.4	8.6	9.0	100	-22.0
Education (P)	83.5	6.9	9.6	100	-11.3
Health and social care (Q)	89.5	3.5	7.0	100	4.3
Other economic activities (R-U)	78.7	5.5	15.8	100	-3.0
Unemployed	87.4		12.6	100	

Source: authors' calculations based on Latvia's Labour Survey data, 2008, 2009

According to the data in Table 1, the construction sector faced the largest and most unpleasant changes during one of the most problematic years of economic crisis in Latvia, losing approximately a third of its labour force. The most stable and least dynamic sectors of Latvia's economy in 2008-2009 were health and social care that retained 89.5% of its labour force as well as agriculture, forestry, and fisheries (85.8%), and education (83.5%). Over the analysed period, a decrease in the number of employed individuals was observed in all the sectors of Latvia's economy – from 32.7% in construction to 3.0% in the sector of other types of economic activity. The sector of health and social care was the only sector that increased the number of employees (it could be a characteristic feature of economic crisis).

The approach of relative transition probability was applied to achieve the research aim and to calculate the intensity of inter-sectorial labour mobility in Latvia's economy in the period between 2008 and 2009. The approach assesses how frequently, compared with other transition alternatives, employed individuals decide to move to another sector of Latvia's economy and how strongly one economic sector is linked with another through human resources.

The employment transitions between 2008 and 2009 in Latvia are examined using the methodology of ETLA (Maliranta M., Nikulainen T., 2008). A 10X11 transition matrix is created, where each cell l_{ij} gives the number of people who worked in industry I ($i = 1, 2, \dots, 10$) in 2008 and were in destination j ($j = 1, 2, \dots, 11$) in 2009. The final 11th destination is the non-employment. A labour outflow matrix (10X11) is derived and consists of the coefficients:

$$x_{ij} = \frac{l_{ij}}{\sum_{j=1}^{j=11} l_{ij}} \quad (1)$$

The coefficient calculated by the formula (1) indicates the proportion of workers in destination j ($j = 1, 2, \dots, 11$) in 2009 by industry group i ($i = 1, 2, \dots, 10$) in 2008.

The interest is in the propensity of a worker in a job in industry i to make a move to a job in industry j relative to other alternatives. To this end the fact that the number of jobs (or positions) varies between the destinations needs to be taken into account. In order to derive a suitable measure for the relative transition probability from industry i to destination j the elements of labour outflow matrix, that is, ij x , need to be proportioned to the relative size of destination j in 2009. The size of each industry destination is the number of jobs in 2009 that is l_j when $j \neq 11$. The size of the non-employment destination is defined here as the number of

workers who worked in 2000 but do not work in 2009, more formally $l_{11} = \sum_{i=1}^{i=10} l_{i,11}$. The relative size of destination j is measured by labour share (lsh_j):

$$lsh_j = \frac{l_j}{\sum_{j=1}^{j=11} l_j} \quad (2)$$

By using (1) and (2) the ratio of the relative transition probability (rtp) between industry i and destination j can now be derived:

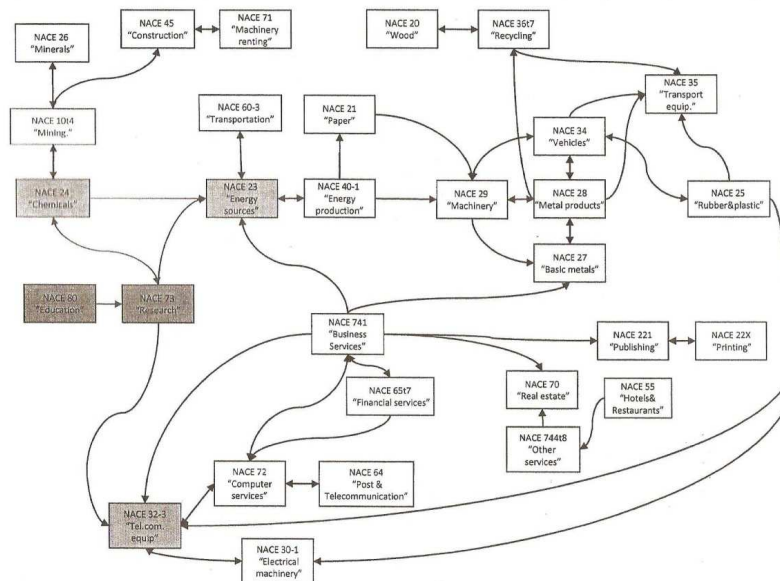
$$rtp_{ij} = \frac{x_{ij}}{lsh_j} \quad (3)$$

It measures the probability for a worker in industry i to switch to destination j relative to all alternatives on average. For each industry i the average relative transition probability over all 11 destinations (weighted by the size of the destination) is one, i.e.

$$\sum_{j=1}^{j=11} lsh_j * rtp_{ij} = 1 \quad \text{for}$$

all $i = 1, \dots, 10$. If all workers of 2008 are randomly distributed to the positions (including non-employment) in 2009 the expected relative transition probability is one in all cases, that is, $E(rtp_{ij}) = 1$ for all i ($i = 1, 2, \dots, 10$) and j ($j = 1, 2, \dots, 11$).

The mentioned methodology was approbated at the Research Institute of the Finnish Economy (ETLA) in the period of 2000-2004 on the data base of labour mobility for 38 Finnish industries, and the most significant results of it are presented in Figure 3.



Source: Maliranta M., Nikulainen T., 2008.

Fig. 3. **Linkages among Finnish industries by labour flow from 2000 to 2004** (linkages where the relative transition probability, i.e. rtp coefficient is greater than 1)

Figure 3 presents the real results of a research conducted by the Finnish scientists on Finland's economy from 2000 to 2004 which were obtained by applying the methodology of determining the intensity of labour flows on employment data. Figure 3 reflects only the inter-industry linkages whose rtp coefficients were greater than 1, i.e. significant. The Finnish researchers started analysing the obtained result from the industry of education which could be a "donor" for several industries. As one can see in Figure 3, there is no significant direct labour flow from the industry of education to other industries, however, education is an important resource for the industry of research (rtp=1.33). The industry of research supplies human capital to three industries in Finland's economy: 1) energy industry (rtp=4.5); chemical industry (rtp=2.5); and industry of telecommunication equipment (rtp=3.2). The latter industry has a significant labour flow linkage with the industry of computer services (rtp=1.6) which, in its turn, is related to the industry of postal and telecommunication services by both the exit labour flow (rtp=1.6) and the entry one (rtp=1.4). So, the labour flows illustrate the Finnish cluster of ICT in the human capital aspect. Figure 3 shows two important "bases" of this cluster: research industry and rubber/plastics industry (rtp=3.0).

At the end of the exit chain of the labour flows from the industries of education and research, the cluster of machinery is located which consists of traditional industries having inter-linkages among the industries of machinery, metals, metal products, ship and transport equipment, and, to some extent, the industry of rubber and plastics. The linkage between the above-mentioned industry of rubber and plastics, and the industries of telecommunication equipment and electrical machinery is interesting. A reason for it is the fact that the industry of rubber and plastics is a subcontractor for the two above-mentioned industries, i.e. it produces covers for cellular phones.

As a result of approbating the Finnish methodology on the data of the Labour Surveys for 2008 and 2009, the relative transition probabilities were computed for every sector of

Latvia’s economy. These data are presented in a common matrix of relative transition probabilities in Table 2.

Table 2

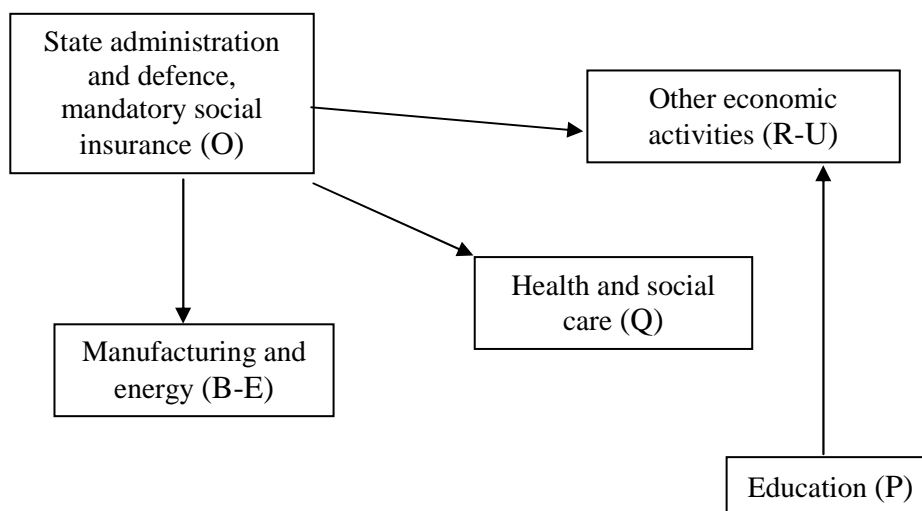
Matrix of the relative transition probabilities (rtp) between Latvia’s economic sectors, 2008-2009, n = 10941 individuals

Sectors	A	B-E	F	G, I	H, J	K-N	O	P	Q	R-U	Unemployed
A	8.98	0.12	0.00	0.05	0.00	0.05	0.04	0.00	0.00	0.03	0.74
B-E	0.17	5.41	0.15	0.09	0.10	0.09	0.22	0.06	0.09	0.02	1.23
F	0.15	0.18	8.83	0.05	0.10	0.14	0.04	0.03	0.05	0.03	1.98
G, I	0.07	0.07	0.04	5.42	0.08	0.06	0.02	0.06	0.06	0.25	1.01
H, J	0.01	0.08	0.12	0.07	9.17	0.28	0.09	0.03	0.05	0.06	0.79
K-N	0.07	0.03	0.15	0.06	0.24	13.99	0.03	0.10	0.00	0.19	1.09
O	0.05	0.51	0.08	0.09	0.10	0.13	9.75	0.12	0.73	0.66	0.59
P	0.02	0.00	0.08	0.05	0.11	0.03	0.04	9.92	0.35	0.50	0.63
Q	0.00	0.04	0.00	0.02	0.00	0.00	0.11	0.16	16.81	0.12	0.46
R-U	0.06	0.04	0.04	0.04	0.03	0.17	0.08	0.14	0.06	17.94	1.03

Source: authors’ calculations based on Latvia’s Labour Survey data, 2008, 2009

The analysis of the labour flows in Latvia showed that in the period of 2008-2009, not a single sector of Latvia’s economy was significantly linked with another one, as the matrix with the Latvia’s result (Table 2), unlike the matrix with rtp coefficients for Finland’s industries (Maliranta M., Nikulainen T., 2008), has no rtp coefficient greater than 1, meaning that there is no sector in Latvia that significantly impacts another one owing to its human resources. It can be partially explained by the fact that the sectorial level (instead of the industrial level as in Finland) was used in the analysis which does not allow to research the platform of economic clustering in more detail – on the level of industries.

Yet, in relation to the data of Latvia, the authors advise to take into account also smaller values of rtp coefficients – 0.5 and greater, thus fixing at least linkage tendencies between the sectors regarding the labour flows. There are four such rtp coefficients in the matrix: between the sector of state administration and defence, mandatory social insurance, and the sector of manufacturing and energy (rtp=0.51), between the sector of state administration and defence, mandatory social insurance, and the sector of health and social care (rtp=0.73), between the sector of state administration and defence, mandatory social insurance and the sector of other economic activities (rtp=0.66) as well as between the sector of education and the sector of other economic activities (rtp=0.50). This result is graphically presented in Figure 4.



Source: authors’ construction based on Table 2 data

Fig. 4. **Linkages between Latvia’s economic sectors by labour flow in 2008-2009** (linkages where the relative transition probability, i.e. rtp coefficient is greater than 0.5)

Conclusions and recommendations

- In researching the world's economies, the input-output approach is usually applied for studying inter-sectorial, inter-branch, or inter-industrial linkages, and ignoring the labour flows transferring knowledge and experience and being an important mechanism for industrial clustering on the basis of human capital.
- The overall situation with the exchange of human resources among the economic sectors in Latvia in the period of 2008-2009 is quite stable and typical – the largest part of labour force stays in the same sector. However, one economic sector in Latvia – construction – faced very unpleasant and essential changes, losing approximately a third of its human resources during a year; in most cases, they have become unemployed individuals. Approximately a fifth of its employees were lost by the sector of state administration and defence, mandatory social insurance. Yet, this sector's labour force turned out to be competitive and in most cases found jobs in the other sectors of Latvia's economy.
- Actual clustering paths of economic sectors in Latvia by the labour flows were measured by the methodology developed and approbated by the Research Institute of the Finnish Economy (ETLA) that is based on relative transition probability coefficients assessing the intensity of exchange of human resources and identifying the sectors between which this exchange occurs.
- The present research on the inter-sectorial labour flows in Latvia's economy allowed to contribute to industrial researches by explaining the composition of economic sectors and to introduce also a new dimension in research on clustering, becoming an additional instrument for identifying industrial clusters in Latvia.
- The data of the Labour Surveys are at the disposal of the Central Statistical Bureau of Latvia, which allows tracing the labour flows from one economic sector to another or to the status of unemployment. However, if compared with the Finnish statistics, Latvia's data represent only the level of economic sectors, not industries which significantly reduced the quality of the present research.
- The analysis of the actual clustering paths of economic sectors in Latvia by the labour flows in the period of 2008-2009 showed that not a single sector of Latvia's economy was significantly linked with another one through human resources, thus not forming clusters of related sectors. This allows considering that the hypothesis of the research was true in general. However, it has to be noted that over the analysed period, several sectors had the linkage tendencies - the sector of state administration and defence, and mandatory social insurance were a source of human resources for such sectors as manufacturing and energy, health and social care as well as other economic activities which were provided with human resources by the sector of education.

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Development of MSMEs in the Regions of Latvia

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Abstract. MSMEs have become significant in the global economy creating most of employment, value added and fostering the economic growth. According to statistics, around 99% of businesses in the EU and Latvia are micro, small or medium. MSMEs have no limitation in type of business - it includes small family-run business, homemade production, agriculture, services and companies producing food, beverages, textile and others. The research aim is to analyse the role and development of MSMEs in the regions of Latvia. Research first describes MSME classification in the EU and Latvia and number of enterprises in each size unit. Then the research analyses regional distribution of MSMEs and its impact on the GDP and employment in 6 statistical regions of Latvia- Riga, Pierīga, Kurzeme, Zemgale, Vidzeme, and Latgale. In all European countries MSMEs are the main source of employment - in the EU-27 countries MSMEs employ 67.4% of all employees and contribute 57.9% to the total value added. As the research shows, in the regions of Latvia increase in number of MSMEs per 1000 inhabitants will most likely mean increase in GDP per capita. On the contrary, the increase in number of MSMEs per 1000 inhabitants will most likely not affect or have a little affect on employment in regions.

Key words: MSMEs, regions in Latvia.

Introduction

Entrepreneurship plays the main role in the economy of each country- successful entrepreneurship can lead to success and welfare of the country and vice versa. Yet it takes a lot of risk to become an entrepreneur, and not everyone is willing to take that risk. In recent years people in Latvia have shown an increasing desire to become self- employed. Eurobarometer research shows that around 50% of people in Latvia desire to become self- employed, which is more than the EU average - 30.71% (SBA Fact Sheet, 2009). Most of start- ups can be classified in enterprise size groups as micro, small, and medium enterprises.

The most common way to **define size groups of micro, small and medium size enterprises** is the number of employees and financial data (turnover, assets, investment or capital). Research done by the World Bank shows that 95% of 89 different countries and country groups are using the number of employees as the main factor to define MSMEs (Kushnir K., 2010). K. Hallberg (2000) actually suggests that scale-based enterprise promotion is driven by social and political considerations rather than by economic reasoning. Some authors work on *ideal* definition to bring together social, political and economic reasoning, like Gibson and van der Vaart, stating that "a SME is a formal enterprise with annual turnover, in U.S. dollar terms, of between 10 and 1000 times the mean per capita gross national income, at purchasing power parity, of the country in which it operates" (Gibson T., van der Vaart H. J., 2008). Despite different options, in Latvia the common EU definition is accepted for policy as well as statistical reasons. According to the Commission Recommendation of 6 May 2003 the common definition used by 27 Member States defines that:

- **micro enterprise** is an enterprise which employs fewer than 10 persons and whose annual turnover and/or annual balance sheet total does not exceed EUR 2 million;
- **small enterprise** is an enterprise which employs fewer than 50 persons and whose annual turnover and/or annual balance sheet total does not exceed EUR 10 million;
- **medium enterprise** is an enterprise which employ fewer than 250 persons and which has an annual turnover not exceeding EUR 50 million, and/or an annual balance sheet total does not exceed EUR 43 million (Commission Recommendation..., 2003).

Micro, small and medium size enterprises have an increasing role in economy. In his early research Birch is stating that micro, small and medium size enterprises are **creating most of new jobs**. The central thesis of Birch's research was that small firms are the most important source of job creation in the U.S. economy (Birch D.L., 1987). Nowadays impressive research done in the U.S. shows that net job creation is high for the smallest firms, and decreases sharply with the firm size. While the average annual rate of job creation in the 0-19 worker category is 10.9% it falls to about -1.1% and 0.5% for firms with between 20 and 999 workers, and it is always negative - indicating net job loss - for firms with 1,000 or more workers, with rather large negative net job creation rates for large firms. These findings clearly suggest an important role of small firms in job creation, consistent with Birch's findings (Neumark D., 2008). Other benefits from MSMEs are improved competition and efficiency. MSMEs are **stimulating competition in the market** and competition is important for efficiency. According to Berry, many markets are too small to have enough large firms to curtail the use of monopoly and oligopoly power, so price-lowering and quality-improving competition tends to come from MSMEs (Berry A., 2007). Researchers are not so consentient about the **role of MSMEs in innovation process**. In some of the works Schumpeter highlighted the importance of SMEs in innovation, suggesting that SMEs were likely to be the source of most innovations (Shumpeter J. A., 1934). Nowadays sectoral belonging, the particular nature of the innovation involved, and the particular nature of the company itself do count. Moreover, even within a given sector, small firms are quite heterogeneous, ranging from highly innovative NTBFs to traditional and financially constrained SMEs for which R&D and innovation are irrelevant (Ortega- Argiles R., 2009). Compared with large enterprises, MSMEs have more significant role in local and regional economy, while large enterprises are usually national or international.

As described before, MSMEs foster economic growth, create most of employment and value added, and have an increasing role in stimulating competition and innovations. These are the reasons why MSMEs are increasingly important for regional development in Latvia. **The following hypothesis is defined:** MSMEs have impact on the employment and GDP in the regions of Latvia. **The research aim** is to analyse the role and development of MSMEs in the regions of Latvia. **The following tasks are set up to achieve the set aim:**

- 1) to give a survey on MSMEs definition and its importance;
- 2) to analyse growth of MSMEs in Latvia;
- 3) to analyse regional distribution of MSMEs in Latvia;
- 4) to analyse correlation between MSMEs and employment and GDP in statistical regions of Latvia.

The research is mainly based on the monographic descriptive method and mathematical statistical methods as well as analysis and synthesis, and graphical analysis.

Results and discussion

1. Business environment for MSMEs in Latvia

Micro, small and medium size enterprises are significant for the growth of Latvia and its regions. Last few years have been really difficult for the economy of Latvia - dramatic drop of GDP, production and employment, leaving thousands of people unemployed and without hope to find the job in the near future. Micro, small and medium size enterprises can be a survival factor for both - unemployed people and the economy of Latvia.

Nowadays in Latvia around 99.7% of all businesses can be classified as micro, small and medium size employing less than 250 employees and with the annual turnover not exceeding EUR 50 million, and/or an annual balance sheet total not exceeding EUR 43 million. In Latvia MSMEs employ 76.3% of all employees in the country (the EU-27 average - 67.4%), and total contribution to value added in Latvia is 74.2%, while the EU-27 average is 57.9% (SBA Fact Sheet, 2009). According to statistics, MSMEs in Latvia have more important role in the economy than the EU average.

It is very important for the government to ensure preconditions for enterprise growth, such as low establishment costs, advantageous tax policy, and others. According to Ayyagari, larger SME sectors are robustly associated with a competitive business environment that facilitates

entry, eases the establishment of property rights, and fosters access to external finance by providing for more efficient credit information sharing. Similarly, findings suggest that higher costs of contract enforcement and more rigid employment laws prevent informal enterprises from entering the formal economy (Ayyagari M., 2007). In 2009 the government in Latvia approved *Microenterprise Support Concept* where the main tasks are named to support micro enterprise sector:

- to decrease establishment costs for micro and small enterprises;
- to introduce microenterprise friendly tax policy;
- to simplify bookkeeping and achieve that entrepreneur can do it by himself;
- to ensure access to finance;
- to ensure information flow for microenterprise (Microenterprise Support Concept, 2009).

These tasks indicate main problems in MSME sector in Latvia - high establishment costs, complicated bookkeeping, and limited access to finance and no special tax policy for MSMEs.

Till the year 2010 this field envisages 3 main achievements:

1. **ALTUM Promotional programme** - established in 2005 the programme is targeted at start-ups and fast growing businesses. ALTUM promotional programme office is established to serve primarily SMEs and persons with mortgage loans. ALTUM provides access to finance organisations which cannot get credit due to their high risk (SBA Fact Sheet, 2009);
2. **Lower establishment costs** - the establishment costs for limited liability companies with maximum 5 founders have sharply decreased since May 2010. The share capital in the moment of establishment can be less than LVL 2000 (starting from LVL 1), and registration costs drop from LVL 130 to LVL 30 (Mazkapitāla SIA dibināšana, 2010);
3. **Microenterprise tax** - since 1 September, 2010 business with less than 5 employees and annual turnover less than LVL 70 000 can choose to pay 9% of total turnover as corporate tax (Mikrouzņēmumu nodoklis, 2009).

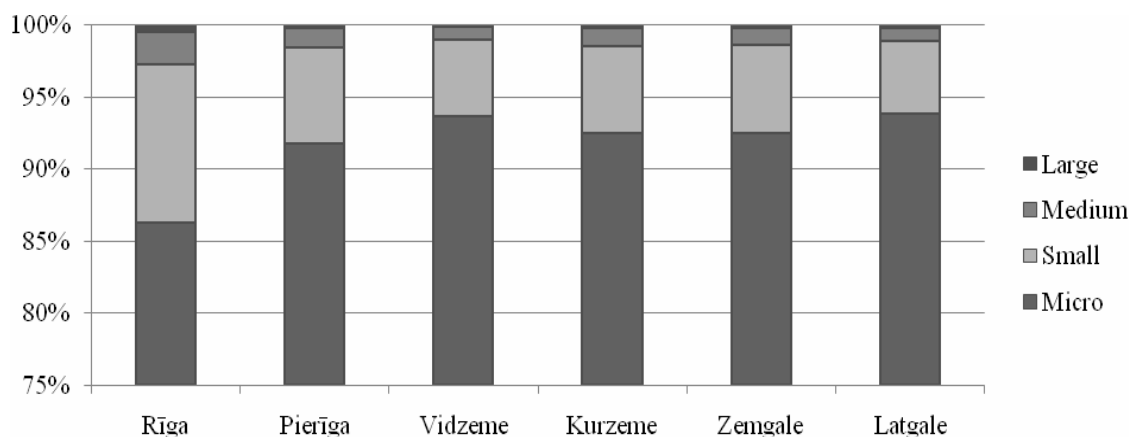
Since the government accepted Microenterprise Support Concept there are few very important improvements in business environment in Latvia. It is very important to look on the situation in 6 statistical regions of Latvia to find whether business environment is beneficial in regional aspect.

2. Regional distribution of MSMEs in Latvia

To ensure sustainable regional growth in Latvia it is important to develop micro, small and medium size enterprises not just in the capital Riga, but also in regions. According to statistics, in 2009 around 38% of all micro enterprises, 55% of small enterprises, 56% of medium enterprises, and 69% of large enterprises were distributed in Riga region.

Riga is a massive business centre, and the economy is not showing equal growth in each region. The distribution of enterprise size units in each region is shown in Figure 1.

As shown in Figure 1, in Riga region the structure of MSMEs is different from other regions. It has less share of micro enterprises - 86% (in other regions 91% - 93%), and the biggest share of small enterprises - 11% (in other regions - 5% - 6%) and medium size enterprises - 2% (in other regions 0.2% - 0.7%). Apart from Riga, the other regions have similar distribution of micro, small and medium size enterprises- in all regions micro enterprises are dominant and the share of large enterprises differ from 0.1% to 0.5%.



Source: authors' construction based on the CSB statistics

Fig.1. **Share of micro, small, medium and large enterprises in the regions of Latvia, 2009**

The most precise ratio, showing the development of MSMEs is the number of micro, small and medium size enterprises per 1000 inhabitants. This ratio takes into account not just changes in the number of MSMEs, but also changes in the number of inhabitants in each region. MSMEs in the regions of Latvia per 1000 inhabitants compared with the average in Latvia and the EU are shown in Table 1.

Table 1

Number of MSMEs per 1000 inhabitants in the regions of Latvia compared with the average in Latvia and the EU, 2005- 2009

Region	2005	2006	2007	2008	2009
Rīga	55	61	67	69	70
Pierīga	41	45	49	49	48
Vidzeme	53	57	60	59	59
Kurzeme	43	50	55	53	54
Zemgale	44	47	50	47	45
Latgale	40	44	47	48	48
AVERAGE LATVIA	46	50	55	54	54
AVERAGE EU	40	-	-	-	-

Source: authors' calculations based on the CSB and Eurostat data

As shown in Table 1, each year the number of MSMEs per 1000 inhabitants in Latvia is above the average in Rīga region and Vidzeme region, while Kurzeme reaches the average number only during 2006 and 2009. The other regions - Pierīga, Zemgale and Latgale are below the average. The most dramatic situation is observed in Latgale region between 2005 and 2007 with the lowest number of MSMEs per 1000 inhabitants, and Zemgale region in 2008 and 2009 with the lowest ratio. If compared with the EU average in 2005, all the regions except Latgale exceed 40 MSMEs per 1000 inhabitants, while Latgale shows the same figure as the EU average. There is no region with a ratio lower than the EU average.

3. Impact of MSMEs on GDP and employment in the regions of Latvia

The authors chose to use Spearman correlation analysis to see the impact of MSMEs per 1000 inhabitants on GDP per capita and employment in the regions of Latvia between 2005 and 2009. The variable X in both cases is the number of MSMEs per 1000 inhabitants in the regions of Latvia, and variable Y is 1) GDP per capita in the regions of Latvia and 2)

employment in the regions of Latvia. The results of Spearman correlation analysis are shown in Table 2.

Table 2

Correlation on the impact of MSMEs per 1000 inhabitants on GDP per capita and employment in the regions of Latvia, 2005- 2009

Region	Spearman Correlation Coefficient r Number of MSMEs and GDP	Significance	Spearman Correlation Coefficient r Number of MSMEs and EMPLOYMENT	Significance
Riga	0.700	0.188	-0.100	0.873
Pierīga	0.821	0.089	0.410	0.493
Vidzeme	0.821	0.089	0.308	0.614
Kurzeme	0.600	0.285	0.400	0.505
Zemgale	0.667	0.219	0.564	0.322
Latgale	0.821	0.089	0.546	0.322

Source: authors' calculations based on the CSB data

Spearman Correlation coefficient shows that there is a positive correlation between the number of MSMEs per 1000 inhabitants and GDP in the regions. It means that increase in the number of MSMEs per 1000 inhabitants will most likely mean the increase in GDP per capita. The regions with highest correlation are Pierīga, Vidzeme and Latgale. These regions are also having the lowest significance level, showing that the probability level is 91%. The lowest correlation between the number of MSMEs and GDP is seen in Kurzeme and Zemgale. These regions also have a high significance and probability level decrease to 72% and 78% respectively. The coefficient $r = 0.7$, showing medium strong connection with data, with significance 0.188 is observed in Riga region.

On the contrary, correlation coefficient between the number of MSMEs per 1000 inhabitants and employment in the regions mostly shows that data are not correlated. In regions like Riga, Pierīga, Kurzeme, and Vidzeme the coefficient r do not exceed 0.5. Zemgale and Latgale are the only regions with $r > 0.5$ which means that the correlation between data is weak. In Riga region the number of MSMEs will not leave any effect on the employment, while in Zemgale and Latgale regions the number of MSMEs will have a little impact on the employment. In all cases the significance is very high and the probability level varies between 13% and 68%. Since the majority of enterprises in regions have fewer than 10 employees, the increase in number of enterprises leaves a very little impact on the employment.

Conclusions

1. Around 99% of enterprises in the EU and Latvia can be classified in the size groups as micro, small or medium size enterprises (MSMEs). MSMEs generate most of new jobs and stimulate growth, efficiency, and competitive business environment.
2. In recent years the Microenterprise Support Concept in Latvia has been accepted, involving 3 main improvements - lower enterprise establishment costs, microenterprise tax (9% of turnover), and support programme ALTUM for high risk enterprises.
3. Regional distribution of MSMEs shows that Riga region is a massive business centre with around 40% of all MSMEs concentrated in this region.
4. The number of MSMEs per 1000 inhabitants shows that all regions are above the EU average number, although the ratio differs between regions. In 2009 the highest number of MSMEs per 1000 inhabitants was observed in Riga - 70 MSMEs, while Pierīga and Latgale regions were having 48 MSMEs per 1000 inhabitants.
5. Spearman Correlation coefficient shows that there is a positive correlation between the number of MSMEs per 1000 inhabitants and GDP in regions. It means that the increase in the number of MSMEs per 1000 inhabitants will most likely mean the increase in GDP per capita. The regions with the highest correlation are Pierīga, Vidzeme, and Latgale. The lowest correlation between the number of MSMEs and GDP is seen in Kurzeme and Zemgale.

6. Spearman correlation coefficient between the number of MSMEs per 1000 inhabitants and employment in the regions mostly shows that data are not correlated. In regions like Riga, Pierīga, Kurzeme, and Vidzeme data are not correlated at all. Only in Zemgale and Latgale the correlation coefficient exceeds 0.5 showing that the correlation between data is weak. In Riga region the number of MSMEs will not leave any effect on the employment, while in Zemgale and Latgale regions the number of MSMEs will have a little impact on the employment.
7. The hypothesis set was proved partly as MSMEs have impact on GDP in the regions of Latvia, but do not have impact or have a little impact on employment in the regions of Latvia.

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