Latvia University of Life Sciences and Technologies

ESAF
Ekonomikas un sabiedrības attīstības fakultāte

NJF Nordic Association of Agricultural Science

INTERFRAME-LV

Latvia University of Life Sciences and Technologies

Faculty of Economics and Social Development

21th International Scientific Conference

ECONOMIC SCIENCE FOR RURAL DEVELOPMENT 2020

12-15 May 2020, Jelgava, Latvia

ECONOMIC SCIENCE FOR RURAL DEVELOPMENT

Proceedings of the
International Scientific Conference

No 54 Home Economics

Marketing and Sustainable Consumption

Integrated and Sustainable Regional Development

New Dimensions in the Development of Society

No 54

Jelgava

2020

ISSN 2255-9930 on line
ISBN 978-9984-48-345-0 (E-book)

Abstracted / Indexed: AGRIS, CAB Abstracts, Crossref, EBSCO Academic Search Complete, EBSCO Academic Search Ultimate, EBSCO Central & Eastern European Academic Source, EBSCO Discovery Service, Web of Science ™, Clarivate Analytics (former Thomson Re uters) (2008 - 2019), Primo Central (ExLibris).
http://www.esaf.llu.lv/lv/proceedings-economic-science-for-rural-development
https://www.webofknowledge.com/
https://agris.fao.org/agris-search/index.do
https://www.cabdirect.org/
http://search.ebscohost.com/
https://scholar.google.com/

Programme Committee of International Scientific Conference

Professor	**Baiba Rivza**	Latvia University of Life Sciences and Technologies, **Latvia**
Professor	**Andra Zvirbule**	Latvia University of Life Sciences and Technologies, **Latvia**
Professor	**Irina Pilvere**	Latvia University of Life Sciences and Technologies, **Latvia**
Professor	**Barbara Freytag-Leyer**	Fulda University of Applied Sciences, **Germany**
Professor	**Bo Ohlmer**	Swedish University of Agricultural Sciences, **Sweden**
Professor	**Wim J.M. Heijman**	Wageningen University and Research, **Netherlands**
Professor	**Bartosz Mickiewicz**	West Pomeranian University of Technology, **Poland**
Professor	**Maria Parlinska**	Warsaw University of Life Sciences - SGGW, **Poland**
Professor	**Alina Danilowska**	Warsaw University of Life Sciences - SGGW, **Poland**
Professor	**Janina Sawicka**	Warsaw University of Life Sciences - SGGW, **Poland**
Professor	**Joanna Szwacka-Mokrzycka**	Warsaw University of Life Sciences - SGGW, **Poland**
Professor	**Jacques Viaene**	University of Gent, **Belgium**
Professor	**Arild Sæther**	University of Agder, **Norway**
Professor	**Vilija Alekneviciene**	Vytautas Magnus University, **Lithuania**
Professor	**Rogier Schulte**	Wageningen University and Research, **Netherlands**
Professor	**Csaba Forgacs**	Budapest Corvinus University, **Hungary**
Professor	**Elena Horska**	Slovak University of Agriculture, **Slovakia**
Senior researcher	**Magnar Forbord**	Centre for Rural Research, **Norway**
Professor	**Nadiya Davydenko**	National University of Life and Environmental Sciences of Ukraine, **Ukraine**
Professor	**Ingrida Jakusonoka**	Latvia University of Life Sciences and Technologies, **Latvia**
Professor	**Aina Dobele**	Latvia University of Life Sciences and Technologies, **Latvia**
Professor	**Modrite Pelse**	Latvia University of Life Sciences and Technologies, **Latvia**
Professor	**Inguna Leibus**	Latvia University of Life Sciences and Technologies, **Latvia**
Professor	**Gunta Grinberga-Zalite**	Latvia University of Life Sciences and Technologies, **Latvia**
Associate professor	**Aina Muska**	Latvia University of Life Sciences and Technologies, **Latvia**
Associate professor	**Anita Auzina**	Latvia University of Life Sciences and Technologies, **Latvia**
Associate professor	**Dina Popluga**	Latvia University of Life Sciences and Technologies, **Latvia**

Time schedule of the conference

Preparation of the proceedings and organization: January 2020 – May 2020

Conference: 12-15 May 2020

Researchers from the following higher education institutions, research institutions, and professional organizations presented their scientific papers at the conference:

Baltic International Academy	Latvia
Balic State Technical University "VOENMEH"	Russia
Baranovichi State University	Belarus
BA School of Business and Finance	Latvia
Batumi Shota Rustaveli State University	Georgia
"BBS-Dizain" Ltd	Latvia
Corvinus University of Budapest	Hungary
Daugavpils University	Latvia
Estonian University of Life Sciences	Estonia
Fulda University of Applied Sciences	Germany
Institute for Personal Training of the State Employment Service of Ukraine	Ukraine
Institute of Agricultural Resources and Economics	Latvia
Jelgava Spidola State Gymnasium	Latvia
Kuban State University	Russia
"Land Technologies" Ltd	Slovakia
Latvia University of Life Sciences and Technologies	Latvia
Latvian State Forest Research institute "Silava"	Latvia
Latvian State Institute of Wood Chemistry	Latvia
Latvian Trade Union of Education and Science Employees (LIZDA)	Latvia
Leningrad state University named after A.S. Pushkin	Russia
Meshchersky branch All-Russian Research Institute of Hydrotechnics and Melioration named after A.N. Kostyakova	Russia
National University "Yuri Kondratyuk Poltava Polytechnic"	Ukraine
National University of Food Technologies	Ukraine
National University of Life and Environmental Sciences of Ukraine	Ukraine
Poltava University of Economics and Trade	Ukraine
Rezekne Academy of Technologies	Latvia
Riga Stradins University	Latvia
Riga Technical University	Latvia
RISEBA University of Applied Sciences	Latvia
Ryazan State University named after S.A. Yesenin	Russia
Saeima of the Republic of Latvia	Latvia
Saint-Petersburg State Agrarian University	Russia
Samara State University of Economics	Russia
Saratov State Vavilov Agrarian University	Russia
Slovak University of Agriculture in Nitra	Slovakia
Southern Federal University	Russia
State Forest Research institute "Silava"	Latvia
Szent Istvan University in Godollo	Hungary
Tashkent Institute of Finance	Uzbekistan
The University of Economics and Culture	Latvia
Transilvania University of Brasov	Romania
"Turiba University" Ltd	Latvia
University of Kassel	Germany
University of Latvia	Latvia
University of Latvia	Latvia
University of Latvia	Latvia
University of Liepaja	Latvia
University of Warmia and Mazury in Olsztyn	Poland

Vidzeme University of Applied Sciences	Latvia
Vytautas Magnus University	Lithuania
West Pomeranian University of Technology Szczecin	Poland

Editorial Board

The Editorial Board of the edition of the International Scientific Conference Proceedings:

Professor	**Vilija Alekneviciene**	Vytautas Magnus University, **Lithuania**
Professor	**Alina Danilowska**	Warsaw University of Life Sciences - SGGW, **Poland**
Professor	**Csaba Forgacs**	Budapest Corvinus University, **Hungary**
Professor	**Barbara Freytag-Leyer**	Fulda University of Applied Sciences, **Germany**
Professor	**Wim J.M. Heijman**	Wageningen University and Research, **Netherlands**
Professor	**Elena Horska**	Slovak University of Agriculture, **Slovakia**
Professor	**Bartosz Mickiewicz**	West Pomeranian University of Technology, **Poland**
Professor	**Bo Ohlmer**	Swedish University of Agricultural Sciences,**Sweden**
Professor	**Maria Parlinska**	Warsaw University of Life Sciences - SGGW, **Poland**
Professor	**Arild Sæther**	University of Agder, **Norway**
Professor	**Rogier Schulte**	Wageningen University and Research, **Netherlands**
Professor	**Jacques Viaene**	University of Gent, **Belgium**
Professor	**Irina Pilvere**	Latvia University of Life Sciences and Technologies, **Latvia**
Professor	**Baiba Rivza**	Latvia University of Life Sciences and Technologies, **Latvia**
Professor	**Andra Zvirbule**	Latvia University of Life Sciences and Technologies, **Latvia**

Editor – in-chief	**Anita Auzina,** Associate professor
Responsible compilers of the proceedings:	**Gunta Grinberga-Zalite,** Professor **Simona Cirule,** Lecturer
Assistants to the responsible compilers:	**Dzesija Zeiferte**

The authors are responsible for the content and language of their papers.

Reviewers

Every article included into the Proceedings was subjected to a scientific, including international review. All reviewers were anonymous for the authors of the articles. The following reviewers from scientific and academic institutions of 13 countries (Belarus, Georgia, Germany, Hungary, Latvia, Lithuania, Poland, Romania, Slovakia, Sweden, Ukraine, USA and Uzbekistan).

Publication Ethics and Malpractice Statement for the International Scientific Conference „Economic Science for Rural Development"

The Editorial Board is responsible for, among other, preventing publication malpractice. Unethical behaviour is unaccepTable and the authors who submit articles to the Conference Proceedings affirm that the content of a manuscript is original. Furthermore, the authors' submission also implies that the material of the article was not published in any other publication; it is not and will not be presented for publication to any other publication; it does not contain statements which do not correspond to reality, or material which may infringe upon the intellectual property rights of another person or legal entity, and upon the conditions and requirements of sponsors or providers of financial support; all references used in the article are indicated and, to the extent the article incorporates text passages, figures, data or other material from the works of others, the undersigned has obtained any necessary permits as well as the authors undertake to indemnify and hold harmless the publisher of the proceedings and third parties from any damage or expense that may arise in the event of a breach of any of the guarantees.

Editors, authors, and reviewers, within the International Scientific Conference „**Economic Science for Rural Development**" are to be fully committed to good publication practice and accept the responsibility for fulfilling the following duties and responsibilities, as set by the *COPE Code of Conduct and Best Practice Guidelines for Journal Editors of the Committee on Publication Ethics* (COPE).

It is necessary to agree upon standards of expected ethical behaviour for all parties involved in the act of publishing: the author, the editor, the peer reviewer, and the publisher.

DUTIES OF EDITORS

Publication decisions
The Editorial Board is responsible for deciding which of the articles submitted to the Conference Proceedings should be published. The Editorial Board may be guided by the policies of ethics and constrained by such legal requirements as shall then be in force regarding libel, copyright infringement and plagiarism. The editor may confer with other editors or reviewers in making this decision.

Fair play
An editor at any time evaluate manuscripts for their intellectual content without regard to the nature of the authors or the host institution including race, gender, sexual orientation, religious belief, ethnic origin, citizenship, or political philosophy of the authors.

Confidentiality
The editor and any editorial staff must not disclose any information about a submitted manuscript to anyone other than the corresponding author, reviewers, potential reviewers, other editorial advisers, and the publisher, as appropriate.

Disclosure and conflicts of interest
Unpublished materials disclosed in a submitted manuscript must not be used in an editor's own research without the express written consent of the author.

DUTIES OF REVIEWERS

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 9 the authors of the articles, and the reviewers presented blind reviews. 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.

Contribution to editorial decisions
Peer review assists the editor in making editorial decisions and through the editorial communications with the author may also assist the author in improving the paper.

Promptness
Any selected referee who feels unqualified to review the research reported in a manuscript or knows that its prompt review will be impossible should notify the editor and excuse himself from the review process.

Confidentiality
Any manuscripts received for review must be treated as confidential documents. They must not be shown to or discussed with others except as authorised by the editor.

Standards of objectivity
Reviews should be conducted objectively. Personal criticism of the author is inappropriate. Referees should express their views clearly with supporting arguments.

Acknowledgement of sources
Reviewers should identify relevant published work that has not been cited by the authors. Any statement that an observation, derivation, or argument had been previously reported should be accompanied by the

relevant citation. A reviewer should also call to the editor's attention any substantial similarity or overlap between the manuscript under consideration and any other published paper of which they have personal knowledge.

Disclosure and conflict of interest
Privileged information or ideas obtained through peer review must be kept confidential and not used for personal advantage. Reviewers should not consider manuscripts in which they have conflicts of interest resulting from competitive, collaborative, or other relationships or connections with any of the authors, companies, or institutions connected to the papers.

DUTIES OF AUTHORS

Reporting standards
The authors of reports of original research should present an accurate account of the work performed as well as an objective discussion of its significance. Underlying data should be represented accurately in the paper. A paper should contain sufficient detail and references to permit others to replicate the work. Fraudulent or knowingly inaccurate statements constitute unethical behaviour and are unacceptable.

Data access and retention
The authors are asked to provide the raw data in connection with a paper for editorial review, and should be prepared to provide public access to such data (consistent with the ALPSP-STM Statement on Data and Databases), if practicable, and should in any event be prepared to retain such data for a reasonable time after publication.

Originality and plagiarism
The authors should ensure that they have written entirely original works, and if the authors have used the work and/or words of others that this has been appropriately cited or quoted.

Multiple, redundant or concurrent publication
An author should not in general publish manuscripts describing essentially the same research in more than one journal or primary publication. Submitting the same manuscript to more than one journal concurrently constitutes unethical publishing behaviour and is unacceptable.

Acknowledgement of sources
Proper acknowledgment of the work of others must always be given. The authors should cite publications that have been influential in determining the nature of the reported work.

Authorship of the paper
Authorship should be limited to those who have made a significant contribution to the conception, design, execution, or interpretation of the reported study. All those who have made significant contributions should be listed as co-authors. Where there are others who have participated in certain substantive aspects of the research project, they should be acknowledged or listed as contributors.

The corresponding author should ensure that all appropriate co-authors and No inappropriate co-authors are included on the paper, and that all co-authors have seen and approved the final version of the paper and have agreed to its submission for publication.

Hazards and human or animal subjects
If the work involves chemicals, procedures or equipment that have any unusual hazards inherent in their use, the author must clearly identify these in the manuscript.

Disclosure and conflicts of interest
All authors should disclose in their manuscript any financial or other substantive conflict of interest that might be construed to influence the results or interpretation of their manuscript. All sources of financial support for the project should be disclosed.

Fundamental errors in published works
When an author discovers a significant error or inaccuracy in his/her own published work, it is the author's obligation to promptly notify the editor or publisher and cooperate with the editor to retract or correct the paper.

Editorial Board

Foreword

The international scientific conference „Economic Science for Rural Development" is organized annually by the Faculty of Economics and Social Development of Latvia University of Life Sciences and Technologies.

The proceedings of the conference are published since 2000.

The scientific papers presented in the conference held on 12—15 May 2020 are published in one thematic volume:

No 54 Home Economics
Marketing and Sustainable Consumption

Integrated and Sustainable Regional Development
New Dimensions in the Development of Society

The proceedings contain scientific papers representing not only the science of economics in the diversity of its sub-branches, but also other social sciences (sociology, political science), thus confirming inter-disciplinary development of the contemporary social science.

This year for the first time the conference includes the section on a new emerging kind of economy—bioeconomy. The aim of bioeconomy is to use renewable biological resources in a more sustainable manner. Bioeconomy can also sustain a wide range of public goods, including biodiversity. It can increase competitiveness, enhance Europe's self-reliance and provide jobs and business opportunities.

The Conference Committee and Editorial Board are open to comments and recommendations concerning the preparation of future conference proceedings and organisation of the conference.

Acknowledgements

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
Anita Auzina
Associate professor of Faculty of Economics and Social Development
Latvia University of Life Sciences and Technologies

CONTENTS

HOME ECONOMICS 12

CAUSES AND EFFECTS OF WOMAN RURAL-URBAN MIGRATION – FIELD STUDY AMONGST FEMALE STREET FOOD VENDORS IN TANGERANG-INDONESIA AND HAT YAI-THAILAND 13
Dionisius Yusuf[1], MSc.; **Barbara Freytag-Leyer**[2], Dr.oec.troph./Prof. i.R. 13
Andrejs Lazdins[1], Dr.oec. / assistant professor; **Liga Jankova**[2], Dr.oec. / assistant professor;
Madara Dobele[3], Mg.art; MBA / lecturer; **Aina Dobele**[4], Dr.oec. / professor 21

IMPLEMENTATION OF THE INTERNATIONAL REAL ESTATE TRANSACTIONS OPENNESS ASSESSMENT IN LATVIA 28
Janis Viesturs[1], Mg.oec.; **Armands Auzins**[2], Dr.oec., assoc.prof. 28

MARKETING AND SUSTAINABLE CONSUMPTION 34

IDENTIFYING TOURISM MARKET GROWTH OPPORTUNITIES AND RISKS IN THE AUTONOMOUS REPUBLIC IN AJARA (GEORGIA) 35
Ekaterine Bakhtadze, PHD of Economics, Assoc.Prof.; **Nargiz Phalavandishvili**, Business Administration Doctor, Assist. Prof.; **Natalia Robitashvili**, Business Administration Doctor, Assoc. Prof. 35

THE EFFECTIVENESS OF SOCIAL MARKETING IN HIV PREVENTION: A LITERATURE REVIEW 43
Janis Duboviks, MSc; **Matiss Kite**, Pharm. 43

MARKET POSITION OF NON-TRADITIONAL AGRICULTURAL PRODUCTS 51
Liga Proskina, Dr.oec.; **Irina Pilvere**[2], Dr.oec. 51

APPLICATION OF DIFFERENTIATED MODERN TECHNOLOGIES TO DIFFERENT TYPES OF RETAIL TRADE: CURRENT REALITY AND PROSPECTS 59
Salome Shervashidze, PhD student; **Gela Mamuladze**, Academic, Doctor of Economics, Professor 59

INTEGRATED AND SUSTAINABLE REGIONAL DEVELOPMENT 65

MODERNIZATION, INNOVATION AND EFFICIENCY OF AGRI-FOOD INDUSTRY IN THE REGIONAL DEVELOPMENT OF SLOVAKIA 66
Izabela Adamickova[1], prof.h.c. doc. Ing., PhD.; **Barbora Begerova**[2], Ing., MBA; **Henrietta Nagy**[4], Dr. Habil, associate professor; **Jan Lajda**[5], Ing., Phd, MBA; **Peter Bielik**[3], Dr.h.c. prof. Ing., PhD. 66

RURAL TERRITORY DIFFERENTIATION ACCORDING TO THE ECOLOGICAL CRITERIA FOR THE RYAZAN REGION 73
Irina Andriyanova, MA, **Inna Davydova**, Dr.sc., assoc.prof. and **Yury Mazhayskiy**, Dr.sc., prof. 73

GASIFICATION MODEL AS A FACTOR IN SUSTAINABLE DEVELOPMENT OF RURAL AREAS 79
Oleg Chekmarev[1], Doctor of economics/associate professor; **Pavel Lukichev**[2], Doctor of economics/professor;
Pavel Konev[3], PhD in economics/ associate professor 79

MUNICIPAL COASTAL GOVERNANCE SYSTEM DEVELOPMENTS IN LATVIA: GOVERNANCE SEGMENTS, SECTORS AND INSTRUMENTS 86
Raimonds Ernsteins, Dr.habil.paed./Prof.; **Erika Lagzdina**, M.Env.Sc., **Ivars Kudrenickis**, Dr.ing./Asoc.prof. and **Anita Lontone-Ievina**, M.Env.Sc. 86

LOCAL COASTAL GOVERNANCE ASSESSMENT DEVELOPMENT: COASTAL GOVERNANCE FRAMEWORK REPORTING 98
Raimonds Ernsteins, Dr.habil.paed./Prof.; **Maija Stokmane**, MSc.biol. and **Arturs Pudans**, BSc.env.sc. 98

AGRITOURISM IN THE CONTEXT OF SUSTAINABLE TOURISM DEVELOPMENT 108
Diana Foris, Dr. Eng, Associate Professor; **Baiba Rivza**, Dr.habil. Oec., Professor; **Maiga Kruzmetra**, Senior researcher; **Ioana Sonia Comanescu**, Dr. Eng, Associate Professor; **Tiberiu Foris**, Dr. Oec, Professor 108

FACTORS INFLUENCING SALARIES OF PRE-SCHOOL TEACHERS IN LATVIA REGIONS 115
Anda Grinfelde, Dr.oec.; **Inga Vanaga**, PhD student; **Liga Paula**, Dr.sc.soc. 115

ECONOMIC POTENTIAL OF RECREATIONAL FISHING FOR SUSTAINABLE DEVELOPMENT OF COASTAL AREA 122
Tamara Grizane[1] , Dr.oec.; **Aija Sannikova**[2], Dr.oec.; **Līga Jankova**[3], Dr. oec; **Inguna Jurgelane**[4], Dr.oec. 122

THE ROLE OF STATE PROGRAMS IN THE TRANSFORMATION OF THE AGRARIAN SECTOR IN AJARA AR 130
Nato Jabnidze, Doctor of Business Management / Assistant Professor; **Leila Tsetskhladze**, Doctor of Business Management / Assistant Professor;**Ia Meskhidze**, Doctor of Business Management / Associate Professor 130

THE INTERNATIONALISATION OF HIGHER EDUCATION IN THE REGIONS: CASE OF LATVIA 139
Inga Jekabsone, Dr.sc.admin., assist.prof. 139

COMMUNITY COOPERATION FOR TOURISM DEVELOPMENT 148
Dace Kaufmane, Dr.oec; **Liga Paula**, Dr.sc.soc. 148

SUSTAINABLE PROJECT MANAGEMENT: CASE OF CULTURE PROJECTS IN ZEMGALE PLANNING REGION 155
Sandra Kauranena, Mg.proj.mgmt.; **Dina Bite**, Dr.sc.soc. and **Zenija Kruzmetra**, Dr.geogr. 155

THEMING DISCOURSE IN VILLAGE DEVELOPMENT 163
Ingrida Kazlauskiene, Phd. stud.; **Vilma Atkociuniene**, Prof. dr. 163

ENVIRONMENTAL BARRIERS IN SPATIAL DEVELOPMENT: JUDICIAL AND ECONOMICAL PERSPECTIVE 171
Maciej J. Nowak, Professor; **Pawel Mickiewicz**, Professor; 171

COMPARATIVE ANALYSIS OF SMART DEVELOPMENT OF TERRITORIES: THE EXAMPLE OF DAUGAVPILS AND ILUKSTE MUNICIPALITY 180
Inta Ostrovska, Dr.paed.; **Baiba Rivza**, Dr.oec., prof.; **Ludmila Aleksejeva**, Dr.oec. and **Brigita Kusina**[4], Mg.oec. 180

THEORETICAL ASPECTS OF REMUNERATION AND PERFORMANCE IN THE CONTEXT OF PROVIDING GENERAL EDUCATION IN THE CONDITIONS OF LATVIA REGIONAL DISPARITIES 189
Ilze Prizevoite, Mg.oec.; **Gunta Grinberga-Zalite**, Dr.oec. 189

INTANGIBLE RESOURCES FOR RURAL DEVELOPMENT: ASSESSMENT APPROACH 198
Maria Tereshina, Dr.oec. / professor; **Tatjana Tambovceva**, Dr.oec. / professor and **Inna Miroshnichenko**, Dr. sc. pol. / professor 198

NEW DIMENSIONS IN THE DEVELOPMENT OF SOCIETY 206

MOTIVATIONAL FACTORS OF CULTURE SECTOR HUMAN RESOURCES IN THE CONTEXT OF GENERATIONS 207
Sanita Bethere, MBA; **Lasma Licite**, Dr.oec., associate professor; 207

EVALUATION OF GENERAL EDUCATION SCHOOL STUDENTS' CAREER SELF-MANAGEMENT SKILLS AND THEIR FORMATION CONDITIONS IN THE CONTEXT OF COMPETITIVENESS 215
Dagnija Cedere[1], Dr. chem.; **Inese Jurgena**[2], Dr. paed. and **Irena Katane**[3], Dr. paed. 215

AGE AND GENDER–BASED DIFFERENCES IN MOTIVATION OF CREATIVE EMPLOYEES: CASE OF IT PROFESSIONALS IN LATVIA 223
Svetlana Gribanova[1], Mg.soc.; **Anna Abeltina**[2], Dr.oec. 223

REGIONAL DEMOGRAPHIC TRENDS IN ACCORDANCE WITH THE NEW MODEL OF TERRITORIAL DIVISION IN LATVIA AND FUTURE DYNAMICS IN STATISTICAL REGIONS OF THE BALTIC STATES 231
Juris Krumins, dr. oec.; **Atis Berzins**, dr. oec. and **Aleksandrs Dahs**, dr. demog. 231

FUNDRAISING FOR UNIVERSITIES BY ALUMNI EFFORTS: A LITERATURE REVIEW 239
Laila Kundzina[1], Mg. hist., **Baiba Rivza**[2], Prof. Dr. oec. 239

ANALYSIS OF DIGITALIZATION REFERRED TO IN STRATEGIC POLICY DOCUMENTS IN THE LIFELONG EDUCATION CONTEXT 247
Modrite Pelse,Dr.oec / professor; **Maira Lescevica**,Dr.oec / professor 247

WORKING CONDITIONS OF ACADEMIC PERSONNEL OF HIGHER EDUCATION INSTITUTIONS IN LATVIA 256
Dita Stefenhagena, Dr.sc.admin.; **Inga Vanaga**, Mg.sc.soc.; **Anda Grinfelde**, Dr.oec. 256

HUMAN DEVELOPMENT INDEX IN GEORGIA AND CHALLENGES OF SUSTAINABLE DEVELOPMENT .. 264
Natela Tsiklashvili, Professor, Doctor of Economics; **Tamila Turmanidze**, Assist. Professor, Doctor of Economics and **Tamar Beridze**, Assist. Professor, Doctor of Business Administration 264

CASE STUDY ON SUSTAINABLE ATTITUDE FOR ENVIRONMENT IN ADULT EDUCATION 271
Anna Vintere, Mg.Math 271

HOME ECONOMICS

Proceedings of the 2020 International Conference "ECONOMIC SCIENCE FOR RURAL DEVELOPMENT" No 54
Jelgava, LLU ESAF, 12-15 May 2020, pp. 13-20
DOI: 10.22616/ESRD.2020.54.001

CAUSES AND EFFECTS OF WOMAN RURAL-URBAN MIGRATION – FIELD STUDY AMONGST FEMALE STREET FOOD VENDORS IN TANGERANG-INDONESIA AND HAT YAI-THAILAND

Dionisius Yusuf[1], MSc.; **Barbara Freytag-Leyer**[2], Dr.oec.troph./Prof. i.R.
[1]University of Kassel; [2]Fulda University of Applied Sciences, Germany

Abstract. Rural-urban movements from poor rural areas to rich urban areas have been the dominant form of migration. A sharp increase in rural-urban migration is stated in recent years in Tangerang, Indonesia, and Hat Yai, Thailand. One of the important changes in internal movements in Indonesia and Thailand have been the rise in the participation of women in migration streams that were previously dominated by men. For studying the causes and effects of women migration, 200 female migrant vendors in Tangerang and 96 in Hat Yai were surveyed, 20 biographical interviews were recorded. Important differences in both study areas were in the proximity of the urban centres. In Tangerang, long-distance migration dominated, in contrast to the short-distance migration in Hat Yai. The start of the migration was slightly shorter in Hat Yai. The influencing decision makers showed wide differences. In Tangerang, the influence of the male-dominated society was strong, and husbands were the most important decision maker, while in Hat Yai females' own decisions dominated. The information sources for migration were families, relatives and friends, whereas mass media played a minor role. The pull and push factors for migration differed in both study areas. Prospects were namely at first place in both study areas, but in different percentages. Remittances to the families were reported from a few number. The rural-urban migration and working as street food vendors had positive effects for the women, their families and relatives, but the agricultural production in rural areas can be hampered through the decrease of younger population.

Key words: rural-urban migration, female street food vendors, Tangerang Indonesia, Hat Yai Thailand, feminization of internal migration.
JEL code: D19, E 29, G 59, J 69, N35

Introduction

Over the last decade, attention has been given to international migration. More recently, internal migration in general and rural-urban migration, in particular, was viewed favourably in the literature. Several studies indicate that internal migration is a driver of growth and an important route out of poverty with significant positive impacts on people's livelihoods and well-being (Murrugarra E. et al., 2011; Hossain E., 2001; Siddiqui T., 2003; Sukamdi Mujahid G., 2015).

Internal migrants in Indonesia constitute a significant population. Nearly 9.8 million individuals were estimated to be temporary internal migrants in 2010 against merely 450.601 people migrating internationally for work in 2012 (Ananta A. and Arifin E. N., 2014). In Thailand, according to the 2010 Thailand Population and Housing Census, 8.3% of the Thai population had migrated internally during the previous five years, and overall 21.8% of the population did not live in their hometown (National Statistical Office, 2010).

The rural-urban migration trend in Indonesia can be explained by a number of so-called push and pull factors (Wadji N. et al., 2017). While the demand for labour in urban centres is the main pull factor for people to move from rural to urban area, Tirtosudarmo (2009), Susanti and Damayanti (2015), and Sukamdi and Mujahid (2015) summarize the main push factors of internal migration in Indonesia as being the decrease of job availability in agricultural sectors, working matters, a desire to rejoin family members, marriage, the search for better economic opportunities, and access to education.

In Thailand, according to Amere et al. (2012), the lack of employment in rural areas, following family and educational opportunities are push factors which have driven people to migrate to urban areas. Wongchai et al. (2012) reported that the search for better job opportunities instead of farming is a factor that significantly affects the migration of farmers in northern Thailand.

One of the important changes in internal population movements in Indonesia and Thailand have been the rise in the participation of women in migration streams that were previously dominated by men. According to Sukamdi and Mujahid (2015), there are more female migrants in Indonesia then male migrants among married, divorced and widowed migrants, particularly of younger groups (15-34 years). The Thai Migration Survey of 2012 found that the number of women in Thailand's internal migration was lower than in other countries in Southeast Asia, including Indonesia. Notwithstanding, according to the National Statistics Office (2010) almost half of Thailand's internal migration flows were women (47.8 %). So, the increasing number of women in internal migration streams is occurring in both countries and led to a "feminisation of internal migration".

The aims of the study were to investigate the causes and effects of woman rural-urban migration amongst female street food vendors in Tangerang, Indonesia, and Hat Yai, Thailand, and to compare the situation in both countries. These cities had high inflows of rural-urban migrants over the past decades: Tangerang in the province of Banten, Java, Indonesia, and Hat Yai in the Songkhla province, South Thailand. Since the early 2000s, both cities are a prominent destination for rural migrants, either for short or long-term migration. Tangerang and Hat Yai grew into central urban settlements along the massive development of industries, tourism, and trades.

The research was conducted in the end of 2017 and beginning of 2018. A standardized questionnaire with socio-economic data, pattern and process of migration, history of business activities, actual situation and economic impact, opportunities and problems were conducted as well as biographical interviews. Interviewers filled the questionnaires in the local languages and recorded 20 oral biographical interviews (14 in Tangerang, 6 in Hat Yai), which were made on the basis of guidelines. Afterwards they were transcribed. Some findings of them about the causes and effects of the rural-urban migration are presented following.

Research results and discussion

Approximately a double number of women had participated in Tangerang (200) in comparison to Hat Yai (96). 175 of the Indonesian females and 64 of the Thai females were married,. The age-groups of 20 to 50 years old-women made up the dominant group with 72.5 % in Tangerang and 76.1 % in Hat Yai. The average respondents' age was higher in Hat Yai (Table 1).

Table 1

Female migrants´ age structure, in %

Age-groups years	Tangerang, n=200	Hat Yai, n=96	Total, n=296
<20	0.5	1.0	2.0
21 - 30	14.5	24.0	17.6
31 - 40	28.5	32.3	29.7
41 - 50	29.5	19.8	26.4
51 - 60	19.5	15.6	18.2
> 60	5.5	7.3	6.1
Total	100.0	100.0	100.0
Mean ± SD	42.58 ± 11.31	40.35 ± 12.31	41.86 ± 11.67

Source: Field work conducted in 2017-2018, authors´ compilation

In Tangerang, most women came from certain rural communities in the island of Java (Table 2). Nearly 38.5 % migrants from Central Java travelled long distances to reach Tangerang. The improvement of transportation and communication had changed the movements. These findings could be found similar in the literature which is discussed by Deshingkar (2006) and Sukamdi and

Mujahid (2015). Deshingkar (2006) mentioned that rural-urban migrants cover greater distances, often travelling to different states/regions than rural-rural movements with short distances. Sukamdi and Mujahid (2015) showed that long-distance migration in Indonesia increased between the 1990s and 2000s, which was driven by faster inter-provincial transportation linkages. The research also indicated that the number of short-distance migrations declined.

Table 2

Places of origin of Tangerang's migrants, n=200

Provinces	Frequency	Percent (%)
Central Java	77	38.5
West Java	47	23.5
Sumatra	21	10.5
East Java	20	10.0
Jakarta	16	8.0
Banten	10	5.0
Kalimantan	5	2.5
Yogyakarta	3	1.5
Others	1	0.5
Total	200	100.0

Source: Field work conducted 2017-2018, authors' compilation

In Hat Yai, short distance migration dominated. Half of the in-migrants to Hat Yai reported that they were born in Songkhla province, while 11.5 %, 5.2 %, and 4.2 % respectively came from Pattani, Patthalung and Satun (Table 3). This is in line with the results from Jampaklay et al. (2017), which states that in Southern Thailand the migration movement is relatively close to the rural areas in shorter distances. Short distances and ease transportation are the main pull factors for rising of rural-urban migrant in Hat Yai areas.

Table 3

Places of origin of Hat Yai's migrants, n=96

Provinces	Frequency	Percent (%)
Songkla	48	50.0
Others	13	13.5
Pattani	11	11.5
Nakhon Si Thammarat	7	7.3
Patthalung	5	5.2
Narathiwat	4	4.2
Satun	4	4.2
Bangkok	2	2.1
Yala	2	2.1
Total	96	100.0

Source: Field work conducted 2017-2018, authors' compilation

In terms of migration duration, a high proportion of the migrants had long settled in both study areas, with a higher average in Tangerang with 16.8 % compared with 14.8 % in Hat Yai.

The majority of the migrants came to Tangerang more than 20 years ago (33.5 %), to Hat Yai with 27.4 %. The shorter migration between one and five years has the second highest percentage in Hat Yai (24.2 %) compared with 23.5 % between six and ten years in Tangerang (Table 4).

Table 4

Start of migration, in %

Years	Tangerang n=200	HatYai n=91
<1	4.0	3.3
1–5	9.0	24.2
6–10	23.5	15.4
11–15	13.0	15.4
16–20	17.0	14.3
>20	33.5	27.4
Total	100.0	100.0

Source: Field work conducted 2017-2018, authors' compilation

In Hat Yai, more than half (53.8 %) of the respondents migrated on their own decision. For 19,8 %, the husbands were dominant for migrating decision. Relatives, parents and friends were decision makers for the residual women. In contrast, in Tangerang the husbands were decision makers in 48.5 % of cases. Only 26 % of respondents had left their place of origin or previous place of residence on their own decision (Table 5).

Table 5

Decision makers for migration, in %

Who made the decision to migrate?	Tangerang n=200	Hat Yai n=91
Self-determined	26.0	53.8
Relatives	14.5	12.1
Parents	7.0	6.6
Friends	4.0	4.4
Husband	48.5	19.8
Spouse	-	3.3
Total	100.0	100.0

Source: Field work conducted 2017-2018, authors' compilation

Bell (2013) found that roughly nine-in-ten or more (93 %) of Indonesian Muslim women said that wives must obey their husbands. Therefore, many women migrants, after they had married, followed their husbands, including for migration decision. Initially, women in Tangerang did not migrate to Tangerang as their first move from their place of origin, but to other destinations, such as Jakarta or Bandung. Tangerang became the last move for migrants when their husbands chose to migrate to Tangerang for helping the family. In cases of married women, the influence of the husband on their decision was predominant. If the husband disapproved of the migration, their wives less likely tended to migrate or stop migrating. Nearly half of the interviewed women migrants in Tangerang claimed that the decision to move to urban centres was mostly made by their husband. About 26 % of respondents in Tangerang had left their place of origin on their own personal decision, which was relatively low compared to those who moved based on their husband's decision. Some women may have decided to move on their own to Tangerang because they were involved in occupations and got a job offer from their relatives, which led them to migrate to Tangerang.

In Hat Yai, even though the survey indicated that the women decided they wanted to migrate by themselves, their decision was not totally independent. In the interviews, most of them reported the decision to migrate on their own with the consent of their parents before migration and in some cases, parents even encouraged their children to migrate and sometimes helped to fund the

transportation costs. This decision mainly occurred when migration from the village was primarily motivated by the need to ensure the survival of rural households.

In order to make the final decision to move to any area, migrants often got to know the place in advance through many sources of information. The available sources played an important role in the process of migration. Table 6 shows that a higher percentage, 46.4% in Tangerang and 55.6% in Hat Yai respectively, had obtained information about the conditions of the destination through friends and relatives.

Table 6

Sources of information to migrate, in %

Sources	Tangerang n = 200	Hat Yai n = 91
Friends and relatives	46.4	55.6
Mass media	3.3	6.9
Previous visit	18.6	12.5
Family members	30.1	25.0
Others	1.6	-
Total	100.0	100.0

Source: Field work conducted 2017-2018, authors' compilation

Between both study areas, similarities and differences could be seen in the reasons for migration. Push factors for migration were poverty and unemployment and insufficient farming income. They were mentioned in similar frequency in both study areas, but better prospects dominated in Hat Yai (50.4 %) compared to Tangerang (29.1 %). To find jobs and migration opportunities for other family members and married women following husband were the indicators of pull factors (28.0 % in Tangerang, 15.8 % in Hat Yai) (Table 7).

Table 7

Reasons for migration, in %, multiple answers possible

Reasons	Tangerang n=200	Hat Yai n=91
Poverty and unemployment	14.6	13.9
Better prospects	29.1	50.4
To find jobs and migration opportunities for other family members	18.5	12.9
Insufficient farming income	2.4	5.0
Married and followed husband	28.0	15.8
Others	7.5	2.0
Total	100.0	100.0

Source: Field work conducted 2017-2018, authors' compilation

Several studies reported that migration varies depending on economic and non-economic factors (Lewis G., 1982; Todaro M. P., 1997). All factors for migration are included in two broad classifications as push and pull factors (World Bank, 2009). The results have revealed that poverty, job searching, insufficient farming income and lack of education facilities were the main push factors for out-migration, while at the place of destination, the availability of employment, better opportunity, married and followed husband and search for better education were the main pull factors behind migration. Education of the migrants and their occupation at the place of origin were related with the push factors of the migrants. Poverty was found to be the main push factor for illiterates and moderately educated migrants, job searching was the main push factor among the migrants

having graduate-level education or higher one. To conclude, urban pull factors are more contributing to rural-urban migration than push factors.

Previous studies had also shown that most people moved out of their home of origin for economic reasons. Wajdi et al. (2017) found that one of the economic factors for inter-regional migration in Indonesia was likely related to search for better prospect opportunities. This study, therefore, lent support to the UNESCO research on internal migration in Southeast Asia. UNESCO (2017) found that the majority of migrants in Southeast Asia considered that getting employment was the main motivation for migration.

The survey results of this study also confirmed the theories by Todaro (1997). He stated that rural-urban migration nowadays to large extent can be explained by economic factors than non-economic factors. In Indonesia, rural-urban migration also most often took place as a response to economic factors rather than non-economic factors (Susanti & Damayanti, 2015). Susanti and Damyanti explained that working matters were the major reasons for migration of the majority of people.

The results of a fewer number of participants show the support of families and relatives through remittances. The main recipients of remittances were the parents, 53.8 % in Tangerang and 53.1 % in Hat Yai respectively, followed by women´s children (26.4 % and 25 %) (Table 8).

Table 8

Recipients of remittances, in %, multiple answers possible

Recipients of migrants' remittances	Tangerang n = 96	Hat Yai n = 18
Parents	53.8	53.1
Children	26.4	25.0
Relatives	19.8	21.9
Total	100.0	100.0

Source: Field work conducted 2017-2018, authors' compilation

The interviews show that women in Hat Yai visited their hometown more regularly hence the shortfall in the proportion of cash remitted to the place of origin. In respect of the amount of remittances, the difference per transfer at present and when the vendors started the business in Hat Yai and Tangerang is meaningful. As noted, the end use of remittance for the receiving household is related with basic necessities such as food and human capital (education). Remittances are a positive outcome of migration. Remittances, the portion of a migrant worker's earnings sent back from the destination of employment to the origin of the migrant, play a central role in the livelihood of many households in rural areas. Amuedo-Dorantes et al. (2007); Quartey and Blankson (2004) and Adger et al. (2002) stated that migrant remittances have played an important role in the economic development, social resilience and the improvement of household welfare in many developing countries. The present evidence was expected in the view of the fact that most women in Tangerang and Hat Yai still had an emotional connection to their place of origin by entrusting a part of their income to their parents, both for daily needs and other necessities. These findings are rather similar to those suggested by Ranathunga (2011). He found that in Sri Lanka, the majority of the rural-urban migrants remitted monthly their money to their home places where nearly one-third of the remittances were used for the investment purpose of education and farm work. In line with the results before, in Lesotho, the majority of households received remittances frequently and regularly at least once a month from their family in urban areas (Crush J. B. et al., 2010). Adaawen and

Owusu (2013) stated almost four in five of the migrants in Ghana remitted money in less than three months interval.

60.8 % of 96 women in Tangerang were likely to send money monthly, around 10.2 % three times per year, and 7.2 % two times a year, while the majority (77.8 %) of women in Hat Yai sent their remittances to home monthly and about 16.7 % six times a year (Table 9). The amount of money sent to home varies among them. The actual remittances were a bit higher than when women had just opened their businesses. In Hat Yai, only 18 women answered on the question about the amount. The average amount of remittances when the vendors had started the business was lower.

Table 9

Frequency of remittances, in %

Frequency of remittances	Tangerang n = 96	Hat Yai n = 18
> 12 times a year	5.2	-
Monthly	60.8	77.8
6 times a year	6.2	16.7
4 times a year	5.2	-
3 times a year	10.2	5.5
2 times a year	7.2	-
Once a year	5.2	-
Total	100.0	100.0

Source: Field work conducted 2017-2018, authors' compilation

Conclusions, proposals, recommendations

Rural-urban movements from poor rural areas to rich urban areas have been the dominant form of migration. There has been a sharp increase in rural-urban migration in recent years, including Tangerang and Hat Yai. A high proportion of women street food vendors have settled for a number of years but they are closely connected to their origin and families. In Hat Yai, the connection is more intensive through the short distances than in Tangerang. In Tangerang, a stronger influence of husbands on the migration decision was found. Many women support the families at home with remittances. But mostly, they will not come back to their places of origin.

The migration of women had an implication on the agricultural production because the youthful labour force, which were supposed to cultivate the farmland, migrate to the urban centres. As a result, agricultural production in rural areas can be hampered and adversely affected because of the dominance of labour by old ages in rural areas.

Bibliography

1. Adaawen, S.A., Owusu, B. (2013). North-South Migration and Remittances in Ghana. African Review of Economics and Finance, Volume 5, No.1, pp. 29-35.
2. Adger, W.N., Mick Kelly, P., Winkels, A., Huy, L.Q., Locke, C. (2002). Migration, Remittances, Livelihood Trajectories, and Social Resilience. Royal Swedish Academy of Sciences. Ambio Volume 31 No. 4, pp. 358-366.
3. Amare M., Hohfeld L., Jitsuchon S., Waibel, H. (2012). Rural-urban Migration and Employment Quality: A Case Study from Thailand. Asian Development Review, Volume 40, pp. 78-84.
4. Amuedo-Dorantes, C. Pozo, S., Vargas-Silva, C. (2007). Remittances and the Macroeconomy. The Case of Small Island Developing States. Research Paper No. 2007/22, United Nations University, World Institute for Development Economics Research (WIDER).
5. Ananta, A., Arifin, E.N. (2014). Emerging Patterns of Indonesia's International Migration. Malaysian Journal of Economic Studies 51(1), pp. 29-41.
6. Bell, J. (2013). The World's Muslims: Religion, Politics and Society. Pew Research Center's Forum on Religion & Public Life, Washington DC.
7. Crush J., Dodson B., Gay J., Green T., Leduka C. (2010). Migration, Remittances and 'Development' in Lesotho. SAMP Migration Policy Series No. 52, Cape Town.

8. Deshingkar, P. (2006). Internal Migration, Poverty and Development in Asia. Paper: Promoting Growth, Ending Poverty Asia 2015.
9. Hossain, I. (2001). A Rapid Situation Assessment of Migration and Remittances and their Impacts on Food Security, Agriculture and Rural Development. FAO, Rome
10. Jampaklay, A., Ford, K., Chamratrithirong, A. (2017). How does Unrest Affect Migration? Evidence from the Three Southernmost Provinces of Thailand. Demographic Research, Volume 37, Article 3, pp. 25-52.
11. Lewis, G. (1982). Human Migration: A Geographical Perspective. London: Croom Helm Ltd.
12. Murrugarra, E., Larrison, J., Sasin, M. (2011). Migration and Poverty: Toward Better Opportunities for the Poor. The International Bank for Reconstruction and Development/The World Bank, Washington DC.
13. National Statistical Office. (2010). The Population and Housing Census 2010. National Statistical Office of Thailand, Bangkok.
14. Quartey, P. and T. Blankson (2004). Do Migrant Remittances Minimize the Impact of Macro Volatility on the Poor in Ghana? A Proposal for The African Economic Consortium (AERC).
15. Ranathunga, S. (2011). Impact of Rural to Urban Labour Migration and the Remittances on Sending Household Welfare: A Sri Lankan Case Study. MPRA Paper No. 35943, posted 27 January 2012.
16. Siddiqui, T. (2003). Migration as a Livelihood Strategy for the Poor: The Bangladesh Case. Paper presented at Regional Conference on Migration Development Pro-Poor Policy Choices in Asia, Dhaka, Bangladesh.
17. Sukamdi, Mujahid, G. (2015). UNFPA Indonesia Monograph Series: No.3, Internal Migration in Indonesia. UNFPA Indonesia Monograph Series, Jakarta. Retrieved: https://indonesia.unfpa.org/en/publications/monograph-series-no-3-internal-migration-indonesia. Access: 09.10.2018.
18. Susanti, H. and Damayanti, A. (2015). Internal Migration in Indonesia: Duration and Factors. Working paper. Department of Economics, Faculty of Economics and Business, University of Indonesia, Depok.
19. Tirtosudarmo, R. (2009). Mobility and Human Development in Indonesia. United Nations Development Programme Human Development Reports, Research Paper 19, Jakarta.
20. Todaro M. P. (1997). Urbanization, Unemployment and Migration in Africa: Theory and Policy. Paper prepared for Reviewing Social and Economic Progress in Africa No 104, Macmillan.
21. Wajdi, N., Mulder, C.H., Adioetomo, S. M. (2017). Inter-regional migration in Indonesia: a micro approach. Journal of Population Research, Volume 34, pp. 253–277.
22. Wongchai, A., Yang Y.-C., Peng K.-C. (2012). Factors Affecting Rural-Urban Migration of Northern Thai Farmers. Journal of International Cooperation 7 (1), pp. 91-106.
23. World Bank. (2009). World Development Report 2009: Reshaping Economic Geography. World Bank, Washington DC.
24. UNESCO (2017). Migration, Free Movement and Regional Integration. UNESCO and UNU-CRIS, Brugge, Belgium.

Proceedings of the 2020 International Conference "ECONOMIC SCIENCE FOR RURAL DEVELOPMENT" No 54
Jelgava, LLU ESAF, 12-15 May 2020, pp. 21-27
DOI: 10.22616/ESRD.2020.54.002

Andrejs Lazdins[1], Dr.oec. / assistant professor; **Liga Jankova**[2], Dr.oec. / assistant professor;
Madara Dobele[3], Mg.art; MBA / lecturer; **Aina Dobele**[4], Dr.oec. / professor
[1,2,3,4]Latvia University of Life Sciences and Technologies

Abstract. The **purpose** of the article "Quantitative Analysis of Demand for Restaurant Services in Jelgava Old Town Quarter Development Example" is to find out the demand for restoration service in Jelgava Old Town Quarter and to determine the factors influencing the development of the service. The study uses a qualitative method of demand estimation through a survey and using significance scale. The survey was attended by museum professionals from the region and other stakeholders. The restoration service is much needed, but there is a lack of restorers and there is insufficient funding to spend on restoration. The survey results clearly show that there is a high demand for all types of restoration because of the large number of items to be restored. Respondents value the need to preserve the cultural heritage, the importance of scientific research, the high quality of restoration services, but less importance on the importance of education. Crafts are a way of preserving and passing on to the next generation the cultural values that have been accumulated, maintained and restored. The main factors influencing the demand for restoration are the availability of information and specialists; services provided by restoration workshops; access to finance; demand for cultural and historical heritage.

Key words: demand, restoration, qualitative analysis, development.
JEL code: R12

Introduction

Restoration is an important process of preserving and maintaining cultural and historical sites. By definition, restoration is the scientifically sound restoration of a monument or part of it in its original form, preserving the most valuable layers (Cabinet Regulation No. 474, 2003).

The **purpose** of this article is to evaluate the demand for the restoration service and to determine the factors influencing its development. Main tasks: to evaluate the importance of restoration in the cultural-historical context; to describe the experience of Kuldiga Restoration Centre; to evaluate the perspective of demand for restoration services and influencing factors in Jelgava Old Town. **Quantitative method** of demand research was used to evaluate the demand for restoration service. Research methodology is based on the collection of first-time data using **questionnaires** (Praude V., 2010). The questionnaire has been developed for restoration services with a significance scale of answers from 1 to 10, where 1 - insignificant qualitative indicator; 10 - significant qualitative indicator; 5 is the mean with a tendency to decrease in significance, while 6 is the mean with a tendency to increase in significance.

Currently, the following restoration specialties exist in Latvia: restoration of monumental painting; restoration of painting; restoration of monumental decorative sculpture objects; graphic restoration; restoration of manuscripts, documents, books and other paper products; polychrome wood, decorative wood sculpture restoration; restoration of gilding; restoration of joinery products construction; restoration of furniture and other interior fittings; restoration of ceramic, glass and porcelain products; restoration of archaeological material; leather, parchment restoration; fabric restoration; restoration of stone and other silicate objects; metal product restoration; organ restoration; physic-chemical and biological research of cultural and historical objects; research of art and antiques (Qualification of restorers., 2020). The **study analyses the demand for ceramic, textile and metal restoration.**

Cultural heritage issues are important for public education and business development, so the restoration of historic sites in the urban environment is important (Murniece B., 2010; Pukis M., 2011). In its turn, the development of crafts provides a tradition of preservation and transfer of cultural heritage in regions and cities (Jankova, L., Lazdins, A., Auzina, A., 2018). Preserving

historical values is important for sustainable development because heritage teaches us to value what we have achieved and to use it for our future goals (Divandari, J., Danaeinia, A., Izadi, P. 2017).

Restoration is supported and promoted by the Latvian Association of Restorers, which was founded in 1989 and plays an important role in providing restoration services (Qualification of restorers, 2020).

Evaluating the number of restorers in Latvia, it can be concluded from the number of existing members and their specialization that there is a shortage of specialists in restoration (Table 1). This could also be affected by the continuing underfunding of museum collections and restoration, but this is a matter of separate study.

Table 1

Members of the Latvian Association of Restorers - restorers by 2020

Restoration specialty	Specialization	Number of
Restoration of ceramic, glass and porcelain products	Ceramic and glass restorer	1
Textile restoration	Textile restorer	2
Metal product restoration	Metal restorer - specialist	1
	Metal product restorer	1
	Archaeological material and metal restorer	2
	Restorer of archaeological material and metal products	1
	Master restorer of metalwork and archaeological material	1
	Metal restorer	1

Source: the author was created according to the data of the Latvian Association of Restorers.

In order to understand the market strategy of restoration services, Kuldiga Restoration Centre (KRC) has been briefly analysed. For example, one of the restorations centres with the widest range of services is the Kurzeme Region Kuldiga Restoration Centre, whose main goal:

- to ensure the preservation of the authenticity of Kuldiga historical heritage for future generations.
- ensure the inheritance of craft traditions and the sustainability of historical craft skills.

The main work of the restoration centre is related to the restoration of wooden structures and their wooden elements (as well as metal elements).

Its restoration services are the restoration of joinery elements; advising citizens, building owners and operators; replenishment and use of the "Material Bank"; research of historic buildings; possibility to use the restoration centre workshop premises and tools to perform restoration of wooden joinery elements.

The tasks of the Kuldiga Restoration Centre are:

- advise residents and downtown building owners on building conservation and restoration issues;
- to raise public awareness of the historical values of Kuldiga;
- popularize Kuldiga values to Latvian and foreign residents;
- carry out practical restoration work on wooden joinery;
- survey of historical buildings in Kuldiga municipality;
- identify urgent work on preserving buildings in the Old Town to prevent the destruction of particularly unique details;
- to attract financing from Latvian and foreign funds to facilitate research and restoration work;
- to ensure co-operation with Latvian and foreign experts;
- continue work on the replenishment of the "Material Bank" (Kuldiga Restoration Centre, 2020).

Proceedings of the 2020 International Conference "ECONOMIC SCIENCE FOR RURAL DEVELOPMENT" No 54
Jelgava, LLU ESAF, 12-15 May 2020, pp. 21-27
DOI: 10.22616/ESRD.2020.54.002

Research results and discussion

Jelgava city specialists have previously conducted a survey of potential restoration service users. The survey results show that museum collections contain many artefacts that should be researched and restored (according to unpublished data).

At the beginning of the survey, a questionnaire was developed to analyse the demand for restoration services, and museums and other stakeholders (collectors, churches, etc.) were surveyed. Of the 35 questionnaires sent and distributed, 25 were answered, which can be considered an enough answer, as it covers 71.4% of all respondents.

Mapping the submitted responses by significance gives a positive overall significance (Table 2). The significance of the answers consists of two fields, a right field with a significance of 6 to 10 and a left field with a significance of 1 to 5. The dominance of the significance of the survey question is located on the right-hand side of the field, amounting to 187 (83.0%), while in the left-hand field, defined as being low or non-significant overall, the significance is 37 (17.0%). So the overall significance of the answers is significant and noteworthy.

All questions concerning the area of restoration are divided into four groups (1 G; 2 G; 3 G and 4 G, see Table 2). The first group consists of questions 1 to 3 and includes a topic on preserving historical objects and obtaining information. The second set of questions from questions 4 to 7 covers the importance of particular types of restoration. The third set of questions, from questions 8 to 11, covers the topic of access to restoration services. The fourth group, from questions 12 to 15, covers the perspective of restoration and the importance of education.

Table 2

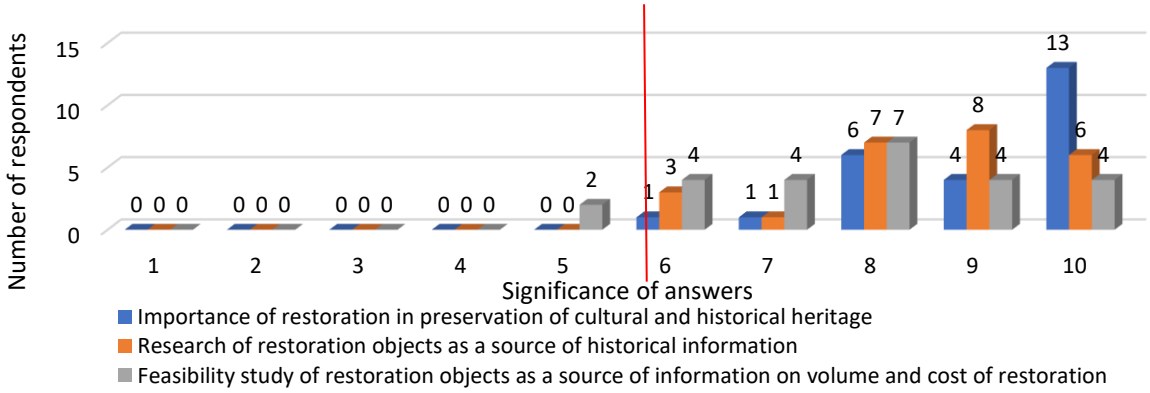
Survey summary on importance of restoration services

No.	Survey questions		Significance									
			1	2	3	4	5	6	7	8	9	10
			Low significance (left field)					Good significance (right field)				
1.	1G	Importance of restoration in preservation of cultural and historical heritage	0	0	0	0	0	1	1	6	4	**13**
2.		Research of restoration objects as a source of historical information	0	0	0	0	0	3	1	7	**8**	6
3.		Feasibility study of restoration objects as a source of information on volume and cost of restoration	0	0	0	0	2	4	4	**7**	4	4
4.	2G	Preservation, research and restoration of woven items (fabrics)	0	0	0	2	0	5	5	**9**	2	2
5.		Preservation, research and restoration of metal objects	0	0	0	1	3	2	7	**8**	2	2
6.		Preservation, research and restoration of ceramic objects	0	0	1	2	1	4	6	**7**	2	2
7.		Preservation, research and restoration of glass (stained glass) articles	0	0	1	1	3	3	2	**7**	5	3
8.	3G	Availability of restoration services	0	0	0	2	3	4	**5**	3	3	4
9.		Quality of existing restoration services	0	0	0	0	1	2	3	3	**9**	7
10.		Prices for existing restoration services	0	0	0	1	4	2	2	5	**6**	5
11.		Topicality and demand of restoration services in the	0	0	0	0	4	5	5	**8**	2	1
12.	4G	Prospects for restoration as an important cultural heritage preservation service for the next 5-10 years	0	1	0	0	1	3	2	**7**	4	**7**
13.		How important is the organization's strategy for preserving cultural heritage?	1	0	1	0	3	0	3	**8**	3	6
14.		How important is education for young people about restoration?	1	0	2	0	3	3	4	**7**	3	2
15.		How important is the function of educating citizens about restoration?	1	0	1	1	1	4	6	**7**	2	2

Source: developed from survey data

The significance of the answers in the first group (1 G) of questions is dominated by right side of field answers - the answers are significant and make up 73 (97.3 %), while in the left-hand side the significance is 2 (2.7 %), which means the answers are insignificant (Fig. 1). The significance of the restoration in the cultural-historical context accounts for a significance with ratio of 100.0 %, which is very significant. Research on restoration items as a source of historical information accounts for a significance ratio of 100.0 %, which is significant. The feasibility study of restoration objects as a

source of information on volume and cost of restoration represents a significance ratio of 92.0 % to a low significance of 8.0 % (Fig. 1).

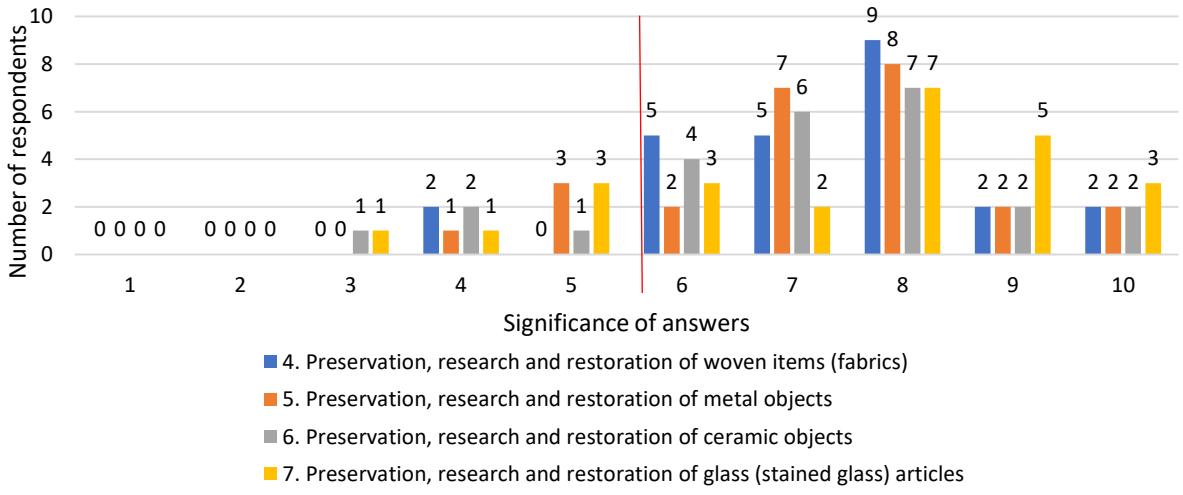


Source: developed from survey data

Fig. 1. **Summary of question group "Preservation of Historic Objects"**

The significance of the answers focuses around significance values of 8 to 10, which can be considered as very significant questions related to restoration in the respondents' answers. The significance indicators of the third question (feasibility study of restoration objects as a source of volume and cost of restoration) are somewhat diffused, which can be explained by the risk of forecasting perspective, or relatively low probability, but still high in the assessment area.

The second group of questions (2 G) forms the theme of specific restoration objects (Fig. 2).



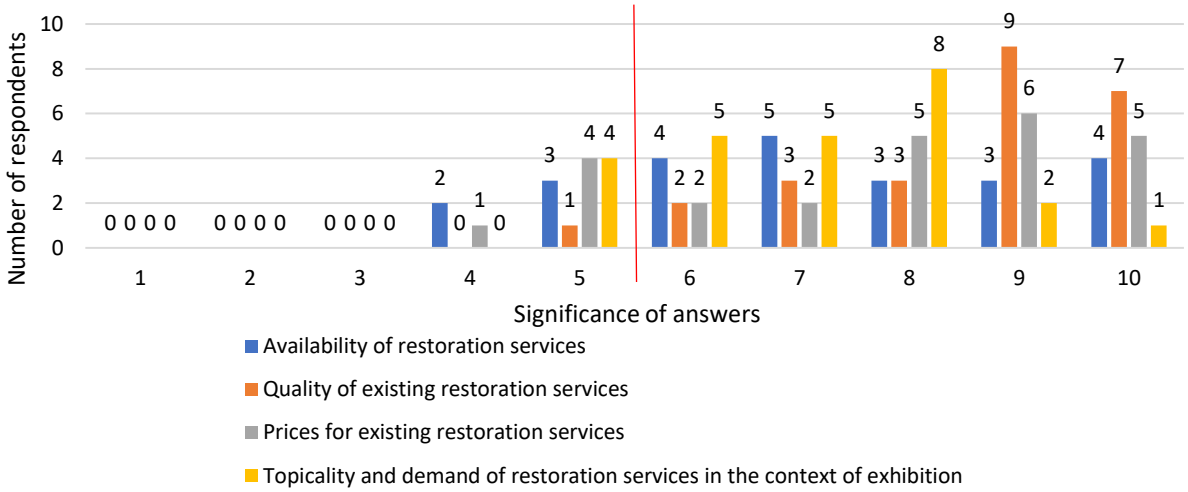
Source: developed from survey data

Fig. 2. **Summary of question group "Importance of Restoration of Specific Objects"**

The defined right-hand matrix area (high significance) is 85.0 % significant, while the left-hand area (low significance) defined as insignificant 15.0 %. Preservation, research and restoration of woven items (fabrics) accounts for a significance ratio of 85.2 %, a high significance of 14.8 %, a negligible significance. Metal object conservation, research and restoration accounts for the importance ratio 84.0 % - vital importance, but 16.0 % of little significance. Preservation, research and restoration of ceramic items account for a significance ratio of 84.0 % as significant and 16.0 % as insignificant. Glass (stained glass) product conservation, research and restoration made up 80.0 % significant importance, but 20.0 % marginal significance. The significance of the questions centres around significance values of 6 to 8, which can be considered as significant questions related to restoration in the respondents' answers (Fig. 2). There are fewer answers with the highest significance, which indicates that certain restoration objects are not very important, as evidenced by

the increase in the number of insignificant answers in the respondents' answers. This group of answers can be interpreted as meaningful; the answers show that the word "restoration" is important, but that certain types of restoration are less meaningful. The results of an earlier study indicate that many artefacts have been accumulated which should be restored but have insufficient financial resources. None of the materials mentioned in the survey dominate, but in general are relevant in the respondents' answers.

The third group (3 G) of claims is made up of the topics of accessibility of restoration services, quality of restoration services, price of restoration services and topicality of restoration services in the context of the exhibition.



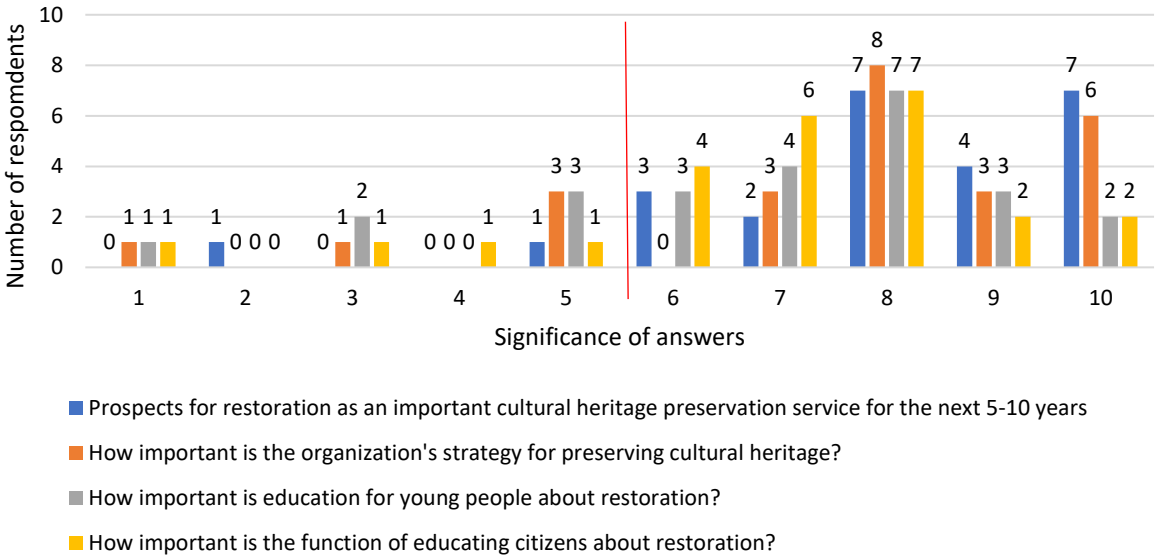
Source: developed from survey data

Fig. 3. **The third group of statements, the importance of restoration, strategic direction and education**

The defined area of the right-hand matrix, as significant, represents 84.8%, while the left-hand area, defined as insignificant, represents 15.2 %. Availability of restoration services accounts for a significance ratio of 84.0 %, which is a high significance versus a low significance of 16.0 %. The quality of existing restoration services accounts for a significance ratio of 96.0 % significance, but 4.0 % insignificant. Prices of existing restoration services account for a significance ratio of 80.0 %, but 20.0 % respondents regard the price as insignificant. Restoration services' actuality and demand in the context of exposure consist of 84.0 % vital importance but make up 16 % low importance. The summary of the significance of the question (Fig. 3) shows that the respondents consider all these questions as significant because the significance scale is dominated by the significance from 6 to 10.

The statement "Topicality and Demand for Restoration Services in the Context of Exposure" is in a worse position because the overall significant is mediocre with a tendency to insignificant. The availability of restoration services and the cost of restoration services are significantly aligned. The quality of restoration services is of relatively high importance.

The fourth group (4 G) consists of a topic on the cultural and historical significance of the restoration in a 5-10 year perspective, the question of the importance of the strategy for the preservation of the cultural and historical heritage in the context of the restoration and education (Fig. 3). The defined area of the right-hand matrix as significant is 83.0 %, while the left-hand area defined as insignificant is 17.0 %.



Source: developed from survey data

Fig. 4. **Fourth question group, importance of restoration, strategic direction and education**

The cultural significance of the restoration over the next 5 to 10 years is constituted by the significance ratio 82.1 %, while 17.9 % of the respondents rate it as low significance. In relation to the significance of the strategy for the preservation of the cultural heritage in the context of the restoration, the significance ratio is 80.0 % significant versus 20.0 % insignificant. On the importance of educating young people in restoration, the significance ratios are 76.0 % essential versus 24.0 % insignificant. Regarding the importance of the educational function of the population in restoration, the significance ratio is 84.0 % significant significance versus 16.0 % insignificant significance (Fig. 4).

Conclusions, proposals, recommendations

1) All respondents' answers to the survey questions and statements provide a common positive and meaningful assessment of the need for a restoration service at the ZPR Centre in Jelgava City.
2) Respondents' assessment of the need to preserve the cultural and historical heritage and the acquisition of information in the context of restorable artefacts is convincingly high, which also indicates the importance of scientific research.
3) When evaluating the material origin of restoration objects, the findings highlight a known problem that may be related to the specificity of museum collections and the availability of restoration, as respondents show little significance.
4) Respondents attach great importance to the availability, quality and cost of restoration, which is an important consideration for planning a restoration budget, raising other funds for the restoration of historic sites.
5) The issue of education is seen by respondents as less important but still relevant. Knowledge of the restoration and the restored object allows a better understanding of its significance in the cultural and historical context but can also be a threat.
6) From the results of the research it can be concluded that demand is influenced due to limited availability of information and specialists (Table 1); few restoration workshops in the regions (only KRC).

Bibliography

1. *Regulations Regarding the Registration, Protection, Utilisation and Restoration of Cultural Monuments and the Granting of the Status of an Environment-Degrading Object. Cabinet Regulation No. 474* (2003). Retrieved: https://likumi.lv/doc.php?id=78458. Access: 20.01.2020.
2. Praude, V. (2010). *Marketing (theory and practice). Book 1.* Riga: Burtene, pp. 521.
3. *Qualification of restorers.* (2020). Retrieved: https://mantojums.lv/lv/restauratoriem/. Access: 01.02.2020.
4. Latvian Association of Restorers. (2020). Retrieved: https://www.restauratorubiedriba.lv/biedri. Access: 01.02.2020.
5. Murniece, B. (2010). *The Role of Cultural Heritage in the Quality of Human Life.* Retrieved: http://www.vraa.gov.lv/uploads/Norvegis/2010.11.26_kulturvesture_B.Murniece.pdf. Access: 01.02.2020.
6. Pukis, M. (2011). *Economic and social role of cultural heritage*. Retrieved: https://mantojums.lv/media/uploads/dokumenti/petijumi/pukis_kulturas_mantojums_ekosoc_loma.pdf. Access: 01.02.2020.
7. Jankova, L., Lazdins, A., Auzina, A. (2018*). Activity of Master Craftsmen in Latvia*. Book Series: Economic Science for Rural Development, Volume: 47., pp. 108- 14. Retrieved: https://llufb.llu.lv/conference/economic_science_rural/2018/Latvia_ESRD_47_2018-108-114.pdf. Access: 25.01.2020.
8. Divandari, J., Danaeinia, A., Izadi, P. (2017). Analysis of the Role of Handicraft Production in Rural Sustainable Development: A Case of Sar Aqa Seyyed, Chaharmahal and Bakhtiari Province. Journal of History, Culture & Art Research / Tarih Kültür ve Sanat Arastirmalari Dergisi. Special issue, Vol. 6 Issue 1, p549-565
9. Kuldiga Restoration Centre. (2020). Retrieved: https://www.kuldiga.lv/kuldiga/kuldigas vecpilseta/restauracijas-centrs. Access: 12.02.2020.

Proceedings of the 2020 International Conference "ECONOMIC SCIENCE FOR RURAL DEVELOPMENT" No 54
Jelgava, LLU ESAF, 12-15 May 2020, pp. 28-33
DOI: 10.22616/ESRD.2020.54.003

IMPLEMENTATION OF THE INTERNATIONAL REAL ESTATE TRANSACTIONS OPENNESS ASSESSMENT IN LATVIA

Janis Viesturs[1], Mg.oec.; **Armands Auzins**[2], Dr.oec., assoc.prof.
[1,2]Riga Technical University

Abstract. In order to evaluate the ability of a country to attract an international investment real estate transaction, research was conducted to determine the criteria for and constituents of the International Real Estate Transactions Openness index as a set of systemic criteria. In Latvia, the assessment of such criteria is expressed as an index, and it was introduced in 2018, henceforth designated as the base year. The elaborated methodological solution for the assessment of International Real Estate Openness allows for the comparison of the institutional environment of international real estate transactions in any given country. In future it will be advisable to conduct an identical assessment of the institutional environment abroad (for example, in the Baltic states) to help foreign investors to evaluate the openness of each country to such transactions and to cross-check individual criteria at an international scale.

Key words: institutional economics, economic openness, international real estate transactions.
JEL code: B25, R3, F41

Introduction

The purpose of this paper is do research on international real estate transactions in Latvia and to implement the methodological solution for assessment of International Real Estate Openness (hereinafter IREO – International Real Estate Openness). It would provide information on the International Real Estate Openness of the assessed country from the perspective of potential real estate transactions. In order to evaluate the ability of a country to attract international investment in real estate transactions as a set of systemic criteria indicating the openness to or potential readiness for international real estate alienation transactions of that country, the criteria and constituent elements have been chosen to determine its International Real Estate Openness. These criteria and constituent elements were discussed and evaluated through individual expert interviews, focus groups, seminars, as well as expert group surveys during period between 1 January 2018 and 30 June 2019. International real estate transaction experts participated in expert surveys twice through the Google Forms tool — (1) in IREO 2018 survey between 31 October 2018 and 30 June 2019 and (2) IREO 2019 survey between 20 January 2020 and 1 March 2020.

The comparative historical analysis of the economic theory of policy leads to the conclusion (Boettke et al., 2013) that the economic activities of actors and organisations, and the conduct of policy always proceed in a wider context of social factors, rather than in a vacuum. The history of global economics demonstrates that countries with a similar availability of industrial resources, or a similar geographical location and other factors beyond the social environment, may still differ greatly in their economic development. The scientific literature deploys various terms (Vitola, 2016) to describe the social factors driving economic development: for instance, habits, culture, religion, social capital, morals, ownership, fairness etc. The scientists of institutional economics share the view that institutional factors govern the reciprocal competitiveness between countries, and therefore economic development differs greatly from country to country.

In 1931, one of the representatives of the first generation of the school of institutional economics, John R. Commons, in his "*Institutional Economics*", when integrating the social dimension of human behaviour with economics theory, emphasized that the main subject of study in economics theory must be the transaction as an activity, coupled with the study of its actors, and that it is not only the market that regulates the economic process (Krilovs, 2014). It is also a significant feature in the view of those promoting the new institutional economy, for whom, contrary to the analysis of

conventional microeconomics, studies focus on the transaction [i.e. event] rather than the act of transacting [i.e. process] (Seabrooke and Hwee Hong How, 2004). According to Commons' theory, the institutional infrastructure directs and regulates the market. Commons maintained that the state's economy must have transparent, fair and strong management to administer the laws and effectively maintain civic order. However, some governments may easily give in to corruption, subjecting legislation to the narrow business interests and generally ignoring the rule of law (Kaufman, 2008). Hence, institutional economics, according to Commons' theory, manifests itself as a collective activity with collective control, which is implemented through the governance of a network of authorities, companies, trade unions, families, churches, socially accepted standards, and other institutions, thus conditioning and regulating the activities of individuals. According to Commons, the institutions constitute a particular regime or a body of working rules (Kaufman, 2008), found in laws, case-law, human resource policies of companies, trade union regulations, collective agreements, socially accepted standards, religious doctrines, principles of ethics and traditions.

A representative of the second generation of the school of institutional economics, Clarence Edwin Ayres, in his work *A Study of the Fundamentals of Economic Development and Cultural Change"* (1944), analysed the social consequences of economic progress by asking the question — do institutions, such as companies, democracy, puritanism etc. "enable" the development of the industrial economy? And his answer was — if the institutional structure, which predominated in Western Europe for the last five centuries before the industrial revolution, had been strong enough to keep technological changes at ban then, no doubt, the changes would not have occurred. This means that the development of institutions can be both impeded and facilitated. This scientist asked the second essential question — what are the social consequences of economic progress? He concluded that the economy progresses if it is regulated by the market and by competition. However, in order to achieve social justice, any economic benefit must have not only a market-driven value, but also a social value, by which the state and social institutions contribute to public life.

Institutions are structures capable of restricting and impacting their subjects (Hodgson, 2002) and changing their habitual behaviour. The most influential representative of modern institutional economics, the editor of *Journal of Institutional Economics,* Geoffrey Hodgson, defines the institutions as an established and common system of social rules structuring social interaction. In his research he emphasizes the evolution of the institutions that entails changes in society's behaviour and a change in the habits of their followers.

Today, real estate transactions are related to several complicated and interdependent activities to meet the needs of different economic and social interests, which in their turn are related to an agreement on the transfer of real estate ownership, transfer (registration) and the financing of possessions, as well as to other activities connected with a transaction. In more recent research representatives of the new institutional economics, R. Coase and D. C. North, unlike the economists of the neoclassical school, have attributed a crucial role to transaction costs, emphasizing that such internal bureaucratic transaction costs (related to the administrative structure of a company) and external market transaction costs (related to the real estate market) arise during the transaction due to incomplete information, product valuation costs, ownership study and protection costs, as well as costs related to the drawing up and performance of contracts.

E. Williamson has greatly contributed to the research of transaction costs by mainly focusing on transaction costs in theoretical terms, comparing them to friction within physical systems which hinder movement. The economic equivalents of such friction are transaction costs, and the fact that

parties who engage in these economic relationships do not always act in harmony - they often face misunderstanding and conflict, which leads to delays, additional costs and other impediments to the transaction (Williamson, 1981). Such real estate transactions, to use an analogy from physics, are therefore impeded by transaction costs; transaction-related costs which are relatively large, and payable in parallel with the real estate purchase price, by comparison with other commodity markets.

Given the wide range of opinions on the institutional aspects of the socio-economic relationships (*"institutional richness"* (Woestenburg et al., 2014), and admitting that no other word has been used more ambiguously and frequently in the contemporary social sciences than "institution" (Ayres, 1944), the authors maintain that studies of the institutional environment (for example, in Latvia — A. Vitola, M. Senfelde) which help to determine the general conditions for economic activity in certain countries, are of high value. Nevertheless, the stated goal of the research was to determine the criteria of the International Real Estate Openness of the country and to calculate the IREO index, involving a detailed assessment of the institutional environment of international real estate transactions.

Methodology

When analysing the openness to international real estate alienation transactions of a country, the scientific literature usually analyses one or several institutional aspects: for instance — (1) level of restrictions of international real estate transactions; (2) real estate transparency; (3) scope of real estate transactions or investments, or scope of investments, i.e. number, area, amount of investment or direct transactions in a certain period of time; (4) presence of measures aimed at attracting foreign investments, for instance, the offer of residence permits (investor visas) or even citizenship. However, these are merely fragmentary indicators of International Real Estate Openness. Therefore, in order to evaluate the ability of a country to attract international investment in real estate transactions as a set of systemic criteria indicating the openness to or potential readiness for international real estate alienation transactions of that country, the criteria and constituent elements have been chosen to determine its International Real Estate Openness. Afterwards, by using *Delphi* methods or *eDelphi* techniques for interviews (Pickard, 2007), in the period between 1 January 2018 and 30 June 2019, these criteria were discussed and evaluated through individual expert interviews, focus groups, seminars, as well as expert group surveys.

The experts for interviews were selected following several criteria:

1) Competence and interdisciplinarity. Representatives of 11 professions / occupations were selected — real estate brokers, company managers, developers, entrepreneurs, academic staff / researchers, managers, sworn notaries, valuers, lawyers / advocates, employees of credit institutions, and other real estate specialists who are considered to have optimal expertise in real estate transactions. This research thus qualifies as an interdisciplinary study. A strict principle — to ensure that the number of representatives of any single profession / occupation constitutes not less than 5 % and not more than 15 % of the total number of survey subjects — was adhered to.
2) Assessment of competence. The assessment included an evaluation to establish whether each expert has the necessary expertise to participate in the research.
3) Experience. The experience of each expert was taken into account. The average duration of professional activity of the experts involved in the IREO 2018 survey was 12.9 years, whereas for the IREO 2019 survey it was 15.3 years).
4) Good reputation. All the selected subjects represent companies and institutions with good reputation.

The authors of the research base the IREO criteria on the incidence of individual indicators in the scientific literature, reviews on indicators characterising the economic environment of different countries (for example*, Tax Attractiveness Index, Financial Secrecy Index, Index of Economic Freedom, International Property Rights Index, Open Markets Index, Global Competitiveness Index, Global Trade Alert*, *Doing Business, Burden of Government Regulation*), on structured interviews with industry experts, approbation of the acquired research results and insights, and discussions thereof in scientific seminars and conferences.

In order to assess the institutional environment of international real estate transactions, the following criteria and their elements were identified (each element was evaluated on a scale between 1 and 10).

1) Transparency of real estate and real estate transactions: (1) Safe real estate ownership; (2) Accurate and reliable information about real estate market and finances; (3) Performance of contracts and efficiency of courts; (4) Cross-compliance and transparency of data registered in the State Unified Computerized Land Register and the National Real Estate Cadastre; (5) Availability of information about real estate liens and the possibility of using the real estate; (6) Understandable tax system and regulations governing the real estate industry and predictability thereof.
2) Direct and indirect restrictions to foreigners in real estate alienation transactions with: (1) Agricultural and forest land; (2) Apartment property; (3) Commercial property (with land); (4) Land intended for household construction; (5) Private houses (with land).
3) Time of real estate alienation transaction: (1) Real estate ownership pre-registration phase; (2) Real estate ownership registration phase.
4) Transaction costs: (1) Transfer tax; (2) Broker services; (3) Legal services (notary fee, advocate or lawyer fees).
5) Administrative obstacles and level of bureaucracy — a need for various permits and references / statements, difficulty of acquiring thereof. For example, municipal permits for foreigners, offering of pre-emptive right etc.
6) Governmental policy encouraging international investments.
7) Governmental policy protecting international investments.
8) Professional competency of the persons involved in the industry: (1) Real estate agents; (2) Notaries; (3) Advocates / lawyers; (4) Real estate appraisers; (5) Economists; (6) Employees of the Land Register; (7) Employees of the State Land Service; (8) Employees of the municipalities; (9) Real estate managers; (10) Real estate insurers; (11) Real estate developers; (12) Employees of the credit institutions.
9) Development of technologies related to real estate transactions regarding: (1) Due diligence of the real estate; (2) Obtaining and collecting data and information; (3) Document circulation (including registration of ownership).
10) Activities of credit institutions encouraging real estate transactions.

Identification of Latvia's Openness to International Real Estate Transactions Index

60 international real estate transaction experts participated in expert surveys twice through the Google Forms tool — (1) in IREO 2018 survey between 31 October 2018 and 30 June 2019 and (2) IREO 2019 survey between 20 January 2020 and 1 March 2020.

When determining the relative significance (weight) of each criterion, the set of individual criteria as a numeric quantity is expressed as an index (formula 1) to characterise the relative changes in the country's International Real Estate Openness, in order to determine the index periodically — on a yearly basis — and to analyse each criterion separately. The calculations demonstrate that IREO of Latvia 2019 in comparison to 2018 has dropped from 5.89 to 5.61 (Table 1).

Table 1

IREO 2018 and IREO 2019 indexes

No.	REO criterion	Assessment 2018 (average.)	Assessment 2019 (average.)	Relevance of criteria (w1-w7), %	Adjusted criteria assessment in 2018	Adjusted criteria assessment in 2019
a	Transparency	6.93	6.71	0.13	0.90	0.87
b	Direct and indirect restrictions	7.17	7.07	0.14	1.00	0.99
c	Time	6.80	6.89	0.05	0.34	0.34
d	Transactions costs	5.03	5.27	0.08	0.40	0.42
e	Administrative obstacles and level of bureaucracy	4.56	4.32	0.10	0.46	0.43
f	Governmental policy encouraging international investments	4.12	3.63	0.11	0.45	0.40
g	Governmental policy protecting international investments	5.00	4.42	0.10	0.50	0.44
h	Professional competency of the persons involved in the industry	6.99	6.93	0.09	0.63	0.62
i	Development of technologies related to real estate transactions	6.49	6.49	0.09	0.58	0.58
j	Activities of credit institutions encouraging real estate transactions	5.63	4.53	0.11	0.62	0.50
Total		58.80	56.26	1.00	5.89	5.61

Source: author's calculation based on research data

IREO index is calculated according to the formula:

$$w_1 * \sum_{n=1}^{6} \frac{a_n}{6} + w_2 \ (0{,}09\ (b_1 + b_3) + 0{,}10\ (b_4 + b_5) + 0{,}62 * b_2) + w_3 * \sum_{n=1}^{2} \frac{c_n}{2} + w_4 * \sum_{n=1}^{3} \frac{d_n}{3} + w_5\ (e + g) + w_6\ (f + j) + w_7 * (\sum_{n=1}^{12} \frac{h_n}{12} + \sum_{n=1}^{3} \frac{i_n}{3}) \quad (1)$$

where:

IREO — Openness to International Real Estate Transactions index of the country

a_1-a_6 — elements of IREO criterion "Transparency of real estate and real estate transactions";

b_1-b_5 — elements of IREO criterion "Direct and indirect restrictions to foreigners in real estate alienation transactions";

c_1-c_2 — elements of IREO criterion "Time of real estate alienation transaction";

d_1-d_3 — elements of IREO criterion "Transaction costs";

e — Administrative obstacles and level of bureaucracy;

f — Governmental policy encouraging international investments;

g — Governmental policy protecting international investments;

h_1-h_{12} — elements of IREO criterion "Professional competency of the persons involved in the industry";

i_1-i_3 — elements of IREO criterion "Development of technologies related to real estate transactions";

j — Activities of credit institutions encouraging real estate transactions;

$w_{1\ldots}w_7$ — Relative weight of criterion, $w_1 + w_2 + w_3 + w_4 + w_5*2 + w_6*2 + w_7*2 = 1$

n — quantity of elements of each IREO criterion.

Conclusions, proposals, recommendations

1) The calculation of the IREO index shows that the International Real Estate Openness of Latvia in 2019, as compared with 2018, has decreased (the index has dropped from 5.89 to 5.61).
2) The elaborated methodological solution for assessment of the International Real Estate Transactions Openness index allows a cross-comparison of the institutional environment of

international real estate transactions in 2018 and 2019. In future it is planned to determine this index regularly (on a yearly basis) as a calculation of the IREO index, taking 2018 as the base year of the calculation. The following persons are advised to become acquainted with it: (1) employees of the state and municipal authorities, who are responsible for promoting foreign investments; (2) members of the Latvian Real Estate Association; (3) Members of the Latvian Chamber of Commerce and Industry; (4) Members of the Foreign Investors Council in Latvia; (5) Foreign investors, and (6) other persons whose professional activity is related to international real estate transactions.

3) Of all the IREO criteria in 2018 and 2019, the lowest score was received by "Administrative obstacles and level of bureaucracy", "Governmental policy encouraging international investments", "Governmental policy protecting international investments", and "Investment encouraging activities of credit institutions". These are indicators that public authorities must take into account in order to prove their intention to attract foreign investments, as well as to provide grounds to foreign investors for a cautious approach to making decisions on investments in Latvia.
4) In future it is advisable to conduct an equal assessment of the institutional environment of the IREO abroad (for example, in the Baltic states) to help foreign investors to evaluate the openness of each country to such transactions and to cross-check individual criteria at the international scale.

Bibliography

1. Ayres, C.E. (1944). Theory of Economic Progress*. A Study of the Fundamentals of Economic Development and Cultural Change.* University of North Carolina Press. Retrieved: http://cas2.umkc.edu/economics/Institutional/Readings/Ayres/tep/teptitle.html Access: 16.09.2019
2. Boettke, P.J., Coyne, Ch., Leeson, P.T. (2013). Comparative Historical Political Economy. *Journal of Institutional Economics*, Volume 9, Issue 3, pp. 285-301. https://doi.org/10.1017/S1744137413000088
3. Hodgson, G. (2002). The Evolution of Institutions: An Agenda for Future Theoretical Research*. Constitutional Political Economy*, Volume 13, pp. 111–127. https://doi.org/*10.1023/A:1015301101712.*
4. Seabrooke, W., Hwee Hong How, H. (2004). Real Estate Transactions: an Institutional Perspective. In: International Real Estate. An institutional approach*.* Ed. by Seabrooke, W., Kent, P., Hwee Hong How, H. Oxford: Blackwell Publishing Ltd., p. 5.
5. Kaufman, B.E. (2008). The Institutional Economics of John R. Commons: Complement and Substitute for Neoclassical Economic Theory. *Socio-Economic Review*, Volume 5, Issue 1, pp. 3-45. https://doi.org*/10.1093/ser/mwl016*
6. Krilovs, L. (2014). Ekonomiskas domas retrospekcija. Ziatniska monografija (A History of Economic Thought. Scientific Monograph). Riga: RTU izdevnieciba, pp. 125-127.
7. Pickard, A.J. (2007). Research Methods in Information. London: Facet Publishing, pp. 126-127.
8. Vitola, A. (2016). Instituciju socialekonomiskas ietekmes novertesana. Promocijas darbs (An Evaluation of the Socioeconomic Impact of Institutions. PhD thesis). Riga: RTU Izdevnieciba, p. 153.
9. Williamson, O.E. (1981). The Economics of Organization: The Transaction Cost Approach. *The American Journal of Sociology*, Volume 87, No. 3, pp. 548–577. Retrieved: http://unige.ch/sciences-societe/socio/files/1114/0533/6204/Williamson_1981.pdf Access: 21.11.2019
10. Woestenburg, A., van der Krabben, E., Spit, T. (2014). Institutions in rural land transactions. *Journal of European Real Estate Research*, Volume 7, Issue 2, pp. 216-238. http://dx.doi.org/10.1108/JERER-01-2014-0005

MARKETING AND SUSTAINABLE CONSUMPTION

Proceedings of the 2020 International Conference "ECONOMIC SCIENCE FOR RURAL DEVELOPMENT" No 54
Jelgava, LLU ESAF, 12-15 May 2020, pp. 35-42
DOI: 10.22616/ESRD.2020.54.004

IDENTIFYING TOURISM MARKET GROWTH OPPORTUNITIES AND RISKS IN THE AUTONOMOUS REPUBLIC IN AJARA (GEORGIA)

Ekaterine Bakhtadze[1], PHD of Economics, Assoc.Prof.; **Nargiz Phalavandishvili**[2], Business Administration Doctor, Assist. Prof.; **Natalia Robitashvili**[3], Business Administration Doctor, Assoc. Prof.
[1,2,3]Batumi Shota Rustaveli State University

Abstract. With the current trends in tourism development and competition in the world, the growth of the tourism market in the Autonomous Republic of Adjara faces certain challenges. Positioning Adjara as a maritime tourist destination is becoming less attractive for tourists. Based on the situational analysis we have identified the existing and new tourism markets and products that in the intermediate-term perspective will enable the growth of tourists and the development of tourism in the region during all four seasons. Based on the expert method and factorial analysis, we assessed the risks of rural and mountain tourism development, which appear to be of the biggest interest of the existing and the new markets. We have ignored the risks that emerge in the macro-environment and put our focus on the risks that should be overcome by all interested parties, in particular the industry of hospitality and the local government. As the results of the research reveal, rural and mountain tourism development is related to high risk and, according to the risk matrix, the highest risk factors include road and transport infrastructure, tourism and supplementary infrastructure, communal infrastructure and problems associated with the quality of service.

Keywords: tourism market, factor analysis, tourism statistics, Ansoff Matrix, risk matrix
JEL Code: M31, Z32

Introduction

Georgia is traditionally a tourist country. Due to natural-recreational resources, cultural attractions, Georgian hospitality, and intangible cultural treasures, it is increasingly becoming an attractive tourist destination for foreign tourists. The growing trend of tourism is confirmed by the increasing flow of visitors and tourists in the country. In 2019, the number of international visits for tourism purposes was 7 725 774, which is 7.3 % higher than the previous year (Georgian National Tourism Administration, 2019).

The Adjara region, located in the south-western part of Georgia, on the Black Sea coast, is an autonomous republic. It has an area of 2900 sq. km, a population of 334,000 people and two coastal and three mountainous municipalities. There are 6 resorts and 11 recreational areas in Adjara. Adjara holds second place after the capital - Tbilisi, in terms of visits and existing tourism infrastructure. In 2019, the number of foreign visitors in Adjara exceeded 2.3 million. This number is increased by 8% since 2017. In 2018, the number of tourists amounted to 862 262 persons and among them, foreign tourists accounted for 66 % of the total number of tourists (National Statistics office in Georgia, 2018). Tourism is one of the priority directions of Adjara Autonomous Republic's economy. In 2019, 19 % of total foreign direct investment (40 million USD) came from the hospitality industry.

As of 2018, with the number of foreign visitors to Adjara the leading international tourist markets were Turkey (833,486 visitors), Azerbaijan (204,562 visitors), Russia (119,704 visitors), Israel (73,979 visitors) and Ukraine (45,849 visitors). Compared to 2017, the highest growth rate of visitors is observed in the three countries: Israel - 55.3 %, Ukraine - 44.2 % and Russia - 34.1 %. At present, the promotional activities of the Department of Tourism and Resorts of the Adjara Autonomous Republic are mainly aimed at exploring new tourism markets such as Poland, the Baltic States, Germany, Great Britain, Saudi Arabia, and the United Arab Emirates.

[1] Ekaterine Bakhtadze e-mail: bakhtadze.ekaterine@bsu.edu.ge
[2] Nargiz Phalavandishvili e-mail: phalavandishvili.nargiz@bsu.edu.ge
[3] Natalia Robitashvili e-mail: nato.robitashvili@bsu.edu.ge

The purpose of our research is to study the growth opportunities of the Adjara tourism market based on situational analysis and to identify and evaluate the risks associated with them based on factor analysis. In the setting of enhanced competition and trends in the world tourism market (transition from passive to active leisure, intensification of leisure, ecological care and promotion of healthy lifestyle), it is important to properly assess the current situation and identify those tourism products that, over the medium term, will help expand existing markets and develop new markets (Chaudhary M., 2010).

Research results and discussion

To analyse the situation in the Adjara tourism market and evaluate the opportunities for market growth, based on the principles of strategic marketing planning, we can use the Ansoff Matrix, which relies on various market growth alternatives (Market penetration, Market extension, Product development, and Diversification). It is the best model for identifying new opportunities for intensive market growth (Kotler Ph., Bowen J., Makens J. C., 2010).

Ansoff's (1956, 1987) Matrix allows us to identify the risks associated with market growth strategies. In addition, developing strategies is based on the information that we receive from the product life cycle and portfolio matrix (McDonald M., 2008).

Based on a situational analysis done by studying such secondary information, such as Adjara Tourism Market Research (2015-2018), Adjara Tourism Brand Strategy (2017), Adjara Tourism Development Strategy (2019-2025) and statistical materials, we tried to identify existing/new products and markets (Tourism and Resorts Department of Adjara Autonomous Republic, 2019). As a result, based on the product lifecycle, we have divided tourism products into two categories:

- Products **on the market - developed and developing.** Developed products include Maritime Tourism (sun and sea) and Gambling Tourism (casinos) and developing products - Rural, Mountain, Ecotourism, Adventure Tourism, and MICE Tourism. **Existing products allow for the penetration of the current market and the development of new markets.**
- Sport Tourism and Tourism for the Elderly can be considered as **new products** on the market. These tourism directions are distinguished by their peculiarity and require the creation of specialized touristic infrastructure. Currently, the Government of Adjara supports the development of both products and facilitates the attraction of investments and the development of so-called PPP projects

Table 1 and Table 2 provide an opportunity to analyse the growth opportunities for current and new markets with **existing products.**

Table 1

Growth opportunities for existing markets with existing products

Existing Markets	Existing Products
Domestic tourists traveling throughout their home country who wants to relax and get new feelings and excitements.	Maritime tourism (sun and sea), however, this also reveals competition from Turkey and Egypt. Many Georgian tourists find the above country resorts to be cost-competitive and often complain about the quality and price discrepancy in the market; Mountain tourism. Actually, this product is just now picking up the force and is linked to the emerging Goderdzi resort, where both public and private investments have been made recently to create appropriate, high standard tourism infrastructure: ski lifts, cottages, food facilities, and hotels; Weekend visits often associated with cultural and social events.
New generation tourists from post-Soviet countries: In post-Soviet countries, the older generation remembers Adjara very well and in their minds, it is positioned as a seaside region, however: it is important to consider young people who are new market and offer them an attractive tourist destination with European elements. Polish tourists are characterized by similar consumer behaviour.	Maritime tourism (sun and sea); Rural Tourism - as a product is in a developing phase. Families in the village are gradually learning to host visitors, improve service and infrastructure as the demand increases. Slavic tourists love to be close to nature and the communication with Georgian hosts; Ecotourism; Mountain Tourism.
Tourists from Turkey, Israel, and the Middle East: Visitors to Batumi at the weekends, mostly Turkish and Iranian tourists, added by groups from Israel and families from the Gulf countries.	Business visits. This is especially true for Turks and Iranians who do business in Adjara. Gambling Tourism. The gambling business today has become a guarantor of the hotel occupancy in the off-season period. Casinos are in high demand from this market segment visiting Adjara throughout the year, sometimes in groups, sometimes individually; Rural Tourism. Tourist from Israel is interested in rural tourism. In rural areas, families are focused on hosting their groups. They offer Georgian dishes to tourists from Israel and present Georgian folklore. Turks and Iranians are not interested in such services; Ecotourism.

Source: author's created based on Information of Department of Tourism and Resorts of Adjara Autonomous Republic: results of marketing surveys in the years (2015-2018) and Adjara Tourism Brand Strategy (2017)

Table 2

Growth opportunities for new markets with existing products

New Markets	Existing Products
Tourists from the West: People who have visited European cities many times and want to discover something new. Currently, the main target markets are - Germany, France, Baltic countries, Great Britain.	Rural Tourism; Adventure Tourism; Ecotourism; MICE Tourism; Mountain Tourism.

Source: author's created based on Information of Department of Tourism and Resorts of Adjara Autonomous Republic: results of marketing surveys in the years (2015-2018) and Adjara Tourism Brand Strategy (2017)

In light of the above, currently, we believe that to diversify Adjara's tourism offerings and increase tourism opportunities in the region during all four seasons, governmental and private sector resources should be focused on developing and perfecting such tourism products as Rural Tourism and Mountain Tourism. Therefore, we have sought to identify and assess the risk factors that will become the hindering factors of their development for the following 3-5 years based on a survey of interested parties in the tourism and hospitality sector.

According to the World Tourism Organization definitions, Rural Tourism is "a type of tourism activity in which the visitor's experience is related to a wide range of products generally linked to nature-based activities, agriculture, rural lifestyle/culture, angling, and sightseeing". Mountain Tourism is a type of "tourism activity which takes place in a defined and limited geographical space

such as hills or mountains with distinctive characteristics and attributes that are inherent to a specific landscape, topography, climate, biodiversity (flora and fauna) and the local community. It encompasses a broad range of outdoor leisure and sports activities". Rural and Mountain Tourism have a high potential to stimulate local economic growth and social change because of their complementarity with other economic activities, their contribution to GDP and job creation, and their capacity to promote the dispersal of demand in time (fight seasonality) and along with a wider territory. (World tourism Organization, - https://www.unwto.org/rural-mountain-tourism).

Rural and Mountain Tourism are directions that provide the greatest opportunity to attract tourists to Adjara. The number of guesthouses in the villages of Adjara reaches 200. On average, the guesthouse can accommodate 10 guests at a time. According to the information from tourist information centres, in 2019, 238665 guests visited villages in Adjara, compared to the previous year, this figure has increased by 94%. Currently, due to its proximity to Batumi, the highest demand is for the Machakhela Gorge and Keda Municipality villages. Due to the scarcity of tourist services, the desire to stay in rural areas is generally not high. Foreign tourists enjoy nature in the village, taste Georgian wine, local cuisine and communicate with the locals. Consequently, the development of tourism services in rural areas must fall within the standards (Alliances Lesser Caucuses Programme, 2015). The family in the village should know how to arrange the residential area following market requirements (Abesadze T., 2019). The existing value chain that combines the transportation, accommodation, food and the supply of additional services should be evaluated. Additional services may include - Georgian handcrafting, adequate entertainment services for children and culinary master classes in which visitors will play an active role. Being close to nature is important for visitors. A new world known concept of hotel - Eco / Green Hotel can be connected to Rural Tourism. The two main components unite Rural Tourism and Adventure Tourism, being close to nature and understanding local traditions. As a result, developed rural tourism will surely become a stimulator for the development of Adventure Tourism and Ecotourism. The development of Mountain Tourism in all four seasons is linked to the development of the Goderdzi resort, which is supported by both the governmental and business sectors. The Goderdzi Resort is located in the high mountainous Adjara, 2027 meters above the sea level. It is one of the best for those who love skiing in the unmarked snow. At present, the Goderdzi resort operates 1700-2400 meters of ski lifts, accommodation is provided by cottages and construction of 19 hotels is underway.

Risk is an unforeseen situation that causes deviation from expected results (Chaganava P., 2013). Moreover, a risk is essentially a potential future problem (or opportunity). Risks come about when vulnerabilities in our systems, processes, facilities or resources are exploited by threats (Osborne A., 2012). Hazardous situations are grouped according to many characteristics. In general, risks related to tourism development are categorized as following: natural, security, health-related, political, economic, technological factors and socio-demographic factors (Shaw G., Saayman M., Saayman A., 2012). The purpose of our study was to identify the risks that will most likely hinder further development of mountain and rural tourism at the regional level, based on factor analysis and expert evaluations. Both product developments fall under the subject of identical risks.

Qualitative, quantitative and statistical research methods were used in the research. First, we describe (Abesadze N., Qinqladze R., Chitaladze Q., 2018) and group the risks identified during the research process (Table 3). A special questionnaire was developed to enable specialists in the tourism and hospitality industry to rank risks, determine risk severity and the likelihood of risk detection.

Table 3

List of major risks and their description

No	Risk Name	Risk Description
1	**Infrastructure**	The unregulated **road and transport infrastructure**, the poor quality of public transport organization and service;
		Tourist and supplementary infrastructure - insufficient number of accommodation, food, shopping, medical facilities, etc.;
		Informational-communication infrastructure - Inadequate access to the Internet, insufficient number of information centres, signs and boards;
		Communal Infrastructure - water, sewage system malfunction, gas, and electricity supply problems, waste management problems.
2	**Quality of Service**	**Low quality of hospitality management** - Low-qualified staff, language barrier, insufficient ability to organize the business.
3	**Competition**	**Competition** from the other regions of Georgia that specialize in rural and mountain tourism.
4	**Investment interest**	Less attraction from investors for the new tourist destination (Goderdzi Resort, Gomarduli, and rural settlements).
5	**Coordination**	Low level of cooperation and communication between the public and private sectors, information vacuum.
6	**Recognition and Branding**	Insufficient promotional activities.
7	**Natural factors**	Natural disasters, climate change, environmental problems.

Source: author's created based on results of the survey

With the questionnaire, experts were asked to evaluate the following 10 risk factors: **Road and Transport Infrastructure, Communal Infrastructure, Informational-Communication Infrastructure, Tourist and Auxiliary Infrastructure, Quality of Service, Competition, Investment Interest, Coordination, Natural Factor, Recognition and Branding**. 96 respondents participated in the study. Including government officials directly involved in defining tourism policy in the region, representatives of non-governmental and consulting organizations supporting tourism development, hospitality industry representatives, academics and tourism agencies/operators representatives.

Through the risk ranking scale, we tried to identify those risk zones (low, high, critical, impermissible) that apply to further development of Mountain and Rural Tourism. Statistical risk assessment can be performed through the expert-point assessment of risk factors.

To assess the severity of the risks associated with rural tourism and mountain tourism development, the risk factors not exceeding 10 are ranked by the level of risk severity (Table 4). Each one is assigned a score of 0-10 (B_i), the risk severity scale is divided into the following: 1-2 points - the risk is insignificant, 3-4 - the risk is minimal, 5-6 - the risk is medium, 7-8 - the risk is critically important, 9 -10 - the risk is catastrophic. For certain factors, the weight (W_i) was determined through the expert method, reflecting the weight of the influence factor, from the total risk. The sum of weights equals one. The absence of any factors is valued at zero (Beliaevski I. K., 2001), (Gelashvili S.,2017).

Proceedings of the 2020 International Conference "ECONOMIC SCIENCE FOR RURAL DEVELOPMENT" No 54
Jelgava, LLU ESAF, 12-15 May 2020, pp. 35-42
DOI: 10.22616/ESRD.2020.54.004

Table 4

Risk severity assessment of Rural Tourism and Mountain Tourism Development

No	Risk Name	Risk Severity B_i	Weight of risk factors W_i	B_iW_i
1	Road and transport infrastructure	7	0.18	1.30
2	Tourist and supplementary infrastructure	7	0.13	0.82
3	Informational-Communication Infrastructure	5	0.09	0.48
4	Communal infrastructure	7	0.12	0.77
5	Quality of Service	7	0.13	0.88
6	Competition	5	0.07	0.34
7	Investment interest	5	0.08	0.40
8	Coordination	5	0.07	0.38
9	Natural	5	0.06	0.29
10	Recognition and Branding	5	0.08	0.40
Σ				6.06

Source: author's calculations based on results of the survey

The average risk is determined by the formula:

$$R = \sum B_i W_i = 6.06$$

The risk zone represents the boundaries (Table 5), where the risk does not exceed the specified values.

Table 5

Risk Zone Boundaries

Risk Zone Boundaries	Risk zones
0	No-Risk Zone
0.1-2.5	Minimum risk zone
2.5-5.0	Elevated risk zone
5.1-7.5	Critical Risk Zone
7.6-10.0	Impermissible Risk Zone

According to the points given by the 96 experts, malfunctioning road and transport infrastructure is the most impeding and critically important risk factor for the development of rural tourism and mountain tourism (average score - 7.13 points), 21 experts gave it 10 points and the risk share amounted to the 18% of the total volume. Quality of service (6.64 points), Communal infrastructure (6.57 points), Tourist and supplementary infrastructure (6.47 points) were also identified as critically important risks.

In addition, a risk matrix was developed to assess the risk factors affecting the development of rural and mountain tourism, which allows for the determination of the consequence and likelihood of each threat. Experts rated the likelihood of identifying risk factors (problems) with the following points, specifically Unlikely - 1 point, Seldom - 2 points, Occasionally - 3 points, Likely - 4 points, Definitely - 5 points. And the Consequence with the following points: Insignificant - 1 point, Marginal - 2 points, Moderate - 3 points, Critical - 4 points and Catastrophic - 5 points.

Risk Assessment Matrix for rural and mountain tourism development in Adjara Region

Risk Assessment Matrix							
		Likelihood					
		1	2	3	4	5	Low Risk
Consequence	1	**1**	**2**	**3**	**4**	**5**	Moderate Risk
	2	**2**	**4**	**6**	**8**	**10**	High Risk
	3	**3**	**Competition, Natural (6)**	**Informational-Communication infrastructure (9)**	**12**	**15**	Extreme Risk
	4	**4**	**Investment Interest, Coordination, Recognition and Branding (8)**	**Communal infrastructure; Tourist and its supplementary infrastructure; Quality of Service (12)**	**Road and Transport Infrastructure (16)**	**20**	
	5	**5**	**10**	**15**	**20**	**25**	

Source: author's created matrix based on results of the survey

Qualitative analysis of risk factors allows us to draw conclusions on the events of high or low negative effects of threats. When applying the risk matrix, the road-transport infrastructure fell in the extreme risk zone, the average value of the points given by the experts in case of risk severity was 3.6 points and in case of risk detection - 3.8 points.

Conclusions, proposals, recommendations

The risk matrix enables us to better understand, analyse, and draw the following conclusions:

1) Access to tourist destination sites is a critical factor in the development of tourism; consequently, the unregulated transport and road infrastructure have been assessed as an extreme risk. Road infrastructure is mainly important in the case of Goderdzi Resort, and the transport infrastructure is crucial for the rest of the locations - problems with public transport (inconvenient schedules, old vehicles, missing bus stations).
2) Insufficient development of Communal, Tourist and its supplementary infrastructure and low quality of service were assessed as high risk. Standards-based accommodation and supply of other auxiliary services, hygienic-sanitation conditions, and hospitality management knowledge is crucial for the sustainable development of Rural Tourism.
3) Internal competition and risks caused by natural factors were assessed as moderate risk. Coordination between the state and business sectors and the lack of resources appropriated to address the region's awareness were also included in the moderate-risk group.
4) Conducted research and analysis based on risk matrix confirmed that Rural Tourism and Mountain Tourism in Adjara are developing products and as a result are associated with high risks. Therefore, for the further growth of the Adjara tourism market, it is very important to deal with extreme and high-risk problems that will become a significant barrier to their development in the medium term, on time.

Bibliography

1. Abesadze, T. `*Management and Organization of Tourism Business in private houses in villages `(2019)* Batumi pp. 102-109.
2. Abesadze, N., Qinqladze, R., Chitaladze, Q. *Statistics for Tourism* (2018)., Tbilisi: Manual pp. 317-330.
3. Alliances Lesser Caucasus Programme, *Rural Tourism Market Analysis* (2015)., pp. 6-10.
4. Aziri, B., Nedelea, A., *Business strategies in Tourism, (2013).* ECOFORUM ,Volume 2, Issue 1(2), 2013 p. 6.
5. Beliaevski, I. K., *Marketing Research: Information, Analyse, Forecasting* (2001)., Moscow: Finance and Statistics, pp 274-275.
6. Chaudhary, M., *Tourism Marketing.* (2010)., Oxford University Press, pp 102-103.
7. Chaganava, P. *Risk Management.* (2013)., Tbilisi, pp 70-72.

8. Gabidzshvili, B., *Statistics in Economics, Business and Management, (2011)*., Tbilisi, pp. 656-663.
9. Gelashvili. S., *Statistic Forecasting in Economics and Business*, (2017)., Tbilisi, pp. 237-251
10. Georgian National Tourism Administration. Retrieved: https://gnta.ge/statistics/ Access: 30.03.2020.
11. Kotler, P.H., Bowen J. T., Makens James C. *Marketing for Hospitality and Tourism.* (2010). Boston: Person pp. 64-65.
12. McDonlad M., *Malcolm McDonald on Marketing Planning: Understanding Marketing Plans and Strategy*. (2008). London and Philadelphia: Kogan Page, pp 82-83.
13. Osborne, A. *Risk Management Made Easy* (2012). pp. 30-32.
14. Robitashvili, N., *Tourism Statistics in Georgia, (2018).* International Journal of Innovative Technologies in Economy, 6(18), Vol. 2, July 2018.
15. National Statistics office in Georgia. Retrieved: https://www.geostat.ge/regions/# Access: 30.03.2020.
16. Shaw. G., Saayman, M., Saayman, A., *Identifying Risks Facing the South African Tourism Industry* (2012). SAJEMS NS 15 . No 2 193 p. 193
17. Statistics for Economics and Business. Lecture course. Ivane Javakhishvili Tbilisi State University., (2017). Faculty of economics and social statistics, Tbilisi, pp. 54-57
18. Tourism and Resorts Department of Adjara Autonomous Republic, Market research reports (2015-2017). Retrieved: http://adjara.gov.ge/branches/listpage.aspx?pid=1352&gid=7&ppid=334 Access: 30.03.2020.
19. Tourism and Resorts Department of Adjara Autonomous Republic, *Adjara Tourism Brand Strategy* (2017). pp 3-10.
20. Tourism and Resorts Department of Adjara Autonomous Republic, *Adjara Tourism Development Strategy* (2019-2025) pp 3-4.
21. World tourism Organization. Retrieved: https://www.unwto.org/rural-mountain-tourism Access: 30.03.2020.

Proceedings of the 2020 International Conference "ECONOMIC SCIENCE FOR RURAL DEVELOPMENT" No 54
Jelgava, LLU ESAF, 12-15 May 2020, pp. 43-50
DOI: 10.22616/ESRD.2020.54.005

THE EFFECTIVENESS OF SOCIAL MARKETING IN HIV PREVENTION: A LITERATURE REVIEW

Janis Duboviks[1], MSc; **Matiss Kite**[2], Pharm.
[1,2]University of Latvia, Latvia

Abstract. Nowadays, social marketing is a widely used approach to address public health issues. Social marketing sells behaviour, making the products, which aims to support the changes in audience behaviour, available to a target audience. One of the most important issues in social marketing today is the evaluation of its effectiveness and its ability to prove that social marketing interventions have led to consistent behavioural changes. Social marketing practitioners are increasingly asked to justify their actions with evidence of effectiveness. Social marketing aims to achieve behavioural changes, thus confirmed changes in health behaviour of the target audience can serve as evidence of its effectiveness. Social marketing is also widely used in HIV prevention, including a variety of behavioural changes and communication.

The aim of the paper is to analyse available evidence on the effectiveness of social marketing in health outcomes and improvements in health behaviour change, with particular emphasis on the effectiveness of social marketing and the methods used to evaluate it in the context of HIV prevention. Adapted form of flow of information through the different phases of a systematic review (PRISMA) was used during the selection process of researches included in this review.

Literature review reveals which social marketing approaches are more often used as a tool to limit the spread of HIV, however it should be noted that most of implemented social marketing campaigns use weak approaches to measure the effectiveness of social marketing, such as measuring health behaviour of the target audience only after implementing a social marketing campaign. In only a few of the studies included in the report, the health behaviour of the target audience and the evaluation of health-related habits were conducted before and after the implementation of the social marketing campaign, which provides stronger evidence of the effectiveness of social marketing.

Key words: effectiveness, HIV, social efficiency, social marketing, literature review.
JEL code: M31

Introduction

In recent decades, Human Immunodeficiency Virus/Acquired Immunodeficiency Syndrome *(HIV/AIDS)* has become one of the most important health issues worldwide. According to the World Health Organization *(WHO)*, more than 32 million people have died from it so far. In 2018, 770,000 people died of HIV-related causes worldwide. There is no cure for HIV infection. However, individuals can reduce the risk of HIV infection by limiting exposure to risk factors through key approaches to HIV prevention commonly used in combination, such as male and female condoms, HIV screening and counselling, voluntary medical male circumcision, antiretroviral *(ART)* therapy, and others (World Health Organization, 2019). The experience of the HIV epidemic over the last 20 years shows that there are many ways to prevent HIV. As a result, strategies to control the spread of HIV have been developed and include various forms of behavioural change and communication (Walker D., 2003). A study in Liberia shows that a condom promotion strategy to prevent HIV/Sexually Transmitted Infections *(STIs)* among highly vulnerable urban youth in a post-conflict environment with limited resources, providing both male and female condoms and information through non-traditional trade places, for instance, music and photo shops, money exchange centres and beauty salons are likely to increase condom use among young people (Harris A. O., Jubwe S., Kennedy S. B., Taylor C. H., Martin R. B., Bee E. M., Perry O. S., Massaquoi M. T., Woods D. V., Barbu E. M., 2011). That study

1Janis Duboviks e-mail**:** Janis Duboviks janis.duboviks@gmail.com
2Matiss Kite e-mail: Matiss Kite e-mail: matiss.kite@gmail.com

demonstrates that traditional marketing approaches and tools are capable of promoting condom use, which is one of the key approaches of the World Health Organization to control the spread of HIV.

In academic literature, the approach that applies traditional marketing principles and techniques to create, communicate and deliver value with the aim of influencing target audience behaviours that benefit society (public health, safety, environment, and communities) as well as target audience is defined as social marketing (Kotler Ph., Lee N. R., 2008). Thus, it can be argued that social marketing aims to benefit society as a whole, or any part thereof, through the behaviour change. Social marketing eases the acceptance, rejection, modification, abandonment or maintenance of certain behaviours (Grier G., Bryant C. A., 2005). This suggests that social marketing selling behaviour, making the products, which aims to support the changes in audience behaviour, available to a target audience.

Nowadays, social marketing is a widely used approach to addressing public health issues including tobacco use, obesity, teenage pregnancy, HIV/AIDS and high cholesterol (Cheng H., Kotler Ph., Lee N., 2011). However, despite the widespread use of social marketing world increasingly rise many questions of its effectiveness. For instance, Andreasen argues that awareness raising on an issue among target audience does not always provide convincing evidence that the goals of social marketing interventions have been achieved, but it may support the end goal of social marketing (Andreasen A. R., 2002). It seems that in today's economic rationalism the issue of evidence of effectiveness has become more relevant. Therefore, one of the most important issues in social marketing today is the evaluation of its effectiveness and its ability to prove that social marketing interventions have led to consistent behavioural changes. It means, that social marketing practitioners need to identify relevant determinants of health, choose activities to promote health, and then evaluate the effectiveness of these chosen activities (Raphael D., 2000). As it follows from the definition of social marketing, it aims to achieve behavioural changes, thus it can be concluded that confirmed changes in health behaviour of the target audience can serve as evidence of its effectiveness (Firestone R., Rowe C. J., Modi Sh. N., Sievers D., 2017). While the ability of social marketing practitioners to identify relevant health determinants and to choose appropriate health promotion activities is not currently disputed, there is still debate about the evidence of the effectiveness of social marketing.

The aim of the paper is to analyse available evidence on the effectiveness of social marketing in health outcomes and improvements in health behaviour change, with particular emphasis on the effectiveness of social marketing and the methods used to evaluate it in the context of HIV prevention. In order to reach the aim of the study, the following tasks were indicated: 1) identify and review previously done systematic reviews that touch on the effectiveness of social marketing for global health; 2) set and use appropriate methodology in research selection process and data collection and summarizing; 3) select and analyse available scientifically based evidence on the effectiveness of social marketing in health outcomes and improvements in health behaviour change in the context of HIV prevention; 4) analyse and interpret gained data in order to identify methods and indicators used to evaluate social marketing efficacy in the context of HIV prevention; 5) summarize the results of the research to draw conclusions. The object of the study is available evidence on the effectiveness of social marketing in health outcomes and improvements in health behaviour change in the context of HIV prevention, and the subject of the study is the methods and indicators used to evaluate the effectiveness of social marketing in the context of HIV prevention. Qualitative and quantitative content analysis were used, also the adopted form of flow of information

through the different phases of a systematic review (PRISMA) (Moher D., Liberati A., Tetzlaff J., Altman D. G., 2009) was applied during paper selection.

Given the growing role of social marketing in global health in recent decades, researchers have previously conducted studies to determine and reflect its effectiveness, based on evaluations of past social marketing campaigns.

Existing reviews on the effectiveness of social marketing

A systematic review of the literature is one of the most popular methods in social research to identify available research evidence on a particular subject. The goal is transparent and rigorous review of the evidence available to improve the opinion of the validity and reliability of the findings (Truong V. D., Dang Vu N. V. H., 2016). Several systematic reviews on the effectiveness of social marketing in global health were identified, covering topics such as HIV prevention, drug use and child morality. Some researchers who have previously conducted a literature review on the effectiveness of social marketing indicate that one of the most important challenges of systematic literature reviews is defining social marketing interventions, because there is a risk that social marketing is misclassified as health promotion or social and behaviour change communications (Firestone R., Rowe C. J., Modi Sh. N., Sievers D., 2017; Sewak A., Singh G., 2017; Sipe T. A., Barham T. L., Johnson W., Joseph H., Tungol-Ashmon M. L., O'Leary A., 2017; Truong V. D., Dang Vu N. V. H., 2016). For example, some practitioners define social marketing as the use of strategic marketing to promote social change (Robinson M. N., Tansil K.A., Elder R. W., Soler R. E., Labre M. P., Mercer S. L., Eroglu D., Baur C., Lyon-Daniel K., Fridinger F., Sokler L. A., Green L. W., Miller T., Dearing J., Evans W. D., Snyder L. B., Viswanath K. K., Beistle D. M., Chervin D. D., Bernhardt J. M., Rimer B. K., 2014), some, instead if social marketing definition, use definition such as mass communication campaigns focused on sexual behaviour, HIV testing or both (Noar S. M., Palmgreen Ph., Chabot M., Dobransky N., Zimmerman R. S., 2009). As well in previously done reviews can be found definitions such as health promotion intervention, in particular behaviour change communication strategies, which utilize different communication channels to promote positive health behaviours at individual and community levels (Juma K., Reid M., Roy M., Vorkoper S., Temu T. M., Levitt N. S., Oladepo O., Zakus D., Yonga G., 2018) or condom social marketing (Sweat M. D., Denison J., Kennedy C., Tedrow V., O'Reilly K., 2012). Before conducting a systematic review of the literature, it is important to define the exact criteria by which the papers will be selected. However, in some previous studies, practitioners did not define social marketing at all or did not define health promotion or social and behavioral change as inclusion criteria in the review (Luca N. R., Suggs L. S., 2010; Stromdahl S., Hickson F., Pharris A., Sabido M., Baral S., Thorson A., 2015; Werb D., Buxton J., Shoveller J., Richardson C., Rowell G., Wood E., 2013; McDaid L., Riddell J., Teal G. Boydell N., Coia N., Flowers P., 2019). In a situation where researchers are differently interpreting and defining social marketing and its tasks, it is difficult to track the evidence of its effectiveness, but this is of major interest to the global health community today (Firestone R., Rowe C. J., Modi Sh. N., Sievers D., 2017). Thereby, when conducting a literature review, it is important to clearly and unambiguously define not only paper inclusion criteria but also social marketing, thus ensuring that evidence of its effectiveness is available to global health community and other interested parties.

Likewise, the previous literature reviews on the effectiveness of social marketing do not fully reflect the measurement methods and factors used, making it difficult to determine a complete set

of methods and factors for assessing the effectiveness of social marketing and providing reliable evidence of its effectiveness.

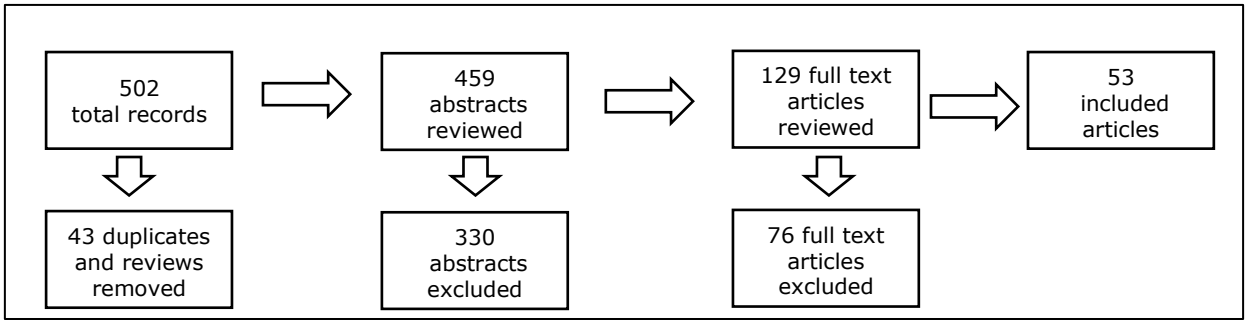
Methodology

Social marketing campaigns was defined as campaigns using traditional marketing principles and techniques to influence target audience behaviours to improve public's health and change its health behaviour. Studies were included if: (1) behaviour-change is the benchmark used to design and evaluate interventions; (2) intervention focuses on the audience, fully understands their lives, behaviour and the issue using a mix of data sources and research methods; (3) the central element of any influence strategy is creating attractive and motivational exchanges with target audiences; (4) careful attention is paid to the competition faced by the desired behaviour; (5) studies were original research and included original data, evaluation method(s) were reported; (6) published in English; (7) assessed a campaign that attempted to change a behavioural factor, health outcome or behaviour within area of HIV prevention. All editorial or review studies were excluded. Also economic evaluations were excluded, except those studies were was possible to identify behaviour factor, behaviour or health outcome results.

Authors searched for studies published from 1983 to 2018 that evaluated the effectiveness of social marketing programmes in the HIV area using the bibliographic database Scopus. The search period of published articles was based on the fact that the first clinical evidence of AIDS was reported in June 1981 and its cause, HIV, was identified in 1983 (United Nations, 2019). Titles, abstracts and keywords were searched for the following terms: ("social marketing" OR "social marketing theory" OR "social franchise" OR "social franchises" OR "social franchising") AND ("HIV" OR "HIV prevention" OR "AIDS"). After duplicates were removed, authors reviewed titles and abstracts if they met eligibility criteria. The selection process and data extraction were compared between two authors and, if there was concern about article inclusion, the abstract was reviewed repeatedly, and inconsistencies were addressed through discussion. Full texts of studies were reviewed by both authors, and all inconsistencies also were addressed through discussion.

Research results and discussion

The initial search identified 502 records using the described search terms. Of those, 43 duplicates and reviews were removed. Then authors reviewed 459 articles at the abstract level. In result, 330 studies were excluded based on the above inclusion criteria. Full text review resulted with another 76 articles elimination, yielding 53 eligible studies for inclusion in analysis. The selection process is described in Figure 1 using adapted form of flow of information through the different phases of a systematic review.



Source: author's construction based on data collection results (June, 2019)

Fig. 1. **Flow diagram**

Data in Table 1 represent that the greatest number of studies focused on HIV testing and condom use promotion, followed by educational communications, ART promotion, reduce of needle sharing and mix campaign focused on both reduce of needle sharing and condom use promotion. This distribution of marketing campaign focus data shows that most of the campaigns implemented comply with WHO' s HIV prevention recommendations.

Table 1

Included studies by campaign focus

No	Campaign focus	Number	%
1.	HIV testing	19	35.85 %
2.	Condom use	19	35.85 %
3.	Educational communication	12	22.63 %
4.	ART promotion	1	1.89 %
5.	Reduce of needle sharing	1	1.89 %
6.	Reduce of needle sharing/ condom use	1	1.89 %
	Total:	53	100 %

Source: author's construction based on data collection results (June, 2019)

In 41 of the papers included in this review, researchers evaluated the effectiveness of social marketing based on data of changes in health outcomes or health behaviour of the campaign's target audience gathered after social marketing intervention implementation only. In turn, 12 studies evaluated the effectiveness of a social marketing intervention based on the data of health outcomes and health behaviour of the target audience obtained pre- and post the intervention. In Table 2 is summarized data on included studies by social marketing campaign focus and applied method of social marketing effectiveness evaluation.

Table 2

Included studies by applied method of social marketing effectiveness evaluation

No	Campaign focus	Comparative statistics	Survey	Comparative statistics/ focus group interview	Interview
1.	HIV testing	13	4	0	2
2.	Condom use	7	12	0	0
3.	Educational communication	5	6	1	1
4.	ART promotion	1	0	0	0
5.	Reduce of needle sharing	1	0	0	0
6.	Reduce of needle sharing/ condom use	1	0	0	0
	Total:	28	22	1	3

Source: author's construction based on data collection results (June, 2019)

As Table 2 reflects, the most commonly used methods are comparative statistics and survey. But qualitative research methods such as focus group interviews and in-depth interviews were used in only 4 of the studies included in this review. Indicators such as the number of performed HIV tests comparing to a similar period before the intervention were evaluated using comparative statistical methods, when the evaluation of the effectiveness of intervention was performed only after intervention implementation. Studies that collected data on the health behaviour of the target

audience before and after the intervention compared the number of HIV tests performed in the target audience, rather than general statistics.

In evaluation of the effectiveness of intervention focused on condom use promotion comparative statistics was also used. But it should be noted, that given the sensitivity of the topic and the near impossibility of the researcher's ability to check the use of condom in order to determine whether health behavioural changes have occurred, in this case the assessment of effectiveness of intervention was done by comparing the sales of condoms before and after the intervention, or comparing of the rise/fall of condom purchases within the relevant target audience. In papers included in this review such indicators as unique page views/visits, ad audience reach rates, etc. within the target audience before or after the intervention were used to evaluate its effectiveness. Popularisation of ART among already infected patients included measures of an increase in the number of patients who started ART or resumed ART after a long interruption. To evaluate the effectiveness of the marketing intervention focused on the syringe exchange campaigns, data on new dispensed syringes as well as the decrease/increase in newly discovered HIV cases among intravenous drug users who were the target audience of this intervention were used.

The second most popular method of evaluating the effectiveness of social marketing intervention is to survey the audience after pre and post intervention implementation. Depending on focus of an intervention the questions asked were: how often the respondents did HIV test; how often they used condom, whether they reduced the number of sexual partners, what their knowledge about HIV was at that moment etc. Authors believe, the survey is a good method for measuring a social marketing intervention that focuses on raising awareness, as the survey can show quite accurately how current knowledge on HIV issues has changed. Moreover, to see a clear trend in knowledge change is an imperative to conduct a pre and post campaign survey. However, the survey is not able to fully reflect the behavioural changes of the target audience, as respondents are often more inclined to report better results than they really are. For example, in authors' opinion, the survey as evaluation tool of effectiveness of intervention focused on HIV testing and condom use promotion does not fully reflect the reality, but rather indicates respondents' intention to act "right" in order to protect themselves from HIV infection.

Analysing in this review included researches, it should be emphasized that better results in health outcomes and behavioural changes of the target audience were reported in campaigns that provided access to behavioural products alongside educational communication (e.g. condom provision, specified places where it was possible to take free HIV test, immediate availability of syringes etc.), thus providing a better exposition of behavioural product for target audience.

Any marketing campaign must have a well-defined target audience in order to measure its effectiveness, otherwise it is difficult to evaluate its effectiveness, otherwise, it rises doubts that the campaign's creators have been aware of its needs and current situation, including cultural, social, demographic and other factors.

When evaluating the effectiveness of a social marketing campaign, it is important to understand its long-term rather than short-term, impact on the health outcome and health behaviour of the target audience, which is the most important purpose and role of social marketing. Evaluating the effectiveness of a marketing campaign immediately after its implementation weakens the evidence of the effectiveness of social marketing as a tool which is able to improve public health and change health behaviour, because inconsistent changes in the health outcomes or health behaviour of the target audience in the direction that campaign's creators want to achieve are not scientifically proven.

Based on the results of the review, it could be concluded that in order to create effective social marketing intervention, it is necessary to carefully explore the target audience with a full understanding of their lifestyle, needs and other factors affecting their lives and knowledge. In order to increase the effectiveness of social marketing intervention, it is necessary to evaluate the possibility of providing the best exposition of behavioural products to target audience. To determine the real effectiveness of social marketing interventions, several factors need to be taken into account, and increased attention needs to be paid to assessing the long-term effectiveness of a social marketing intervention, as in the literature there is not much evidence available for it.

Limitations

This review has several limitations. Only studies in which the evaluation of effectiveness of social marketing interventions could be identified were included in this review. In addition, given the variety of variations in the definition of social marketing in academic literature, there is possibility that authors unintentionally included in the review a study that is essentially an evaluation of a health promotion campaign rather than an evaluation of an implemented social marketing intervention. Likewise, there is another possibility that social marketing intervention has been misclassified due to the minimal availability of information in published articles.

Conclusions, proposals, recommendations

1) Social marketing is widely used in the prevention of the spread of HIV by application of traditional marketing tools and approaches for its implementation including a variety of health behaviour changes and forms of communication.
2) Most social marketing campaigns focus on reducing the impact of health risk factors determined by World Health Organization.
3) Providing a product that can potentially influence changes in health behaviour of target audience during the campaign available to particular audience increases campaign's effectiveness and promotes behaviour change more effectively comparing to interventions when product is not available to target audience.
4) Most popular methods of evaluation of effectiveness of social marketing campaigns devoted to HIV prevention are comparative statistics and target audience survey.
5) Majority of social campaigns included in the review run poor approaches to measuring the effectiveness of social marketing interventions, such as measuring changes in health outcomes and health behaviours of the target audience only after its implementation, which weakens the evidence of its effectiveness, and ignore various factors such as product availability to target audience, cultural factors, and target audience knowledge on the issue.
6) Measuring the effectiveness of a campaign immediately after its implementation weakens evidence of its effectiveness because it does not demonstrate consistent long-term changes in health-related habits, which is the main purpose of social marketing.
7) Using the audience survey as a method to measure the effectiveness of the campaign can weaken the evidence of its effectiveness because respondents are not always willing to indicate the true action, but only the intention. However, that given the sensitivity of the topic, such as changes in condom use or sexual lifestyle, it should be acknowledged that survey remains almost the only method of evaluation.

8) Campaign's creators are recommended to take into account that in order to create an effective social marketing intervention, it is necessary to carefully explore the target audience and provide the best possible exposition of behavioural products to target audience during the campaign.
9) In the future, the increased attention needs to be paid to evaluation of the effectiveness of social marketing intervention in a long-term as there is a lack of evidence for it in literature.

Bibliography

1. Andreasen, A. R. (2002). Marketing Social Marketing in the Social Change Marketplace. *Journal of Public Policy and Marketing*, Volume 21, Issue 1, pp. 3 – 13.
2. Cheng, H., Kotler, Ph., Lee, N. (2011). *Social Marketing for Public Health: Global Trends and Success Stories*. Sudbury, Mass.: Jones and Bartlett, p. xxv, 442.
3. Firestone, R., Rowe, C. J., Modi, Sh. N., Sievers, D. (2017). The Effectiveness of Social Marketing in Global Health: A Systematic Review. *Health Policy and Planning*, no 32, pp. 110 – 124.
4. Grier, G., Bryant, C. A. (2005). Social Marketing in Public Health. *Public Health,* no 39, pp. 319 – 339.
5. Harris, A. O., Jubwe, S., Kennedy, S. B., Taylor, C. H., Martin, R. B., Bee, E. M., Perry, O. S., Massaquoi, M. T., Woods, D.V., Barbu, E. M. (2011). Condom Social Marketing Program to Prevent HIV/AIDS in Post-Conflict Liberia. *African Health Sciences,* no 11, pp. S77 – S81.
6. Juma, K., Reid, M., Roy, M., Vorkoper, S., Temu, T. M., Levitt, N. S., Oladepo, O., Zakus, D., Yonga, G. (2018). From HIV Prevention to Non-Communicable Disease Health Promotion Efforts in Sub-Saharan Africa. *AIDS, no* 32, pp. S63 – S73.
7. Kotler, Ph., Lee, N. R. (2008). *Social Marketing: Influencing Behaviors for Good (3rd ed.)*. Los Angeles; London; New Delhi; Singapore: Sage Publications, p. xii, 444.
8. Luca, N. R., Suggs, L. S. (2010). Strategies for the Social Marketing Mix: A Systematic Review. *Social Marketing Quarterly*, Volume 16, Issue, 4, pp. 122 – 149.
9. McDaid, L., Riddell, J., Teal, G. Boydell, N., Coia, N., Flowers, P. (2019). The Effectiveness of Social Marketing Interventions to Improve HIV Testing Among Gay, Bisexual and Other Men Who Have Sex with Men: A Systematic Review. *AIDS Behaviour,* Volume 23, Issue 9, pp. 2273 – 2303.
10. Moher, D., Liberati, A., Tetzlaff, J., Altman, D. G. (2009). Preferred Reporting Items for Systematic Reviews and Meta-Analyses: The PRISMA Statement. *BMJ – British Medical Journal*, no 339, pp. 332 – 336.
11. Noar, S. M., Palmgreen, Ph., Chabot, M., Dobransky, N., Zimmerman, R. S. (2009). A 10-Year Systematic Review of HIV/AIDS Mass Communication Campaigns: Have We Made Progress? *Journal of Health Communication,* no 14, pp. 15 – 42.
12. Raphael, D. (2000). The Question of Evidence in Health Promotion. *Health Promotion International*, Volume 15, Issue 4, pp. 355 – 367.
13. Robinson, M. N., Tansil, K.A., Elder, R. W., Soler, R. E., Labre, M. P., Mercer, S. L., Eroglu, D., Baur, C., Lyon-Daniel, K., Fridinger, F., Sokler, L. A., Green, L. W., Miller, T., Dearing, J., Evans, W. D., Snyder, L. B., Viswanath, K. K., Beistle, D. M., Chervin, D. D., Bernhardt, J. M., Rimer, B. K. (2014). Mass Media Health Communication Campaigns Combined with Health-Related Product Distribution: A Community Guide Systematic Review. *American Journal of Preventive Medicine,* Volume 47, Isuue 3, pp. 360 – 371.
14. Sewak, A., Singh, G. (2017). Integrating Social Marketing into Fijian HIV/AIDS Prevention Programs: Lessons from Systematic Review. *Health Communications,* Volume 32, Issue 1, pp. 32 – 40.
15. Sipe, T. A., Barham, T. L., Johnson, W., Joseph, H., Tungol-Ashmon, M. L., O'Leary, A. (2017). Structural Interventions in HIV Prevention: A Taxonomy and Descriptive Systematic Review. *AIDS Behaviour,* Volume 21, Issue 12, pp. 3366 – 3430.
16. Stromdahl, S., Hickson, F., Pharris, A., Sabido, M., Baral, S., Thorson, A. (2015). *A Systematic Review of Evidence to Inform HIV Prevention Interventions among Men Who Have Sexith Men in Europe.* Euro Surveill 20 (15). Retrieved: http://www.eurosurveillance.org/ViewArticle.aspx?ArticleId=21096 Access: 27.08.2019.
17. Sweat, M. D., Denison, J., Kennedy, C., Tedrow, V., O'Reilly, K. (2012). Effects of Condom Social Marketing on Condom Use in Developing Countries: A Systematic Review and Meta-Analysis, 1990–2010. *Bull World Health Organization*, Volume 90, Issue 8, pp. 613 – 622A.
18. Truong, V. D., Dang Vu, N. V. H. (2016). Reviewing Research Evidence for Social Marketing: Systematic Literature Reviews in: Kubacki, K., Rundle-Thiele, S. (2016). *Formative Research in Social Marketing,* pp. 183 – 250.
19. *United Nations. AIDS.* (2019). Retrieved: http://www.un.org/en/sections/issues-depth/aids/index.html. Access: 29.03.2019.
20. Walker, D. (2003). Cost and Cost-Effectiveness of HIV/AIDS Prevention Strategies in Developing Countries: Is There an Evidence Base? *Health Policy and Planning*, Volume 18, Issue 1, pp. 4 – 17.
21. Werb, D., Buxton, J., Shoveller, J., Richardson, C., Rowell, G., Wood, E. (2013). Interventions to Prevent the Initiation of Injection Drug Use: A Systematic Review. *Drug and Alcohol Dependence*, no 133, pp. 669 – 676.
22. *World Health Organization. HIV/AIDS: Key Facts.* (2019). Retrieved: https://www.who.int/news-room/fact-sheets/detail/hiv-aids Access: 26.08.2019.

Proceedings of the 2020 International Conference "ECONOMIC SCIENCE FOR RURAL DEVELOPMENT" No 54
Jelgava, LLU ESAF, 12-15 May 2020, pp. 51-58
DOI: 10.22616/ESRD.2020.54.006

MARKET POSITION OF NON-TRADITIONAL AGRICULTURAL PRODUCTS

Liga Proskina[1], Dr.oec.; **Irina Pilvere**[2], Dr.oec.
[1,2]Latvia University of Life Sciences and Technologies

Abstract. The liberalization of food trade leads to intensified competition at the regional and transnational levels. Consequently, the current economic and cultural processes indicate that a gradual shift from mass trade in commodities to trade in a large number of niche products occurs. Product differentiation or a strategy for different factors is considered to be the most proper approach to assessing the ways of business strategy positioning for deer farming. In this respect, the real differences among deer-farming products (higher quality, a different appearance, a pronounced taste, smell etc.) and the apparent differences, achieved by pricing and visual differences (packaging), that could be used to differentiate the deer products should be noted. **The research aim** is to identify the strategic advantages of deer product positioning and the most proper competition strategy. The most proper competition strategy for deer farming to reach the target market is a differentiation strategy focusing on the niche market. Niche specialization focuses on a product attribute strategy and emphasizes the difference between deer-farming products and traditional agricultural products, product exclusivity as well as the positive effect of venison consumption on human health.

Key words: deer farming, non-traditional agricultural, meat market.
JEL code: Q22

Introduction

As information exchange opportunities and educational attainment increase and owing to other socio-economic conditions, consumers become more knowledgeable, leading to the emergence of certain consumer interest groups, which largely affect their requirements concerning goods and services. The mentioned factors increase consumers' interest in products with unique, different, functional and other specific characteristics and decrease their interest in homogeneous mass products. The mentioned market trends also apply to the market of food of animal origin, where high-quality products instead of low-cost mass products come to the fore and, for example, environmental protection requirements, organic farming criteria etc. have been met in the production of food.

The liberalization of food trade leads to intensified competition at the regional and transnational levels. The concept of competition is usually understood as a strategic model that allows any enterprise to rank the most relevant players in the industry. Foreign scientists have extensively researched competitive advantages, emphasizing the role of a niche strategy and a specialization in high-quality service and high-quality products (specific product features) for small, narrowly specialized enterprises, which is the most proper competition strategy for marketing also non-traditional agricultural products.

In recent years in Latvia, focus has been put on the development of non-traditional agricultural enterprises, which ensures the diversification of agricultural products and promote the production of specific products with high added value. However, non-traditional agricultural enterprises need to be viable, as the positive effect of the enterprises on the socio-economic situation of a specific region could be observed only in a long term (Barkley and Wilson, 1993; Dannenberg and Kulke, 2015). Accordingly, the selection of a proper market strategy, which can ensure a regular and growing market for the products and consequently the long-term operation of the enterprise, is of particular importance.

In Latvia, deer farming as a non-traditional agricultural industry began developing in the 1990s. Venison contains optimal levels of cholesterol, amino acids, fatty acids and micronutrients for human

[1] Liga Proskina **Tel**.:+371 28206624,e-mail: Liga.Proskina@llu.lv

health (Daszkiewicz and Mesinger, 2018; Polawska et al., 2013; Shao et al., 2018). Besides, venison has specific, distinct taste characteristics (Hoffman and Wiklund, 2006; Hutchison et al., 2010), which means the quality of venison is a potentially important competitive factor in the development of deer farming and gives an opportunity to position the venison in the market as a healthy, safe and high quality product for consumer health.

Accordingly, the research aim is to identify the strategic advantages of deer product positioning and the most proper competition strategy. The following specific research tasks are set: 1) to examine the extent of difference of deer-farming products from similar products available in the market; 2) to identify and assess the most proper competition strategy for deer-farming products.

The research employed the following methods: monographic, analysis and synthesis as well as induction and deduction. To examine theoretical matters concerning the economic role of competitiveness of deer-farming products, the research used research papers by national and foreign scientists and researchers.

Research results and discussion

Under economic globalization, one of the factors contributing to the competitiveness of livestock products is the high quality of the products. Quality is important when it comes to discussing the competitiveness of a product, a service, an industry and the economy as a whole. In this respect, competitiveness is perceived as both a process and a result, and methods for researching it are selected accordingly. Competitiveness is most commonly researched with regard to how the overall position in the market could be identified as well as the process between an investment and a return could be analysed; in addition, it is researched as process performance or a structural component (Paula and Titarenko, 2009). Economic scientist Karnite R. (2008) stresses that competitiveness has to be viewed from the static and dynamic perspectives (Karnite, 2008). According to the static perspective, productivity contributes to high incomes in the economy and to high returns on investments, whereas according to the dynamic perspective, high productivity and returns on investments determine the growth and development of the economy in the future. Scientific research studies on competitiveness and opportunities to increase it indicate various ways how to achieve it: price competitiveness, service competitiveness, quality competitiveness etc. (Dumont et al., 2016).

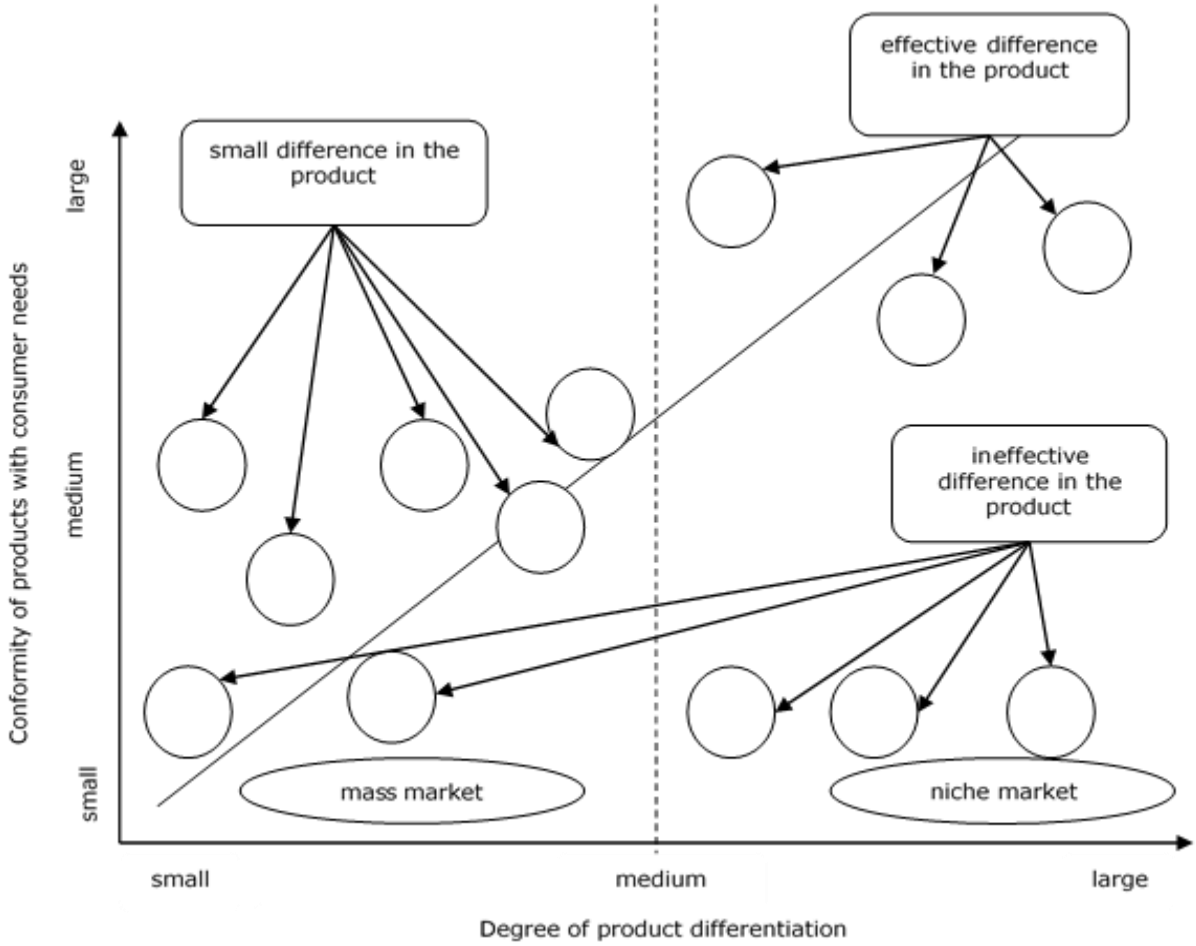
There are several ways how to develop competitive advantages in most of the industries. This applies in particular to a segmented market: in such a market, product or service and communication differences could exist not only at the level of the market as a whole but also at the level of individual customer categories. Deer farming enterprises have to compete with traditional agricultural producers and service providers in a dynamic market. Accordingly, it is necessary to set key priorities in a deer farming development strategy in order to protect deer farming from competitive forces or to use the forces to its advantage.

Business strategy positioning allows choosing from among either a low cost strategy, a product differentiation (diverse factor) strategy or a focusing strategy (Porter, 1998). Enterprises could use a low cost strategy by introducing a new technology that lowers production unit cost. Such a strategy could be applied in the fields of production, marketing, finance or management; however, in the author's opinion, it is not suitable for a strategy for the deer-farming product market because the production capacity of deer farming enterprises and, consequently, their output are constrained, which limits the potential for cost reductions. Product differentiation means making products distinct from similar ones, i.e. creating an effective difference in the product that meets consumer needs to a high extent (Fig. 1). It should be emphasized in this respect that the consumer has to be able to

clearly perceive product distinctions and understand an effective difference in the product that meets the consumer's needs to a high extent. If a product or service is not distinct from similar products, the consumer has little reason to choose it from among the competing ones.

Product differentiation ensures competitor rivalry is eliminated owing to consumer confidence in the brand, which also manifests itself in lower sensitivity to price differences. In this respect, the real differences among deer-farming products (higher quality, a different appearance, a pronounced taste, smell etc.) and the apparent differences, achieved by pricing and visual differences (packaging), that could be used to differentiate the deer products have to be noted. Higher quality allows marketing a particular product or service at a higher price without losing market share. The phenomenon of placing goods of different quality on the market is called vertical product differentiation.

Applying the differentiation strategy in deer farming, it is necessary to emphasize the difference between deer-farming products and traditional agricultural products, product exclusivity and the positive effect of venison consumption on human health.



Source: author's construction based on Porter, 1998

Fig. 1. **Degree of differentiation of products and their conformity with consumer needs**

When focusing on a narrow market segment, dear farming enterprises could apply the focusing strategy while considering that they are able to serve the narrow target market more effectively than competitors operating on a broader scale.

The author believes that with deer farming developing in the future, a focusing strategy applied to a narrow target market could partly limit the overall expansion of the market, yet the strategy cannot be excluded if specializing in narrow specific market segments, e.g. restaurants. In the

opinion of the author, differentiation is the most proper strategy. There are three commonly used approaches to product or service differentiation: 1) unique features of the product; 2) unique features of the enterprise and resources used, which allows offering specific and different products; 3) customer satisfaction level.

Each of the three approaches contains a number of options for defining product or service distinctions. The purpose of choosing a differentiation strategy is to emphasize the uniqueness of the product or service. Differences in a product or service are defined as unique features that are perceived by the buyer as an advantage over the competing products and services.

Two main approaches to making an effective difference from the competing products are offered by Kuhn K.U. (Kuhn, 1997): specific features of the product or service, e.g. the quality of the product or service etc. and communication messages, e.g. advertisements, sales, sponsorship etc. The most essential feature is the quality of the product or service, which contains a number of various potential features, each of which, individually or in combination, could serve as the basis for the market strategy and supply.

The nutritional value, wholesomeness, safety, etc. should be mentioned as the most important properties of food products. Non-traditional agricultural production, incl. deer-farming products and services, are valued by potential buyers for quality, price, sales channels and product promotion approaches. One of the most important sales channels for non-traditional agricultural products is direct selling (Kuzman and Prdic, 2018; Szelag-Sikora et al., 2019), while cooperation among manufacturers, retailers and other market players in various fields, including marketing activities, is desirable for promoting the products. The current economic and cultural processes indicate that a gradual shift from mass trade in commodities to trade in a large number of niche products occurs (Anderson, 2008; Godin, 2008). As various non-traditional agricultural industries develop in Latvia, changes also occur in the agricultural market; therefore, the author considers it useful to assess the market position of deer-farming products.

Potential producers of non-traditional agricultural products should assess their potential for entry into the industry from a competition perspective. Barriers to entry into non-traditional agricultural industries could be linked to economic factors. Barkley R. and Wilson C. (1995) point out that barriers to entry into a non-traditional industry could be due to a lack of resources (Barkley and Wilson, 1995) . The barriers to entry into the market, indicated by Barkley R. and Wilson C. (1995), pertain to the limited possibility of product differentiation and limited access to marketing channels and the time needed to learn technologies and production practices in a new industry.

Barriers to entry into deer farming for new entrants or producers are relatively high and linked to limited access to resources. The area of land owned or rented and start-up capital are essential for ensuring an adequate scale and success for this kind of business. However, the underdeveloped market for deer-farming products makes it difficult to process the deer and access sales channels.

Competition among market players for gaining or maintaining their market share might be intense, requiring designing a competition strategy. In deer farming, given the small volume of production, the competition strategy should be, first of all, determined at industry level. Kotler F. et al. (2008) distinguishes four types of competition strategies, depending on how much market share the enterprise has, and points out that the market could be entered at several levels – segment, niche, local and individual – as well as distinguishes several specializations or niche player roles the enterprise could apply in a niche market, emphasizing that market segments represent large

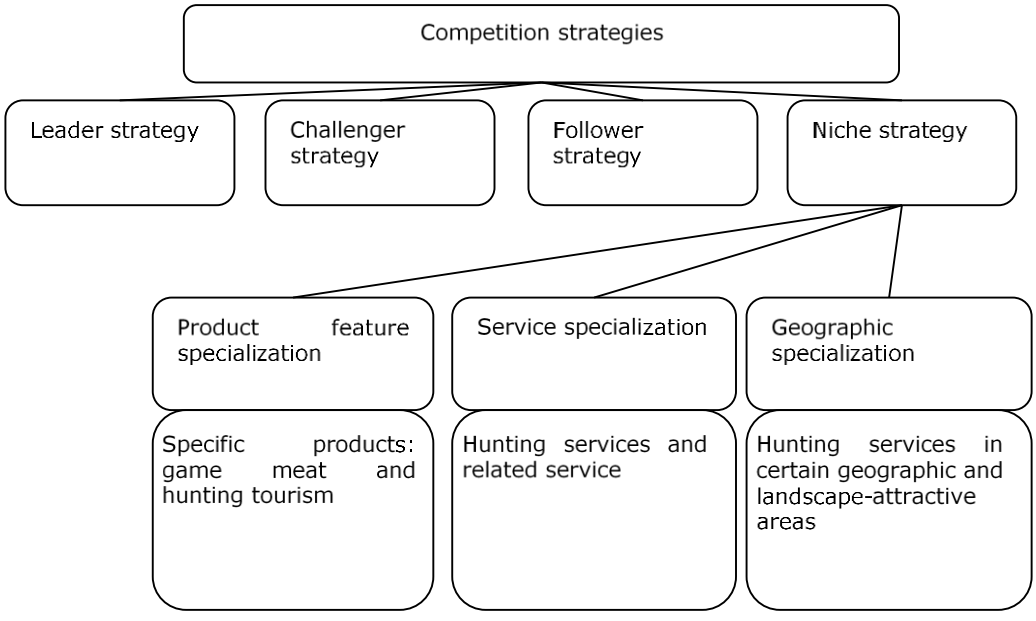
identifiable groups of customers in the market, while a niche is defined as a narrow segment (Kotler and Armstrong, 2008).

Conner D. S. (2004) defines non-traditional agricultural enterprises as niche market players, pointing out that the enterprises are small or medium-sized farms that produce diverse, heterogeneous products and which, because of their small market size and production characteristics, could be included in the niche product category (Conner, 2004). The target market for non-traditional agricultural products is a specific and concentrated segment of the market that differs by location, income class, age or buying habits. If finding such a niche market, the enterprise could make good use of it (Porter, 1998). In the opinion of the author, a niche strategy is the most proper strategy for deer farming to reach the target market.

The author has identified several characteristics indicating that the market for deer-farming products is a niche market:

- small, usually narrowly specialized enterprises operate in the market;
- deer-farming products are different from traditional meat products; tourism services, including hunting and wildlife viewing, are different as well;
- specific sales channels are used for sales, and a small amount of production is sold;
- enterprises specializing in specific, narrow market segments – niches (restaurants, farm visitors etc.);
- certain consumer requirements for quality, exclusivity etc. of the product or service are met;
- focus is placed on high profit margins.

The author believes that deer farming enterprises serve narrow market segments or niches, based on the offers of a special kind of products and services in the market (product differentiation), choosing no more than 2-3 niche specializations (Fig. 2).



Source: author's construction based on Kotler et al., 2008; Conner, 2004; Porter,1998

Fig. 2. **Competition strategies for deer farming in Latvia**

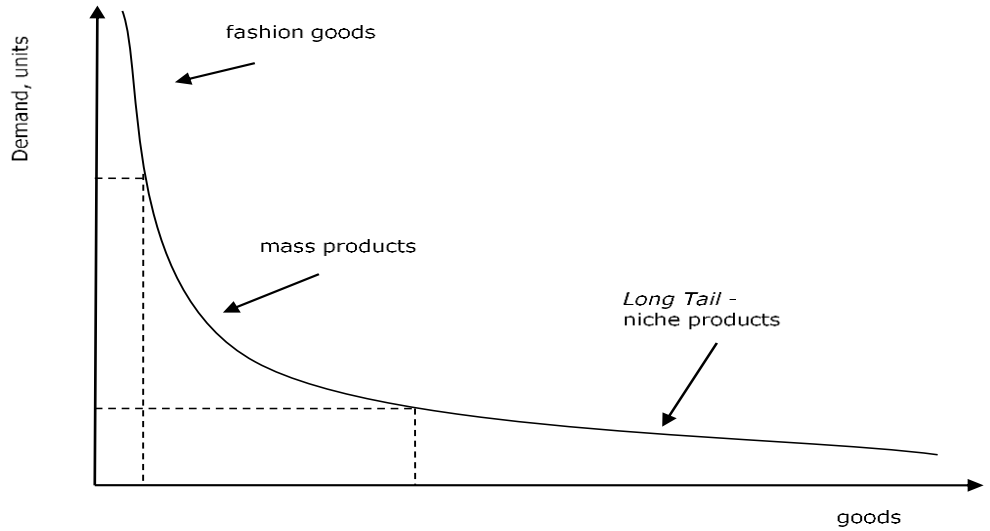
The product feature specialization of a niche strategy focusing on producing high quality products is the most important one. In the field of services, the strategy focuses on raising trophy animals for hunting tourism.

The principle defined by Italian scientist Vilfredo Pareto (1971) states that 20 % of the assortment or mass production of goods on the market accounts for 80 % of the revenue; therefore, a logical

question is whether it is appropriate to sell the remaining 80 % of the total product assortment. Niche products, according to the Pareto principle, make up most of the total assortment of goods (75-80 %) and generate minimal revenue (20 %), compared with mass products. In the author's opinion, this principle could be fully applied to the meat market in Latvia, where the majority of the market turnover is made up of traditional types of meat; however, changes in consumer buying habits indicate market growth opportunities for the non-traditional types of meat.

As socio-economic and technological factors change, niche products are gaining market importance (Anderson, 2008), and selling products requires seeking new and narrow market segments – niches. Niche products make up the so-called "Long Tail" in the total assortment (Fig. 3), which, as a result of change in demand, shifts towards mass products or fashion goods. The term Long Tail was created by Anderson C. in 2004. He employed the "Long Tail" to describe an online shopping business model used by, for example, Amazon.com, NetFlix etc. These companies supply a great variety of goods being able to meet a wide variety of requests, yet they sell a small number of items of each good.

The Long Tail theory defines that a wide range of assortment within a category of similar products creates a wide range of niche products, resulting in a higher share of revenue from sales of individual niche products than from mass products.

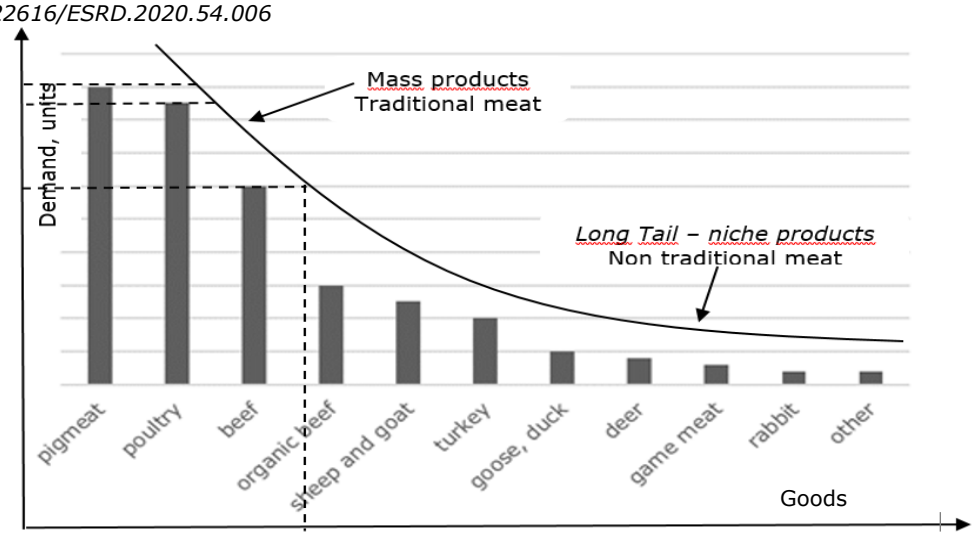


Source: author's construction based on Anderson, 2008

Fig. 3. **Long Tail theory applied to the goods market**

The author believes that the Long Tail theory is applicable to define the position of deer-farming products in the meat market. In the meat market, traditional types of meat – pork, poultry and partly beef – constitute a mass market, while a niche market is characterized by a variety of less accessible and less known types of meat, incl. venison (Fig. 4), the sales of which need to be intensified, thereby increasing the proportion of revenue from it.

Niche market players focus on a narrow segment of potential consumers with specific requirements – the niche. The basic principles of a niche market state that developing a niche market requires research studies on consumer motivation, behaviour etc. As pointed out by Anderson C. (2008), the growth of sales of niche products is largely affected by the possibility of distance sales and an opportunity to purchase goods through online shops. The positive role of distance selling for non-traditional agricultural products is also emphasized in research studies by national scientists (Baraskina, 2010). The author concludes that such a sales channel could also be used to promote deer-farming products.



Source: author's construction based on Anderson, 2008

Fig. 4. **Position of deer-farming products in the meat market**

One can conclude that selling deer-farming products requires a variety of sales channels. At the same time, this means disseminating information on the positive effects of deer-farming products on consumers' health, lifestyles etc. and arousing the consumers' interest in the products as well as a desire to purchase such a product or service.

There are authors who recommend a limited access strategy for distributing niche products. Simon H. (2009) emphasizes that the availability of products for a limited customer base is an essential element in maintaining an elite customer base, pointing out that product exclusivity could be maintained only if output growth is controlled (Simon, 2009). Such a strategy is often implemented by luxury manufacturers, deliberately making the product difficult to access and, to some extent, creating a shortage of the product. Although the limited availability of a product is one of the most effective ways of maintaining a high intangible value of the product – exclusivity –, such an approach to a niche strategy in deer farming would also mean that niche market players would not exploit their growth potential to expand the industry; therefore, this approach to a niche strategy for the development of the deer-farming product market would be unacceptable in Latvia.

Godin S. (2008) and Anderson C. (2008) believe that a niche market could be developed through a wider price range, thereby making the product available to a wider audience. However, the author only party agrees with this assertion. Such a strategy is applicable when deer-farming products are planned to be marketed as mass products.

Deer-farming products – meat, hunting and other niche products – have to remain unique to some extent (high quality, luxury status etc.), thereby arousing consumers' interest in the products. The unique properties and condition of a product have to be continually renewed and maintained over time. Simon H. (2009) suggests several instruments for maintaining the uniqueness of a product. The instruments are as follows: patent protection, a strong trademark, focus on customers, artistic design changes in product packaging, the trademark etc. Customer-focused activities as well as branding to promote product awareness in the export market would be important in the development of a market strategy for deer-farming products.

Conclusions, proposals, recommendations

1) A market strategy for deer-farming products, compared with traditional agricultural products, involves differentiation, which is based on the real differences among deer-farming products (hunting services, venison quality etc.) and the apparent differences (achieved by pricing).

2) The most proper competition strategy for deer-farming products is a niche strategy, specializing in high-quality service and high-quality products (specific product features).

Acknowledgements

The research received funding from the ERDF Post-doctoral Research Support Programme (project No.1.1.1.2/16/I/001) Research application "Assessment of the Bioeconomic Efficiency of Use of Legumes for Feed" (No.1.1.1.2./VIAA/1/16/181).

Bibliography

1. Anderson, C. (2008), *The Long Tail: Why the Future of Business Is Selling Less of More*, Hyperion, New York.
2. Baraskina, I. (2010), *Market and Competitiveness of Organic Products*, Latvia University of Agriculture, available at: https://llufb.llu.lv/dissertation-summary/agricultural-economic/Irena-Baraskina-promocijas-darba-kopsavilkums-2010-LLU-EF.pdf.
3. Barkley, D.L. and Wilson, P.N. (1993), "Nontraditional Agriculture: An Economic Development Alternative", in Barkley, D.L. (Ed.), *Economic Adaptation. Alternatives For Nonmetropolitan Areas.*, Routledge, New Yor, pp. 185–204.
4. Barkley, D.L. and Wilson, P.N. (1995), *The Role of Nontraditional Agriculture in Rural Development By*, available at: https://api.aae.wisc.edu/pubs/pdf/cenews/ce221.pdf.
5. Conner, D.S. (2004), "Expressing values in agricultural markets: An economic policy perspective", *Agriculture and Human Values*, Vol. 21 No. 1, pp. 27–35.
6. Dannenberg, P. and Kulke, E. (2015), *Economic Development in Rural Areas.*, *1st Edition*, Routledge, London.
7. Daszkiewicz, T. and Mesinger, D. (2018), "Fatty Acid Profile of Meat (Longissimus lumborum) from Female Roe Deer (capreolus capreolus l.) and Red Deer (cervus elaphus l.)", *International Journal of Food Properties*, Vol. 21 No. 1, pp. 2276–2282.
8. Dumont, A.M., Vanloqueren, G., Stassart, P.M. and Baret, P. V. (2016), "Clarifying the Socioeconomic Dimensions of Agroecology: between Principles and Practices", *Agroecology and Sustainable Food Systems*, Vol. 40 No. 1, pp. 24–47.
9. Godin, S. (2008), *Tribes: We Need You to Lead Us*, PORTFOLIO, The Penguin Group.
10. Hoffman, L.C. and Wiklund, E. (2006), "Game and Venison - Meat for the Modern Consumer", *Meat Science*, Vol. 74 No. 1, pp. 197–208.
11. Hutchison, C.L., Mulley, R.C., Wiklund, E. and Flesch, J.S. (2010), "Consumer Evaluation of Venison Sensory Quality: Effects of Sex, Body Condition Score and Carcase Suspension Method", *Meat Science*, Vol. 86 No. 2, pp. 311–316.
12. Karnite, R. (2008), "Latvijas Globālā Konkurētspēja.", *Komersanta Vēstnesis*, Vol. 6, pp. 9–11., in Latvian
13. Kotler, P. and Armstrong, G. (2008), *Principles of Marketing*, 12th ed., Pearson/Prentice Hall.
14. Kuhn, K.U. (1997), "Germany", in Graham, E.M. and Richardson, D.J. (Eds.), *Competition Policies for the Global Economy*, Peterson Institute, Washington: Institute for International Economics, pp. 115–149.
15. Kuzman, B. and Prdic, N. (2018), "Strategic Significance of Wholesale Markets in Agricultural Products Sale.", *Proceedings of the IAE Scientific Meetings*, Institute of Agricultural Economics (IAE) / Belgrade, pp. 87–104.
16. Paula, D. and Titarenko, D. (2009), *Latvijas Ekonomikas Konkurētspēja Un Investīciju Nozīme Tās Veicināšanā : Monogrāfija*, edited by Dubra, E., LU Akadēmiskais apgāds, Rīga, Latvija, in Latvian.
17. Polawska, E., Cooper, R.G., Jozwik, A. and Pomianowski, J. (2013), "Meat from Alternative Species - Nutritive and Dietetic Value, and its Benefit for Human Health - A review", *CYTA - Journal of Food*, February.
18. Porter, M.E. (1998), Competitive Strategy: Techniques for Analyzing Industries and Competitors, 2nd ed., The Free Press, New York.
19. Shao, D., Shen, Y., Zhao, X., Wang, Q., Hu, Y., Shi, S. and Tong, H. (2018), "Low-Protein Diets with Balanced Amino Acids Reduce Nitrogen Excretion and Foot Pad Dermatitis without Affecting the Growth Performance and Meat Quality of Free-Range Yellow Broilers", *Italian Journal of Animal Science*, Vol. 17 No. 3, pp. 698–705.
20. Simon, H. (2009), *Hidden Champions of the Twenty-First Century*, Springer, Bonn, Germany.
21. Szelag-Sikora, A., Niemiec, M., Sikora, J., Grodek-Szostak, Z. and Komorowska, M. (2019), "Competitiveness OF Organic Food in Terms of Marketing Activities.", *Proceedings of the International Multidisciplinary Scientific GeoConference SGEM*, STEF92 Technology Ltd., Vol. 19 No. 1, pp. 241–247.

Proceedings of the 2020 International Conference "ECONOMIC SCIENCE FOR RURAL DEVELOPMENT" No 54
Jelgava, LLU ESAF, 12-15 May 2020, pp. 59-64
DOI: 10.22616/ESRD.2020.54.007

APPLICATION OF DIFFERENTIATED MODERN TECHNOLOGIES TO DIFFERENT TYPES OF RETAIL TRADE: CURRENT REALITY AND PROSPECTS

Salome Shervashidze[1], PhD student; **Gela Mamuladze**[2], Academic, Doctor of Economics, Professor
[1,2]Batumi Shota Rustaveli State University

Abstract. In the conditions of accelerated globalization, based on improving internal organizational and marketing solutions and rationalizing market behavior, new models of commercial enterprise management are being introduced. Given the current market development trends, the retailer must not only solve problems related to the physical distribution of goods, but also fight in fierce competition for customers. One of the main reasons for increasing competition is the large number of retail businesses, such as small businesses, large chain markets, department stores etc. Each of them occupies a niche that must be maintained by its own forces. Thus, the retailer must take into account many factors and make appropriate strategic and tactical decisions in the development of its business. In this article, the example of Georgia evaluates the attitude of customers to retail stores and analyzes the General factors that affect this fact. The aim of this paper is to make an investigation of above mentioned relationship and lead to the further modernization of the retail sales strategies. Customers usually go to regular stores to make purchases, despite the increased availability of orders made online or by mobile phone. A large number of end users want to participate in the procurement process themselves, even though modern technologies are actively used in the procurement process.

Based on empirical research and statistical analysis, the relationship between the type of priority procurement object and modern technologies used in the procurement process was revealed. Based on this assessment, we can conclude which types of technology development and interaction will be beneficial for owners of different types of retail outlets. Mobile apps have leadership position in any type of retail business, with the exception of fairs, where 70% of customers receive information from social networks. Unfortunately, auxiliary bots still are not used by Georgian customers as simplifying tool of procurement process

With the development of existing forms of modern retail trade, new forms are being introduced into the market. For successful realization of the finished product, for retail industry leaders it is a necessary requirement to understand modern internet methods and techniques of sale, as stated in the results of the study retailers should give preference to mobile apps.

Key words: retail Ssales, purchasing, modern technologies, competition, priority purchasing.
JEL code: M30 , M31

Introduction

In modern socio-economic conditions, the role of retailers has increased much more than in previous years, which is mainly due to the development of new marketing technologies. In a tough competition traders must win and strengthen their place in the target market segment. The emergence of international retail chains in local markets increases competition between retailers and increases the importance of key strategies in the process of gaining competitive advantages, improving marketing tools and innovations.

Retailers need faster and more professional maneuvering of existing resources to develop modern commerce. Various studies have shown that price is a key factor in the buying process (Owusu A., 2013), but people don't want to give up the quality, convenience, and enjoyable buying process because of the price. Retail sales are characterized by impulsive purchases, and resellers, on the contrary, make purchases systematically.

In each segment of the market, customers create an image of the institution for themselves, guided by what they consider subjectively more important than others. American scientists J. Engell and R. Blackwell, commenting on this hypothesis, describe the process of perception and choice of a

1 Salome Shervashidze e-mail: Salome.shervashihdze@gmail.com
2 Gela Mamuladze e-mail: G.mamuladze@mail.ru

business institution with such details as location, assortment, prices, advertising and incentives, quality of service and level of training of service personnel (Engell J., Bleckwell R., 2001).

The success or failure of a retail establishment is largely determined by the customer's attitude towards it. Customer loyalty is mainly formed by subjective evaluation, which is formed in the subconscious of the same customer. In this regard, any commercial institution should be considered not only from a functional point of view, but also from the basic psychological aspects (Kotler Ph., Keller K., 2013).

While the market often creates problems for particularly small retailers, it is not difficult for most establishments that are well prepared to do business to compete with larger firms. In the process of analyzing the situation, retailers who are planning their strategy or refining it should especially think about their capabilities. Obviously, misjudged views about their capabilities, resources, competitors and opportunities can lead to disastrous results.

Despite the recent increased availability of ordering online or by phone, customers usually go to regular stores to make purchases. A large number of end users want to participate in the purchasing process themselves, because these end users need to know about the sales pitch, and it is very important to have the right lure strategy (Simonson I., 2005).

Customers quickly refer to a particular merchant when asking which store they are referring to, naming features such as "lowest price", "most convenient", "best service", and so on. It should be noted that the most prominent and popular institutions for a specific target segment are usually mentioned in the answers. Thus, the more the actual image of the merchant is presented to the customer, the more increases the psychological willingness to make a purchase at that object.

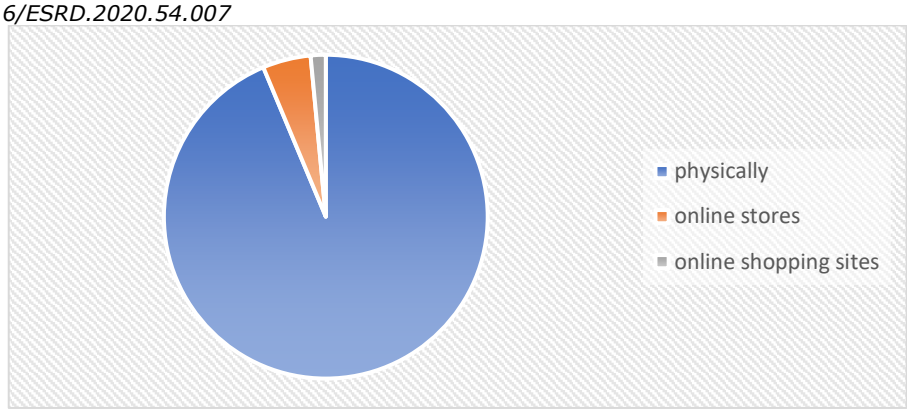
For the purpose of this study, we have considered the following retail outlets: small area stores, mini markets, chain supermarkets, hypermarkets, and fairs, while identifying as used modern technologies mobile applications, QR codes, social networks and auxiliary bots accordingly.

The following methods were used in the research process: data collection and statistical analysis. Quantitative research strategy was used for the research. The questionnaire was developed and posted on the web and was available from 1 November 2010 to 28 January 2020, 356 users were surveyed, due to incomplete information we ignored 26 user-filled responses and reviewed responses from 330 respondents.

Research results and discussion

Habits have a big impact on customer behavior. Some customers prefer large supermarkets, others-small home stores, third-party - exhibitions / sales. Each of them is based on their own experience of buying goods, covering all aspects of the relationship between the buyer and the seller.

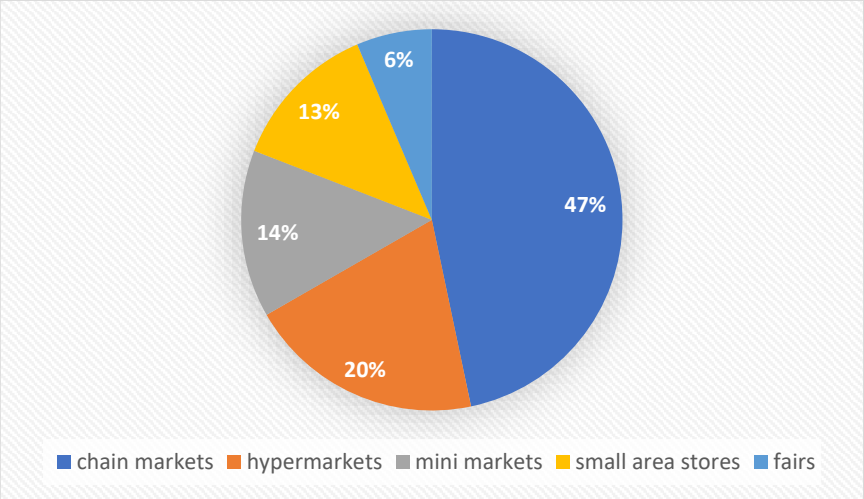
Currently, at the revival stage of online trading in Georgia, we get a rather strange picture of the issue of determining the purchase path. The quantitative research design was used in the study and the quantitative survey of the costumers was conducted via google forms. Vast majority of our respondents (93.6 %) still buy goods physically, 4.8 % use online stores, and only 1.5 % use certain online shopping sites (Figure 1). This fact can be explained by the desire of costumers to participate in the procurement process itself, to compare different models and trademarks, to be emotionally involved in the procurement process; however, this desire also does not exclude the use of modern technologies in the procurement process at any stage of it.



Source: author's calculations based on the results of the survey

Fig. 1. **Customers' attitude towards procurement**

According to the survey results (Figure 2), chain supermarkets actually lead the way (46.7 %).



Source: author's calculations based on the results of the survey

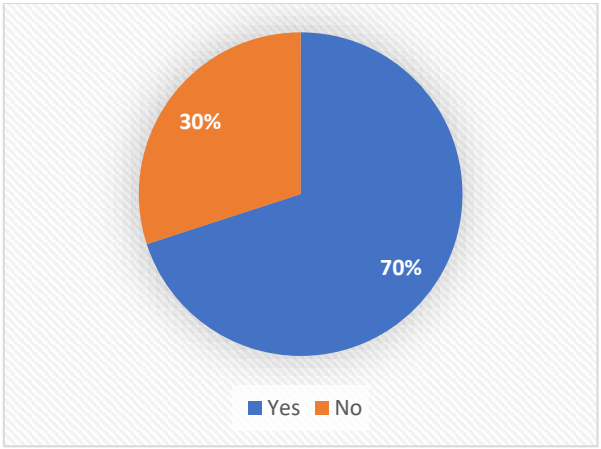
Fig. 2. **Customer attitude towards physical retail trade object**

Both rational and emotional factors influence the purchase decision (Achar, C., So, J., Agrawal, N., & Duhachek, A. 2016). In any case, it depends on the decision maker, the procurement object, and various aspects that affect him. Based on a complex analysis of the factors that influence the decision to buy a product, this decision of the Georgian customer is determined by the self-service, which is in the chain supermarkets, the customer is free from the attention of the specific sales representative, which does not coincide with the modern trends, where the active sales representative should be more favored. This is where we need to look for one of the key problems in the retail business.

From a retailer's perspective, online space and modern technologies can perform several functions, including image display and information delivery to potential customers as well as simplifying the procurement process (Pontano, E., Nguyen. B., Dennis, C., Gerlach, S., 2016). The performance of this task depends on the goals of the organization.

The widespread adoption of mobile technologies and the Internet has furthered the development of the retail markets and has even shaped the global market development trends for several years. The concept of "modern commerce", which emerged in the 1980s, when large retail chains were solely at the expense of pricing policies, paid little attention to personal communication with customers. At present, however, the situation is opposite - communication is the basis of a 'knowledge economy' where the foreground is not the products themselves but the customer service process (OECD, 2001).

With the evolution of business models, manufacturers and sellers connect directly with customers online. The use of modern technologies in the procurement process is largely driven by the integration of online and offline sites, personalized offers and discounts, innovative payment methods, automated logistics solutions. Considering the use of the latest technologies by research participants at various stages of the procurement process as a stimulating factor, 70% of our respondents use at least some of the modern technologies (Figure 3).



Source: author's calculations based on the results of the survey

Fig. 3. **Usage of modern technologies in the procurement process**

Respondents of this study had groups and pages on social network, mobile apps, auxiliary bots, QR codes to choose from among the used modern technologies The majority of users (77.4 %) favour mobile applications, which allows us to assume that this is where retailers should focus their attention. By itself, knowing only which technology is used most in the procurement process does not provide us with comprehensive information that the supplier can use, unless we specifically determine which type of facility customers prefer.

For this purpose, in accordance with the Chi Square method, we examined the relationship between the type of procurement object and the technology used. We got P-value less than 0.05, therefore we concluded, that between these two variables there is a significant statistical relationship. The results are shown in Table 1.

Table 1

Application of modern technologies to the type of procurement object

Type of procurement object		Used modern technology			Total
		Mobile app	QR	Soc. networks	
Small area stores	Count	20	4	10	34
	% preferable procurement object	58.8%	11.8%	29.4%	100.0%
	% used modern technology in procurement process	12.4%	16.7%	15.6%	13.7%
Minimarkets	Count	18	4	6	28
	% preferable procurement object	64.3%	14.3%	21.4%	100.0%
	% used modern technology in procurement process	11.2%	16.7%	9.4%	11.2%
Chain supermarkets	Count	78	10	28	116
	% preferable procurement object	67.2%	8.6%	24.1%	100.0%
	% used modern technology in procurement process	48.4%	41.7%	43.8%	46.6%
Hypermarkets	Count	39	6	13	58
	% preferable procurement object	67.2%	10.3%	22.4%	100.0%
	% used modern technology in procurement process	24.2%	25.0%	20.3%	23.3%
Fairs	Count	3	0	7	10
	% preferable procurement object	30.0%	0.0%	70.0%	100.0%
	% used modern technology in procurement process	1.9%	0.0%	10.9%	4.0%
Total	Count	158	24	64	246
	% preferable procurement object	64.7%	9.6%	25.7%	100.0%
	% used modern technology in procurement process	100.0%	100.0 %	100.0%	100.0%

Source: author's calculations based on the results of the survey

According to the Table 1, of those who favor small-area marketers, 58.8 % use mobile apps, 11.8 % QR code, and 29.4 social network groups and pages.

Most of the supermarkets' customers(64.3 %) use mobile apps; 14.3 % use QR code and 21.4 % social networking groups, respectively.

Most of the users of network supermarkets (67.2 %) use mobile apps, 8.6 % use QR code and 24.1 % social network groups.

Most hypermarket customers (67.2 %) use of mobile apps, 10.3 % use QR codes and 22.4 % social networking groups.

As for fairs, 30 % of users use this mobile app only and 70% use social networking groups and pages.

By analyzing the research data and spreadsheet, we can boldly identify the undisputed leadership of mobile apps in any type of merchant, with the exception of fairs where 70% of customers receive information from social networking groups and webpages before purchasing. Also, one of the latest trends for our respondents, auxiliary bots, are not yet a simplifying tool in the procurement process.

Conclusions, proposals, recommendations

The success or failure of a retail trading company is determined by the customer's attitude towards it. Customer loyalty is mostly subjective, emotional assessment is formed, it should be noted that in the light of the changes that are taking place in social and economic life, the retail institutions are

forced to maintain their competitiveness in the market to fully consider customer micro and macro-economic conditions, including the following.

1) To maintain a stable market position, retailers must carefully select the target market and position it correctly, determining the exact competitive advantage and selecting the type of trade.
2) The rapid growth in the number of smartphones and other related devices, combined with widespread international access, has become a prerequisite for the revival of mobile commerce in Georgia. According to the results of this study, retailers should give preference to mobile apps for their products.
3) Social networks have introduced new approaches to the retail sector in principle. Providers have received databases that can provide a personalized offer for users, so groups and social media pages should be used not only to provide information, but also to plan products and services.
4) For the successful realization of the finished product for retail industry, for leaders and staff it is a necessary condition to understand modern internet methods and techniques of sale. Technology helps sellers to optimize their supply chains, diversify their communication channels, and enter new markets
5) Although the use of QR codes and auxiliary bots is less common among our respondents, considering global trends, they have a great potential for development, thus we should pay more attention to the involvement of technology in the procurement process.
6) Georgian internet companies should try to gain trust, offer discounts, prices should be more attractive for customers to feel benefits from internet purchases.

Bibliography

1. Achar, C., So, J., Agrawal, N., & Duhachek, A. (2016). What We Feel and Why We Buy: The Influence of Emotions on Consumer Decision-Making. *Current Opinion in Psychology*, *10*, 166-170. https://doi.org/10.1016/j.copsyc.2016.01.009
2. Chi, H, K., Yeh, H, R., Huang, M, W. (2008). The Influences of Advertising Endorser, Brand Image, Brand Equity, Price Promotion, on Purchase Intention the Mediating Effect of Advertising Endorser, Taiwan.
3. Engell, J., Blackwell, R., Miniard, P. (2001). Consumer Behavior. 9th ed. Ft. Worth. Harcourt College Publishers. New York
4. Hislop, M. (2001). An Overview of Branding and Brand Measurement for Online Marketers. Dynamic Logic's Branding, Vol. 101, pp. 1-22
5. Kotler, Ph., Keller, K. L., Koshy, A., Jha, M. (2013). Marketing Management: A South Asian Perspective, 14thEdition.
6. OECD, 2001 Competencies for The Knowledge Economy
7. Owusu, A. (2013). Influences of Price and Quality On Consumer Purchase of Mobile Phone In The Kumasi Metropolis In Ghana A Comparative Study (179-184) European Journal of Business and Management Vol.5, No.1, 2013
8. Pontano, E., Nguyen. B., Dennis, C., Gerlach, S. (2016). Internet Retailing and Future Perspectives Routledge,Taylor and Francis Group, London.
9. Simonson, I (2005). Determinants of Customers' Responses to Customized Offers: Conceptual Framework and Research Propositions. Retrived:https://journals.sagepub.com/doi/10.1509/jmkg.69.1.32.55512, Access: 19.02.2020

INTEGRATED AND SUSTAINABLE REGIONAL DEVELOPMENT

Proceedings of the 2020 International Conference "ECONOMIC SCIENCE FOR RURAL DEVELOPMENT" No 54
Jelgava, LLU ESAF, 12-15 May 2020, pp. 66-72
DOI: 10.22616/ESRD.2020.54.008

MODERNIZATION, INNOVATION AND EFFICIENCY OF AGRI-FOOD INDUSTRY IN THE REGIONAL DEVELOPMENT OF SLOVAKIA

Izabela Adamickova[1], prof.h.c. doc. Ing., PhD.; **Barbora Begerova**[2], Ing., MBA; **Henrietta Nagy**[4], Dr. Habil, associate professor; **Jan Lajda**[5], Ing., Phd, MBA; **Peter Bielik**[3], Dr.h.c. prof. Ing., PhD.
[1,2,3]Slovak University of Agriculture in Nitra, Slovak Republic; [4]Szent Istvan University in Godollo, Hungary; [5]Land Technologies ltd, Slovak Republic

Abstract. Slovakia's membership in the EU and the introduction of the EU Common Agricultural Policy have significantly changed the necessary conditions for the functioning of agriculture. Increasing competitiveness in the internal market for agricultural and food products has necessitated an acceleration of the structural development of agricultural holdings and improved conditions of production and product quality. It has contributed to a more balanced regional development of lacking rural areas on the development pillars of the growth of competitiveness in small and medium-sized enterprises. However, enterprises, particularly in the agricultural sector, are still characterized by lack of innovation demand, poor motivation and awareness of enterprises to transfer to the latest technologies. In agriculture, the use and exploitation of natural resources to produce renewable energy sources remains low. For this reason, part of the businesses' activities is also directed at setting up growths of fast-growing trees, which allows farmers to create space for diversified production, which contributes to strengthening the economic dimension of sustainable rural development. The establishment of growth of fast-growing trees gives farmers the opportunity to use less productive agricultural land efficiently to produce renewable energy sources and their commercial use.

Key words: agriculture, biogas, biomass, efficiency, net present value.
JEL code: R00, R1, R11

Introduction

A key problem for agriculture in the future is not only to produce more, but also to produce in a sustainable way. The bioeconomy is the conversion of renewable biological resources into value-added products such as food, feed, materials or bioenergy. Farmers have for a long-time produced non-food product, whether for energy or industrial purposes. However, there is now the need to decarbonise the energy sector to meet climate change goals, compounded with considerations of resource efficiency, a rapidly changing energy landscape and an increasing interest in green chemicals and green growth. Taken together, all these issues underlie the importance of channelling renewed attention to diverse uses of land and biomass driven by technological progress and the related promising markets.

European Biomass Association (2013) writes in their document that usage of biomass as bioenergy source will play the main part in achieving the ambitious goal leading to 20 % of the final energy consumption to reproduced by renewable sources by 2020, which is approved by the Renewable Energy Directive. Today biomass represents 2/3 of renewable energy sources in the EU. Currently RES stands for of 8,5 % of final energy consumption. European Environmental Agency 2 (2006) states that agricultural industry still poses a huge unutilized room in bioenergy sector believed to experience the highest growth in near future.

The agricultural sector in Slovakia accounts for approximately 7.3 % of the total volume of greenhouse gas emissions produced in Slovakia. In 2017, according to the Slovak Hydrometeorological Institute, it decreased year-on-year to the volume of produced greenhouse gases from agriculture by 4.1 % to the level of 2,546.8 Gg CO_2 equivalent. The development of greenhouse gas emissions from agriculture has been decreasing since 1990 and has changed only minimally since 2005. In June 2018, the EU institutions reached an agreement for the new Renewable Energy Directive for the next decade. The new regulations include a legally binding EU-wide target

for renewable energy by 2030 of 32 %. The aim of this program is to support the further introduction of electric mobility, but also includes a sub-target of 3.5 % for advanced biofuels and biogas.

Renewable energy sources, given the possibility to predict their production relatively precisely, in addition to the environmental benefits, also increase self-sufficiency and thus the energy security of the country. Therefore, increasing the share of renewable energy sources (RES) in energy consumption is one of the priorities, also declared in the new policy of the "Energy Policy of the Slovak Republic", adopted by the Government in October 2014. Slovakia has committed to increase the usage of RES from 6.7 % in 2005 to 14 % in 2020 (Gadus J., 2019).

At present, there are 111 biogas stations connected in Slovakia with a total output of 103 MW and planned annual production of 810 526 MWh of electricity. Biogas plants process various types of plant and animal waste, but according to various expert estimates, up to 80% of the feedstock is corn silage, the rest being grass hay, manure or slurry manure and fast-growing trees. Fast growing trees have the advantage over energy forests, due to the time between planting and harvesting being significantly shorter. It varies between 2-5 years and planting is renewed only after 20-30 years. At the same time, fast-growing trees can produce more biomass on the same area per year.

Kapustova Z. et al. (2018) says that waste from agriculture and food industry is burned today by a minority from biogas stations, according to Energie-portal.sk. Most of them, according to the portal, focus on the production of electricity from the processing of corn silage. According to the current Electrotechnical and Energy Yearbook, biogas power plants had a total capacity of 105 MW in 2017, which is 1.4 percent of the total electricity production capacity in Slovakia.

The draft of the Integrated National Energy and Climate Plan, according to the Ministry of Economy of the Slovak Republic (2013), gradually increases from 110 MW in 2020 to 180 MW in 2025 and to 200 MW in 2030. The last figure represents slightly less than half of the capacity of one Slovak nuclear block. Nowadays, biogas is also used for heat production in Slovakia. Its share of combined generation of electricity and heat is 9 percent. This is very little compared to natural gas, coal and oil - fossil fuels, which together account for almost 60 percent. According to Technical and Research Institute of Agriculture in Rovinka (TSUR) (2013), energy is the key element for economic growth in Europe. Economic growth must ensure job creation and sustainable development at the same time. The increasing oil prices focus the attention of EU leaders on an increasing Europe's dependency on import of energy. Due to this fact energy policy of the EU has three main objectives: competitiveness, sustainable development and security of supply.

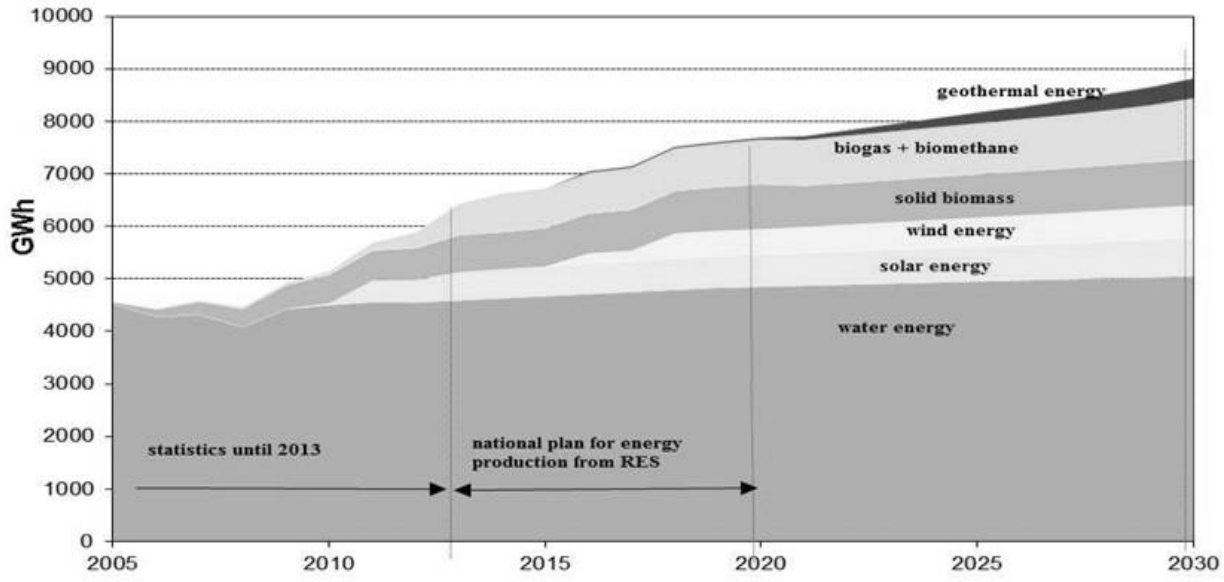
TSUR (2013) states that Slovakia is dependent not only on gas supplies from a single source, but from the same source is also dependent on the supply of oil, coal and nuclear fuels, so we can conclude that Slovakia is absolutely dependent on energy from Russia (more than 95 percent of the energy carriers are imported from Russia).

Nevertheless, the potential of biogas stations is still not fully exhausted. It is estimated that in case of usage of livestock manure as an input material, there is possibility for running of 280 biogas stations (BGPs) with average installed capacity of 350 kW and an annual manure consumption of 40 000 tonnes by a BGP in Slovakia. At the same time, up to 8300 BGPs could work with average installed capacity of 500 kW with an annual biomass consumption of 600 tonnes per one biogas station in Slovakia (European Agricultural Fund for Rural Development (2012), (Lajdova Z. et al. 2016).

Zacharda F. (2012) considers using biomass for anaerobic fermentation in biogas stations as one of the most advanced technologies as a source of renewable energy. Realization of projects for building Biogas stations (BGP) in Slovakia had to wait for an adoption of legislative guarantees, so that electric energy and heat produced from biogas will have long-term consumption ensured for guaranteed prices.

For comparison Karkulin D. (2012) reveals that the average installed electric capacity is 838 kW. In the Czech Republic there are BGPs with average installed electric capacity of 595 kW, in Italy 760 kW, in Denmark 513 kW, in Austria 260 kW and in Germany 380 kW. In terms of total installed capacity of power facilities in Slovakia, BGPs represents only 0.4 percent. All BGPs in Slovakia are technologically aimed at production of electricity and heat, but in most BGPs do not utilize the produced heat.

Zacharda F. (2013) comments that tot only the economic crisis, high prices of oil, 38 fertilizers and chemical products, but also climatic changes have affected yields of silage corn in our areas causing raising its prices. There were observed prices of corn silage at 40 EUR per tonne in 2013 putting BGPs into an unprofitable territory. The development of biogas utilization may be the reason why there is slight increase of arable land used for corn silage in 2009 -2011 (Zacharda F., 2012). On the other hand, there is still about 70 thousand of arable soil not utilized yet and with 360 thousand of unused agricultural soil we are able to grow about 2,550 thousand of biomass per year, which accounts for 459 mil m³ of biogas. The highest share of RES in electricity production have share of the total installed capacity, then the share goes to biomass utilization reaching 11.63 %.



Source: Ministry of Economy of Slovak Republic, 2014

Fig. 1. **Development forecast of electricity production from RES**

Research results and discussion

The main aim of this article is to investigate impacts of producing biogas via anaerobic digestion on agriculture sector in Slovakia. Then it is focused on forecast of economic viability of Slovak biogas industry. This article is divided into following partial goals:

- analysis of effects of biogas plants on farms/enterprises and economic condition of biogas sector in Slovakia;
- to forecast economic viability of biogas plants in Slovakia (NPV);
- to estimate payback period of biogas plants.

Data were used from Green reports, Agriculture and Food Sector SR and individual research. Net present value (NPV) was used as valuation criteria in order to forecast economic viability of biogas plants. NPV determines the present value of an investment and represents sum of estimated future cash flows in today's value of money Bielik P. et al. (2018).

The net present value (NPV) formula is as follows:

$$NPV = -1 + \sum_{t=1}^{n} \left(\frac{CF_t}{(1+r)^t} \right) \quad (1);$$

and

$$CF_t = p_t\, o_t - c_t\, m_t - FC_t \quad (2).$$

Where:

CF - is estimated cash flow, it is a function of income, variable cost and fixed costs in year t;

r - is discount factor;

p - is price of output produced at time t;

o - is amount of output produced at time t;

c - is cost of input in year t;

m - is amount of input in year t;

FC - are fixed cost including annuity, labour costs, G-component, manipulation with materials services, maintenance and service costs.

Payback Period is a tool that estimates the time in which the initial investment is expected to be regenerated from cash inflows from operation of the investment. For uneven cash inflows the cumulative net cash flow for each period is calculated and the following formula is used:

$$Payback\ Period = A + \frac{B}{C} \quad (3).$$

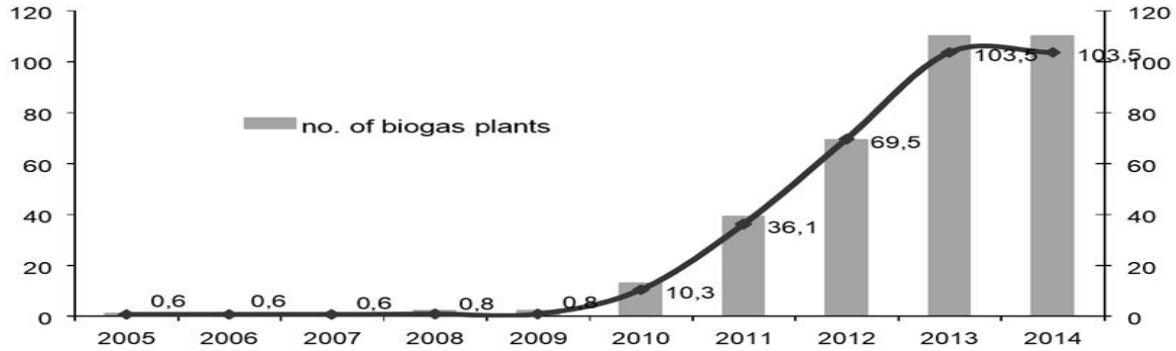
Where:

A - is the last period with a negative cumulative cash flow;

B - is the absolute value of cumulative cash flow at the end of the period A;

C - is the total cash flow during the period after A.

Figure 2 follows the biogas industry development in Slovakia. The boom started in 2010 when 11 new BGPs were launched with total electric capacity of 10,3 MWh. The trend was continually increasing, with an increase of 26 BGPs in 2011, 30 BGPs in 2012 and 41 BGPs in 2013. In 2014, the development suddenly stopped at total number of 110 BGPs and 103.5 MWh total electric capacity.



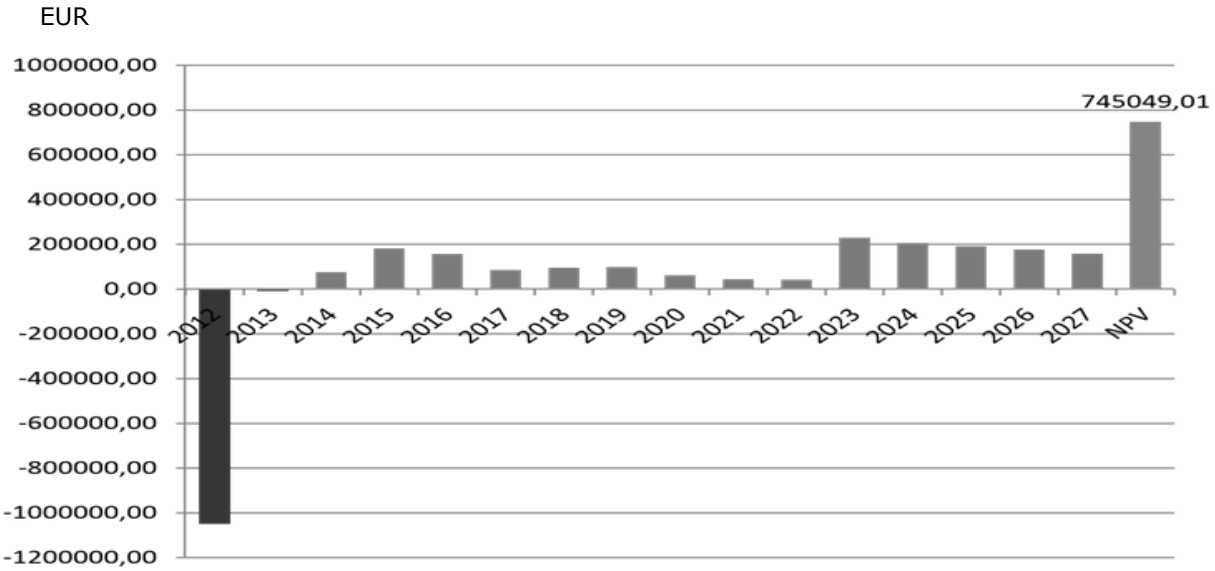
Source: URSO

Fig. 2. **Development of biogas industry in Slovakia for years 2005 – 2014**

Determining Net Present Value (NPV) of the project

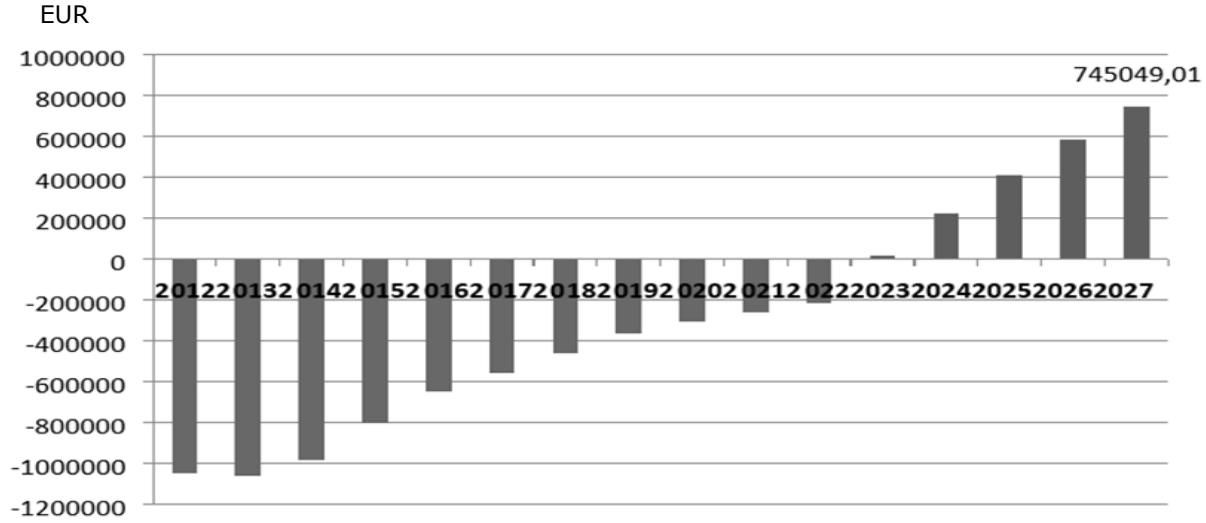
To forecast economic viability of biogas sector NPV tool was used. The model of a biogas plant was constructed in the way so that it represents as many BGPs in Slovakia as possible and contains general similarities. The scenario does not count with any other income than the one from sale of

electricity and only one single input is used. Some BGPs benefit from using different types of inputs that are less costly than corn silage even though they may not be as effective as the corn silage or there are also options of selling heat and fertilizers; however, these investments are costly and extremely difficult to generalize.



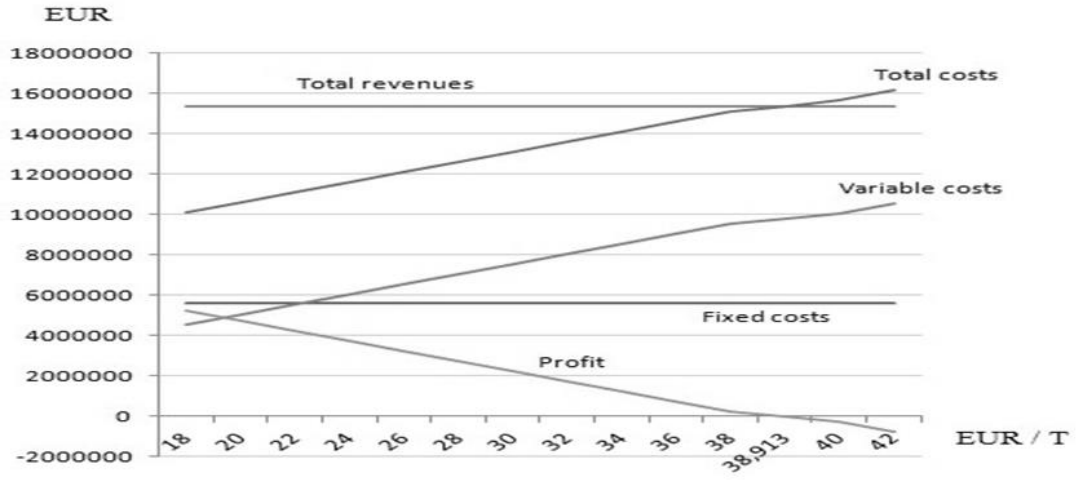
Source: authors' calculations ***Fig. 3. Discounted cash flow with final NPV value***

One of the most criticized weak spots of the payback period tool is the fact that it does not consider time value of money. To overcome this drawback, payback period was calculated also based on discounted cash flow. The result is very similar to the previous one and it estimates 10 years for the investments to be recovered and since 11th year it starts to generate profit as it is shown in Figure 4. The cumulative profit generated in the 15th year in today's value of money is 745,049.01 EUR.



Source: authors' calculations

Fig. 4. **Discounted cumulative cash flow**



Source: authors' calculations

Fig. 5. **Profitability of BGPs in Slovakia at different prices of maize silage**

The following years will show how biogas sector in Slovakia will develop under current legislation and support system; however, one of the main drawbacks – silage maize as the main input, is still not regulated by legislation. Structure of subsidies depending on input material may work out this problem.

According to the indicators, the net present value as well as the payback period, the biogas plant is in good economic condition and thus the overall biogas sector in Slovakia is stable with positive financial and economic benefits for anaerobic digestion (AD) farms. On the other hand, the accuracy of the analysis depends particularly on the accuracy of the forecasting of the price of corn silage.

Conclusions, proposals, recommendations

1) Innovation possibilities of farmers in Slovakia are mainly concentrated on the production of biomass serving for renewable energy sources. The biogas sector in Slovakia is characterized by biogas plants with a capacity of around 1 MWh of electricity, using mainly corn silage and not waste biomass.
2) Determining and predicting the economic condition of the biogas sector was based on the model of biogas plant, which represents most of the biogas plants in Slovakia. The biogas plant is part of the agricultural enterprise, the only input material is corn silage, and the only output that generates sales is electricity. The price of electricity is given by the legislation for BPS in 2013 (134.08 EUR / megawatt). The station is in operation at 95 % electric capacity, 8040 hours per year. The investment cost is estimated at EUR 3.5 million with 3.2 % interest and 10-year maturity.
3) The net present value of the investment is positive, which confirms the economic efficiency of the project in which is worth investing. The payback period is estimated at 10 years, even at discounted cash flow. According to the indicators, the net present value as well as the payback period is a biogas plant in good economic condition as well as a biogas sector in Slovakia, which we characterize as stable with positive financial and economic benefits for agricultural enterprises using anaerobic digestion.
4) Development of biogas sector in agriculture was determined by development of legislative and subsidy conditions. Research has shown that in the coming period it is necessary to adapt the legislative environment of business in this area, as well as the tools of subsidy policy, to support wider use of anaerobic technology through biogas stations (BPS) for electricity production.

5) The economic aspects of biogas plants are determined by their payback period, which is not only dependant on the same output and the same acquisition price, but also the price of input biomass, which is mainly corn silage, less waste material from agriculture and stagnation of food waste.

Bibliography

1. Bielik, P., Turcekova, N., Svetlanska, T., Adamickova, I. (2018). *Podnikove hospodarstvo*, Slovenska polnohospodarska univerzita, Nitra, p. 363. ISBN 978-80-552-1903-5.
2. *Environmental Data Centre on Natural Resources. Energy from Biomass*. Retrieved: http://epp.eurostat.ec.europa.eu. Access: 15.02.2020
3. European Biomass Association (*A Biogas Road Map for Europe* 2013)., p. 4,5,12,17. Retrieved: http://www.aebiom.org/IMG/pdf/Brochure_BiogasRoadmap_WEB.pdf. Access: 15.02.2020
4. *Fachverband Biogas. German Biogas Association*. Retrieved: http://www.biogas.org. Access: 15.02.2020
5. *Food and Agriculture Organization of the United Nations. Bioenergy.* Retrieved: http://faostat3.fao.org. Access: 15.02.2020
6. Gadus, J. (2019). *Perspektivy rozvoja vyuzivania bioplynu v EU a na Slovensku. Moderna mechanizacia v polnohospodarstve*, Bratislava, p. 26-28. ISSN 1335-6178.
7. *Greenhouse gas emissions - OECD Statistics.* Retrieved: http://stats.oecd.org. Access: 15.02.2020
8. Kapustova, Z., Lajda, J., Kapusta, J., Bielik, P. (2018): *Economic evaluation of biogas production.* In MakeLearn and TIIM, Dublin: ToKnowPress, p. 421. ISBN 978-961-6914-23-9.
9. Karkulin, D. (2012). *Agrotrade group, spol. s. r. o. ponuka komplexne riesenia pre bioplynove stanice*. In Agromagazin, Issue 8, p. 28–29.
10. Karkulin, D. (2013). *Bioplynove stanice znovu menej lukrativne, o slovo sa hlasi sucha fermentacia*. In Agromagazin, Issue 10, p. 27, 29.
11. Lajdova Z., Lajda J., Kapusta J., Bielik P. (2016). *The Impact of the Biogas Industry on Agricultural Sector in Germany*. Agricultural Economics – Czech, p. 543-549.
12. *Ministerstvo Hospodarstva Slovenskej Republiky. Vyuzitie Energeticka politika Slovenskej republiky* (2013), p. 52. Retrieved: http://www.economy.gov.sk/index/ open_file.php?ext_dok=141627. Access: 15.02.2020
13. *Urad pre regulaciu sietovych odvetvi. Rozhodnutia.* Retrieved: http://www.urso.gov.sk. Access: 15.02.2020
14. *Vedecky casopis Ekonomika polnohospodarstva. Casopis EP.* Retrieved: http://www.vuepp.sk. Access: 15.02.2020
15. *Vyuzitie polnohospodarskej biomasy na energeticke ucely a jej vplyv na trvalo udrzatelny rozvoj (Technicky a Skusobny Ustav Rovinka* 2013). p. 17, 18, 23, 25, 32, 35, 83. Retrieved: http://www.tsup.sk/files/vyuzitie_poln.biomasy_na_energet.ucely.pdf. Access: 15.02.2020
16. Zacharda, F. (2012). *Ako dalej v budovani bioplynovych zariadeni.* In Rolnicke noviny, 2012, Issue 36, p. 21–22.
17. Zacharda, F. (2013). *Budovat BPS alebo nie?* In Rolnicke noviny, 2013, Issue 41, p. 11, 16.

Proceedings of the 2020 International Conference "ECONOMIC SCIENCE FOR RURAL DEVELOPMENT" No 54
Jelgava, LLU ESAF, 12-15 May 2020, pp. 73-78
DOI: 10.22616/ESRD.2020.54.009

RURAL TERRITORY DIFFERENTIATION ACCORDING TO THE ECOLOGICAL CRITERIA FOR THE RYAZAN REGION

Irina Andriyanova[1], MA, **Inna Davydova**[2], Dr.sc., assoc.prof. and **Yury Mazhayskiy**[3], Dr.sc., prof.
[1,2]Ryazan State University named after S.A. Yesenin, Russia; [3]Meshchersky branch All-Russian Research Institute of Hydrotechnics and Melioration named after A.N. Kostyakova, Russia

Abstract. Increased industrial enterprises concentration leads to environmental pollution in rural areas and an increase in incidence. This problem was studied using spatial comparative analysis. There was determined the negative trend value for rural development. A comparison of rural areas was made in the Ryazan region. These areas are similar in terms of natural conditions and differ in terms of economic development and health risks. Medical and demographic statistics were used to justify the impact of environmental pollution on the rural population morbidity. Statistical indicators of rural population morbidity and mortality based on medical data were used. The environment pollution influence on the growth of neoplasm morbidity and mortality has been established for rural areas. These indicators are higher in the Ryazan region than the average for Russia. The indicator of social factors, which is the main cause of infectious disease death from in 60% of cases, was chosen as the tuberculosis morbidity and mortality rate. To calculate the integral region health index there were used environmentally significant pathology indicators – the neoplasm incidence index, the neoplasm mortality index and the infant mortality index. The tuberculosis mortality index was used as the negative social phenomena indicator. The ranking of municipalities (mostly rural) was based on these indexes. Intraregional differentiation of the population's health status largely corresponds to the distribution of background territory pollution indicators. Therefore territorial and temporal changes in the integral index of regional health should be considered as an indicator of the corresponding negative environment quality change.

Key words: Key words: population morbidity, integral regional health index, rural territory classification, environment quality.
JEL code: I1

Introduction

The environmental impact of rural localities is determined by their functional type and population size. For the Ryazan region the main type of rural settlements is the agricultural type. As a rule this is characterized by terrain transformation, soil degradation and contamination, underground and surface water pollution (Mazhayskiy, 2001). The maximum anthropogenic load associated with agricultural activity is confined to the territories of agricultural settlements with a population of more than 500. The settlement system, being a subject of environmental "pressure", in turn, experiences the impact of an adverse environmental situation through the health of the population (Lyapkalo, 2001). There is the increase in the incidence of circulatory system, respiratory organs, malignancies and endocrine system among the population in the Ryazan region (Kovalchuk, 2009). The sustainable development concept, adopted in Rio de Janeiro in 1992, was a turning point in the understanding of the importance of preserving a favourable environment and public health. Inequality in the health status of the population is observed in different territories (Meng, 2018). Zonal differences in health levels have long been established in the scientific literature and many studies confirm that people have different diseases in different geographical areas (Chenjing, 2019). Recently geographical issues have become increasingly intertwined with public health issues. For example there was built a set of conceptual frameworks that synthesized the relationship between health and various factors such as health, social policy, economy, consumption, environmental environment, and other factors that have a strong impact on people's health (Curtis, 2004). A number of empirical studies have shown that environmental impacts and the uneven distribution of medical resources due to

[1] Irina Andriyanova. Tel.: +79105782449. E-mail address: irina.slepcova.86@mail.ru
[2] Inna Davydova. Tel.: +79066474924. E-mail address: diu2004@mail.ru
[3] Yury Nazhayskiy. Tel.: +79156013089. E-mail address: director@mntc.pro

geographical conditions have caused public health problems (WHO, 2012; Lamnisos, 2019). In Russian practice medical and geographical issues are most thoroughly studied in the works performed under the supervision of S. M. Malhazova (Malhazova, 2001). In addition, medico-geographical mapping and modeling are reflected in the research of B. B. Prokhorov and V. S. Tikunov (Prohorov, Tikunov, 2005), as well as S. A. Kurolap (Kurolap, 2012) and other authors who study human ecology, public health and medical-ecological forecasting.

The purpose of our study was to develop a classification of rural areas based on several indicators and compare the state of the environment and the health of the population living in a particular area. One of the methodological approaches to identifying trends in environmental conditions is a spatial-comparative analysis of individual territories. It is based on the opposition of territorial complexes (systems) of the same type in terms of natural conditions, but differing in the degree of their economic development and the risk of a certain disease. To identify the relationship between the state of the environment and the health of the population, a system of the method of scoring with subsequent calculations was used. This methodological approach allows us to determine the degree of negative trends and their significance for rural development. A comparison was made of rural areas that are similar in terms of natural conditions, but differ in terms of economic development and health risks. Medical and demographic statistics were used to justify the impact of environmental pollution on the incidence of rural population. Statistical indicators of morbidity and mortality of the rural population based on medical data were used.

Research results and discussion

When creating a typology usually it is necessary to solve the problem of optimal selection of initial indicators that should comprehensively characterize the essence of the phenomenon under study. Obviously for health estimate in a region it is appropriate to use indicators of morbidity and mortality associated with a disease that depends on the degree of pollution of the environment with toxic substances. It was found that the indicators of neoplasm morbidity and mortality are the most informative when comparing the Ryazan region and the average situation in Russia. These indicators shows the impact of negative geological and ecological (or geo-ecological) factor such as chemical pollution of the environment. The indicator of tuberculosis morbidity and mortality was chosen because it depends on social factors. Tuberculosis is the main cause of death from infectious diseases in 60% of cases. To calculate the regional health integral index we selected some indicators. Firstly they were connected with environmentally significant pathologies such as the neoplasm incidence and neoplasm mortality. Secondly we used the tuberculosis morbidity and the tuberculosis mortality as the indicators of negative social phenomena. Thirdly the infant mortality has been selected because it is considered reliable indicator of the interaction of the environmental situation on the health of the population (Semenova, 2010).

The regional health integral index (*RHII*) was calculated using the formula (1):

$$RHII = 1 \mid \frac{Idn + Idt + Imn + Imt + Iim}{5} \quad (1)$$

Where:

Idn – is the neoplasm morbidity index;

Idt - is the tuberculosis morbidity index;

Imn - is the neoplasm mortality index;

Imt - is the tuberculosis mortality index;

Iim - is the infant mortality index.

To calculate the *Idn* as the other indexes – the *Idt*, the *Imn*, *Imt* and *Iim* - for each (i-th) district during the period from 2005 to 2010 the formula (2) was used:

$$Idn = \frac{Xiav - Ximin}{Xmax - Xmin} \quad (2)$$

Where:

Xiav – is the average value of the neoplasm morbidity rate for each (i-th) district;

Ximin – is the minimum value of the neoplasm morbidity rate for each (i-th) district;

Xmax – is the maximum value of the neoplasm morbidity rate for all districts in the region;

Xmin – is the minimum value of the neoplasm morbidity rate for all districts in the region (based on Prohorov, Tikunov, 2005).

To calculate the indexes the data concerning the neoplasm morbidity rate, the tuberculosis morbidity rate, the neoplasm mortality rate, the tuberculosis mortality rate and the infant mortality rate were taken from official sources (Gosudarstvennyy doklad, 2014). The results of calculating the *RHII* values are shown in table 1.

Table 1

The regional health integral index (*RHII*) for municipalities of the Ryazan region

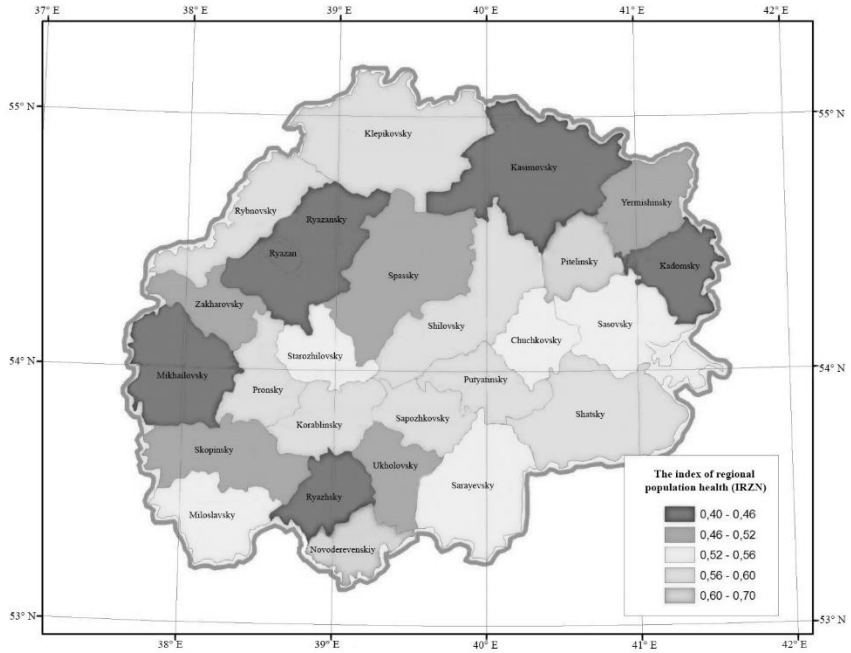
No	Municipality	Regional health integral index	No	Municipality	Regional health integral index
1.	Ryazan city	0.40	**14.**	Rybnovsky district	0.60
2.	Yermishinsky district	0.52	**15.**	Ryazhsky district	0.46
3.	Zakharovsky district	0.55	**16.**	Ryazan district	0.40
4.	Kadomsky district	0.45	**17.**	Sapozhkovsky district	0.60
5.	Kasimov district	0.40	**18.**	Sarajevo district	0.56
6.	Klepikovsky district	0.50	**19.**	Sasovskiy district	0.54
7.	Ship district	0.63	**20.**	Skopinsky district	0.52
8.	Miloslavsky district	0.60	**21.**	Spassky district	0.50
9.	Mikhailovsky district	0.40	**22.**	Starozhilovsky district	0.53
10.	Novoderevensky district	0.65	**23.**	Uholovsky district	0.50
11.	Pitelinsky district	0.70	**24.**	Chuchkovsky district	0.54
12.	Pronsky district	0.57	**25.**	Shatsky district	0.60
13.	Putyatinsky district	0.60	**26.**	Shilovsky district	0.57

Source: author's calculations based on Gosudarstvennyy doklad, 2014; Sleptsova, 2012

The value of the *RHII* varies from zero to one. Zero corresponds to the worst estimate, one to the best state. The *RHII* values are concentrated in the range 0.4-0.7. The results of classification of districts of the Ryazan region by the level of population health are shown in figure 1. The first group, characterized by a generally healthy level of health, includes 2 districts of the study region. Here, the *RHII* is maximum and has a value of at least 0.7 and 0.65, respectively. The second, most numerous group, characterized by a satisfactory level of health of the population (the *RHII* in the range of 0.56-0.60) includes eight districts. The group with a low level of regional health includes the territories of 5 municipal districts which are characterized by the *RHII* within 0.52-0.56.

The group with a low level of regional health includes the territories of 5 municipal districts with the *RHII* in the range of 0.46 -0.52. As a result of the analysis, 6 territories were assigned to the group with a poor level of population health. They are the regional centre Ryazan and Ryazhsky, Kadomsky, Kasimovsky and Mikhailovsky districts (the *RHII* within 0.40 - 0.46). The typological classification of the territory of the region by medical and geographical indicators allowed us to identify areas with an unfavourable medical and geographical situation, which requires more

attention to them, administrative bodies, health authorities and environmental organizations. Areas with adverse conditions require more detailed research to determine the cause of their occurrence.



Source: author's calculations based on Gosudarstvennyy doklad, 2014; Semenova, 2010

Fig. 1. **The population health status for municipal districts of the Ryazan region**

To identify depending on the level of regional health from negative environmental effects, the combined ranking for districts in the Ryazan region was made in 2010. The two indicators were used for this purpose - the *RHII* and the integral indicator of assessment of geo-ecological situation in the region. It should be noted that the integral indicator of assessment of geo-ecological situation in the region was calculated earlier (Sleptsova, 2012). Table 2 shows the results of the study.

Table 2

Combined ranking of the territory of the studied region by the size of the *RHII* and the geo-ecological situation in the Ryazan region

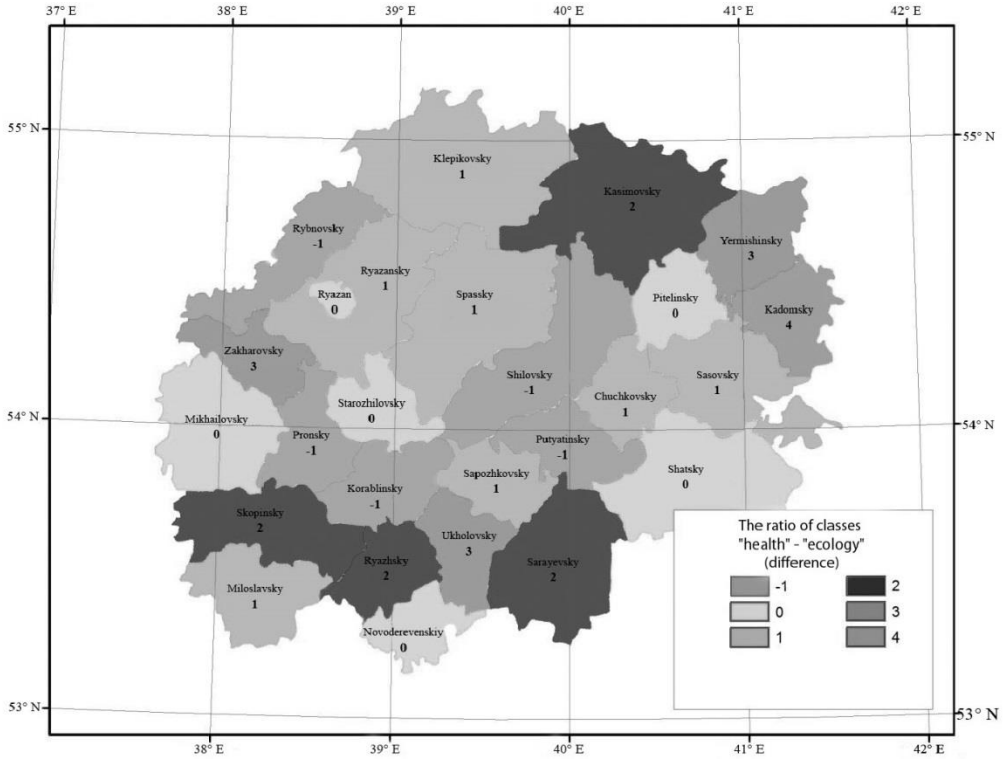
No	Municipality	Integral assessment of the geo-ecological situation in the region	Regional health integral index	No	Municipality	Integral assessment of the geo-ecological situation in the region	Regional health integral index
1.	Ryazan city	critical	0.40	**14.**	Rybnovsky district	tense	0.60
2.	Yermishinsky district	satisfactory	0.52	**15.**	Ryazhsky district	tense	0.46
3.	Zakharovsky district	satisfactory	0.52	**16.**	Ryazan district	critical	0.40
4.	Kadomsky district	satisfactory	0.45	**17.**	Sapozhkovsky district	favourable	0.60
5.	Kasimov district	spicy	0.40	**18.**	Sarajevo district	favourable	0.56
6.	Klepikovsky district	tense	0.58	**19.**	Sasovskiy district	tense	0.54
7.	Korablinsky district	tense	0.60	**20.**	Skopinsky district	tense	0.52
8.	Miloslavsky district	satisfactory	0.54	**21.**	Spassky district	spicy	0.50
9.	Mikhailovsky district	critical	0.45	**22.**	Starozhilovsky district	tense	0.53
10.	Novoderevensky district	favourable	0.65	**23.**	Uholovsky district	favourable	0.50
11.	Pitelinsky district	favourable	0.70	**24.**	Chuchkovsky district	tense	0.54
12.	Pronsky district	critical	0.57	**25.**	Shatsky district	tense	0.60
13.	Putyatinsky district	tense	0.60	**26.**	Shilovsky district	spicy	0.57

Source: author's calculations based on Gosudarstvennyy doklad, 2014; Sleptsova, 2012

The analysis showed that for the first group of municipalities, characterized by a relatively good state of health, corresponds to favourable environmental situation for the second group with satisfactory levels of health – satisfactory and ecological situation, for the group of districts with low level of regional health characterized by acute and serious ecological situation in the group with low level of regional health - a tense and acute ecological situation in the group with unfavorable levels of health are mainly dominated by acute and critical environmental situation.

Standard procedures for spatial analysis in GIS were used to obtain quantitative estimates that characterize the above relationships and to solve the problem of zoning the territory of the Ryazan region according to the degree of influence of geo-ecological factors on the health of the population. In particular, thematic maps describing the geo-ecological situation and health status of the population of municipal districts of the Ryazan region, presented in vector form, were converted to raster. Further, a reclassification procedure was carried out, as a result of which the information presented on the maps was brought to a single scale (10 classes in each, ranked by increasing environmental and health burden and deterioration, respectively), which allowed a wide range of operations to be performed with them in the future. In particular, a raster layer overlay (subtraction) operation was performed, which resulted in a scheme reflecting the degree of overlap of classes that characterize the environment and health for each district.

Analysis of the data shown in the diagram shows a significant causation of the incidence of the current environmental situation. So, in 5 districts, a complete match of classes is found. In 12 districts, there is a discrepancy of 1 class (with 4 maximum possible).



Source: author's calculations based on Gosudarstvennyy doklad, 2014; Prohorov, Tikunov, 2005

Fig. 2. **Zoning of the Ryazan region territory according to the degree of influence of geo-ecological factors on the population health**

Consequently, for 17 districts of the Ryazan region out of 26 (65.4%), the existence of a significant link between the environmental situation and the health of the population has been proven. At the same time, the connection of these characteristics is more evident in areas with a complex environmental situation and is typical for territories located in the Central and Eastern parts

of the region. The largest deviations from the General trend (2 or more classes) are typical for districts located in the North-Western and southern parts of the region. Here, the health status of the population is significantly worse than could be predicted based on an assessment of the environmental situation. It is obvious that several other factors and processes are of decisive importance in these areas.

Conclusions and suggestions

Thus, the carried out zoning of the territory of the Ryazan region according to the degree of influence of environmental factors on the health status of rural population leads to the conclusion that intra-regional differentiation of the health status of the population largely corresponds to distribution of background pollution of the area that allows geographically-temporal changes of the index of regional population health regarded as the appropriate indicator of changes in environmental quality. When establishing the connection between these indicators based on medical and demographic statistics, it is concluded that the quality of the human environment is decreasing and this decrease is a negative result of economic activity.

Bibliography

1. Curtis, S. (2004). Health and Inequality: Geographical Perspectives; Sage: Thousand Oaks, CA, USA.
2. Chenjing, F., Wei, O., Li, T., Yan, S. and Wensheng, M. (2019). Elderly Health Inequality in China and its Determinants: A Geographical Perspective. International Journal of Environmental Research and Public.
3. Gosudarstvennyy doklad (2014). O sanitarno-epidemiologicheskoy obstanovke v Ryazanskoy oblasti v 2016 godu. // Ryazan'. Rospotrebnadzor. - 120 p.
4. Kiryushin, V. A., Konopleva, V. I., Akutin, E. K., Kuzina, N. A. (2002). Frequency of Isolation and Species Composition of Pathogens of Intestinal Infections in Open Water. Microbiology and Biotechnology of the XXI Century. Materials of the International Conference. Minsk: Mikrobio. - 41 p.
5. Kovalchuk, T. U. (2009). Gigiyenicheskaya otsenka sostoyaniya atmosfernogo vozdykha I zdorov'ya naseleniya prigorodnykh zon promyshlennogo tsentra. Ryazan'. - 237 p.
6. Kurolap, S. A., Klepikov, O. V. (2012). Integral'noe mediko-ehkologicheskoe zonirovanie kak osnova regional'noj strategii ustojchivogo razvitiya Voronezhskogo regiona / S. A. Kurolap, O. V. Klepikov. // Vestnik Tambovskogo universiteta. Ser. Estestvennye i tekhnicheskie nauki. No 2, pp. 516–519.
7. Lamnisos, D., Middleton, N. (2019). Geodemographic Area Classification and Association with Mortality: An Ecological Studyof Small Areas of Cyprus, Tom 16, Release 16, No 2927.
8. Lyapkalo, A. A., Dementiev, A. A., Tsurgan, A. M. (2001). Risk dopolnitel'nykh smertey ot vozdeystviya vzveshennykh v gorodakh tsentral'noy Rossii. Upravleniye riskam chrezvychynykh situtsiy. / Shestaya Vserossiyskaya nauchno-practicheskaya konferentsiya. Moskva, pp. 338-340.
9. Mazhayskiy, Yu. A., Evtyukhin, V. A., Reznikova, A. V. (2001). Ekologiya agrolandshafta Ryazanskoy oblasti. Monografiya. M.: Izdatel'sstvo MGU. - 93 p.
10. Malhazova, S. M. (2001). Mediko-geograficheskij analiz territorij: kartografirovanie, otcenka, prognoz. / M.: Nauchnyj mir. – 240 p.
11. Meng, L., Huang, J. (2018). Assessment of Rural Ecosystem Health and Type Classification in Jiangsu Province. China. Volume 615, pp. 1218-1228.
12. Prohorov, B. B., Tikunov, V. S. (2005). Mediko-demograficheskaya klassifikaciya regionov Rossii // Problemy prognozirovaniya. No 5, pp. 142–152.
13. Semenova, A. N. (2010). Analiz sostoyaniya zdorov'ya naseleniya Krasnodarskogo kraya: geograficheskiy aspect. Krasnodar, 160 p.
14. Sleptsova, I. N. (2012). Integral'naya otcenka geoecologicheskoy situatcii v Ryazanskoy oblasti. / Byulleten' Moskovskogo Gosudarstvennogo Oblastnogo universiteta. No. 2, p. 97-100.
15. The World Health Organization (2012). Environmental Health Inequalities in Europe. Retrieved: http://www.euro.who.int/__data/ assets/pdf_file/0010/157969/e96194.pdf. Access: 10.02.2020.

Proceedings of the 2020 International Conference "ECONOMIC SCIENCE FOR RURAL DEVELOPMENT" No 54
Jelgava, LLU ESAF, 12-15 May 2020, pp. 79-85
DOI: 10.22616/ESRD.2020.54.010

GASIFICATION MODEL AS A FACTOR IN SUSTAINABLE DEVELOPMENT OF RURAL AREAS

Oleg Chekmarev[1], Doctor of economics/associate professor; **Pavel Lukichev**[2], Doctor of economics/professor; **Pavel Konev**[3], PhD in economics/ associate professor
[1]Saint-Petersburg State Agrarian University, Russia; [2]Balic State Technical University "VOENMEH", Russia; [3]Leningrad state University named after A. S. Pushkin, Russia

Abstract. Sustainable rural development implies balancing of economic, social and environmental factors affecting quality of life. Achieving sustainable development is impossible without ensuring access of rural communities to uninterrupted and cost-effective supply of energy. High-quality socio-economic infrastructure for rural areas implies constant physical and economic access of households to energy resources. The purpose of the study is to develop recommendations for economically and environmentally efficient energy supply to the rural population. To achieve this goal, the following tasks are solved. Firstly, the environmental and economic advantages of using gas as a source of energy supply to the rural population are revealed. Secondly, calculations and comparative analysis of various gas supply options are carried out to ensure sustainable development of rural areas. Thirdly, cost-effective gas supply options are substantiated, depending on the characteristics of the population distribution. The article examines comparative efficiency of connections of rural communities to sources of gas supply against other methods of energy supply in rural areas. The analysis is made for purposes of regional planning for building a sustainable energy supply system for rural communities and does not provide for studying use of gas by non-household customers. The analysis takes into account settlement patterns of rural communities, economic and environmental factors, as well as the risks of ensuring the uninterrupted supply of necessary energy resources. Comparative advantages and disadvantages of connections to distribution pipelines vs. use of gasholders are evaluated. The paper analyses one of the regions of the North-West Federal District of the Russian Federation.

Keywords: rural areas, sustainable development, access to gas supply, economic efficiency.
JEL code: R22, R29

Introduction

The level of access of communities to gas supply remains quite low in Russia. This is particularly the case for rural communities. For example, the level of access of communities to gas supply in rural Russia amounted to 59.4 % as of 01/01/2019, while in 2005 it was 34.8 %. At the same time, the level of access of urban communities to gas was 71.4 % at the beginning of 2018. In 2015, the level of connection to gas mains of towns in the Leningrad Region has amounted to 78.4 %, and in rural areas it has achieved 42.6 % only (The five-year program, 2019). Consequently, there is a significant lag in these processes in rural areas and the pace of connecting communities in different regions is diverse at the background of the positive dynamics in the general level of connection to gas supply.

It is generally agreed that the household sector is one of the most important energy consumption sectors (Wang Z. et al., 2011). Percent in energy consumption on the housing sector was 26 % in Japan, in the US – 25 %, in Canada – 24 %, at least 16 % - in Finland, in the world as a whole – 31 % (Swan G., Ugursal V., 2008). It was shown that not all factors have equal important in determining the pattern and behaviour of household energy consumption for different areas due to differences in socio-economic settings, environmental factors, cultural factors as well as the average level of development in the area (Danlami A. H. et al., 2015).

General feasibility of using gas as a source of energy supply for households stems from its high enough environmental safety, versatility of use (for heating, electricity, hot water, cooking) and relatively low cost of supplying gas via pipelines. Negative factors limiting the possibility of using gas for energy supply of residential premises are the high cost of laying pipelines and arranging gas distribution infrastructure and increased hazard of explosion at gas supply facilities.

Regional authorities are actively involved in funding development of gas supply infrastructure. Budget constraints make it necessary to evaluate economic efficiency of various models of providing gas to households. The article explores alternative models for gas supply, such as supplying a gas pipeline with and use of liquefied hydrocarbon gases in households with installation of individual gasholders. Alternatives are analyzed from the point of view of comparative economic efficiency of their use for providing gas to rural communities with different density of settlement and degree of remoteness from gas mains. The issue of reliability of household gas supply system is consistent with the main elements of sustainable development. Among the latter we may emphasise support and development of rural areas potential and balancing between economic and environmental development goals (Chekmarev O. P., Konev P. A., 2018).

Materials and methods

Environmental friendliness of using gas for household energy supply has been confirmed by numerous studies (Aksyutin O. E. et al., 2017). Use of natural gas and LPG makes it possible to reduce emissions of pollutants and carbon dioxide multiply compared to other types of fuel, both at the production stage and at the stage of operation of energy supply facilities. Ensuring access of communities to gas supply is the most important element in maintaining ecological balance and it is demanded from the point of view of the goals of sustainable development of territories. Electricity is a more environmentally friendly source of energy for households. Environmental pollution at the place of use occurs at a minimum rate. Almost two thirds of electricity generated in Russia is provided by thermal power plants. The latter harm the environment not less, but taking into account the structure of the fuel used and the generation efficiency (not exceeding 34 %), and more than as a result of gas burning within the household. Placing power plants in remote areas from population centres can be a positive factor in distribution of environmental pressure on the environment. In this case, additional problems arise due to increased costs of power generation in remote areas, and the loss of electricity, reaching 10 percent or more, in transmission over long distances (Bakai E. O., 2017).

The use of natural gas as a source of energy supply has a number of environmental advantages. Approximately 90 percent of natural gas produced is delivered to customers as useful energy. By comparison, only 30 percent of energy converted to electricity reaches consumers. In particular lower gas prices have likely been a moderate contributor to the decrease in American carbon emissions over the last five years (Brehm, 2019). Using natural gas instead of oil or coal produces less chemicals that contribute to greenhouse gases, acid rain, smog, and other harmful forms of pollution. In the long run more natural gas generation should come online changing the way power plants of all fuel types are dispatched (Holladay J. S., LaRiviere J. 2014). Consequently, natural gas is the ultimate alternative fuel of the future.

Gas supply to the region’s households can be provided either with pipeline (natural) gas, which mainly consists of methane, or with liquefied petroleum gas (LPG), consisting mainly of a mixture of propane and butane in different proportions. The condition for providing households with pipeline (natural) gas is the need to build trunk and other gas pipelines, and in general - creation of gas distribution network, requiring significant capital investments. Creating a single capital distribution network is not required to supply LPG to household using gas storage tank (gasholder) within the household. In this case, the costs of installation of the gasholder and arranging gas pipes within the household are required. The latter equally applies to pipeline gas. In addition, use of gas tanks requires development of roads to ensure delivery of LPG to the users. The road infrastructure is of a

more universal nature, relative to the gas distribution network of natural gas, and can be used to solve issues of mobility, health, safety and many others.

Providing households with gas has the advantage of having multiple uses of it. In fact, the presence of gas in the household provides potential for electrification, heating, hot water supply and cooking. That is, it can solve most of the pressing problems of households. Regional authorities, however, should create conditions for availability of additional essential lifelines to ensure sustainability of the energy supply to households. First of all, we are talking about electric power supply, as well as about the options to use local resources (wood, peat etc.) in case of emergencies.

The data posted in table. 1 taken and calculated according to information on tariff rates in force in the Leningrad region for the population of rural areas, directories of conversion factors and current standards for the characteristics of individual fuels. The transfer in euro was carried out based on the average exchange rate of the ruble against the euro for 2019 at 72.4 rubles / EUR. From the tabular data it can be seen that natural gas has the lowest cost per kilowatt-hour of energy. For firewood, when calculating this cost, the coefficient of efficiency of conversion to thermal energy (0.8) was additionally used, since it significantly differs from the efficiency of using other types of energy carriers (0.9-0.95). Given the efficiency of electricity generation within the household, the current supply of electricity to households at the level of comparable electricity prices can be provided only with natural gas.

Economic advantage of natural gas is its price per unit of reproducible energy (Table 1).

Table 1

Cost of energy generated from different types of energy products without taking efficiency of final use into account

Type of fuel	Unit	Unit price	Price EUR•kWh-1
LPG for gasholders (propane-butane mixture 70-30)	EUR•l-1	0,27	0.04
Pipeline gas (methane assumed)	EUR•(m3)-1	0,09	0.01
Chipped firewood, natural moisture content	EUR•(m3)-1	23,00	0.02
Electricity	EUR•kW-1	0,06	0.06

Source: author's calculations based on Zemsky G. T. (2016). Flammable Properties of Inorganic and Organic Materials: a Reference Book. Moskva: VNIIPO. p. 337; Tariffs and Pricing Policy Committee of the Leningrad Region Order No. 533-p dated 12/20/2018 "On Setting Tariffs for Electric Energy Supplied to the Population of the Leningrad Region in 2019".

Other types of energy carriers can successfully compete with electricity to solve other problems of life support in terms of current costs (excluding initial capital investments), as noted in the table.

When making decisions about the model of gas supply to households in rural areas, regional authorities should take into account the difference between the price of pipeline gas and LPG, the amount of capital investments in gas distribution networks and the ratio of the service life of these networks to the service life of gasholders. Analysis of operational characteristics shows that the average service life of gas networks up to the time of their overhaul is, according to the current GOST standards, from 25-30 (for metal) to 50 years (for polymer) gas pipelines.

The average actual costs for the construction of gas pipelines are shown in Table 2.

Table 2

Calculation of the average cost per kilometre of gas infrastructure development as part of the gas infrastructure development programme of Gazprom Gas Distribution Leningrad Region PJSC for the years 2019-2023 due to special allowances for the tariff for transporting natural gas to users

Years	Estimated cost, EUR mln	Pipeline length, km	Unit cost, EUR mln•km-1
2019	7.03 including previous costs incurred (3.16)	80.31	0.09
2020	3.85	65.58	0.06
2021	4.25	29.62	0.14
2022	4.37	40.05	0.11
2023	4.51	14.00	0.32
2019-2023	24.03	230.01	0.10

Source: author's calculations based on The Order of the Committee on the Fuel and Energy Complex of the Leningrad Region, 2018

The average cost of laying one kilometre of the gas distribution network in the Leningrad Region as part of one of the gas infrastructure development programmes is planned for 2019-2023 at the level of EUR 102.95 K•km $^{-1}$ (K = thousand). Fluctuations in the cost of the data are explained by a mismatch the timing of the works and the commissioning of the gas distribution network. Inter-settlement gas pipelines are the main construction sites under this programme.

Other gas infrastructure development programmes that focus on distribution gas pipelines within the settlements have an average cost of laying a kilometre of gas distribution infrastructure from EUR 26.67 K to EUR 53.33 K•km^{-1} (The Order of the Committee on the Fuel and Energy Complex of the Leningrad Region, 2018; Decree of the Government of the Leningrad Region, 2018). In general, gas infrastructure development programmes of the region with pipeline gas are funded from several sources: regional and local government funds (in some regions the federal government funds are also involved), funds of Gazprom PJSC and its subsidiaries, as well as through special allowances to the tariff for transporting natural gas to users. The latter is introduced by regional services that control tariffs and represents a mark-up within the framework of gas tariff for individual groups of users (mainly commercial enterprises). Table 3 presents several programmes and plans of the Leningrad Region within which gas infrastructure development of the region is carried out.

The regional authorities of the Leningrad Region incur significant budget expenditures to finance gas infrastructure development programmes. The share of budget expenditures for gas infrastructure development, taking into account the funds of Gazprom PJSC, is at least 35–40 % of the total cost of gas infrastructure development projects in the region. Accounting for government regulation measures largely determines the efficiency of energy supply to rural households (Lukichev P. M., 2016).

Therefore, it is necessary to determine the economic feasibility of conducting pipeline gas to households and to create a method for choosing a gas infrastructure development model between the "pipeline gas" and "gasholder" alternatives. Solving this problem requires comparing the average cost of constructing gas pipelines and other gas infrastructure facilities, taking into account the timing of their operation, with the cost of installing gasholders. The service life of gasholders, judging by the suppliers 'passports, is 20–25 years, which is comparable to metal gas pipelines and is approximately two times shorter than that of polymer pipes for gas supply networks. The cost of installing a gasholder and the gas distribution system in an average household (rural house) is about EUR 4 K. When bringing the gas line to the houses and indoors, it is also required to spend funds in the range of RUR 100-150 K per average rural house.

Consequently, operation of the gas distribution system within the household using gasholder has a comparable service life. The downside is that it is necessary to incur additional costs for supply of pipeline gas in the range of EUR 1.33-2.00 K for a standard rural house with a floor area of 100-120 m^2. The advantage of this solution is that, compared with the pipeline gas option, it does not require construction of a gas supply pipeline. The authors proceed from the assumption that all additional costs of gas infrastructure development with gasholders are borne by the regional authorities, just as it occurs with the costs for construction of intra-settlement gas pipelines under the option of supplying pipeline gas. The government should compensate the households for the difference in prices per unit of energy supplied in the form of LPG and in the form of pipeline gas to ensure equal access of households to the gas infrastructure. This difference is EUR 0.03 per kWh as seen in Table 1. If a standard household of three of its members uses no more than 4,000 litres per year LPG (28161 kWh), then the annual compensation for the cost of LPG use should be EUR 845. Accordingly, for 25 years of operation of a gasholder, undiscounted expenses of the region for compensation, the price of LPG will amount to EUR 21.12 K per standard household, and taking into account discounting, with a discount rate of 6.25 % (the current key rate of the Central Bank of the Russian Federation) – EUR 10.55 K. Thus, provision of a separate conventional household with gas using gasholders will cost the government no more than EUR 13.9 K of the present value. At the same time, the costs in the first year of installation will not exceed EUR 4.2 K.

Table 3

Volumes of funds appropriated for various gas infrastructure development programmes of the Leningrad Region

Programme	Years	Estimated cost, EUR mln	Source of funding
Gas infrastructure development programme of PeterburgGaz LLC for connection of housing and utility facilities, in the Leningrad Region to gas for the years 2018-2022	2018-2022	11.21	Special allowance to the tariff for transportation of natural gas to users
Gas infrastructure development programme of Gazprom Gas Distribution Leningrad Region JSC for the years 2019-2023	2019-2023	24.89	Special allowance to the tariff for transportation of natural gas to users
Comprehensive development of social and engineering infrastructure for rural communities, objects of the subprogramme "Sustainable development of rural territories of the Leningrad Region" of the governmental programme of the Leningrad Region "Agricultural development of the Leningrad Region"	2014-2024	18.44	Regional and local government funds
Subprogramme "Gas infrastructure development of the Leningrad Region" of the governmental programme of the Leningrad Region "Ensuring sustainable operation and development of utilities and engineering infrastructure and improvement of energy efficiency in the Leningrad Region"	2018-2024	95.36	Regional and local government funds

Source: author's calculations based on The Order of the Committee on the Fuel and Energy Complex of the Leningrad Region, 2018; Decree of the Government of the Leningrad Region, 2018; Resolution of the Government of the Leningrad Region, 2018; The Order of the Committee on the Fuel and Energy Complex of the Leningrad Region, 2018.

Research results and discussion

As a result, it becomes possible to assess feasibility of connecting sparsely populated communities and communities remote from gas mains to pipeline gas. For example, if we take the cost of laying a gas pipeline for EUR 64.36 K / km, then, with the current introductory gas pipeline with a total length of even 1 km, it is not expedient from the point of view of spending government funds for programmes of providing gas to households if it provides less than 5 standard households with gas.

Financing a gas supply scheme using gasholders by the region would be economically feasible in this case.

LPG market is more competitive than the market of pipeline gas in Russia. While the pipeline gas is provided, in fact, by one company, LPG can be produced and delivered by a much wider number of suppliers from gas and petrol industry. Therefore, the region's active policy of maintaining competition in the LPG market can mitigate risks of reducing the economic affordability of gas supply for households.

Conclusions, proposals, recommendations

1) Natural gas and LPG have a high environmental safety in comparison to other types of fuel and allow organizing simultaneous provision of most of utility services to households. Ensuring sustainability of the delivery of public services to households, in addition to gas supply, also requires supplying electricity, and, in some cases, stimulating organization of energy supply using local resources.
2) The main factors for the region to choose a gas connection scheme for individual groups of households ("pipeline gas" or "gasholders") are: difference in tariffs for pipeline gas and LPG, cost of capital expenditures for building gas supply infrastructure, remoteness and density of households in the territory, lifetime of gas supply systems, structure of sources of funding for gas infrastructure development programmes, model to ensure the level of competition in the LPG market, capacities of the region in providing long-term guarantees for price subsidies and LPG.
3) Preparation of documents for territorial planning and location of households, especially in the framework of the settled farm model of settlements, requires not only gas infrastructure development plans for pipeline gas and measures to regulate LPG prices, but also subsidization of costs for supplying individual households with gas using individual gasholders and communal gasholders in remote areas with dense arrangement of households.

Bibliography

1. Oficial'nyj sajt PAO "Gazprom». (PJSC Gazprom.) [13.03.2019]. Retrieved: http://www.gazprom.ru/press/news/2019/february/article476017 /; Utverzhdena pyatiletnyaya programma razvitiya gazosnabzheniya i gazifikacii Leningradskoj oblasti. (The Five-Year Program for the Development of Gas Supply and Gasification of the Leningrad Region has been approved). [online] [13.03.2019]. Retrieved: http://www.gazprom.ru/press/news/2016/september/article283981/.
2. Wang, Z., Zhang, B., Yin, J., Zhang, Y. (2011). Determinants and Policy Implication of household Electricity Saving Behaviour: Evidence from Beijing China. Energy Policy, vol. 39, pp. 3550-3557.
3. Swan, G., Ugursal, V. (2008). Modeling of End-use Energy Consumption in the Residential Sector: A Review of Modeling Techniques. Renewable and Sustainable Energy Reviews, vol. 13, pp. 1819–1835.
4. Danlami, A.H., Islam, R., Applanaidu, S.D. (2015). An Analysis of the Determinants of Households' Energy Choice: A Search for Conceptual Framework. International Journal of Energy Economics and Policy, vol. 5(1), pp. 197-205.
5. Chekmarev O.P., Konev P.A. (2018). Ustojchivoe razvitie: podhody k opredeleniyu (Sustainable Development: Approaches to the Definition). Proceedings of the International Academy of Agricultural Education, vol. 38, pp. 109-113.
6. Aksyutin O.E., Ishkov A.G., Romanov K.V., Pystina N.B., Akopova G.S., Kosolapova E.V. (2017). Ekologicheskaya effektivnost' proizvodstva i ispol'zovaniya prirodnogo gaza na osnove ocenki polnogo zhiznennogo cikla. (Ecological Efficiency of Production and Use of Natural Gas Based on the Assessment of the Full Life Cycle). Scientific and Technical Collection. Vesti gas science, vol. 5(33), pp. 3-11.
7. Bakai E.O. (2017) Ekonomiko-statisticheskij analiz poter' pri peredache elektroenergii po vysokovol'tnym provodam v Rossii (Economic-Statistical Analysis of Losses in the Transmission of Electricity through High-voltage Wires in Russia). Bulletin of the South Ural State University. Series: Economics and Management, vol. 11, no. 4, pp. 117-125.
8. Brehm, P. (2019). Natural Gas Prices, Electric Generation Investment, and Greenhouse Gas Emissions. Resource and Energy Economics, vol. 58, pp. 101-116.
9. Holladay J.S., LaRiviere J. (2014). The Impact of Cheap Natural Gas on Marginal Emissions from Electricity Generation and Implications for Energy Policy. Working Paper. Retrieved: http://web.utk.edu/~jlarivi1/docs/HL_gas.pdf.

10. Komitet po tarifam i cenovoj politike Leningradskoj oblasti Prikaz №533-p ot 20.12.2018 «Ob ustanovlenii tarifov na elektricheskuyu energiyu, postavlyaemuyu naseleniyu Leningradskoj oblasti v 2019 g.» (Tariffs and Pricing Policy Committee of the Leningrad Region Order No. 533-p dated 12/20/2018 "On Setting Tariffs for Electric Energy Supplied to the Population of the Leningrad Region in 2019").
11. Lukichev P.M. (2016). Regulatory Challenges for the Russian High North During the Current Economic Crisis. Management in the High North Young researches' contribution. Collection of essays, Volume 2. Edited by Bourmistrov A., Dybtsyna E., Nazarova N. – Nord universitet, Utredning nr. 9, Bodo, p. 189-198.
12. Postanovlenie Pravitel'stva Leningradskoj oblasti ot 20.09.2018 N 348 "O vnesenii izmeneniya v postanovlenie Pravitel'stva Leningradskoj oblasti ot 9 marta 2016 goda N 54 "Ob utverzhdenii Perechnya ob"ektov podprogrammy "Ustojchivoe razvitie sel'skih territorij Leningradskoj oblasti" gosudarstvennoj programmy Leningradskoj oblasti "Razvitie sel'skogo hozyajstva Leningradskoj oblasti" i o vnesenii izmenenij v postanovlenie Pravitel'stva Leningradskoj oblasti ot 29 dekabrya 2012 goda N 463 "O gosudarstvennoj programme Leningradskoj oblasti "Razvitie sel'skogo hozyajstva Leningradskoj oblasti". (Decree of the Government of the Leningrad Region of 20.09.2018 N 348 "On Amendments to the Decree of the Government of the Leningrad Region of March 9, 2016 No. 54" On Approving the List of Objects of the Subprogram "Sustainable Development of Rural Areas of the Leningrad Region" of the State Program of the Leningrad Region "Agricultural Development of the Leningrad Region "and on Amending the Decree of the Government of the Leningrad Region of December 29, 2012 No. 463" On the State Program of the Leningrad Region "Development of Agriculture Sector of the Leningrad Region").
13. Postanovlenie Pravitel'stva Leningradskoj oblasti ot 20.09.2018 N 342 "O vnesenii izmeneniya v postanovlenie Pravitel'stva Leningradskoj oblasti ot 18 dekabrya 2015 goda N 482 "Ob utverzhdenii Perechnya ob"ektov podprogrammy "Gazifikaciya Leningradskoj oblasti" gosudarstvennoj programmy Leningradskoj oblasti "Obespechenie ustojchivogo funkcionirovaniya i razvitiya kommunal'noj i inzhenernoj infrastruktury i povyshenie energoeffektivnosti v Leningradskoj oblasti". (Resolution of the Government of the Leningrad Region of September 20, 2018 N 342 "On Amendment to the Resolution of the Government of the Leningrad Region of December 18, 2015 No. 482" On Approval of the List of Sub-Program Facilities "Gasification of the Leningrad Region" of the State Program of the Leningrad Region " Infrastructure and Energy Efficiency in the Leningrad region").
14. Rasporyazhenie komiteta po toplivno-energeticheskomu kompleksu Leningradskoj oblasti ot 04.09.2018 N 57 "Ob utverzhdenii programmy gazifikacii OOO "PeterburgGaz" ob"ektov zhilishchno-kommunal'nogo hozyajstva, raspolozhennyh na territorii Leningradskoj oblasti na 2018-2022 gody i o priznanii utrativshimi silu nekotoryh rasporyazhenij komiteta po toplivno-energeticheskomu kompleksu Leningradskoj oblasti". (The Order of the Committee on the Fuel and Energy Complex of the Leningrad Region of 09/04/2018 N 57 "On the Approval of the Gasification Program of PeterburgGaz LLC of Housing and Communal Facilities Located in the Leningrad Region for 2018-2022 and on the Recognition of Certain Orders of the Fuel Committee -Energy Complex of the Leningrad Region").
15. Rasporyazhenie komiteta po toplivno-energeticheskomu kompleksu Leningradskoj oblasti ot 24.12.2018 N 95 "Ob utverzhdenii programmy gazifikacii AO "Gazprom gazoraspredlenie Leningradskaya oblast'" na 2019-2023 gody". (The Order of the Committee on the Fuel and Energy Complex of the Leningrad Region of 12/24/2018 N 95 "On Approval of the Gasification Program of Gazprom Gas Distribution Leningrad Region for 2019-2023").
16. Zemskij G. T. (2016). Ogneopasnye svojstva neorganicheskih i organicheskih materialov: spravochnik (Flammable Properties of Inorganic and Organic Materials: a Reference Dook) Moskva: VNIIPO. p. 337.

Proceedings of the 2020 International Conference "ECONOMIC SCIENCE FOR RURAL DEVELOPMENT" No 54
Jelgava, LLU ESAF, 12-15 May 2020, pp. 86-97
DOI: 10.22616/ESRD.2020.54.011

MUNICIPAL COASTAL GOVERNANCE SYSTEM DEVELOPMENTS IN LATVIA: GOVERNANCE SEGMENTS, SECTORS AND INSTRUMENTS

Raimonds Ernsteins[1], Dr.habil.paed./Prof.; **Erika Lagzdina**[2], M.Env.Sc., **Ivars Kudrenickis**[3], Dr.ing./Asoc.prof. and **Anita Lontone-Ievina**[4], M.Env.Sc.
[1,2,3,4]University of Latvia, Riga, Latvia

Abstract. Integrated coastal management (ICM) is still challenge at any governance level, but, particularly, for the small local governments and scattered coastal communities, especially, when aiming for in complementary manner of all stakeholders to design and create, establish and collaboratively manage the municipal coastal governance (MCG) system, but in practice having limited, often not linked, elements or instruments for such system as is also the case in Latvia. The EU BONUS programme, supported BaltCoast project (2015-2018) in the Baltic Sea region to provide related studies with an internationally acknowledged methodology based on social-ecological system (SES) and stakeholder participation approaches – System Approach Framework (SAF), which was also adjusted for a particular local rural coastal governance process case in Latvia. Current study has been based on research-and-development (R&D) framework, conducted in the typical local coastal municipality of Salacgriva as a pilot territory applying case study research (CSR) methodology (complementary stakeholder interviews, document studies, observations etc.). The aim of the study was to explore in to the detail the rural local coastal governance shortcomings, analysing all the triple complementary governance dimensions - governance content, process and stakeholders' segments - and to recognize the main necessary preconditions for the local coastal governance process functioning and eventual governance system building elements. The findings of the research allow to propose also recommendations: for the local coastal governance process and system design in Latvian municipalities in general; for a range of approaches and basic pre-conditions to be taken into account - systems approach, complementarity and collaboration; also towards design and development of the mixed ICM application perspective for MCG. It was also recommended to develop MCG instruments, especially, coastal collaborative communication instruments – information, education, participation and coastal-friendly behaviour.

Key words: governance system design, preconditions, systems approach, complementarity, collaboration.
JEL code: Q20, Q57, Q58

Introduction

Integrated coastal management (ICM) is based on aims and tasks integration of coastal environmental protection with those of coastal areas wise use of resources and local development facilitation. This requires development of related policies and regulations, administration and planning, involving other tools and, particularly, stakeholder participation, towards governance system development, to perform that integration and adaptive management of all multiple interests and practices of different development sectors at all levels of administration (GESAMP, 1996; Christie, 2005; Ballinger, 2008; Ernsteins, 2010; Quesada, 2018;). Stakeholder involvement is considered beneficial for gaining trust, knowledge, reducing conflicts, though there is present concern that the public may not be sufficiently well-motivated to participate (Evans *et al*., 2018; Schumacher *et al*., 2018;). There is still a growing number of literature sources on how participatory processes can help adaptive management of socio-ecological systems (SES) such as coastal areas (Quesada *et al*., 2018; Schumacher *et al*., 2018; Wamsler, 2017); even coastal communities are not sufficiently informed and face difficulties in accessing-applying information (Stojanovic, 2007; Ballinger, 2008; Kalpakis *et.al*., 2019; Ernsteins, 2011; Lagzdina *et al*., 2017). System Analysis Framework (SAF) now is internationally recognized method for better ICM particularly building on **social-ecological systems** and **public involvement** for the whole project cycle (Ostrom, 2009; Hopkins, 2012). SAF

[1] Raimonds Ernsteins e-mail: raimonds.ernsteins@lu.lv
[2] Raimonds Ernsteins e-mail: erika.lagzdina@lu.lv
[3] Ivars Kudrenickis e-mail: ivars.kudrenickis@lu.lv
[4] Anita Lontone-Ievina e-mail: anita.lontone-ievina@lu.lv

methodology based on research and development (R&D) project frame has been step-by-step implemented in a pilot coastal rural municipality in Latvia - Salacgriva municipality, forming a narrow stretch along 55 km of coastline (around 10 % of the whole Latvia coast) with less as 9 000 inhabitants. SAF was methodologically adapted for the need of the local level municipal coastal governance (MCG) process (Kudrenickis, 2016, Ernsteins, et al., 2017) during international project BaltCoast ("A Systems Approach Framework for Coastal Research and Management in the Baltic", 2015-2018) co-financed by the Latvia government and EU BONUS programme. R&D project was aimed at studying limited coastal governance process in order to develop locally feasible tools for coastal resources and capacities for real governance development, using innovative approaches for Latvian MCG and existing variety of successful cases of both top-down and bottom-up general municipal management elements in Salacgriva community.

First stage of BaltCoast R&D project studies done in rural coastal municipalities of Latvia (Lagzdina, 2017; Ernsteins, 2019; etc.) brought us again to the general conclusions (Ernsteins, 2010; etc.) that there still are to be seen: limited understanding and acknowledgement of the diverse and accumulating, even not yet crucial, coastal governance process problems; lacking known and statutory recognized vision and related efforts for sustainable use of the coastal resources and services, except for general interest towards standard beach tourism infrastructure; especially, main participatory and adaptive, cross-sectorial and cross-level deficiencies in ICM (Ernsteins, 2011 and 2017a). Also during this first stage there were identified the five overall key **coastal governance process problems** (Ernsteins, 2019), and second stage of this R&D project continues with this study.

In Latvia, the initial developments of the overall national level coastal areas' spatial planning system were most welcomed as based now on Coastal Spatial Planning Strategy (2011-2017) and Coastal Public Infrastructure Development Plan (2016-2030), as first national coastal sectorial approach documents, being finally elaborated after long term strong pressure of science, municipal and public (NGO) stakeholder groups, and, also importantly, as some related steps towards general agreement and eventual implementation of EC Integrated Coastal Zone Management Recommendations (EC, 2002). At the same time, both mentioned national spatial planning documents and process around them, being multi-stakeholder supported (National Advisory Coastal Cooperation and Coordination Group) has been oriented almost only to the coastal public infrastructure planning, aimed at coastal tourism development, while also reducing its anthropological pressure. Even improvement and good coastal governance is recognized as the second coastal planning task, there is no strong requirement for integration of coastal issues and ICM principles (EC, 2002) into all statutory municipal planning documents, and the message perceived by municipalities is that coastal infrastructure is going to solve ICM issues. ICM is about creation and functioning of necessary **governance systems** (Ballinger, 2008; Ernsteins, 2011 and 2017a) that allow to integrate stakeholders' interests into the whole governance cycle participation process on full spectrum of coastal content issues (SES approach) to be managed by governance instruments (Ernsteins, 2017b).

Research approaches, frames and models

The whole R&D project and, particularly, research part was a complex set of the consequential steps, carried out in the pilot territory of the Salacgriva local rural coastal municipality. The activities were based on SAF approach and the **case study research** (CSR) methodology utilizing complementary set of mutually to be integrated methods, including field works, which were

conducted by the research team of the University of Latvia, Environmental Science Department, with involvement of Environmental Science master level students, after the necessary preparation steps during related study course (2015-2016). The aim of the study was to explore in the detail the rural local coastal governance shortcomings and existing positive experience as of one of most developed rural coastal municipalities in Latvia, analysing all the **triple complementary governance dimensions' model** - governance content, process and stakeholders' segments (Ernsteins et.al., 2017b) - and to recognize the necessary preconditions for the coastal governance system development. Ultimate aim for the CSR was also to establish interface between two methodologically defined processes: SAF, from one side, and the coastal and municipal development planning, from the other side, revealing new coastal municipal governance instruments and, particularly, drafting suggestions for **governance system developments** and coastal monitoring system, as well as later on preparing proposals for their integration into municipal planning. The Salacgriva coastal municipality was evaluated within the context of traditional complementarity of sustainable development (SD) dimensions and systemically integrated dimensional (methodological) sustainability model, focusing on nature environment (incl. coastal environment, risk environment, utility environment, and spatial environment), but within the broader perspective of the other SD elements – social, culture, economic, communication and governance, and spatial environments (Figure 1).

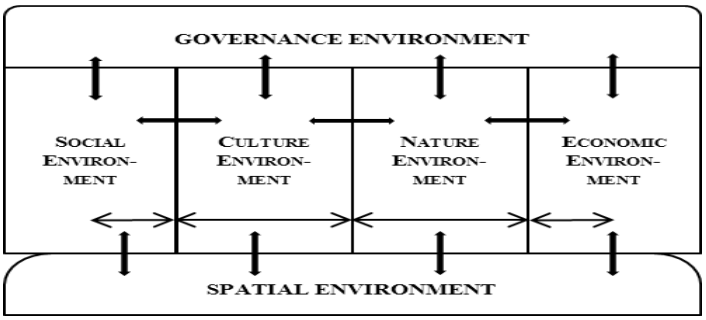


Fig. 1. **Enhancement of the traditional triple bottom line sustainable development dimensions' model into a six-dimensional frame for MCG content application (Ernsteins, 2010)**

A complex and interlinked coastal governance content system for the needs of this research and perspective development of action policies recommendations was split into four main **coastal governance content sectors:** 1. Coastal governance and communication; 2. Coastal infrastructure environment (including coastal technical, spatial planning); 3. Coastal socio-economic environment; 4. Joint coastal nature and cultural heritage. It provided systemic basis for exploring **sector-specific governance** ideas and appropriate instruments and tools for all stakeholders (governance segments).

Coastal stakeholders structuring into the groups was based on complementary **five governance segments model** (Figure 2) that consists of (Ernsteins, 2010): state environmental/coastal institutions (esp. regional agencies); local municipal institutions (incl. administration, service and utility companies);

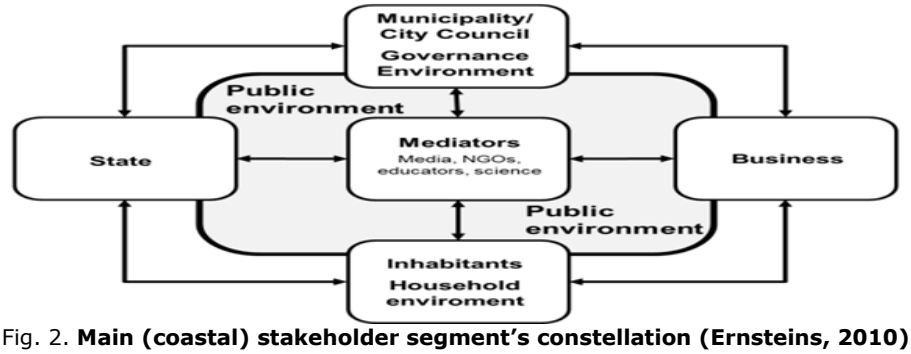


Fig. 2. **Main (coastal) stakeholder segment's constellation (Ernsteins, 2010)**

Salacgriva municipality located business companies; mediators segment (incl. non-governmental organizations (NGOs), villages' elders - community representatives; formal/ informal educators; media and various experts representing a science sector); and most significant stakeholder group was local inhabitants, analysed also from the coastal households' management perspective.

Subsequently, according to the development goal, the SD system approach, integration principle and complementarity of traditional governance instruments were used also further to elaborate coastal governance guidelines and testing compliance of their eventual implementation in the Salacgriva (and/or other) coastal municipality case. The coastal governance process shall be seen via all **governance cycle steps** - situation/problem analysis, policy design and formulation, policy planning, implementation/management and monitoring - but esp. looking for re-design/implementation of six main **governance instruments' groups** (Ernsteins, 2010) – political and legislative instruments, institutional and administrative, also planning instruments, as well as infrastructure and technological, economic and financial, also communication instruments (Figure 3). In general, for all coastal municipalities, MCG guidelines could be emphasizing the eventual coastal **cross-sector governance planning document,** both, as an eventually fully operational single/sectorial ICM (ICM sector approach) local statutory document and/or, at least, as a system-based structured pre-planning support document, providing a necessary content for coastal governance system issues to be integrated (ICM integration approach) into forthcoming municipal development statutory and also any voluntary planning processes and their produced documents.

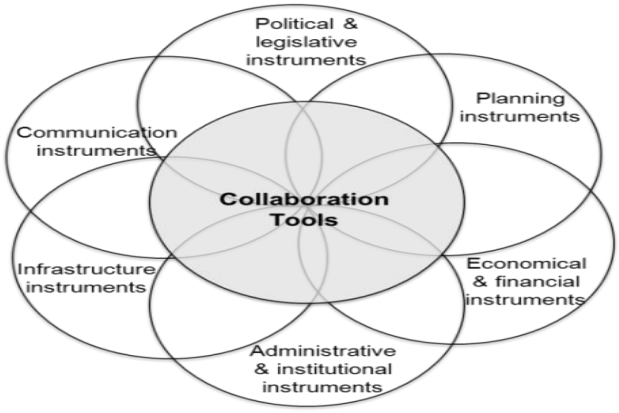


Fig. 3. **Governance instrument groups and complementary option for development of collaboration instruments (Ernsteins, 2010)**

Case study research methodology and methods

The following research methods and specialized approaches were applied for this CSR study.

1) Initially, during this stage of research, the **re-analysis of ICM elements'** presence was done (2015) together with the whole international consortium of the BaltCoast project (Jansen et al., 2016) by revisiting a number of methodologically profoundly selected cases of the ICM practices taken place during last decade and around the whole Baltic Sea. This was realized by addressing

the complex coastal problem-situations in order to study the best formerly used ICM approaches, principles and tools applications via the SAF methodology (Re-analysis was intended to serve as a preparatory step before a full scale application of SAF in the BaltCoast project's pilot sites, incl. Latvia (Lagzdina et.al., 2017a; 2017b). **Re-analysis included three Latvian cases** (two represent the port cities and one – a rural community) which were selected as the still most complete experience demonstrating application of the ICM principles in the municipal coastal management (Ernsteins et. al., 2017a). These cases were: 1) Setting-up of a voluntary municipal environmental licensing system in Ventspils town (1994-2009); 2) Bottom-up self-organized process for protection of the Pavilosta Grey Dune (1999-2007); and 3) Development of a voluntary spatial planning instrument in the Liepaja city –Thematic plan of coastal zone development (2014-2015).

2) All further steps of this research stage contributed to the analysis of MCG in Salacgriva municipality concerning MCG segments, process and content analysis sought for the integration assessment and first step to be mentioned was performed - MCG issues in the **municipal development planning and legal documents**. For this purpose, content analysis of 23 national and local level policy documents and regulations was done. It was complemented also by the analysis of information from 13 available **municipal and regional data bases** covering issues of local development and environment.
3) To fulfil SAF requirement for stakeholder involvement, **initial mapping of stakeholders** was done. Essential step was done already during first research stage (Ernsteins et. al., 2019) as a survey (2015) of the representatives from all key stakeholder groups, living directly at the coastal strip along the municipal coastline (stretching for all the 55 km along the Baltic Sea Riga Gulf East coast). **Interactive involvement** of stakeholders was ensured during different stages of the R&D project and in different formats – for this second research stage (2015-2016) it was an introductory seminar with municipal leaders and specialists; during implementation phase activities; and presentation of the results and final stage discussion in the seminar for representatives from the municipality.
4) **Semi-structured in-depth interviews** (2015) were conducted with 39 stakeholders representing all main governance segments as described above and revealed in Fig. 1. Particular and detailed list of interviewees is presented in the next table (Table 1). Content of the interviews was based on the mentioned triple complementary coastal governance dimensions - governance content, process (incl. all six main groups of governance instruments) and stakeholders' segments (Ernsteins et.al., 2017b).

Application of the classic planning method SWOT analysis revealed the strength and opportunities, weaknesses and threats of the coastal governance, and, thus finalizing problem-analysis stage of coastal governance cycle and suggesting necessary frame for next stages of policy design, formulation and policy planning, its implementation and management, monitoring (Ernsteins et. al., 2017b).

Table 1

In-depth interviews: coastal local stakeholder segments and representatives

Stakeholder segment	Representatives in Salacgriva municipality (institution/unit or position and number of interviewed people)
State/national segment	Nature Protection Agency (NPA) regional unit; state environmental inspector; public relations and environmental education unit – information specialist
Municipal segment	Political level/administration: Chair of the Municipal Council; council members (4) Consultative bodies: Business Consultative Board (1); Youth Consultative Board (1) Executive level: Executive director of municipality; Deputy executive director on development; Head of finance unit; Head of Information Unit; Human resources specialist; Municipal education unit specialist; Buildings and territory manager; Energy engineer; Construction supervisor; Policemen (2) Municipality-owned utility service: Salacgriva Water Service (2)
Business segment	Port services (1); Fishery industry (2); Small tourism (3); and Small entrepreneurs/farmers (2)
Mediators' segment	NGOs: Pensioner society; Fishermen society; North Vidzeme Biosphere Reserve's society; coastal NGO Jurkante (the only one environmental NGO); Ex-elder of the Svetciems village; Media: Salacgriva Municipality News Formal education sector: Local secondary schools' directors (2) Informal education sector: Tourism information centre head/staff (2); Head of Salacgriva museum; Head of local Youth Centre; Culture group: folklore group
Inhabitants/household segment	Represented in this survey in personal capacity of those local specialists mentioned in above segments (see also previous research stage study results (Ernsteins, 2019))

Research results and discussion

1. Re-analysis: complementarity of coastal communication instruments

Complete results of the re-analysis of three former ICM studies in Latvia and in different coastal municipalities as Salacgriva are discussed in the other publications (Ernsteins *et al*., 2017a; Jansen *et al.,* 2016). The results demonstrate that SAF elements as regards applying multi-disciplinary perspective to the coastal SES assessment and issue identification and general involvement of local stakeholders in ICM processes were present in all three Latvian cases, though in different qualities. Yet, a key to overall governance success has been dependent on the comprehensiveness of public participation, which in the Latvian cases has exceeded traditional participatory methods. This demonstrates the need for strengthening public/citizen component and communication tools for the ICM application.

Latvian cases demonstrate consistent use of all environmental communication instruments in ICM: environmental information, environmental education, public participation in decision-making, and what is essential, to complete communication and awareness building cycle, also pro-environmental behaviour, which all together make a set of complementary coastal communication instruments, that is recognized as key pre-requisite for adequate ICM process management (Ernsteins, 2010). Further work brought us to the conclusion that for addressing deficiencies in ICM, it is necessary to develop coastal collaborative communication, which builds on involvement of all stakeholder groups; on related coastal topics selectively, multi-thematically oriented and based on complementarity of all communication instruments. It was also recommended to develop MCG instruments, especially, coastal collaborative communication instruments, which are based on involvement of all stakeholder groups and on related coastal topics selectively, being multi-thematically oriented and based on complementary use of all communication instruments.

2. Municipal statutory planning documents: integration of the coastal issues

Every administrative planning level (national, regional, local/municipal) is requested to have besides budget also three interlinked statutory planning documents – strategic and mid-term policy planning, mid-term spatial planning – as well as permission to develop various voluntary thematic planning documents. There is no interest to develop coastal issues related thematic planning documents in Salacgriva municipality. At the regional planning level there is planning document on coastal nature tourism development for eastern coast of the Baltic Sea Riga Bay.

The most comprehensive local long-term document is a Sustainable Development Strategy until 2038 (SDS). It was co-developed with the group from the University of Latvia in 2014. Still, the coast and its resources, as well as the Baltic Sea and the Riga Sea Gulf, are incompletely reflected in the territory's description. Long-term development vision of the municipality is distantly related to the coastal specifics, namely, it is envisaged to ensure adaptation to climate change and to maintain characteristic coastal cultural landscape. Though, the vision is not transformed in the coast-specific goals, however, strategic priorities envisage use of coastal resources and specific features for entrepreneurship, especially port services and recreation (yachts), fishing and fishery production. From spatial development perspective, the coast is recognized in SDS as one of priority territories where infrastructure, environmentally friendly moving (biking road) and river management issues shall be managed. The coast has significant functional role. It is emphasized that the coast is freely accessible. It is local, national, and international tourism destination, economic transit point, recreational transport point, while it is also suffering from environmental pollution and socio-economic interests causing pressures.

Salacgriva Municipality Development Program 2015-2021 (DP) does not sufficiently conceptualize coastal perspective for development. Generally, DP fails to reflect specificity of the coastal municipality and consequent coast-related challenges or does it poorly. Coastal issues are scattered in the text. As a result, there is no analytical understanding of coastal potential and its contribution to the local socio-ecological system (incl. economy). As the DP envisages implementation evaluation, for 11 mid-term priorities set in this DP, 39 resultative parameters (indicators) are selected to measure progress. But only five of them are related to the coast: two are linked to the ports' activities, three – to the access to the sea and related infrastructure, and one – to the quality of bathing waters. Though there are not quantitative values suggested, only direction of positive tendency is referred to. Indispensable part of the development documentation is Action Plan (AP) and Investment Plan, which contain activities related to the implementation of the following coast-specific priorities: extension of port services; improvement of coastal infrastructure for tourism and recreational purposes; ensuring better and more controlled access to the sea; reconstruction of two quaysides, old lighthouse with great historical value and floods management.

Spatial Plan (SP) uses zoning instrument and specifies so called General Regulations for Territory Use and Building. It maps out territories on the coast for recreation and tourism, access points to the sea, bathing sites, nature territories etc. Analysis shows that at all spatial planning levels, coastal protected belts, and towpaths, as well as restrictions are stipulated by national legal acts, mainly Protection Zone Law (adopted 1997, with amendments in 2016) and Law on Specially Protected Nature Territories (1993, with amendments in 2013). Accordingly, specific requirements are defined in the 5 km width of the coastal zone where restrictions of economic activities are enforced as regards construction, extraction of minerals (what is strictly forbidden in the coastal dunes and specially protected landscape territory of the North Vidzeme Biosphere Reserve, and the Stony Shore of the

Vidzeme, which belong to the Natura2000 sites). SP defines, that access to the sea/coast shall not be limited with private constructions. Zoning tool also regulates the use of beach (e.g. limits use of motorized water transport).

3. Stakeholders' mapping and survey: stakeholders' roles in the coastal governance

As it results from stakeholder survey, the national level (state sector) presence is defined by location of the municipality in the territory of the North Vidzeme Biosphere Reserve (NVBR) that is managed by the Nature Protection Agency (NPA), which is subordinated to the Ministry of Environment and Regional Development of Latvia. Nature protection regime to large extent stipulates requirements and restrictions for economic activities, which embodies potential for conflicts in the territory. Thus, cooperation with the regional office of the NPA is a precondition for collaborative coastal management. Besides controlling and licencing tasks, the NPA is active in nature education and tourism. Its experience in setting up a public monitoring network in the territory is unique as a novel public involvement tool.

Local municipality is a complex institution with different levels of responsibilities as regards the coastal management, that are split among political, administrative, and public service (utility) powers. Municipal management responsibilities are diverse: starting from provision of cleanness and safety of the beach to floods management, licencing (fishing rights etc.), supervising construction, initiating projects, attracting financing, and providing infrastructure for public services, as well as business, transport and tourism activities. In this context, the role of local Business Consultative Board as a participatory tool is essential for enhancing coastal collaboration between entrepreneurs and administration. Significance of the Baltic Sea and marine resources, as well as transport opportunities is essential for business activities in the territory. Besides, the coastal resources are used as a key asset for tourism enterprises.

Mediators' sector is diverse and well developed. There are numerous culture groups acting in the local culture centres. Five museums and Tourism information centre play a significant role in informing on and maintaining of unified coastal nature-culture-history heritage. Libraries act as local activity and informal/life-long education centres. Local schools integrate environmental education in school curricula and take part in national and global Eco-school movement and environmental campaigns on the coast. In scope of local non-governmental sector, the most active are pensioner and fishermen societies. But there is only one NGO working with the coastal issues. The municipality has several participatory institutions (different advisory councils) that play significant role in local collaboration and information exchange. The most significant among them is the Village Elders institution that ensures information exchange between central administration and citizens. At the same time, interviews revealed that coast specifics in the activities of local stakeholder groups is marginal. Missing understanding of the coast could be seen as generalization of the stakeholder perceptions. Stakeholders' awareness about the coast is usually limited to their proximity ('my village'), or to the land strip between the highway and the sea.

4. SWOT analysis of coastal governance for planning framework suggestions

Stakeholders' interviews and other in-depth MCG as sector governance studies revealed strength and opportunities, weaknesses and threats of the MCG components in the Salacgriva municipality, which are summarized in the SWOT table (Table 2). This analysis allowed to identify essential sectors and work directions to ensure sustainable and integrated management of all coastal sustainability dimensions.

Table 2

SWOT analysis: Coastal governance aspects in the Salacgriva municipality

Strength	Threats
• Positive attitude of local people towards coast: see it as integrative whole and multi-dimensional value • Different, active and well developed forms of local citizen self-organization (NGOs, Village Elders), even not coastal oriented • Presence of local opinion leaders in local communities • General interest of people in the coastal management improvement • Awareness and support of people to the municipal political Green Declaration (2010) • Active municipal general public relations due to commitments set in Green Declaration • Diversity of 55 km coast substantiates its attractiveness • Absence of very critical and urgent problems on the coast even numerous small ones • Gradual improvement of the coastal quality (particularly, less littering) • Close relation of business to the coast as their resource even limited usage and development	• Tourism flow reduction due to low quality of coast (during algae blooming season; after storms, due to invasive plants) • Increased unregulated flow of visitors to the coastal zone • Visitors behaviour degrades valuable biotopes, which accelerates due to lack of management • Increased coastal littering after holidays-seasonal pressures • Transboundary pollution pressures deteriorate bathing waters quality • Impacts of climate change becomes more severe and frequent (storms, floods, heat) • Coastal erosion and other processes deteriorating coastal quality • Limited fish stocks and invasive species causes reduction of the coastal fishery activities • Restrictions for economic activities and construction in the coastal zone of 5 km and esp. in 150m (300m outside villages) zone by the national regulation

Weaknesses	Opportunities
• Underdeveloped citizen awareness and understanding about coastal resources and coast as a resource itself, also due to strong national coastal zone legislation/enforcement tradition • Coastal bio-geodiversity and accessibility impedes management • Lack of sufficient coastal infrastructure - pro-environmental coast access problems in the most of territory • New access limitations appear due to growing territory of invasive coastal plants (e.g. roses) • Fragmentation of coastal problems and lack of their topicality in eyes of different stakeholder • Irresponsible behaviour of local people (and relatedly guests) in coastal zone/dunes causing its littering and esp. degradation • Shortcomings in municipal coastal governance: lack of human resources and their capacity; passive management practice, lack of coastal issues integration into planning documents • Insufficient citizen awareness and trust, e.g. participation, in admin and planning process • Limited, even many and diverse, local NGOs interest on coast • Limited public monitoring (e.g. Citizen science) interest and practice from top-down and bottom-up sides, even existent and successful former practice by Biosphere Reservation admin with local school etc. collaboration • Stakeholders are adhered to projects as a tool for attracting financing rather as tool for the coastal problem solving • Narrow spatial perception of the coast and its situation by inhabitants/NGOs • Limited rights for bottom-up selected Village Elders • Week stakeholders' interest in joint solutions collaboration	• Coastal attendance improvement while limiting pressures on ecosystem by Improved infrastructure and services • Coastal science knowledge use for developments for coastal use based zoning and general planning • Presence of Biosphere Reservation administration in the territory, e.g. Environmental education centre • Information platforms and media activation in coastal information dissemination • Disperse pollution loads reducing by environmentally sound business activities (eco-farming etc.) • Lobbying for national legislation and regional enforcement on wise restrictions in the coastal zone • Provision of prototypes/standardized models for small-scale coastal infrastructure (already approved by the state environmental institutions) • Growing coastal recognition/support by Riga Planning Region (regional institutional municipal partnership) and • Inter-municipal planning and partnerships, incl. Union of Coastal municipalities • Activation of Ministerial level admin and planning works on coastal issues, e.g. new National Coastal public infrastructure policy document (2016) to be implemented towards local coastal municipalities, incl. necessary implementation support, incl. financial mechanisms etc. whole range of governance instruments • Further use of EU accepted approach for this planning period for coastal infrastructure funds as well as national environmental funding recent availability on coastal issues

5.R&D discussion: MCG content framework Guidelines

Understanding and management of the coastal resources in integrated manner, taking into account all sustainability dimensions, since approaching coastal governance as social-ecological

system (SES) governance, is still a theoretical and practical challenge for municipal level everyday practice. According to the former studies and the above methodological frame and approaches (Ernsteins et.al. 2016), studies lead to the conclusions, that there are the following four MCG content sectors selected: Coastal governance and communication; Coastal infrastructure; Coastal socio-economic environment, and Joint coastal nature and cultural heritage (Table 3). For them, 10 directions of main action frame and also detailed sub-directions were proposed. These elements of governance system are suggested by the research team as a basis for structure of more detailed further studies and/or for planning of coastal activities. In fact, this forms a potential basis to be developed as the Salacgriva MCG Program Framework Guidelines.

Table 3

Municipal Coastal Governance Program Framework Guidelines: integrated sectors and related main work directions based on governance content 4-dimensional model (Authors, 2015)

Govern. sectors	Directions of action	Sub-directions of action
1. Coastal governance and communication environment	1.1. Governance environment	1.1.1. Top-down governance 1.1.2. Bottom-up governance 1.1.3. Coastal integrated governance (in general) and climate change adaptation and risk governance (in particular)
	1.2.Communi-cation environment	1.2.1. Access to environmental/coastal information 1.2.2. Environmental/coastal education – formal, informal, life-long learning 1.2.3. Environmental/coastal participation – public involvement and self-initiatives; stakeholder cooperation 1.2.4. Pro-environmental/pro-sustainable coastal behaviour (PEB)
2.Coastal infrastructure environment (including spatial planning)	2.1.Technical environment (utilities)	2.1.1. Water supply and sanitation compliance for all 2.1.2. Wastewater treatment and environmentally sound management of sewage sludge 2.1.3. Household waste management 2.1.4. Heating and air quality
	2.2.Spatial environment	2.2.1. Land management 2.2.2. Integrated in environment public outdoor space 2.2.3. Climate change adaptation and risk governance 2.2.4. Built environment (incl. Coastal Building Guidelines)
	2.3. Infrastructure environment	2.3.1. Amelioration and non-depleting access to environment (for all– inhabitants, tourists, fishermen, boatmen, recreational business) and infrastructure enabling tourism/recreation, nature protection 2.3.2. Sanitary infrastructure – toilets, waste bins 2.3.3. Climate change adaptation and risk governance: safe public environment and infrastructure 2.3.4. Complete information infrastructure contacts of nature guides, municipal services, destinations/directions
3.Coastal socio-economic environment	3.1. Sustainable living environment	3.1.1. Social services 3.1.2. Education – support system for locally required skills/professions: support for those studying outside, education for locals, life-long education, distance work options 3.1.3. Environmentally friendly housing 3.1.4. Pro-environmental mobility 3.1.5. Environmentally and health friendly food (incl. seafood; local market) 3.1.6. Pro-environmental behaviour in public space/environment 3.1.7. Development of local communities
	3.2. Environmentally friendly business	3.2.1. The countryside, sea, forests, tourism – connections with ecosystems and their conservation, capacity 3.2.2. Real estate management – as business opportunity 3.2.3. Tourism and ecotourism (accommodation and catering, networking)
4.Joint coastal nature and culture environment	4.1.Nature environment	4.1.1. Nature and landscape values/assets serving for creation of protected nature territories 4.1.2. Management of biologically important meadows, forests etc 4.1.3. Surface waters and fish resource governance 4.1.4. Migration of birds and animals
	4.2.Culture environment	4.2.1. Coastal material and non-material values 4.2.2. Effective use and governance cultural-historical heritage
	4.3.Joint coastal heritage	4.3.1. Basis for coastal development – unity of natural and cultural values 4.3.2. Material heritage: home production, crafts 4.3.3. Intangible heritage (traditional festivals, events) 4.3.4. Cultural-historical monuments 4.3.5. United phenomena of nature and culture (history, ship building, sailors)

Conclusions and recommendations

1) R&D study done in coastal rural municipality of Salacgriva exploring existing coastal governance process problemsituation have been leading to more detailed understanding and following confirmation of succesfull applicability of all **triple complementary governance dimensions model**, both as the methodological governance research frame and as the eventual **framework for municipal coastal governance system** design and development, subsequently, being based on **governance content, governance process and governance stakeholders' segments**.
2) **Main stakeholders and coastal governance segments**. Interviews with representatives of all main municipal stakeholder groups, complemented by studies of municipal documents, data resourses and locallly designed projects, allowed to recognize stakeholders' **limited understanding of the coast** as complex socio-ecological system, week acknowledgement of the coastal problems and a lack of vision for sustainable use of the coastal resources, subsequently, their **limited contribution to MCG**.
3) **Coastal governance content**. Existing statutory and other planning and management documents do not fully represent neither coastal issues/resources, nor conceptualize coastal system development, e.g. failing to reflect specificity and perspective of the coastal municipality. Relatedly developed recomendations as MCG Program Framework Guidelines proposes SES governance approach, based on **systemically integrated costal governance content 4-dimensional model**, which could be recognized as pre-requisite for adequate MCG process planning and management.
4) **Coastal governance process and instruments**. Wide range of existant general municipal development governance instruments are neither necessarily complementary nor does fully cover MCG issues. Recomendations include accordingly to replan/restructure all set of six main instrument groups and establish several MCG sector instruments, e.g. MCG monitoring and reporting. Coastal collaborative communication shall be based on complementarity of application of all four main groups of communication instruments.
5) Application of mentioned governance research frame, but studying separately each of three governance dimensions are permitting to figure out and to make initial confirmation (also in the relation to the former studies done) on the **three basic pre-conditions** for the MCG process functioning and building elements for eventual MCG system: **systems approach, complementarity and collaboration**, however their further detailed studies have been planned for the next stage of BaltCoast project.

Acknowledgement

R&D study done within the framework of the BaltCoast project with financial support of EU BONUS program and Latvian national co-funding. Authors would like to acknowledge all researchers and students being involved in this study, particularly, Ugis Rusmanis and Krista Osniece for studies administration.

Bibliography

1. Ballinger, R, Cummins, V., O'Hagan, A.M., Philippe, M. (2008). The Point of COREPOINT: Improving Capacity for Integrated Coastal Zone Management in North West Europe. COREPOINT Report. p. 81.
2. Christie, P. (2005). Is Integrated Coastal Management Sustainable? Ocean Management, Vol.48, pp.208-232.
3. Cohn, J.P. (2018). Citizen Science: Can Volunteers Do Real Research? BioScience, Vol. 58, Issue 3, pp. 192-197.

4. Coastal Spatial Development Guidelines for 2011-2017. Cabinet of Ministers 20.04.2011 Decision Nr. 169. Retrieved: http://polsis.mk.gov.lv/documents/3634
5. Conrad, C.C., Hilchey, K.G. (2011). A Review of Citizen Science and Community-Based Environmental Monitoring: Issues and Opportunities. Environ Monit Assess Nr.176, pp. 273–291.
6. GESAMP (1996). The Contributions of Science to Coastal Zone Management. Rep. Stud. GESAMP, IMO/FAO/UNESCO-IOC/WMO/WHO/IAEA/UN/UNEP Joint Group of Experts on Marine Environmental Protection. Nr.61, 66 p.
7. Quesada, C.G., Klenke, G.T., and Mejia-Ortiz, L.M. (2018). Regulatory Challenges in Realizing Integrated Coastal Management – Lessons from Germany, Costa Rica, Mexico and South Africa, Sustainability, No. 10, p.3772.
8. Ernsteins, R. (2010). Sustainable Coastal Development and Management: Collaboration Communication and Governance, Journal of Social Sciences, No.3, pp.247-252.
9. Ernsteins, R., Kaulins, J. *et al.* (2011). Integrated Coastal Management for Local Municipalities in Latvia: Sustainability Governance and Indicator system. WIT Transactions on Ecology and Environment, Vol. 149, pp.29-40.
10. Ernsteins, R., Lontone–Ievina, A. *et al.* (2017b). Integrated Coastal Management Practice Case Studies: Deficiency of Collaboration and Socio-Ecological System Approaches. Book Series: Economic Science for Rural Development. Issue 45, pp. 63-70.
11. Evans, S.M., Gebbels, S. (2018). Our Shared Responsibility: Participation in Ecological Projects - Means of Empowering Communities to Contribute to Coastal Management Process, Marine Pollution Bulletin, 57, pp.3-7.
12. Hopkins, S., Bailly D. *et al*. (2012). A Systems Approach Framework for the Transition to Sustainable Development: Potential Value Based on Coastal Experiments, Ecology and Society, Vol. 17, Issue 3, p.39.Hyder, K., Wright, S. *et al*. (2017). The Role of Citizen Science in Monitoring Small-Scale Pollution Events, Marine Pollution Bulletin, Vol. 120, Issues 1-2, pp. 51-57.
13. Jansen, H., Ernsteins, R. et al. (2016). A Retrospective Analysis of Best Practice Integrated Coastal Management Cases Around the Baltic Sea. In: European Coastal Lagoons Symposium. Abstracts Book. Marcos C., Perez-Ruzafa A., Perez-Marcos M., (eds.), Compobell, Murcia: pp. 212.
14. Kalpakis, V., Kokkos, N. *et.al*. (2019). An Integrated Coastal Zone Observatory at Municipal Level: The Case of Kavala Municipality, NE Greece, Journal of Coastal Conservation, Vol. 23, pp.149-162.
15. Karpouzoglou, T., Dewulf, A. and Clark, J. (2016). Advancing Adaptive Governance of Social Ecological Systems through Theoretical Multiplicity, Environmental Science & Policy, Vol. 57, pp.1-9.
16. Kudrenickis, I., Ernsteins, R., and Kaulins, J. (2016). Sustainable Coastal Science-Policy Interface Development: Municipal Governance Indicator System, Environmental Science, No. 1, pp.255-264.
17. Lagzdina, E., Kudrenickis, I. *et.al.* (2017). Coastal Sustainable Development Studies in Latvia: Integrated Local Social-Ecological Systems Governance, Regional Formation and Development Studies, Vol. 1, Issue 21, pp.83-96.
18. Ostrom, E. (2009). Framework for Sustainability of Social-Ecological Systems, Science, No. 325, pp. 419-422.
19. Recommendation of the European Parliament and of the Council of 30 May 2002 Concerning the Implementation of Integrated Coastal Zone Management in Europe. OJ L 148, 6.6.2002, p. 24–27.
20. Ringsmuth, A., Lade, S., and Schluter, M. (2019). Cross-Scale Cooperation Enables Sustainable Use of a Common-Pool Resource.
21. Schumacher, J., Schernewski, G. *et al.* (2018). Methodologies to Support Coastal Management – A Stakeholder Preference and Planning Tool and Its Application, Marine Policy, Vol. 94, pp.150-157.
22. State Long-Term Thematic Plan for Development of Public Infrastructure on the Baltic Sea Coast. Cabinet of Ministers 17.11.2016 Decision Nr. 692.
23. Stojanovic, T.A. (2007) Guidelines for Implementing Local Information Systems at the Coast. COREPOINT and Cardiff University, Cardiff. p. 35.
24. Wamsler, C. (2017). Stakeholder involvement in Strategic Adaptation Planning: Transdisciplinarity and Co-production at Stake? Environmental Science and Policy, Issue 75, pp.148-157

Proceedings of the 2020 International Conference "ECONOMIC SCIENCE FOR RURAL DEVELOPMENT" No 54
Jelgava, LLU ESAF, 12-15 May 2020, pp. 98-107
DOI: 10.22616/ESRD.2020.54.012

LOCAL COASTAL GOVERNANCE ASSESSMENT DEVELOPMENT: COASTAL GOVERNANCE FRAMEWORK REPORTING

Raimonds Ernsteins[1], Dr.habil.paed./Prof.; **Maija Stokmane**[2], MSc.biol. and **Arturs Pudans**[3], BSc.env.sc.
[1,2,3]University of Latvia, Riga, Latvia

Abstract. Coastal governance practice at the local level in Latvia has various shortages and the reasons behind that are several, including, that the coastal municipalities have neither sufficient coastal information and understanding, nor integrative planning tradition and active stakeholder's participation experience. The aim is to study to what extent and how municipal coastal governance (MCG) has been developed and accordingly performed towards effective pro-environmental and pro-coastal policies, thus analysing the coastal governance dimensions – governance content, process and its documents, main stakeholders understanding and contribution - in Jurmala municipality as a chosen coastal pilot territory, since being especially sensitive area at the Latvian coastline. The summary results of case study research (document studies, observation and stakeholder's interviews) suggest, that the municipality still has limited focus on sustainable coastal governance – in general, underdeveloped internationally acknowledged integrated coastal management (ICM) implementation approaches and related requirement on various basic ICM capacities development. There are neither specially designed coastal planning and management system (ICM sectorial/cross-sectorial approach), nor well developed ICM integration into statutory municipal development planning process and products (ICM integration approach). Existent MCG is based on long existing traditional approach of former and formal sector-based municipal development planning with limited cross-sectorial perspectives and linking. Taking into account also climate change adaptation challenges, new understanding and new approaches, including mixed ICM approach and also, eventually, a range of innovative coastal governance instruments. The study is done in the framework of the research-and-development approach aimed also to develop recommendations for the improvement of the local coastal governance practise, e.g. testing of MCG framework and also testing to be pre- and post-planning document – Municipal Coastal Governance Outlook - as designed for MCG overview and assessment with later public discussion and stakeholder MCG agreement as well as for integrative planning as could be serving as basic missing integration instrument.

Key words: coastal governance report; socio-ecological system; integrated coastal management; environmental governance dimensions.
JEL codes: Q20, Q57, Q58

Introduction

Nowadays, a lot of contradictions and conflicts of interest develop in coastal areas and therefore attract particular attention, and its management should be especially carefully planned. Latvian local municipalities, that border the Baltic Sea, should protect and manage one of the largest national treasures – the coastal area (almost 500 km of coastline, not only, but mainly sandy beach areas) is defined as **area of national interest**, where the preservation of coastal joint natural and cultural heritage should be balanced with the promotion of economic development, including tourism (Sustainable Development Strategy of Latvia, 2030). However, also internationally, the amount and the availability of the necessary coastal information is often insufficient and also knowledge on complex coastal systems is still limited for main coastal stakeholders, especially at the local government level (Stojanovic, 2007; O'Hagan, 2009; Klingsheim, 2011; Ernsteins et al. 2011; Kalpakis, 2018), therefore having difficulties to carry out integrated coastal management (ICM) approach (Ballinger et. al., 2008; Deboudt, 2012; Portman, 2012; Buono, 2015; Ernsteins, 2017) as developed and prescribed internationally (EC, 2002). In Latvian coastal territories there is the **lack of all type capacities at the local** (municipal) level (Ernsteins, 2011; Coastal Spatial Plan, 2016)

[1] Raimonds Ernsteins Tel.: +371 29476620, e-mail: raimonds.ernsteins@lu.lv
[2] Maija Stokmane Tel.: +371 22161440, e-mail: ms08165@students.lu.lv
[3] Arturs Pudans Tel.: +371 29209429, e-mail: art.pudans@gmail.com

in coastal exploration/assessment, policy/planning, management and monitoring, actually, for the whole coastal governance cycle and also instruments (Ernsteins, 2017; Kaulins, 2017). Also, at the national level, even there are recently ongoing possibilities to support municipalities at least within the proposed framework of the coastal public infrastructure as the first and main priority for national municipal coastal governance (MCG), however the second priority announced, being good coastal governance, have also some national impetus but lacking far behind at the local coastal development and environmental protection work (Coastal Spatial Strategy, 2011; Coastal Infrastructure Plan, 2016). Previous ICM related studies in Latvia (Ernsteins, 2011 and 2017; Kaulins, 2017; Coastal Infrastructure Plan, 2016) are leading to the recognition, that there are **limited ICM developments** at all governance levels (national, regional planning and local level), particularly, missing both initial ICM preconditions - identification and assessment of the complex coastal socio-ecological resources and services, including development of coastal municipal monitoring (Lontone et. al., 2017; Kaulins et. al., 2018), as well as, coastal governance structural integration into the statutory political and territorial development planning process and documents, especially at the local level (Ernsteins et. al., 2017a and 2017b). Coastal territories in Latvia need to be **more knowledgably and systemically, participatory and adaptably governed.**

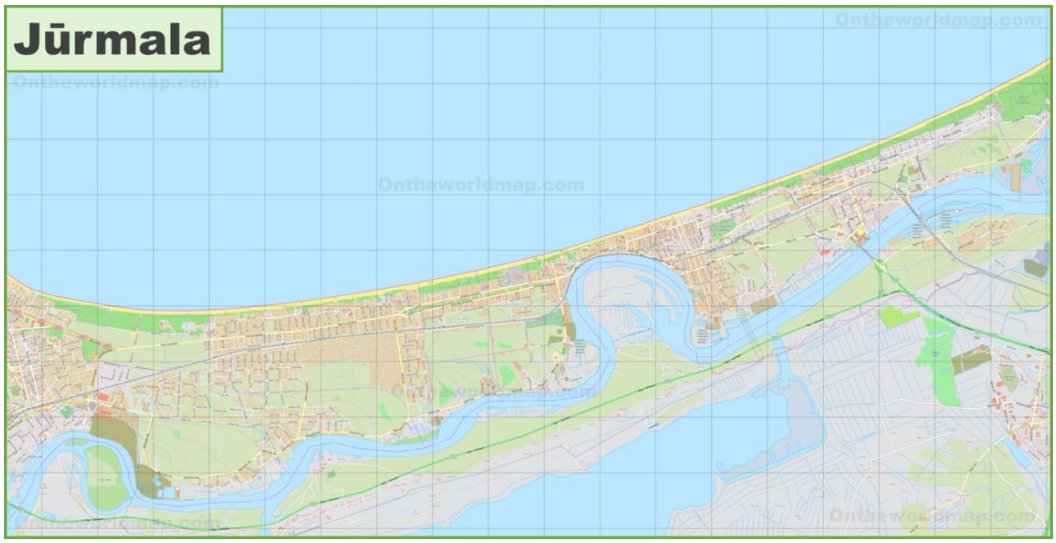
The governance of the coastal areas should be considered as a governance of a complex **socio-ecological systems** (SES) and situation urgency requests to use research-and-development framework (R&D) applications (Breton, 2006; Hopkins, 2012; Kaulins et. al., 2017) also in Latvian local coastal municipalities. The possible perspectives for the MCG in Latvia might be the development and application of **nationally/locally innovative instruments** (Breton, 2006; Ballinger, 2009; Thetis, 2011; Ernsteins, 2017b; Kalpakis, 2018;), esp. cost-effective ones, e.g. municipal monitoring with mandatory public monitoring part, and, accordingly, coastal governance reports and the integration instruments for ICM type development planning/management process and its products/documents etc. (Ernsteins et. al., 2011; Kudrenickis et. al., 2016; Kaulins et.al., 2017; Pommere et. al., 2018). During recent research-and-development (R&D) studies, mentioned developments have been elaborated within National Research grant SUSTINNO (2014-2018) and also further tested during BaltCoast project (2015-2018) conducted in the Salacgriva rural coastal municipality with financial support of EU BONUS program and Latvian national co-funding. Research results were complemented by the coastal science-policy interface related recommendations, e.g. to design MCG system proposal, based on governance segments, content and process dimensions; including, set of governance instruments, especially collaborative communication instruments; mixed ICM applications perspective in general etc. (Lontone, 2017; Ernsteins, 2020). Current research described now represents next round of mentioned MCG approbations and design studies.

Already in 2008–2009, specialists from the University of Latvia developed the first national level **ICM indicator system** proposal for Latvia, but later on – also for the local coastal level (Ernsteins et al. 2011 and 2017). The first local level sustainability indicator system proposal in Latvia for the whole territory of the coastal municipality was developed for Saulkrasti municipality (2013) - indicator system being approved by municipal council for the evaluation of municipal Sustainable Development Strategy (statutory strategic planning document, required at all governance levels in Latvia) implementation. Following, the first full scale measurement/assessment of this working indicator system has also already been carried out for the municipality, designing and developing also first of a kind in Latvia - **Sustainability Outlook as monitoring and reporting system instrument** for municipal sustainable development governance in Latvia (Ernsteins et al. 2017;

Kaulins et al. 2018). This experience is to be further developed, modelled and piloted, also during Jurmala coastal case study research, for the development and testing of the Coastal Governance reporting (Outlook) of Jurmala city, in order to serve eventually as a **missing ICM status and integration instrument.**

Piloting Jurmala municipality – enclosed coastal strip area along the Baltic Sea

The pilot and model territory chosen for the present study was the municipality of Jurmala city, semi-urban area being by its size (100 km^2) as well as by the number of its inhabitants (almost 60 000) the largest resort city on the coast of the Baltic Sea visited by more than a hundred thousand tourists every year. The city, being just 25 km from Riqa, the capital city of Latvia, actually, is located on a kind of narrow (even only 380 m at Majori railway station) and long stretched peninsula. This location is formed, by the river Lielupe coast meandering along city (30 km) from its southern part, and, from Northern part, by seaside at the very bottom of Baltic Sea Riga Bay with around 25 km long coastal beach, being famous as one of the few white sand beaches in Europe (Fig. 1). Besides, being rich with various natural resources, including six specially protected nature territories occupying approximately 38 % of the city, dune pine forests, sulphide-containing mineral waters and mud actively used in Jurmala resort, which started as early as in the beginning of 19th century, also having diverse coastal cultural-historical resources, Jurmala as the only city in Latvia has officially granted the **status of a resort and a healthy city**. In the same time, city is threatened by high anthropological pressure, what may lead to the problems with unique coastal health and other resources, ecosystem services, and, Jurmala as **coastal and environmentally sensitive municipality**, has been stressing importance of environmental protection.



Source: ***www.openstreetmap.org***

Fig. 1. **The general map of Jurmala city location on the Baltic Sea coast**

Methodological framework for coastal governance studies

The aim of this R&D study is to assess the irregular complex situation of the environmental and coastal governance at the local municipal level as well as to develop coastal action policy proposals and recommendations for the chosen pilot territory of Jurmala municipality and all its main target groups together. Research object is coastal governance process and it is necessary to clarify to what extent and how both, municipal environmental and coastal governance, have been developed and accordingly performed now towards effective pro-environmental and pro-coastal policies and best ICM practise. Methodological coastal governance analytical framework to be applied for this study is structured according to all the **triple complementary governance dimensions' system** -

governance content, process (incl. documents) and its realization instruments as well as stakeholders' segments (incl. understanding and contribution) – adopted for local governance level (Ernsteins et.al., 2017b). The collaboration R&D planning with Jurmala municipality was oriented to find out the main deficiencies and subsequently develop recommendations for the improvement of the whole situation of the coastal governance, eventually designing coastal governance system and process guidelines at the later stage of this study. Subsequently, R&D study is also aiming to design and develop, to apply and initially test an innovative pre- and post-planning document – the **Municipal Coastal Governance Outlook** (MCG Outlook) for the Jurmala.

Besides the pre-study of the previous ICM investigations carried out in the coastal territories and also best available practice in Latvia as well as in other countries, relatedly, the main tasks of the present study were: (1) to recognize and study the main developments and deficiencies of the coastal governance main segments (constituting of the main stakeholder groups) and their interactivity (who in ICM); (2) to assess the coastal governance content development as the current coastal socio-ecological system status and, most importantly also its governance impetus and impacts on this situation (what in ICM); (3) to evaluate coastal governance process, esp. as design and implementation of governance instruments' groups – political and legislative instruments, institutional and administrative, also planning instruments, as well as infrastructure and technological, economic and financial, also communication instruments (how in ICM); (4) by analysing the mentioned coastal governance sectors, segments and process integration into governance framework for pilot municipality to develop recommendations, incl. MCG Outlook document.

Research-and-development project frame

The Case Study Research (CSR) methodology, being framed via Research-and-Development approach, was used for Jurmala city as model municipality - complementary application of several research methods to get complex system study and overview of temporary phenomenon – **document studies, stakeholder interviews, coastal site observations.** These studies were comprised of two complementary parts for the first stage of the R&D project – **environmental governance** studies and **coastal governance** studies, realized in such a sequence with slight overlapping. Second stage then was on using both approaches and sector information gathered for its complementary integration into the development of MCG Outlook.

Comparative analysis between those two sectors seemed to be perspective when looking towards MCG and taking into account comparative similarity of both to be integrative realized environmental governance and coastal governance sectors, but already long ago statutory established, however never perfect, experience of environmental governance with whole set of instruments - legal, planning, infrastructure, financial, communication and, particularly, also institutional sectorial instruments, e.g. in Jurmala municipality having Development and Environmental Commission, Environmental Dept., municipal Water, Heating etc. companies and other environmental related structure units/organizations. Sustainable **cross-dimensionally developed environmental governance sector in coastal municipality** would obviously cover also the most of coastal governance cross-sector, and such application approach could be seen as one pragmatically perceived scenario for MCG development to be realized by mutual integration of both sectors, particularly, when having long experience authoritative municipal Environmental department (e.g. Ventspils international harbour based city municipality), taking lead role and organizing most of necessary coastal governance functions coordination work and at various administration levels and

organizations. Also Jurmala municipality have had such disciplinary (sector based) Environmental governance development experience after establishing of Environmental Dept. since 1990-ties and approving Environmental Policy Plan since 2002 etc. possessing several other sectorial instruments, being at the time for only top five cities in Latvia.

Detailed CSR studies started with the inspection and analysis of all the municipal statutory and sustainability/environmental/coastal issues related documents at all local administration level and sectors - political and legal, development planning, management regulations/practice documents, but also in the relation and about all main stakeholder groups and activities, as well as for the whole coastal municipality territory in case of environmental governance and coastal governance, starting from 150/300 m coastal dune protection belt up to 5 km limited economic activity belt and the whole municipality territory (Protection Belt Law, 1997). That was complemented with observation study along the main coastal strip institutional, infrastructure and management related territories, objects and organizations. Finally, 25 deep semi-structured interviews were conducted with representatives of **all local stakeholders,** being legally designated and/or being involved with municipality both environmental and coastal issues and grouped by **governance segments** (Ernsteins et al. 2017):

- Municipality / City council administration segment (elected deputies, employees of municipality);
- National administration segment institutions (employees of the Ministry of Environmental Protection and Regional Development, the State Environmental Service and the Nature Conservation Agency, incl. Kemeri National Park, partially also within Jurmala municipal borders);
- Corporative (business) segment (different municipality based producing/services entrepreneurs);
- Mediator segment, in particular (representatives of the media, formal/non-formal education and non-governmental organizations, science representatives);
- Inhabitants of coastal city, local householders – were not interviewed, but utilized different secondary sources, esp. bi-annual municipal questionnaires on local development evaluation.

Coastal governance framework reporting approach - Outlook

On the basis of all the information obtained during studies, including available general data banks at the municipality, the preparation of the initial version of the Jurmala Coastal Governance Outlook as pre/post planning document was carried out, striving for still non-traditional SES multi-disciplinary application, and, especially and mainly oriented towards initial status and potential development assessment of to be established coastal governance framework (system). This initial MCG Outlook document was designed and structured being based methodologically on three main governance dimensions' approach, including **governance segments** (structured all main stakeholder groups), **governance contents** (cross-sectorial thematic) and **governance process** instruments, but altogether in their **interlinked sectorial-integrative ICM complex frame** (Ernsteins et al. 2017). This is represented here as table of contents for the MCG Outlook document: Part 1. Overview: An overall characterization of the municipality's sustainable development; Part 2. Development of the MCG: The formal place of the MCG in the overall development planning process and statutory and other planning documents of the municipality; Part 3. Supervision of the MCG: The elements of the MCG monitoring system within the municipality's planning documents; Part 4. MCG stakeholders: Characterization of the interest groups and their governance; Part 5. MCG content: Characterization of all MCG four sectors and cross-sectors of social-ecological system, their governance; Part 6. MCG process: Characterization of all MCG six groups of instruments (especially, set of coastal communication instruments); Part 7. Summary: Sectoral versus integrative MCG development and Recommendations.

MCG Outlook design model included the following man constituents (Ernsteins, 2017b and 2020): (1) MCG content framework was based on application of costal governance content four systemically integrated sector's model - Coastal governance and communication; Coastal infrastructure environment (including coastal technical, spatial planning environment); Coastal socio-economic environment; Joint coastal nature and cultural environment. (2) MCG process instruments framework was based on application of all main and complementary six coastal oriented governance instrument group's model – political and legislative instruments, institutional and administrative, also planning instruments, as well as infrastructure and technological, economic and financial, also communication instruments; (3) MCG stakeholder segments framework was based on application of complementary five governance segments model - state environmental/coastal institutions (esp. regional agencies); local municipal institutions (incl. administration, service and utility companies); Jurmala municipality located business companies; mediators segment (incl. non-governmental organizations (NGOs), formal/ informal educators; media and various experts representing a science sector); and local inhabitants. Drafted MCG Outlook document version was subduing to the initial approbation process – expert discussions, approach and content testing via stakeholder interviews. Detailed approbations are planned for latter stages of the project, including focus groups and stakeholder seminars.

Jurmala case study research - coastal governance studies

Jurmala municipality has a particularly great responsibility for the conservation and sustainable use of the coastal multidimensional resources, especially in circumstances when the integration version of ICM approach has been chosen, which requires a very high level of coordination of all management services and instruments.

Table 1

SWOT analysis: coastal governance components in Jurmala municipality

Strengths	Weaknesses
• A very important natural, cultural-historical, economic-tourism related resource – the sea coast with its wide sandy beaches; • Natural resources– sulphide-containing mineral waters and sludge – are one of the few deposits of these resources in a temperate climate zone; • Municipality has partially or indirectly integrated some coastal aspects into its mandatory development planning documents; • Municipality has developed several voluntary thematic planning documents (for example, "A vision for the development of Kemeri area", "Resort concept of Jurmala city"), which partly include also the coastal issues; • The municipality has established some indicators which are partly related with the coast, such as the number of tourists, revenue from tourism services etc. • The infrastructure instruments have been quite successfully used– the necessary recreation infrastructure is well-established in the coastal area (beach, dunes, forests/nature parks); • Several of the specially protected nature territories have been established directly in the coastal area; • There are developed multi-nominations in the program "The Blue flag movement for the beaches and small harbour".	• There are many different regular municipal statutory commissions/committees, but none is specialized on the coastal issues. • There is no separate and SES based chapter about the coast/governance in any on the pre-and planning documents of coastal municipality; • The municipality has not prepared a separate thematic planning document about the coast; • In all of the mandatory development planning documents there is noticeable some dis-balance stressing specially supported economic interests in the coastal zone compared to the interests of the nature environment; • The coastal monitoring does not really occur; • The municipality has not developed any separate indicators (or indicator system) which could be used in the coastal monitoring; • The establishment and development of the wide tourism infrastructure within the coastal natural areas will increase the anthropogenic pressure on the fragile coastal ecosystems; • Not all of the governance instrument groups which are at the disposal of the municipality are used or widely used for the coastal management; • The involvement of different stakeholders-governance segments (for example, residents and NGOs) in the development municipal coastal zone is limited;
Opportunities	**Threats**
• The closer cooperation with other coastal municipalities (including the Latvian Coastal Municipalities association), and the collaborative development and implementation of the coastal policy planning documents; • Involvement and active participation in the spatial planning of the Baltic Sea; • Cooperation with the national interest groups for the development of environmental communication, the attraction of the external sources of finance, and the adoption of the world's best practice; • Expanding the cooperation with the Nature Conservation Agency in order to care better for the nature environment in the coastal area; • Active participation in the national/international research and development projects on the coastal issues; • Attraction of the external financial resources to solve the coastal problems (including the state support, EU funds etc.).	• The lack of modern environmental/coastal governance and increased number of tourists and visitors may result in depletion/degradation of the coastal natural and cultural resources; • The possibility that coastal municipalities will continue to have inadequate political and financial support from the state for coastal protection and development issues; • The lack of general public awareness in Latvia about the coastal problems because of the incomplete reflection of the coastal issues in the various information sources; • Insufficient capacity of the state to find/attract financial and methodological resources (including human resources) for the sustainable coastal development nationally/locally; • The increase of competition with other coastal municipalities; • The lack of communication with the neighbouring coastal municipalities can lead to fragmentation and incoherence in the coastal governance.

Without support of any thematic coastal assessment and/or planning document in the municipality and with limited purposeful systemic and systematic coastal management coordination instruments that would provide guidelines and supervision in approaching ICM. The overall assessment of the

Jurmala municipality's three main coastal governance dimensions (sectors, segments and instruments) and their components was done by using a SWOT (Strengths-Weakness-Opportunities-Threats) analysis framework (Table 1).

Discussion and recommendations

Previous coastal governance or related studies suggest, that most of Latvian coastal municipalities to particular extent have limited integration of the coastal aspects into their statutory development plans. At the municipal level, there is not only a lack of coastal governance capacity (in rural municipalities also general planning-management capacities), but especially a lack of information about the complex coastal socio-ecological system. Also the link between the national and the local level planning documents and practices is insufficient, and therefore the provision of the ICM approach remains under threat in the coastal zone of Latvia, actually, coastal governance is comparatively incomplete in Latvia.

Summarizing **environmental governance studies** in short we are coming to several assessment results, understandings and, subsequent, conclusions: (1) governance content - environmental related sectors are assessed in terms of content – data/information, however, not at the same level and within the same updating term; moreover, not all system information is accumulated, systematized and accessible, including for integrated use in the planning and management process; (2) governance segments - depending on particular topic, but with limited pro-activity and basically limited public involvement in the decision-making process have been observed; the target groups are not sufficiently aware of their role and the necessity to cooperate; (3) governance process and instruments - municipality have almost the whole set of diverse instruments, both integrative and sectoral, but it was not observed that all environmental management instruments are actively used, including in the complementary manner;

After R&D studies done in Jurmala municipality, especially stakeholders, experts and environmental agencies interviews conducted, there are to be recognized general conditions, still traditionally **known overall integration deficiencies**, both internal and external for environmental governance realization practice quality, and, actually, directly similarly to be recognized for coastal governance as also proved during current studies. Main internal conditions for mentioned not sufficient environmental governance implementation are: it's not fully integrated into the statutory planning documents; management practices are not sufficiently integrated into the planning/practice of Jurmala City Council departments and organizations; there is little scope for co-operation between municipal departments, departments and non-municipal organizations/stakeholders. Subsequently, it is recommended to look for functional audits and revision/update of related regulations, job descriptions and annual individual/collective work plans of structural units of the municipality in order to **integrate the whole content, process and instrumental issues** of the environmental (also coastal) management sector, its sub-sectors, also sustainable development cross-sectors as systemically properly as possible, to regulate and also institutionalize horizontal and vertical cooperation among structural units as far as possible. Relatedly, main stakeholders and, especially experts/specialists, recognize also the following main external conditions: not sufficient legal requirements of integration principle and consistent implementation of existent requirements, lack of methodological and guidance materials, training and communication from the sectorial Ministry of Environmental Protection and Regional Development, their regional structures in particularly, how to integrate environmental (and coastal) management; non-regular and organized effective pressure from the general public and mediators, including NGOs, on politicians and managers that

environmental (coastal) management particularly needs to be more active; also public media has relatively little pressure and practical information on the issue. Summarizing, the **combination of legal pressure with methodological support**, still best practice developments and complementary use of environmental communication instruments (Ernsteins, 2017a; Lontone, 2017), as well as, all types of stakeholder cooperation or better **collaboration and building of various partnerships and networks** could be again and again recommended as overall problem-solving frame.

Jurmala as coastal and environmentally especially sensitive municipality has been step-wise developing various environmental protection and management planning studies and documents incl. starting from municipal Environmental Policy Plan (2002-2010), but later developing Sustainable Energetics' Program (2013), Water Resources Protection Plan (2016), as well as coastal resort, tourism, river harbour etc. development plans, done with limited/formal public collaboration, as well as commissioned several coastal issues related mono-thematic studies. However, MCG studies are proving, that all main local stakeholders, including municipality employees and decision makers, still have limited information and understanding on the whole complex coastal socio-ecological system, and, have been not deciding either on ICM sector approach oriented process and document in Jurmala as per ICM national planning recommendations from Europe (EC, 2002) or procedural realization of ICM integration approach, according to the main eight ICM policy principles and instruments etc. recommendations (EC, 2002). Also ICM or MCG or alike terminology haven't been employed by municipal development policies and practice in general in Latvia, instead **applying traditional sectorial development policy/planning approach** and terminology to view and plan coastal system via separate and limitedly interconnected planning sectors, e.g. beach infrastructure, nature protection, tourism, building etc sectors.

Existent MCG has several limitations to be seen as directly related to the coastal policy and administration as well as normative and planning capacities, especially, in circumstances when the MCG integration version chosen, but this requires a very high level of coordination of all instruments. Having all these coastal SES and its governance challenges, municipality step-wise continuously works with MCG further implementation, but climate change and other additional inside/outside challenges would **require more pro-active development steps** and renewed, even just nationally/locally new innovatives, **mix of governance instruments** (Ballinger, 2008; Stojanovic, 2007; Ernsteins, 2017b) into their mixed development and complementary application. At least pre-planning/resource document (MCG Outlook or alike), which could be serving for more detailed knowledge-based **coastal science-policy-practice** (Lontone, 2017) understanding and eventual complex integration into both - planning processes and documents of municipal statutory development planning as well as any voluntary thematic (tourism, culture heritage, etc) planning too (Thetis, 2011; Hopkins, 2012; Ernsteins, 2017a).

This initial **Environmental Governance Outlook** document was designed and structured being based methodologically on tthree main governances' dimensions' approach, but altogether in their interlinked sectorial-integrative ICM complex frame and first version was prepared, which already in this first stage of the project gives a **new systemic overview and cumulative information** about the coastal governance situation in the municipality, but which is going to be publicly tested, supplemented and updated during the next stage of current R&D project to be eventually serving as a useful auxiliary document in the coastal planning process in the municipality of Jurmala. The fact that this approach is very convenient to use and easy-to-understand for both municipal employees

and other target groups, could be a key to success of this approach, therefore its use should be seriously considered when re-designing ICM type further development.

Conclusions

1) Besides good number of coastal related planning, infrastructure etc. instrument developments in Jurmala municipality, incl. existing governance instruments and their application, not all aspects related with the coastal environment and its governance have been integrated within statutory planning (and/or voluntary) and, subsequently, municipal practice (incl. monitoring and stakeholder's collaborations) - **coastal governance is comparatively limitedly integrated into municipal development governance**. Municipality step-wise continuously works with MCG further implementation, but climate change adaptation and other additional inside/outside challenges would **require more pro-active development steps** and renewed, even just nationally/locally new, instrumental and other innovations, **mix of coastal governance approaches and instruments**
2) It could be recommended also to all coastal municipalities of Latvia, especially for rural coastal municipalities, also to the city of Jurmala as the largest resort city on the coast of the Baltic Sea and one of the most popular tourism/recreation destinations in Latvia, but at the same time being bio-geographically sensitive territory - it is necessary to consider, elaborate and systemically use the **coastal governance framework** for MCG planning/management development as minimum as **networking application of all main and complementary coastal oriented governance instrument groups** – political and legislative instruments, institutional and administrative, also planning instruments, as well as infrastructure and technological, economic and financial, also communication instruments.
3) In piloting of innovative in Latvia municipal coastal pre-/post- planning document, the Municipal Coastal Governance Outlook, it was recognized that its design based on the **three basic governance dimensions** – coastal governance sectors, governance segments and governance instruments – is also comparatively easy to be understood and utilized by all main stakeholder groups since answering most important questions regarding MCG: by Whom, What and How is needed to be done for coastal governance system establishment. MCG Outlook could serve as basic **missing integration instrument** to take necessary account of coastal social-ecological system and its governance conditions for designing/renewing of statutory municipal development planning and documents as well to be used as mandatory integrative requirement for any other voluntary (sectorial/thematic) planning processes and documents, e.g. climate change, coastal contingency, health/resort, tourism etc. planning.

Bibliography

1. Ballinger, R, Cummins, V., O'Hagan, A.M., Philippe, M. (2008). The Point of COREPOINT: Improving Capacity for Integrated Coastal Zone Management in North West Europe. COREPOINT Report. p. 81
2. Breton F. (2006). Report on the Use of the ICZM Indicators from the WG-ID of EC: A Contribution to the ICZM Evaluation. European Environment Agency, 63.
3. Buono, F., Soriani, S., et. al. (2015). The Difficult Road to Integrated Coastal Zone Management Implementation in Italy: Evidences from the Italian North Adriatic Regions. Ocean and Coastal Management, 114, 21–31.
4. Deboudt, P. (2012). Testing Integrated Coastal Management in France. Ocean Coastal Management, 57, 62–78.
5. Recommendation of the European Parliament and Council Concerning the Implementation of Integrated Coastal Zone Management in Europe (2002). Brussels, 2002/413/EC
6. Ernsteins, R., Kaulins, J., Lice, E., Stals, A. (2011). Integrated Coastal Management for Local Municipalities in Latvia: Sustainability Governance and Indicator System, WIT Transactions on Ecology and Environment, 149, pp. 29–40.

7. Ernsteins, R., Kudrenickis, I., Kaulins, J., Lontone-Ievina, A. (2017a). Pro-Environmental Municipal Governance Developments in Latvia: Sustainability and Integration Principles in Practice. Proceedings of The International Scientific Conference, Vilnius Gediminas Technical University, Vilnius, Lithuania, May 2017, 308-317pp.
8. Ernsteins, R., Kudrenickis, I., Lontone-Ievina, A., Kaulins, J., Urtans, A. (2017b) Municipal Sustainable Coastal Governance: Participatory Approaches for System Analysis and for Local Monitoring Development. WSEAS Transactions on Environment and Development, Vol. 13, pp 276-290
9. Ernsteins, R., Lagzdina, E., Kudrenickis, I. Lontone, A., (2020) Municipal Coastal Governance System Developments in Latvia: Governance Segments, sectors and instruments. Economic Science for Rural Development Conference Proceedings. Latvian University of Life Sciences and Technologies, Jelgava, Latvia, May 2020 (in print)
10. Hopkins, S., Bailly, D. et al. (2012). A Systems Approach Framework for the Transition to Sustainable Development: Potential Value Based on Coastal Experiments, Ecology and Society, Vol. 17, Issue 3, p.39.
11. Kalpakis V., Kokkos N., Pisinaras V., Sylaios G. (2018). An Integrated Coastal Zone Observatory at Municipal Level: the Case of Kavala Municipality, Greece. Journal of Coastal Conservation, 23, 149–162.
12. Kaulins, J., Ernsteins, R., Kudrenickis, I., Lontone-Ievina, A., Zilniece, I. (2017). Municipal Thematical and Territorial Indicator Systems for Sustainable Socio-Ecological Coastal Governance. Proceedings of The International Scientific Conference, Vilnius Gediminas Technical University, Vilnius, Lithuania, May 2017, 318-329pp.
13. Kaulins, J., Ernsteins, R., Kudrenickis, I. (2018) Monitoring and Reporting System for Municipal Sustainable Development Governance in Latvia: Sustainability Outlook. Economic Science for Rural Development Conference Proceedings. Latvian University of Agriculture, Jelgava, Latvia, May 2018, 129-137. pp.
14. Klingsheim J. M. (2011). Norwegian Policies in ICZM and Requirements for Data and Methods, Adapting to Climate change. BLAST – Bringing Land and Sea Together, 1–20.
15. Lontone, A., Ernsteins, R., Lagzdina, E., et. al. (2017). Local Coastal Governance: Science-Policy Interface and Municipal Monitoring. Proceedings. 13th International MEDCOAST Congress on Coastal and Marine Sciences, Engineering, Management and Conservation, MEDCOAST 2017, pp. 105-116
16. National Long-Term Public Infrastructure Thematic Plan for the Coastal Area of the Baltic Sea (2016). Ministry of Environmental Protection and Regional Development, Republic of Latvia (Coastal Infrastructure Plan 2016)
17. O'Hagan A.M., Ballinger R. (2009). Coastal Governance in North West Europe: An Assessment of Approaches to the European Stocktake. Marine Policy, 33(6), 912–922.
18. Pommere I., Osniece K., Lontone-Ievina A., Ernsteins R. (2018). Municipal Integrated Coastal Management: Local Participatory Multi-thematical Monitoring Development. Journal of Social Sciences, Regional Formation and Development Studies, pp. 106-118.
19. Portman, M. E., Esteves, L.S., Le, X.Q., Khan, A.Z. (2012). Improving Integration for Integrated Coastal Zone Management: An Eight Country Study. Science of the Total Environment, 439, 194–201.
20. Protection Zone Law. Republic of Latvia, Parliament Saeima on 05.02.1997.
21. Stojanovic, T.A. (2007) Guidelines for Implementing Local Information Systems at the Coast. COREPOINT and Cardiff University, Cardiff. p. 35
22. Strategy for Coastal Spatial Development for 2011–2017 (2011). Ministry of Environmental Protection and Regional Development, Republic of Latvia (Coastal Spatial Strategy 2011)
23. Sustainable Development Strategy of Latvia until 2030 (Republic of Latvia, Parliament Saeima on 10.06.2010).
24. Thetis (2011). Analysis of Member States Progress Reports on Integrated Coastal Zone Management (ICZM): Final Report. European Commission – DG Environment, 357.

Proceedings of the 2020 International Conference "ECONOMIC SCIENCE FOR RURAL DEVELOPMENT" No 54
Jelgava, LLU ESAF, 12-15 May 2020, pp. 108-114
DOI: 10.22616/ESRD.2020.54.013

AGRITOURISM IN THE CONTEXT OF SUSTAINABLE TOURISM DEVELOPMENT

Diana Foris[1], Dr. Eng, Associate Professor; **Baiba Rivza**[2], Dr.habil. Oec., Professor; **Maiga Kruzmetra**[3], Senior researcher; **Ioana Sonia Comanescu**[4], Dr. Eng, Associate Professor; **Tiberiu Foris**[5], Dr. Oec, Professor
[1,4]Transilvania University of Brasov, Romania; [2,3]Latvia University of Life Sciences and Technologies, Latvia; [5]Transilvania University of Brasov, Romania

Abstract. Between agritourism and sustainable development there is a close link. Agritourism acts as an integrator for local development and preservation of traditions and historical heritage, as well as for other economic sectors: agriculture, transport, services etc. This research presents an analysis of the evolution of the agritourism infrastructure and of the main tourism indicators for Romania as a tourist destination, as part of the development of the tourism industry. Quantitative and comparative analyses were carried out regarding the number and the existing accommodation capacity for agro-tourist boarding houses and the numerical evolution for domestic and international arrivals related to agritourism throughout the period between 2009 and 2017. Romania is an important agritourism destination, well known at national and international level for its unaltered natural resources (wild landscapes and nature) and preservation of traditions in rural area. A better understanding of processes occurring in the country could be achieved by comparing the processes with similar ones in another European Union Member State, which, in the present research, is Latvia, thereby confirming the cooperation of scientists of both countries in doing research on the viability of rural areas.

Key words: agritourism, sustainable development, rural areas
JEL code: O18, Q56, Z31, Z32

Introduction

Agritourism is directly linked to agricultural activities, being practiced by small farmers and these activities carried out in their own household are the main source of income (Foris D, et al., 2018). There are also other concepts such as "farm tourism", "green tourism" that have the same content. In European Union, rural tourism is a concept that includes tourist activity organized and led by the local population, based on a close connection with the natural and human environment (Caratus Stanciu M., 2017). Agri-tourism is one of the most dynamic forms of tourism in the European Union, due to the current trend of returning to origins and, also due to the advantages that it offers to both tourists and the host communities. Rural areas are rich in ecological and rural diversity (Dorobantu M. R., et al., 2012), to which the tourism resources (natural, cultural and human) and the tourism facilities and equipment, including tourist guests houses and agro-touristic farms as well are added (Nistoreanu P., 2007).

In Romania, the current legislation has defined agro-tourist boarding houses as establishments of tourist reception, with a capacity of accommodation of up to 8 rooms, operating in citizens' homes or in an independent building, which ensures in specially arranged spaces the tourists' accommodation and the conditions for preparing and serving the meal, as well as the possibility to participate at household or craft activities. In agri-tourist boarding houses, tourists are offered the meal prepared from mostly natural products from their own household (including fish products) or from locally authorized producers / fishermen. The hosts deal directly with the reception of tourists and their program throughout the stay at the pension and will accompany tourists who participate in traditional, household or crafts activities. Within the agri-tourist boarding houses, there is at least one activity related to agriculture, fish farming, fisheries, reed harvesting, animal husbandry, cultivation of different types of plants, orchards or fruit trees or a craft activity, with a workshop,

[1] Diana Foris e-mail: diana.foris@unitbv.ro
[2] Baiba Rivza e-mail: baiba.rivza@llu.lv
[3] Maiga Kruzmetra e-mail: maiga.kuzmetra@llu.lv
[4] Ioana Sonia Comanescu e-mail: ioanacom@unitbv.ro
[5] Tiberiu Foris e-mail: tiberiu.foris@unitbv.ro

from which different handicraft products results. The activities in question must be carried out continuously or depending on the specificity and seasonality, in order to have repeatability (Order no. 65, Annex 1.5, 2013). An example would be grape processing in wine-growing areas, considering the fact that wine regions offers many tourist land marks with high quality wines: places with interesting architecture, historical castles, cultural festivities, amazing landscapes, etc. (Canja C. M., 2010), and the emotional connection between wine, identity and region image is a key event for international and domestic tourism.

The exceptional tourism potential of Romania has two main components: the natural component, represented by spectacular landscapes, varied configuration of the relief, favourable climatic conditions and lots of natural therapeutic spas; and the historical component, represented by traces of succeeding civilisations that had lived on Romanian territory since ancient times, monuments and lay or religious art objects, museums and museum collections, beautiful and original ethnographical and folklore elements and actual prestigious achievements (Sumovoschi C. D., et al., 2015).

If in the beginning, in Romania, agri-tourism was practiced by the peasants who had additional accommodation in their houses, now agri-tourism is more and more an activity carried out in buildings built in accordance with the legal requirements regarding comfort, but keeping the local specific, being an activity developed both by the locals and by the people who moved to the country. Thus, this form of tourism has undergone constant development and has become a way of achieving sustainable development of rural areas. Romania is actually following the successful models developed in Western Europe, where agri-tourism occupies a leading position in the tourists' preferences (National Institute of Statistics, 2017), because it is among the countries with a great agri-tourism potential, especially due to the wild landscapes and nature, to which contemporary people now want to return, but also because of the preservation of traditions, which have been preserved authentic over the centuries.

The objective of the research is to demonstrate that agritourism in Romania has undergone a continuous development process between 2009 and 2017, in order to confirm the viability of rural areas. In order to achieve this goal, the tasks of the present research are to demonstrate that the numerical evolution of agro-tourism boarding houses and the tourist accommodation capacity is increasing, that agri-tourism activities are sustainable and that agri-tourism plays a role of great importance within the country's tourism industry. In this respect, an analysis of the evolution of the agritourism infrastructure and of the main tourism indicators for Romania will be made. In order to a better understanding of the processes taking place in Romania, the analysis will be carried out by comparing the processes with similar ones in Latvia.

In Latvia, agritourism as well as cultural heritage as a way of supporting and expanding tourism in rural areas are among the research priorities (Liscova A., 2011; Jeroscenkova L., 2016). The cooperation of both countries in doing research on tourism in rural areas has already been established (Kruzmetra M. et al., 2018), which is expanded and continues in the form of the present paper.

Materials and Methods

The analysis was carried out on the basis of the statistical data provided by the National Institute of Statistics published in the Romanian Tourism Statistical Abstract for the period between 2009 and 2017. Quantitative and comparative analyses were carried out regarding the total number and the existing accommodation capacity for agro-tourist boarding houses and the numerical evolution for domestic arrivals and international arrivals throughout the period between 2009 and 2017. Data on agritourism in Latvia for the same period were acquired from the Statistical Bureau of Latvia (CSBL).

Research results and discussion

We started by analysing the numerical evolution for agro-tourist boarding houses in Romania and Latvia in Table 1.

Table 1

The numerical evolution of agro-tourist boarding houses

No	Year	2009	2010	2011	2012	2013	2014	2015	2016	2017
1.	Romania	1412	1354	1210	1569	1598	1665	1918	2028	2556
2.	Latvia	327	375	390	385	307	306	257	291	467

Source: author's calculations based on The National Statistics Institute, Tourism of Romania - statistical summary 2009 - 2018; CSB of Latvia 2009 – 2017

In Romania, during the analysed period, we find a steady increase of number of agro-tourist boarding houses. There can be noticed a small decrease in 2011 for agro-tourist boarding houses, which can be attributed to the global economic crisis. Also, in 2012, there can be noticed a significant increase for agri-tourist boarding houses, a situation that may be caused by the good functioning of the National Rural Development Programme of Romania 2007-2013 (PNDR, 2012). Starting with 2012, there is a constant increase of the number of these establishments. The effects of the global economic crisis were observed also in Latvia, two years later than in Romania. However, despite the slowdown in growth caused by the global economic crisis, the number of boarding houses for agro-tourists rose in both countries in the analysis period. Besides, this process was much faster in Romania than in Latvia (181.01% in Romania; 142.8% in Latvia).

Table 2

The tourist accommodation capacity for agro-tourist boarding houses

No	Year	2009	2010	2011	2012	2013	2014	2015	2016	2017
1.	Romania	19783	20208	20683	27453	28775	30480	35188	37394	44409
2.	Latvia	12113	12717	14197	15134	11131	11460	10311	12177	15479

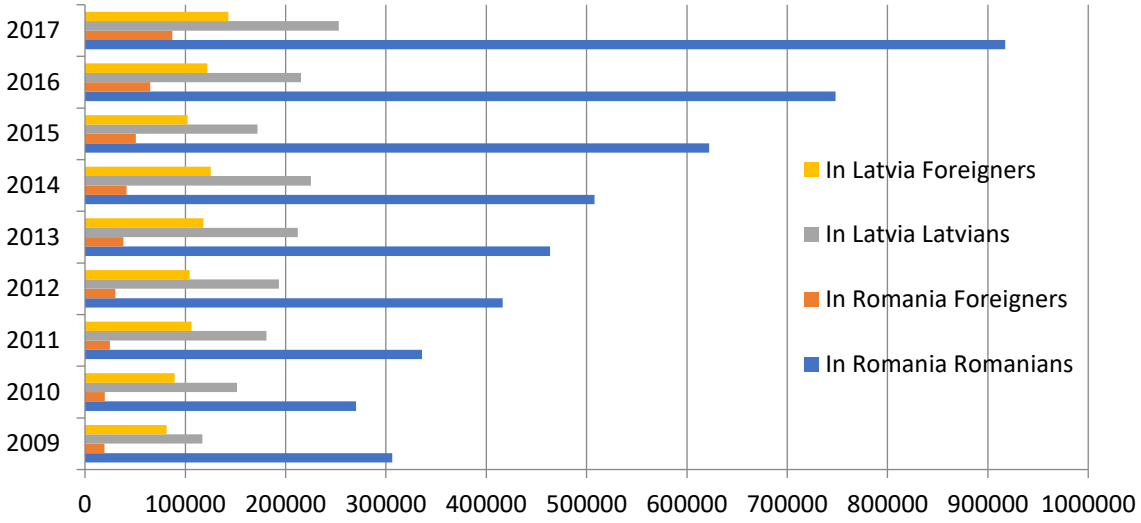
Source: author's calculations based on The National Statistics Institute, Tourism of Romania - statistical summary 2009 - 2018; CSB of Latvia 2009 – 2017

Analysing the tourist accommodation capacity for the studied period in Table 2, we notice a significant increase regarding agro-tourist boarding houses in Romania (224.48 %).

It is necessary to mention that the increase of the units can be based on the fact that in 2016, started the National Rural Development Programme of Romania (2014-2017). The main objective of these activities is to contribute to sustainable economic development, to create jobs and to reduce poverty in rural areas (PNDR, 2017).

The tourist accommodation capacity for the studied period increased also in Latvia (127.8%), yet the increase rate was lower than that in Romania. It could be explained by the fact that Latvia, in terms of area, is a small country compared with Romania, and one-day tourism was specific to Latvia. For example, one-day visitors totalled 960722 in Latvia in 2017. (Tourism in.., 2018).

In the following study, we will try to identify if the agro-tourism activities are sustainable, through the analysis of the demand for this type of tourism. In this regard, we will analyse in Fig. 1 the number of arrivals during the period 2009 –2017 for agri-tourist boarding houses.



Source: author's calculations based on The National Statistics Institute, Tourism of Romania - statistical summary 2009 - 2018; CSB of Latvia 2009 – 2017

Fig. 1. **Tourists' arrivals in agri-tourist boarding houses**

Analysing the tourists' arrivals in agro-tourist boarding houses, we notice a significant increase, except for the period 2009-2010, when there is a small decrease in the number of tourists, both Romanian and foreign, as a result of the effects of the economic crisis. After 2011, there have been steady increases in the flow of arrivals for both the domestic and the international tourism flows but a slow evolution of the number of international arrivals. We can explain the slower evolution of the number of international arrivals, by identifying the negative aspects related to infrastructure, transport and promotion. Regarding the infrastructure, in many rural localities a drainage network and centralized water supply system are lacking. One of the main negative aspects of transport is the lack of highways and the existence of incomplete trans-European roads. In addition, we can take into account the fact that many rural tourist areas do not have an airport nearby, the stations and the coaches have inadequate equipment, the speed of trains does not correspond to the demands of the tourists nowadays, the lack of bus schedule, poor road quality. Regarding the promotion, one of the main problems is the lack of destination marketing organizations in rural areas and the lack of a coordinated network of tourist information centres.

In Latvia too, first of all, domestic tourists visit the nicest and most interesting sites in rural areas, which both give them cultural and historical knowledge and acquaint them to the cultural and historical heritage. It is not correct to compare the numbers of such tourists between Latvia and Romania, as the population of Romania is ten-fold larger than that of Latvia. The interest of foreign tourists in the nature of Latvia and the cultural environment outside the country's cities also increases.

The relative data, however, reveal a significant distinction: in Romania, the number of foreign agritourists increased faster than that of domestic agritourists. The situation in Latvia was opposite – the number of domestic agritourists rose faster than that of foreign agritourists in the analysed period. The rise in the number of domestic agritourists might be explained by the coming 100th anniversary of Latvia's independence and the wish of the tourists to get better familiarised with their own country.

Agri-tourism plays an important role in sustainable development, but the question is whether agri-tourism plays an important role in the tourism industry of the respective country. In order to answer such a question, we will carry out an analysis to determine the contribution (in percentage)

of the number and the accommodation capacity of the agri-tourism pensions in the total number and the accommodation capacity of the accommodation units in Romania and Latvia.

In Table 3 we represented the numerical evolution of the establishments of tourist reception with functions of accommodation in Romania and Latvia. In Romania we notice that in 2009 the total number of registered units was 5095, of which 1412 were represented by agri-tourist boarding houses. In 2017, the total number of units was 7905, of which 2556 were agro-tourist boarding houses, namely 32.33 % of the total number of units and compared to 2009, their number increased, the results following a positive trend.

The same processes were observed in Latvia too – the total number of tourist accommodation establishments rose, and the number of those located in rural areas rose as well. However, in terms of increase rate, Romania outpaced Latvia.

Table 3

The numerical evolution of the establishments of tourist reception with functions of accommodation and the number of agro-tourist boarding houses

No	Annual comparative growth	Establishments of tourists reception with functions of tourists accommodation	No. of agro-tourist boarding houses	Establishments of tourists reception with functions of tourists accommodation	No. of agro-tourist boarding houses
1.	**Year**	**Romania**		**Latvia**	
2.	2009	5095	1412	559	327
3.	2010	5222	1354	628	375
4.	2011	5003	1210	641	390
5.	2012	5821	1569	632	385
6.	2013	6009	1598	546	307
7.	2014	6130	1665	544	306
8.	2015	6821	1918	563	257
9.	2016	6946	2028	607	291
10.	2017	7905	2556	809	487
11.	**Increase**	**136.3 %**	**143.6 %**	**144.7 %**	**148.9 %**

Source: author's calculations based on The National Statistics Institute, Tourism of Romania - statistical summary 2009 - 2018; CSB of Latvia 2009 – 2017

A distinctive feature of Latvia was that the proportion of agro-tourist boarding houses in the total of tourist accommodation establishments increased at a faster rate (7.3 % percentage points in Romania; 4.2 % percentage points in Latvia).

In Romania, in most cases hotels, hostels, bungalows etc. are located in or near urban areas, and at present, rural areas in Romania cover 87.1 % (Management Authority for PNDR, 2013) of the country's territory, so there are perspectives for more favourable to the development of agro-tourism.

The values for the total accommodation capacity for existing establishments of tourist reception with functions of accommodation in Romania and Latvia are also highlighted in the Table 4.

Table 4

Total accommodation capacity for establishments of tourist reception with functions of tourist accommodation and accommodation capacity for agri-tourist boarding houses

No	Annual comparative growth	Total accommodation capacity for establishments of tourists reception with functions of tourists accommodation	Accommodation capacity for agro-tourist boarding houses	Percent, %	Total accommodation capacity for establishments of tourists reception with functions of tourists accommodation	Accommodation capacity for agro-tourist boarding houses	Percent, %
1.	**Year**	**Romania**			**Latvia**		
2.	2009	303486	19783	6.5	32496	12113	37.3
3.	2010	311698	20208	6.5	34657	12717	36.7
4.	2011	278503	20683	7.4	35745	14195	39.7
5.	2012	301109	27453	9.1	36901	15134	42.01
6.	2013	305707	28755	9.4	32311	11131	34.4
7.	2014	311288	30480	9.8	33459	11460	34.3
8.	2015	328313	35188	10.7	34420	10311	29.95
9.	2016	328888	37394	11.4	37453	12177	32.5
10.	2017	343720	44499	12.94	40824	15479	37.9
11.	**Increase of accommodation capacity in agro-tourist boarding houses**						
12.	6.4 % percentage points				0.6 % percentage points		

Source: author's calculations based on The National Statistics Institute, Tourism of Romania - statistical summary 2009 - 2018; CSB of Latvia 2009 – 2017

In 2017, 12.94 % in Romania and 38.0% in Latvia of the total accommodation capacity were represented by the agro-tourist boarding houses and their number has increased compared to 2009.

Various development strategies have been developed over time in Romania, which concerned also the agro tourism field, such as certain actions provided in the National Tourism Development Master Plan 2007-2026, and to be more specific, we can mention, Action 35, which requires the regional inspectors of the National Tourism Authority to encourage and facilitate the formation of the destination of rural areas; Action 70, which requires the National Tourism Authority to collect and publish data on traditional festivals and events and to work with NGOs to promote niche products and activities in rural areas; and Action 77a, which requires the National Tourism Authority to set up advertising campaigns with organizers and associations responsible for rural activities, focusing on groups of great interest (Foris et al., 2018). We also find actions aimed at agri-tourism in the Strategy for Ecotourism Development in Romania, 2009 (National Institute of Ecotourism Development in Romania, 2009), such as for example the simplification of the procedure for issuing the Fire Prevention and Fire Extinguishing permit and the Sanitary – Veterinary permit.

Conclusions, proposals, recommendations

1) During the period 2009 – 2017, agritourism has experienced a real development in Romania and also in Latvia. In Romania, the continuous development of the agro-tourism units is noticed, this resulting in an increase in the number of arrivals both internally and internationally. The development of agri-tourism was based largely on the non-reimbursable financial support granted to entrepreneurs through the European programs for rural development.
2) In Latvia, just like in Romania, an important role is played by the maintenance of viability of rural areas, thereby providing decent living conditions to rural residents as well. Economic

diversification could contribute to it, and tourism is one of the options. According to statistical data, the number of agro-tourist boarding houses increased in Latvia. The numbers of visitors – both residents and foreigners – rose as well. Although these processes are taking place more rapidly in Romania than in Latvia, they confirm the importance of tourism as a socio-economic and cultural activity in Latvia.

Bibliography

1. *Autoritatea de Management pentru PNDR (Managing Authority for PNDR*) (2013). Analiza socio-economica in perspectiva dezvoltarii rurale 2014-2020 (Socio-economic analysis in the perspective of rural development 2014-2020), p.1.
2. Canja C. M. (2010). Role of Education in Oenotourism Development, International Conference Bioatlas, Brasov, May 2010, p.164.
3. Dorobantu, M. R., Nistoreanu P. (2012). Rural Tourism and Ecotourism- the Main Priorities in Sustainable Development, Orientations of Rural Local Communities in Romania, *Economy Transdisciplinarity Cognition*, Vol. XV, Issue1, p.3.
4. Caratus Stanciu M. (2017). Agrotourism and Rural Tourism the Way of Sustainable Development in Rural Areas of Sibiu County – Romania, Oltenia. *Studii si comunicari. Stiintele Naturii*. Tom. 33, No. 2, p.1.
5. Foris D., Comanescu I.S., Foris T. (2018). Trends in Romanian Agritourism in the Context of Sustainable Tourism Development, Proceedings of the 2018 International Scientific Conference 'Economic Sciences for Agribusiness and Rural Economy' No 1, Warsaw, 7–8 June 2018, pp. 81–86.
6. *Institutul National de Cercetare-Dezvoltare in Turism - INCDT* (National Institute for Research and Development in Tourism – INCDT) (2009). Strategia nationala de dezvoltare a ecoturismului in Romania (Strategy of Ecotourism Development in Romania). p.37.
7. *Institutul National de Statistica* (The National Statistics Institute) (2018). Turismul Romaniei - breviar statistic (Tourism of Romania - statistical summary), 2009-2018.
8. Jeroscenkova, L. (2016). The Use of Cultural Heritage for the Development of Rural Tourism. Latvia University of Agriculture. Jelgava, p. 124.
9. Kruzmetra, M., Rivza, B., Foris, D. (2018). Modernization of the Demand and Supply Sides for Gastronomic Cultural Heritage. *Management Theory and Studies for Rural Business and Infrastructure Development* Vol. 40(3), pp. 337–347.
10. Liscova, A. (2011). Farm diversification opportunities for Zemgale planning region farms. Latvia University of Agriculture. Jelgava, 99 p.
11. *Ministerul Dezvoltarii Regionale si Administratiei Publice* (Ministry of Regional Development and Public Administration) (2007). Master Planul pentru Dezvoltarea Turismului National (Master Plan for National Tourism Development), 2007, p. 144.
12. Nistoreanu, P. (2007). Aprecieri asupra fenomenului turistic rural (An appreciation of the rural tourism phenomenon). *Revista de turism* nr.3. p.17.
13. Order no. 65 of June 10, 2013 for the approval of the Methodological Norms regarding the issuance of certificates of classification of tourist reception structures with functions of accommodation and public food, of licenses and tourism patents (2013). Annex 1.5. Published in the Official Gazette no. 353 of June 14 2013.
14. PNDR (2012). Programul National de Dezvoltare Rurala 2007-2014 (National Rural Development Program 2007-2014). Retrieved: https://www.fonduri-ue.ro/pndr-2007. Access: 28.06.2019.
15. PNDR (2017). Programul National de Dezvoltare Rurala 2014-2020 (National Rural Development Program 2014-2020), Ghidul Solicitantului- Submasura 6.2-"Sprijin pentru infiinţarea de activitati neagricole in zone rurale" (Applicant's Guide - Sub-measure 6.2- "Support for setting up non-agricultural activities in rural areas"), p.3.
16. Sumovoschi D.C., Moraru R.A. (2015). Factori motivationali in agroturism (Motivational factors in agrotourism). Turismul rural romanesc in contextul dezvoltarii durabile. Actualitate si perspective, vol XXXVIII, Editura PIM, p. 133.
17. *Statistical Bureau of Latvia*. (Tourism). Retrieved: http://www.csb.gov.lv Access: 13.01.2018.
18. *Tourism in Latvia*. (2018) Collection of Statistics. CSB of Latvia, p.64.

Proceedings of the 2020 International Conference "ECONOMIC SCIENCE FOR RURAL DEVELOPMENT" No 54
Jelgava, LLU ESAF, 12-15 May 2020, pp. 115-121
DOI: 10.22616/ESRD.2020.54.014

FACTORS INFLUENCING SALARIES OF PRE-SCHOOL TEACHERS IN LATVIA REGIONS

Anda Grinfelde[1], Dr.oec.; **Inga Vanaga**[2], PhD student; **Liga Paula**[3], Dr.sc.soc.
[1,3]Latvia University of Life Sciences and Technologies; [2]University of Latvia; Latvian Trade Union of Education and Science Employees

Abstract. Educators are the most important factor for children's well-being, learning and development outcomes especially at pre-school level. The problem of an unequal workload of pre-school teachers and the corresponding salary in regions of Latvia has defined the research aim, which is to identify problems in ensuring equal opportunities in pre-school teachers' workload and average salaries in the regions of Latvia, as well as to develop proposals to reduce inequalities. The paper reflects the results of a study on inequalities in the payroll and monthly salaries of pre-school teachers. The research data were obtained from interviews with members of 12 local trade unions of Latvian Trade Union of Education and Science Employees throughout Latvia and quantitative survey in 119 municipalities. The survey of local governments was conducted in Autumn 2019 to find out the average workload and monthly salary rate of pre-school teachers in municipalities. At the second stage of the research, chairpersons of the local trade unions were interviewed in order to collect suggestions for improving the pay model for pre-school teachers. Results show that the salary of pre-school teachers depends on local political decisions of the municipalities on the organization of pre-school work, the subsequent workload and the monthly salary rate determined by each municipality. Pre-school teachers have a limited right to equal pay for work of equal value in different regions of Latvia. According to a survey of local trade unions, all respondents believe that funding for pre-school teachers should be provided by the state budget in order to prevent local governments from setting different monthly salary rates.

Key words: regions, inequality, pre-school teachers, salary, teacher workload.
JEL code: R23, K31

Introduction

Pre-school education is the first stage of education playing an important role in individual's further education, his/her competitiveness in the labour market, socialization according to the values and norms of society. Highly motivated professionals need to be employed in pre-school education; therefore, a strategic approach is needed to improve the quality of work and motivation of pre-school teachers (OECD, 2018). The role of human capital, including education, in the development of society is difficult to quantify and is often overlooked in economic calculations. Recommendations of the European Commission on high quality early childhood education and care systems sets out the rationale that the return on investment at an early stage is the highest of all education stages. Early childhood education can be an effective means of achieving an equal level of education for all children. In particular, the work of early childhood education and care professionals has a lasting impact on children's lives. Spending on early childhood education and care is an early investment in human capital. To put it differently, "the highest social gains come from investing during early years" (Council of Europe Development Bank, 2017, p.1). Quality considerations must be given priority in policy measures and reforms. In order to play their professional role in supporting children and their families, pre-school education and care staff need sophisticated knowledge and competencies as well as a deep understanding of child development and knowledge of early childhood education (Priekslikums Padomes…). Educators are the most important factor for children's well-being, learning and development outcomes. Therefore, the quality of work of staff is considered to be an essential component of the quality of education.

[1] Anda.Grinfelde@llu.lv, +371 29265476
[2] inga.vanaga@lizda.lv, +371 25998994
[3] Liga.Paula@llu.lv, +371 26321667

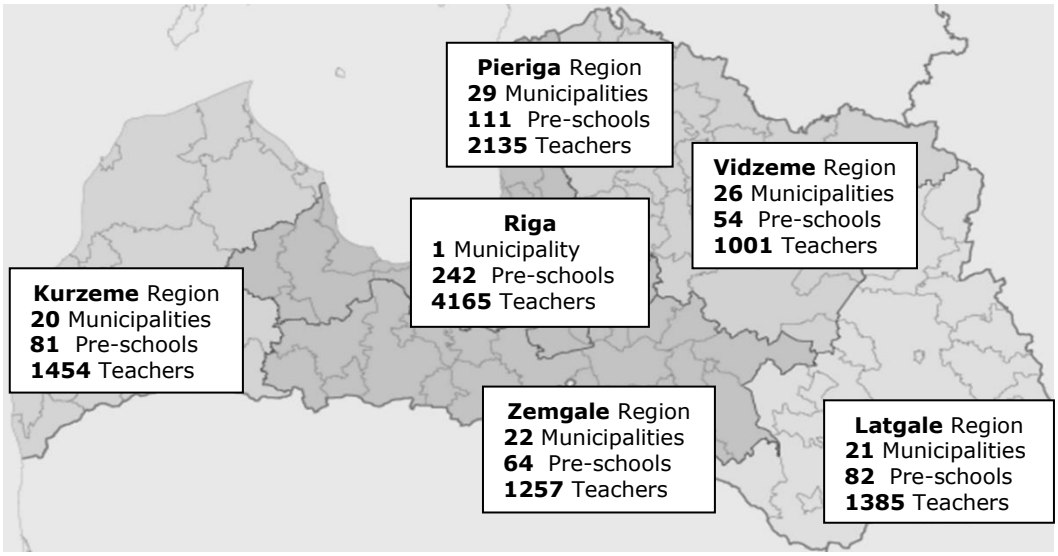
The issue of income inequality is more broadly addressed in the European Pillar of Social Rights (The European Pillar…), presented by the European Commission in April 2017. The third principle of the pillar is that everyone has the right to equal opportunities. Out of the 14 core indicators included in the accompanying social scoreboard, one relates directly to income inequality, while several others relate to policies closely linked to combating the rise in income inequality and equal opportunities (Nevienlidzibas noversana, 2016). The European Commission notes that inequality is a multidimensional problem. Although inequality can be measured in many different dimensions, the two basic concepts are inequality of outcomes (distribution of income and resources) and inequality of opportunity.

Aspects of inequality between teachers in pre-school education encompass both inequality in outcomes and opportunities. This problem in Latvia has been raised for several years and no research has been carried out on the comparison of the workload of pre-school teachers and the corresponding salary in regions of Latvia to find out which regions concentrate pre-schools where the teachers receive higher and lower average monthly wages. Therefore, the aim of the study is to identify problems in ensuring equal opportunities in pre-school teachers' workload and average wages in the regions of Latvia, as well as to develop proposals to reduce inequalities. The article reflects the results of a study on inequalities in the payroll and monthly wages of preschool teachers. To achieve the aim of the research, the following tasks were set: 1) to conceptualize the factors influencing the wages of pre-school teachers in the context of inequality; 2) to investigate the workload and monthly salary rate of pre-school teachers in Latvian municipalities and comparisons by region; and 3) to develop proposals for reducing inequalities among pre-school teachers in different regions and regions of Latvia.

Research results and discussion

1. Research methodology

The research was carried out to identify problems in ensuring equal opportunities in the workload and average wages of pre-school teachers in the regions of Latvia, therefore the research object is 119 municipalities of Latvia, of which 110 are rural municipalities and 9 cities. In order to compare the average workload and the monthly salary rate in municipalities and statistical regions of the country, municipalities are structured according to one of the six regions in which they are located (Figure 1).



Source: Authors' calculations based on Central Statistical Bureau data, 2018

Fig. 1. **Number of municipalities, pre-schools and teachers by statistical region**

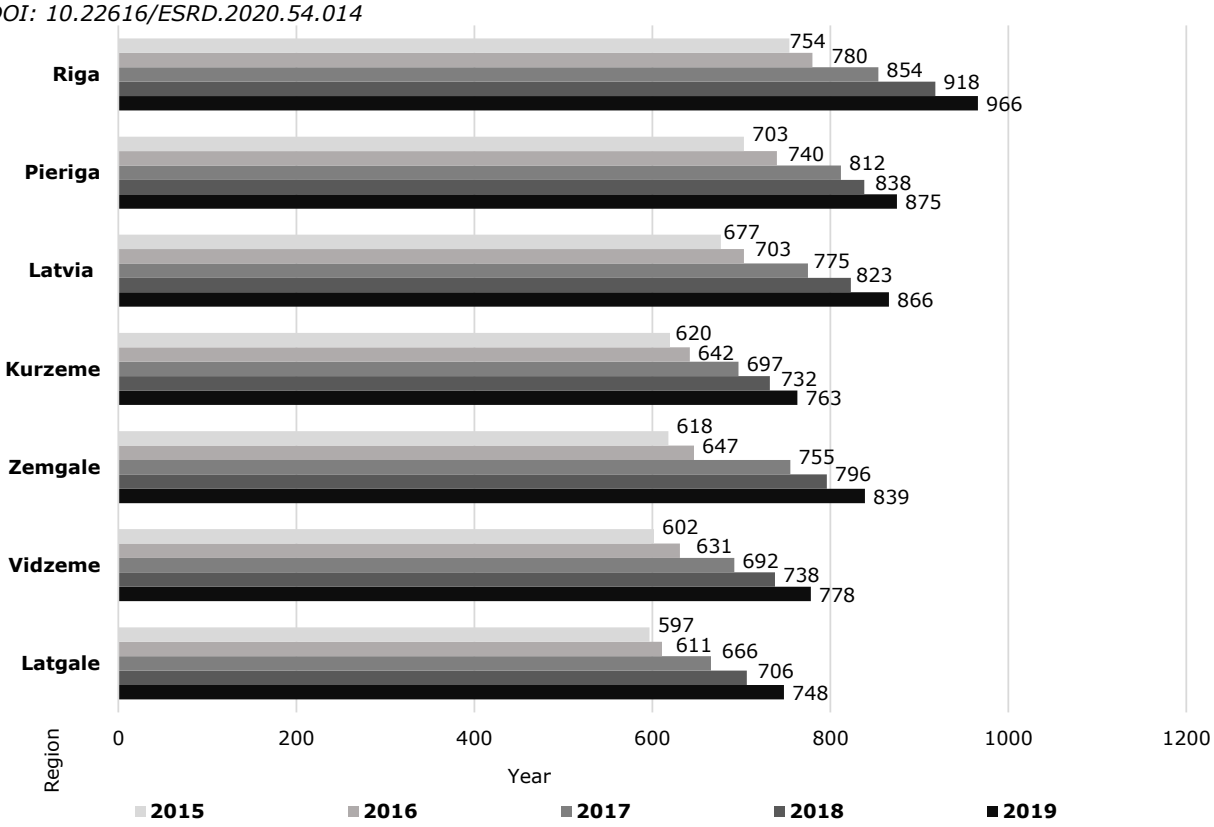
In Latvia, 11.4 thousand of teachers in 634 pre-school establishments provide education for 99.2 thousand of children in age 1.5 to 6 years. The authors in the paper focus on the factors influencing wages for the teachers working with 1.5 to 4 years old children as the wages for this teacher group are influenced by the possibilities of municipal funding and local political decisions. The research data for the paper was obtained from interviews with representatives of 12 local trade unions of Latvian Trade Union of Education and Science Employees and 119 municipalities. Quantitative survey of local governments was conducted from September 30, 2019 to November 5, 2019 to find out the average workload and monthly wage rate of preschool teachers in municipalities. At the second stage of the research, interviews with the chairpersons of the local trade unions was conducted from November 20, 2019 to January 15, 2020, to collect suggestions for improving the pay model for preschool teachers. Information about the workload and salary rate was processed using EXCEL, whereas proposals for improving the model of pay for pre-school teachers were processed by using content analysis, identifying the most frequently made proposals.

2. Regional disparities: analysis of the research results

In Latvia, according to the Education Law, pre-school education is provided to children from 1.5 years of age, but the availability of this service and the involvement of teachers depend on the priorities and financial resources of each municipality. Pre-school teachers who work with children aged 1.5 - 4 are paid by local governments from their own budget, while salaries of teachers who work with children of pre-school age (5-6 years) are paid from the state budget (Izglitibas likums…). Although in Latvia all teachers have the same basic education (qualification) requirements when working with children (Noteikumi par pedagogiem ..., 2018), regulations of the Cabinet of Ministers on the workload and wages of pre-school teachers (Pedagogu darba samaksas noteikumi, 2016) include inequalities: the minimum wage rate is the same for all teachers, while the workload for pre-school teachers is significantly higher than for other teachers.

Reducing inequalities and raising the prestige of teaching profession are important subjects of debate in the European Union and in Latvia. Achieving equal opportunities in equal pay for work of equal value and responsibility in the education sector is essential. No matter in which municipality or region the pre-school teacher does works, it should be equal in terms of workload and wages throughout Latvia and compared to other teachers. According to the Education Development Guidelines 2014-2020, the average wage (gross) of education and training employees should be equal to the average at national level in 2020 (Izglitibas attistibas…).

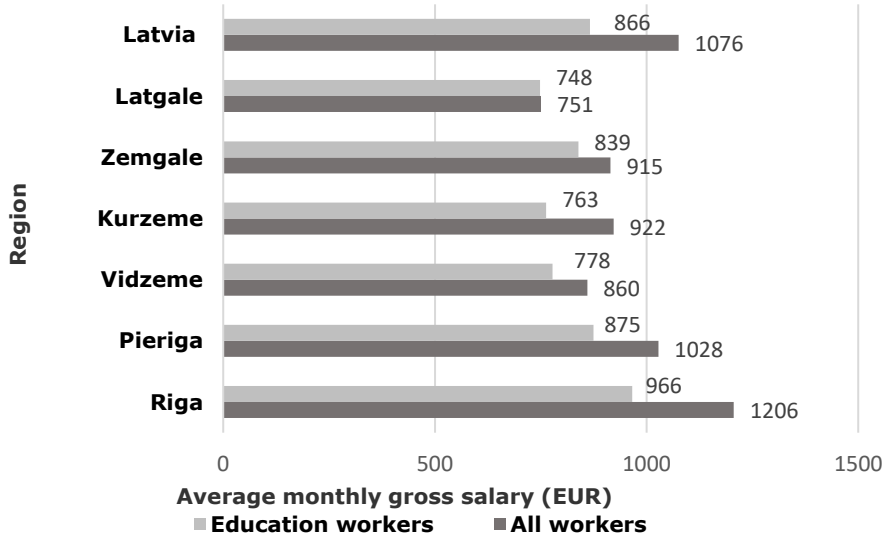
Despite the fact that the average monthly salary in the education sector is increasing every year in both the country and its regions (Figure 2), there is still a significant gap between salaries of those who work in education sector and the average salary in the country. In 2019, the gap reached 210 EUR (Figure 3).



Source: Authors' calculations based on the Central Statistical Bureau data, 2019

Fig. 2. **Average monthly gross wages in education sector by regions in 2015-2019, EUR**

Comparing the average wages of those working in the education sector in the regions, the biggest difference in the last five years is between teachers in Riga and Latgale (Figure 2). As a result, in regions with lower average teachers' salary there is a smaller difference between the average wage in the country and the average wage in the education sector (e.g. Latgale 3.00 EUR) than in regions with higher average wages, e.g. the gap in Riga is 240.00 EUR (Figure 3.).



Source: Authors' calculations based on the Central Statistical Bureau data, 2019

Fig. 3. **Average monthly gross wages in statistical regions of Latvia in 2019, EUR**

The task No 127 of the Government Action Plan (Par valdibas ricibas…) aims to further increase the remuneration of teaching and academic staff including preschool teachers, and to improve the remuneration model. This is due to the fact that preschool teachers are in an unequal position compared to other teachers. Pre-school teachers are currently required to work 40 hours a week,

including 36 hours with children and 4 hours for preparation of classes, while workload of other teachers is 30 hours a week, including lessons, optional teaching activities, individual and group work, etc. The nationally defined minimum wage for all teachers is EUR 750 per month, but due to the difference in working hours, pre-school teachers may not receive less than 4.69 EUR per hour, but other teachers – not less than 6.25 EUR per hour. Municipalities have different patterns of teacher work load organization in preschools. It also affects the amount of workload of pre-school teachers in regions, for example, 50-60 % of municipalities in Pieriga, Vidzeme and Zemgale regions provide full-time work for teachers who work with 1.5-4 years old children, whereas only 14 % of Latgale municipalities and 30% of Kurzeme municipalities can afford this (Table 1).

Table 1

Number of municipalities in Latvia where preschool teachers work full-time, October 2019

Region	1.5 - 4 years old children		5 - 6 years old children	
	Number of municipalities	%	Number of municipalities	%
Riga city	1	100	1	100
Pieriga	15	52	16	55
Vidzeme	16	62	16	62
Kurzeme	6	30	7	35
Zemgale	14	64	17	77
Latgale	3	14	5	24
Latvia	**48**	**40**	**29**	**24**

Source: Authors' calculations based on LIZDA survey data

The workload of pre-school teachers is the most important factor influencing wages. If there is a difference in the amount of workload, there is also a difference in the average monthly wage in the regions (Table A2). Comparing the average monthly salary rate of pre-school teachers in municipalities, it can be concluded that in Pieriga region the salary rate for pre-school teachers in municipalities is much higher than officially defined minimum (750 EUR) reaching up to 1006 EUR per month. In Latgale region, on the other hand, only two municipalities have higher wage rates than minimum for pre-school teachers. An even more negative tendency is due to the fact that municipalities are unable to provide full-time workload for teachers and as a result, in Latgale region, unlike Pieriga region, the average monthly salary is below the minimum wage in almost all municipalities. Only in three municipalities it has reached 750 EUR. The salary of pre-school teachers depends on the local political decisions of the municipality on the organization of work; the subsequent workload and the monthly salary rate will be determined by each municipality. Preschool teachers have a limited right to equal pay for work of equal value in different regions of Latvia.

Table 2

Distribution of municipalities according to pedagogical rate and average monthly salary of preschool teachers in the regions of Latvia, October 2019, n=118

Income level (EUR)	Pieriga		Vidzeme		Kurzeme		Zemgale		Latgale	
	Rate	Average salary	Rate	Average salary	Rate	Average salary	Rate	Average salary	Rate	Average salary
351-399	0	0	0	0	0	0	0	1	0	1
400-449	0	0	0	1	0	1	0	2	0	1
450-499	0	1	0	0	0	0	0	0	0	0
500-549	0	1	0	1	0	0	0	0	0	0
550-599	0	0	0	0	0	1	0	2	0	4
600-649	0	2	0	0	0	6	0	1	0	4
650-699	0	2	0	3	0	4	0	7	0	5
700-749	0	2	0	5	0	2	0	0	0	3
In total (351-749)	**0**	**8**	**0**	**10**	**0**	**14**	**0**	**13**	**0**	**18**
750 (minimum)	**11**	**5**	**24**	**16**	**19**	**6**	**20**	**8**	**19**	**3**
751-799	3	6	2	0	1	0	0	1	1	0
800-849	6	5	0	0	0	0	2	0	1	0
850-899	2	0	0	0	0	0	0	0	0	0
900-949	5	4	0	0	0	0	0	0	0	0
950-1006	2	1	0	0	0	0	0	0	0	0
In total (751-1006)	**18**	**16**	**2**	**0**	**1**	**0**	**2**	**1**	**2**	**0**

Source: Authors' calculations based on LIZDA survey data

According to a survey of local trade unions, all respondents believe that funding for pre-school teachers should be provided by the state budget in order to prevent local governments from setting different monthly salary rates. The survey allows to conclude that municipalities have different organization of pre-school teachers' work including different limits of working hours of pre-schools, number of children per teacher, planning of teachers' work, different requirements to be at work or to remotely prepare lessons. As a result of the survey, it is proposed to improve the remuneration model for pre-school teachers by reducing the proportion of lessons with children and providing a greater number of hours for class preparation. This is crucially important for the qualitative implementation of the new reform, the competency-based curriculum, which involves the transition from ready-to-use knowledge to meaningful engagement or learning by each child.

The world's most important report on quality of education in OECD member countries and partner countries, "Education at a Glance: OECD Indicators", shows that although Latvia's expenditure on pre-school education as a percentage of gross domestic product is one of the highest in OECD countries, expenditure per child is significantly lower than the OECD average (OECD, 2018). Pre-school teachers in Latvia receive three times less salaries than the average in OECD countries. In 2016, pre-school teachers in Latvia earned an average of 10 551 EUR per year, the lowest in all OECD countries and partner countries, and well below the OECD average of 31 701 EUR (OECD, 2018). With reference to the above, it should be concluded that regarding significant inequalities in pay between pre-school teachers in the OECD countries, it would initially be necessary to eliminate inequalities in the regions of Latvia and achieve equal opportunities for all teachers to work full time and to receive equivalent pay for work with equivalent qualifications.

Conclusions and recommendations

1) In Latvia, the salaries of pre-school education teachers are three times lower than the OECD average, but their growth tendency is upward, however, lower than the average salary in Latvia. In regions with higher average monthly wages (in all sectors overall) there is a larger difference compared to the average monthly wage in education.
2) There are regional disparities in the provision of workload for pre-school teachers, leading to marked disparities in average monthly wages. In order to reduce inequalities between regions in the provision of workloads and the corresponding wages for pre-school teachers, the funding of pre-school teachers' salaries should be provided from the state budget.
3) Reduction of inequality in pre-school education institutions requires improvement of the pre-school teacher remuneration model by reducing the proportion of hours with students and providing for a greater number of hours for class preparation.

Bibliography

1. Central Statistical Bureau. Retrieved: http://www.csb.gov.lv/en/dati/data-23959.html Access: 05.03.2020.
2. Council of Europe Development Bank (2017). Educational inequality in Europe: Tackling Inequalities in Europe: The Role of Social Investment. Retrieved: https://coebank.org/media/documents/Part_2-Inequality-Education_lowres.pdf Access: 05.03.2020.
3. Izglitibas attistibas pamatnostadnes 2014. - 2020. gadam. Retrieved: https://m.likumi.lv/doc.php?id=266406 Access: 02.03.2020.
4. Izglitibas likums (1998). Retrieved: https://likumi.lv/doc.php?id=50759 Access: 05.03.2020.
5. Nevienlidzibas noversana (2016). Eiropas pusgada tematiska faktu lapa. Retrieved: https://ec.europa.eu/info/sites/info/files/file_import/european-semester_thematic factsheet_addressing-inequalities_lv.pdf Access: 21.03.2020.
6. Noteikumi par pedagogiem nepieciesamo izglitibu un profesionalo kvalifikaciju un pedagogu profesionalas kompetences pilnveides kartibu Nr. 569 (2018). Retrieved: https://likumi.lv/ta/id/301572-noteikumi-par-pedagogiem-nepieciesamo-izglitibu-un-profesionalo-kvalifikaciju-un-pedagogu-profesionalas-kompetences-pilnveides 21.03.2020.
7. OECD (2018). Education at a Glance 2018: OECD Indicators. Paris: OECD Publishing. Retrieved: https://www.oecd-ilibrary.org/education/education-at-a-glance-2019_f8d7880d-en 21.03.2020.
8. Par Valdibas ricibas planu Deklaracijas par Artura Krisjana Karina vadita Ministru kabineta iecereto darbibu istenosanai. Retrieved: https://likumi.lv/ta/id/306691-par-valdibas-ricibas-planu-deklaracijas-par-artura-krisjana-karina-vadita-ministru-kabineta-iecereto-darbibu-istenosanai Access: 05.03.2020.
9. Pedagogu darba samaksas noteikumi Nr.445 (2016). Retrieved: https://likumi.lv/ta/id/283667-pedagogu-darba-samaksas-noteikumi 21.03.2020.
10. Priekslikums Padomes ieteikumam par augstas kvalitates agrinas pirmsskolas izglitibas un aprupes sistemam. Retrieved: https://ec.europa.eu/education/education-in-the-eu/council-recommendation-on-high-quality-early-childhood-education-and-care-systems_lv 21.03.2020.
11. The European Pillar of Social Rights in 20 principles. Retrieved: https://ec.europa.eu/commission/priorities/deeper-and-fairer-economic-and-monetary-union/european-pillar-social-rights/european-pillar-social-rights-20-principles_en Access: 19.03.2020

Proceedings of the 2020 International Conference "ECONOMIC SCIENCE FOR RURAL DEVELOPMENT" No 54
Jelgava, LLU ESAF, 12-15 May 2020, pp. 122-129
DOI: 10.22616/ESRD.2020.54.015

ECONOMIC POTENTIAL OF RECREATIONAL FISHING FOR SUSTAINABLE DEVELOPMENT OF COASTAL AREA

Tamara Grizane[1] , Dr.oec.; **Aija Sannikova**[2], Dr.oec.; **Līga Jankova**[3], Dr. oec; **Inguna Jurgelane**[4], Dr.oec.
[1]Turiba University; [2]University of Economics and Culture; [3]Latvia University of Life Sciences and Technologies; [4]Riga Technical University

Abstract. The current economic crisis caused by both the coronavirus disease and the global prevention measures, will have significant negative impact on the tourism sector. Some of the negative consequences possibly can be averted by increasing return from tourism industry. One of the opportunities is to develop the recreational fishing tourism. Until now the economic potential of the recreational fishing for ensuring sustainable development of Kurzeme coastal area was not acknowledged. The aim of the research was to determine the residents and non-residents coastal recreational anglers at the Baltic Sea coast of Kurzeme region and their total expenses. Through use of primary data acquired in recreation fishing environment the demographic data and habitual data of resident and non-resident anglers were analysed and compared to those of different regions in the EU and Australia. The calculated result is EUR 4,558 698 and that underlines the assumption on the economic potential of recreational fishing in the Baltic Sea coast of Kurzeme Region.

Key words: sustainable; coastal area; recreational fishing tourism.
JEL code: R11; Z32

Introduction

It is estimate that in the EU there are 8.7 to 9 mil. recreation fishing tourists that constitute 1.6 % of EU citizens (European Parliament, 2018). For certain countries there are statistical data on the number of coastal anglers. In Germany, there are 165 000, in Poland 80 000, while in the Baltic countries there is no clear data. In some sources it is stated that in Latvia there are 41 000 to 100 000 to some extent even 120 000 anglers, however the real number is not known, which is a real obstacle for carrying out evidence based research work (CCB, 2017: 6; Hyder K. et al., 2017).

The coastal fishermen in the EU are angling an estimated 77 mil. days per year, bringing into the economy about 10.5 bil. Euro, while directing part of the money towards purposes for a sustainable development of the coastal areas (HELCOM, 2015; Spahn, 2016). Since the tourism in Latvia in 2019 constituted around 4.3 % of GDP, the current economic crisis caused by both the coronavirus disease and the global prevention measures, will have significant negative impact on the tourism sector. This situation requires urgent reaction to work out appropriate countermeasures. It is ever more unfortunate that in 2019, despite the number of tourists in Latvia rising, the forecasted financial return did not meet the expectations. This unclaimed revenue would have been ever more important in nowadays situation to avert the impact of the crisis (Aleksejenko R., 2019; Luka-Ruskulova M. and Kalniņa I., 2019).

One of the possibilities for increasing of number of tourists and the revenue is the increase of variety of tourism services, which is possible through further development of the tourism industry – recreational fishing tourism. Recreational fishing takes place mainly with the aim of hobby fishing and for personal consumption, and does not involve selling. The fact that this type of recreational activity has a high potential has been acknowledged by Sweden, Finland, Estonia, Poland, Lithuania and Latvia through increased efforts to study the potential of recreational fishing tourism around the Baltic Sea area. There is a high potential for Kurzeme region in Latvia to be developed into quality destination for fishing tourism, while helping the cause of sustainable development for coastal area (Kurzemes planosanas regions, 2019). This goes hand in hand with the opinion of many authors, stating that the current EU policy which was aimed mainly at limiting the fishing activity in the Baltic Sea, has deteriorated and endangered the livelihood of the coastal area populations. These policies

have even been contrary to neoliberal approach: among the most of the Baltic Sea coastal areas populations in the past 20 years an increase in unemployment and reduction of the relative income has been observed (Loizou E. et.al, 2014).

In the Latvian scientific literature, the topic of coastal fishing and its contribution the coastal tourism has not been throughout researched. Individual papers cover the topics of coastal industrial fishing, or impact analysis of the investments in infrastructure and protection of cultural heritage (Baltic Consulting, 2011; Benga, E., 2014). Other publications in Latvia and Europe are aimed at investigating the connection between the investment by the European Fishery Fund (EFF) and European Maritime and Fisheries Fund (EMFF) development of coastal area (Puzulis, A. & Veveris, A., 2019). There are very few articles on the recreational fishing tourism (European Parliament, 2018) and even fewer papers are about the coastal fishing tourism covering the issue of sustainability and impacts on climate change (Grizane T., et al., 2019; Grizane T., Jurgelane-Kaldava I., 2019; Grizane T., Blumberga, D., 2020).

The first countrywide survey of recreational fisherman was conveyed in 2018 by the Latvian Rural Advisory and Training Centre (LRATC) and initiated by the Latvian Ministry of Agriculture (LMA) (Zemkopibas ministrija, 2018). The survey represented the whole state, while Kurzeme region accounted for n=141 fishermen responses. The survey was carried out on the visidati.lv online web-platform. One of the main aims of the LRATC was to estimate the demographic indicators and expenses of the anglers (Zemkopibas ministrija, 2018).

Meanwhle the research project RETROUT Nr.R065 which was initiated by the Kurzeme planning region is the first of its kind research papers (hereafter KPR_R research) on coastal fishing tourism covering specifically the Baltic Sea coastal area of Kurzeme region.

The **Research goal** of this research: Determination of the resident and non-resident coastal recreational fishermen and determination of total expenses. **Research tasks:** 1) to determine the demographic indicators of fishing tourism; 2) to calculate the expenses of recreational fishermen in a given area; 3) to compare the results with those of similar research in Europe and World. **Research methods:** monographic, comparison, abstract-logical method, synthesis and analysis, induction and deduction; in processing the primary data, the authors used statistic data analysis – descriptive statistics. **Research sources and materials**: information provided the LRATC, LMA, LCSB, documents, statistics and research studies done in Latvia and international organizations.

Research results and discussion

1. Case study site and study approach

The Eurostat (2017) defines the coastal territories as municipalities, that border sea or which are located within a 10km distance from the coastline. Meanwhile the task by the contracting entity of the KPR_R research was to include a wider area. As a result, the survey of fishermen was carried out both on the Western Baltic Sea coastline of Kurzeme region within an area from Papes up to Irbe river delta, and in-lands stretching out to the Pape, Liepaja, Durbe, Tasu and Usmas lakes.

The concentration of anglers is dependent on the climate factors: strength of wind, temperature, water flows, sea weed density, existence of fish in the given area and the time. The scope of the survey population was limited by both the stated climate factors, and the availability of the surveyees (which were fishing from the sea coast, lakeside or riverside), given task and available resources. Therefore, a limited quota population of (n=65) was assessed. The survey was carried out in 2019 five days in August and two in September, which were deemed the most appropriate for fishing

purposes: on Durbe lake, Pape lake and canal, Usma and Puze lake, at the sea coast: Jurkalne, Jurmalciems, Liepaja, Luzna, Mikeltornis, Ovisi, Pavilosta, Pitrags, Uzava and Ventspils.

The gathering of the *data on the habits* of the fishermen allowed to determine how many times per year and for how long they are visiting Kurzeme seacoast, while the *demographic data* allowed to determine the gender, age, place of residence, in order to determine the length of the journey to the fishing destination. The number of missing responses was removed from the calculations.

In order to determine the total costs of the fishing trip, the following formula was used:

$$TAEX = \text{Average Fish/Trip/year} \times NA \times \text{Average EUR/TRIP} \quad (1).$$

Where:

TAEX– total expenses of anglers per year;

NA – number of anglers;

Average Fish/Trip/year – the average number of journeys per year;

Average EUR/Trip – the average expenses of fishing trips per year.

* each target group (residents and non-residents) is calculated separately and the average is calculated.

The expenses of fishing trip were calculated per one day based on the formula:

$$\text{Average EUR/day} = TAEX/(\text{Average FishDay}) \quad (2).$$

Where:

Average EUR/day – average daily expenses;

TAEX– total fishing trip related expenses per year;

Average FishDay – the average number fishing days per year.

For the comparison of data acquired within the KPR_R research, the data from 2017 fishermen survey carried out by the Latvian Rural Advisory and Training Centre (LRATC), as well as information from research from Europe and Australia, was used. The differences in the research approach were taken into account, refined and recalculated in monetary harmonized data.

2. Demography and habits of fishermen, their comparison

In the KPR_R research it was determined, that the average age of respondents was 45.9 years, minimum age was 12, while the maximum – 76 years. The Table 1 indicates that the survey population is dominated by males and residents. The proportion of female and male anglers was 1:15. Comparatively, in Sweden this proportion is more harmonized with ratio of 1:2 (Sveriges officiella statistic, 2018).

Table 1

Demographical data of fishermen

Fisherman determining variable	Number	Distribution in percentage (%)
Gender		
Female	4	6.2
Male	61	93.8
Nationality		
Resident	57	87.7
Non-resident	8	12.3
Age (years)		
<15	2	3.1
16-30	8	12.3
31-64	46	70.8
65>	9	13.8

Source: author's calculations

When comparing the age group distribution of anglers with the data from LRATC research, it was determined that the number of youth under 15 years was by 2.3 % greater, in the age group from

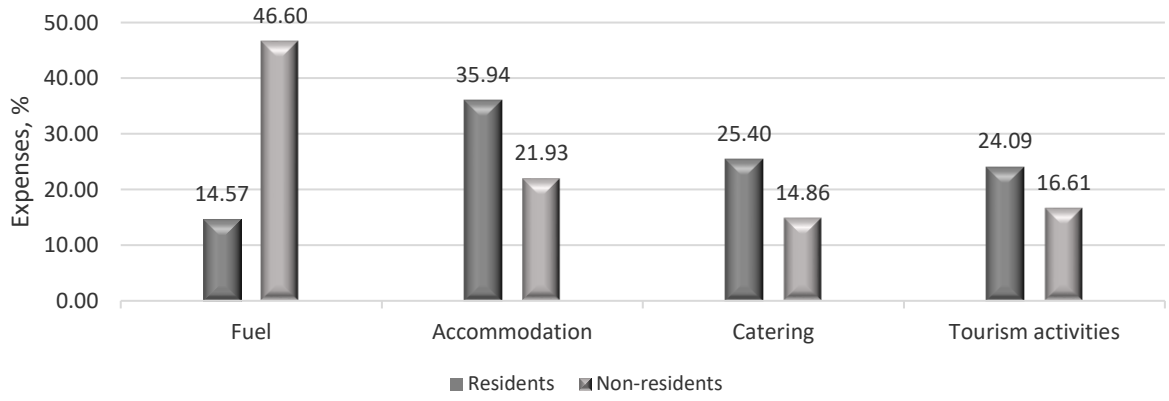
31 to 64 the proportion was similar, but the number of fishermen in the age category 16-30 years was by 13.17 % fewer; meanwhile in the age category 65+ the research of the authors of this paper show greater difference – 12.38 % which could be related to the fact that in the survey by LRTAC there were fewer respondents of senior age due to digital skills gap. Therefore, authors assume that the results of the 2019 survey show a more realistic depiction of reality in the field of fishing tourism. Additionally, in the 2019 survey the senior category was extracted of the dataset, because they are exempt from fishing card costs.

The local active anglers, mainly from Liepaja and Ventspils cities, annually visit the fishing destinations in the range from 40 to 180 times, thus the total number of days spent on average is 59.79 days, but when the 'daily anglers' are excluded from the dataset, the number of total days is 32.66 days. Occasionally it reaches the national average of 37.30 days per year (Hyder K. et al, 2017). When comparing with other Baltic Sea countries, in Finland on average it is 27.3, Norway 21.1, Denmark 21, Sweden 12.1, thus the mean number of fishing days is greater, whoever it should be accounted for the difference in the categories of fishermen (Toivonen A-L. et al., 2000).

The research by the LRATC calculated the number of fishermen from Riga at 15.5% fewer. The departure location of the rest of respondents is in vicinity of 18 towns of Latvia, as well as from four towns in Lithuania (Kauna, Klaipeda, Telsiai and Siauliai) and two towns in Germany (Hanover and Munich), thereby even more wider territory is included, mainly representing urban areas. This coincidence should be further examined in the further research. This could possibly be attributed to the household income disparity between the rural and urban areas, because the travel to the Kurzeme western coastline requires significant investments.

3. Expenditures of recreational fishermen

Travel costs constitute a significant part of the expenditures of the fishermen, most significantly impacting the non-resident fishermen (Fig. 1), where their expenses are by EUR 77.63 higher than those of residents. All of the Kurzeme coastline trips included use of car as the choice of transport and the fuel costs constituted 14.57 % of the total expenses for anglers residents, while 46.6% for anglers non-respondents, or on the average 30.59%. In Denmark, the travel costs of the anglers were lower – just 27 % of the travel expenses, in Finland – 35 %, Sweden –39 % (Toivonen A-L. et al., 2000).



Source: author's calculations based on results of the survey

Fig. 1**. The average expenses of residents and non-residents per single trip, %**

However, the anglers residents (Fig. 1) similarly as in the LRATC research spent the largest sum for accommodation services, the difference was just 3.24 %. The catering costs were by 26.18 % larger for anglers residents, while similar results are seen in their expenses on tourism activities –

both indicators were by 18.38% larger for anglers non-residents. On average the expenses for angler resident (Table 2) per trip were by EUR 103.2 lesser for non-residents, which is connected with a larger fuel consumption during the trip and thus larger expenses for accommodation services.

The total expenses for the fishing gear in the destination and in home for residents (Table 2) is by EUR 207 smaller than those of non-residents, while the price of the fishing gear purchased at home on average is EUR 1649. It should be noted that only 41.54% of respondents indicated their expenses for fishing gear at home. Therefore, it is difficult to calculate representable data on the true costs. In other research it was determined that the overall expenses for fishing gear can differ significantly.

In Poland for the fishing gear on average EUR 190 is spent; in Denmark - even EUR 1000 per year in Germany – EUR 783, while in Lithuania on average – EUR 375 (The Interreg South Baltic…, 2018).

The costs related to boats and their transportation total a significant share of expenses (Table 2) altogether EUR 4668, while only 22 % of respondents own a boat, while two had borrowed the utilities for their transportation from their friends, only 6.5 % had rented the boat. However, in Australia 65.14 % of fishermen have boats and their total expenses with the additional equipment (engine, trailer) on average are relatively lower by EUR 2596.21 (European Central bank, 2018; McLeod P., Lindner R., 2018).

The KPR_R research indicated that the fishing outfit is important for just 22 % of anglers (Tab. 2) and that on average they spend around 113 EUR, while non-respondents spend in the range from EUR 90 to 135.

The foreign experience shows that when comparing the fishing licence prices, in the period (1998-2016), a significant difference was observed between Estonia, Latvia and Lithuania, Poland, Finland and Sweden: the costs of daily licence rose from EUR 1 to 8.11, weekly licence from EUR 3 to 20.45, while the annual licence from EUR 14.23 to EUR 45 and EUR 33.80 in Sweden and Finland (KPR, 2019). The KPR_R research operates with the data on the annual fishing licence, which is two times less expensive than that in Sweden and Finland.

Table 2

Average annual and per trip costs of coastline anglers of Kurzeme coastline, EUR

Expenditure category	Total expenses of anglers residents in each category (year) (EUR)	Total expenses of angler non-residents in each category (year) (EUR)	Average expenses of angler residents (per trip*) (EUR)	Average expenses of angler non-residents (per trip*) (EUR)
Direct expenses				
Fuel	37457.02	10913.65	13.47	91.18
Accommodation	92432.91	5137.52	33.24	42.92
Catering	65320.37	3480.88	23.49	29.08
Entertainment	61955.63	3890.25	22.28	32.50
Total:	257165.92	23422.3	92.48	195.68
In-direct expenses				
Fishing gear (in destination)	227565,57	15810.8	5.41	30.45
Fishing gear (at home)	1472252,38	0	42.90	0.00
Boat	1707355,27	0	102.87	0.00
Boat trailer	293276,06	0	18.56	0.00
Fishing clothing	494 066,63	4 089	10.91	8.25
Licence and card	32 910,02	1 105,67	0.69	1.34
Additional expenses	28864.43	813.96	0.27	0.50
In total:	4256290.357	21819.43	181.60	40.54
Total:	**4513456.277**	**45241.73**	**274.08**	**236.22**

Source: author's calculations based on results of the survey

The additional costs do not contribute to significant part of expenses in the total expenditures per fishing trip, however that impact the direct and indirect fishing costs. The direct costs include the costs for products and services which are directly necessary for the fishing purpose within the given fishing trip, while the indirect costs are related to the expenses on long-term investments. The average fishing costs for residents (Tab. 2) is about EUR 274, while for non-residents EUR 236. In comparison, according to Hyder et al. (2017), the local expenditures of local residents for Latvia have been calculated at EUR 243, for Estonia – EUR 276; Lithuania – EUR 277; Poland – EUR 257; Finland – EUR 350; Sweden – EUR 399 and Germany – EUR 677. However, Arlinghaus (2006) indicated that the German anglers spend on average EUR 920 for their hobby per year (Arlinghaus R., 2006). Therefore, the results are close to the expenses of the fishermen in the Baltic countries. However, comparisons with results of this research should be interpreted carefully, because the respondent choice criteria, sample, context and question structure is different, also the expenditures per year are demonstrated in constant prices and are different to different countries. The data clearly illustrate that the expenses of fishermen arising from the hobby and travel transport related expenses at the Kurzeme coastline at the Baltic Sea can have a significant impact on the sustainable development for coastal area, based on the assumption that according to the economic sustainability-approach, the aggregate human utility does not tend to decline over time (Asheim, 2007).

It should be noted that the coastal area is a specific territory and that tourism, including the fishing tourism, can have a significant positive impact for the local economy. The socio-economic and environmental integration process, when tourism blooms, can help develop and upkeep the coastal territories in such a way and scale so that it would be viable and would not alter the environment, while promoting the processes for more successful development and welfare.

Conclusions, proposals, recommendations

1) The KPR_R research is the first of such kind in Latvia and the only one focusing on the fishing tourism in the Baltic Sea Kurzeme coastline, which has been carried out on-field, unlike the LRATC research, which took place only in online environment. The following demographical and habitual indicators were identified: average age of an angler - 45.9 years, number of senior anglers greater than 12 %; total number of days spent on fishing 33 days; by 16 % fewer fishermen from Riga; geographical origin – Latvia, Lithuania, Germany.
2) Largest expenses for anglers-residents are spent on accommodation 36 %, catering 25 % and touristic activities 24 %, but largest expenses for angler's non-residents on fuel 47 %. The average expenses for residents are around EUR 274 and for non-residents EUR 236, which differs most significantly from Sweden and Germany.
3) EUR 4,558 698 is the financial illustration of the possible positive impact on the sustainable development and coastal area development at the Baltic Sea coastal area of Kurzeme region.
4) In the further research it is necessary to continue in-depth analysis of the coastal area fishing tourism potential, to monitor, accumulate statistical database, based on the real-world environment.

Acknowledgement

The authors are thankful to the project marketing consultant of the Kurzeme Planning Region (KPR) and to The Institute of Social, Economic and Humanities Research of Vidzeme University of Applied Sciences (ViA HESPI) for permission to use the primary data acquired within the RETROUT Nr. R065 project.

Bibliography

1. Arlinghaus, R. (2006). Der unterschatzte Angler. Zukunftsperspektiven fur die Angelfischerei in Deutschland (Deutsch) (Underrated angler. Fishing prospects in Germany) Stuttgart: Kosmos; Auflage: 1. Aufl. (August 2006), 168 Seiten.
2. Asheim, GB. (2007). Justifying, Characterizing and Indicating Sustainability, Springer: Dordrecht, the Netherlands, p.269.
3. Baltic Consulting. (2011). Ricibas programmas Eiropas Zivsaimniecības Fonda atbalsta ieviesanai Latvija 2007. – 2013. gadam Vidus termiņa (Interim) novērtējums. Ziņojums. (Action Programe of Implementation of the European Fisheries Fund Support in Latvia 2007-2013. Interim assessment report).
4. Bartlomiejski, R. (2011). Fisheries Local Action Groups: A New Theme for Researching Maritime Communities Roczniki Socjologii Morskiej. *Annuals of Marine Sociology*, XX.
5. Benga, E. (2014). Zvejniecibas attistiba Baltijas juras un Rigas juras lica piekrastes josla (piekrastes zveja). Atskaite. (Fishing Development in the Coastal Zone of the Baltic Sea and the Gulf of Riga (Coastal Fishing. Report)) LVAEI.
6. Coalition Clean Baltic 2017 (CCB) (2017). Recreational Fishing in the Baltic Sea Region. Retrieved: https://ccb.se/wp-content/uploads/2018/02/ccb_recreational_fishing.pdf Access: 14.03.2020.
7. European Central Bank (2018). Converting Australian Dollars into Euros in 01.10.2018 Retrieved: https://www.ecb.europa.eu/stats/policy_and_exchange_rates/euro_reference_exchange_rates/html/eurofxref-graph-aud.en.html Access: 24.03.2020.
8. European Parliament (25.5.2018) *REPORT on the State of Play of Recreational Fisheries in the European Committee on Fisheries* (2017/2120(INI)) (A8-0191/2018) Available: https://www.europarl.europa.eu/doceo/document/A-8-2018-0191_EN.html Access: 14.01.2020.
9. European Parliament, Atputas zvejas stavoklis Eiropas Savieniba. (State of Play of Recreational Fisheries in the EU). (A8-0191/2018). (2018) Retrieved: http: //www.europarl.europa.eu/doceo/document/TA-8-2018-0243_LV.html. Access: 22.02.2020.
10. Eurostat (2017*). Definition of Coastal Region*. Retrieved: https://ec.europa.eu/eurostat/statistics-explained/index.php/Glossary: Coastal_region. Retrieved: https://ec.europa.eu/eurostat/statistics-explained/index.php?title=Territorial_typologies_manual_-_coastal_regions#Classes_for_the_typology_and_their_conditions. Access: 14.01.2020.
11. Grizane, T., Blumberga, D. 2020. Recreation Fishing Impact to Climate Changes. Case of Latvia. Environmental and Climate Technologies, 2020.
12. Grizane, T., Gusca, J., Sannikova, A., Jurgelane-Kaldava, I. (2019). Emissions of Carbon Dioxide (CO2) and Growth the Tourism Industry: Case study of Latvia. In: Proceedings of the 2019 International Conference Economic Science of Rural Development. New Dimensions in the Development of Society. No. 52, pp. 347-354. DOI: 10.22616/ESRD.2019.141
13. Grizane, T., Jurgelane-Kaldava, I. (2019). Tourist Transportation Generated Carbon Dioxide (CO2) Emissions in Latvia. Environmental and Climate Technologies, 2019, Vol. 23, No. 3, 274.-292. pp. ISSN 1691-5208. e-ISSN 2255-8837. DOI: 10.2478/rtuect-2019-0095
14. Hyder, K. et al. (2017). Recreational Sea Fishing in Europe in a Global Context – Participation Rates, Fishing Effort, Expenditure, and Implications McLeod P., Lindner R., (2018). Economic Dimension of Recreational Fishing in Western Australia. Research Report for the Recreational Fishing Initiatives Fund. P. 83. for monitoring and assessment. Fish and Fisheries, 2017; Vol., pp1–19. Retrieved: https://onlinelibrary.wiley.com/doi/full/10.1111/faf.12251. DOI: 10.1111/faf.12251 Access: 14.01.2020.
15. Phillipson, J., Symes, D. (2015). Finding a Middle Way to Develop Europe's Fisheries Dependent Areas: The Role of Fisheries Local Action Groups. Sociologia Ruralis, Volume 55 Issue 3, pp.343–359. DOI: 10.1111/soru.12098
16. Puzulis, A., Veveris, A. (2019). Role of the European Fishery Fund Support in the Development of the Latvian Coastal Areas. *Research for Rural development 2019*, Volume 2., pp.111-117. DOI: 10.22616/rrd.25.2019.057
17. Raimonds Aleksejenko (LV), Deputy State Secretary, Ministry of Economics. Latvia Tourism Vision 2020+ (2019). Retrieved: https://www.youtube.com/watch?v=aDYzyGTlFf8 Access: 13.01.2020.
18. Sveriges officiella statistic (2018). Statistsika Meddelanden JO 57 1910. Fritidsfeske I Sverige 2018. (Recreational Fishing in Sweden 2018) Retrieved: https://www.scb.se/contentassets/cfbd2f4a6c8e4fb9b1f9293609b00c59/jo1104_2018a01_sm_jo57sm1901.pdf Access: 23.03.2020.
19. Symes, D., Phillipson, J. (2009). Whatever Became of Social Objectives in Fisheries Policy*? Fisheries Research*, Volume 95 Issue 1, pp.1–5. DOI: 10.1016/j.fishres.2008.08.001.
20. Kurzeme planning region (KPR) (2019). *Ziņojums par makskeresanas turisma lomu ekonomika projekta partnervalstis: Zviedrija, Somija, Polija, Lietuva, Igaunija, Latvija*. (Report on the Role of Recreation Fishing Tourism in the Economy Project Partner Countries: Sweden, Finland, Poland, Lithuania, Estonia, Latvia) HESPI, p.40.
21. *Kurzeme Planning Region. In project RETROUT a plan for Baltic Sea Coastline as a sport and recreation fishing destination is being planned* (2019). Retrieved: https://www.kurzemesregions.lv/projekta-retrout-tiek-izstradats-plans-baltijas-juras-piekrastes-ka-sporta-un-atputas-makskeresanas-turisma-galamerka-veidosanai/ Access: 13.10.2019.

22. Loizou, E., Chatzitheodoridis, F., Michailidis, A., Polymeros, K., Mattas K. (2014). Sustainable Development of Rural Coastal Areas: Impacts of a New Fisheries Policy. *Land Use Policy.* Volume 38, pp. 41-47. DOI: 10.1016/j.landusepol.2013.10.017
23. Luka-Ruskulova, M., Kalniņa, I. Latvia Tourism Vision 2020+. Turisma politika 2021-2023. (Tourism Policy 2021-2023.) (2019). Retrieved: https://www.lps.lv/uploads/docs_module/Latvijas%20t%C5%ABrisma%20v%C4%ABzija%202020+.pdf Access: 13.10.2019.
24. Symes, D., Phillipson, J., Salmi, P. (2015). Europe's Coastal Fisheries: Instability and the Impacts of Fisheries Policy. *Sociologia Ruralis*, 55(3), 245–257. DOI: 10.1111/soru.12096
25. The Interreg South Baltic project CATCH (2018). The CATCH Angler Survey Report (January 2018). Retrieved: http://catch-southbaltic.eu/wp-content/uploads/2018/02/CATCH-ANGLER-SURVEY-REPORT.pdf Access: 14.03.2020.
26. Toivonen, A-L., Appelblad, H., Bengtsson, B., Geertz-Hansen, P., Gudbergsson, G., Kristofersson, D., Kyrkjebo, H., Navrud, S., Roth, E., Tuunainen, P., Weissglas, G. (2000). *Economic Value of Recreational Fisheries in the Nordic Countries*. Nordic Council of Ministers, Copenhagen 2000, p.71.
27. Walle, G. (2017). *Assessment of Fisheries Local Action groups support to Small Scale Coastal fisheries in Europe*. Technical Report. DOI: 10.13140/RG.2.2.21228.05763.
28. Ministry of Agriculture 2018. Results of fishermen surveys, year 2017. (angl) (2018). Retrieved: https://www.zm.gov.lv/public/ck/files/Rezultati(1).pdf Access: 13.03.2020.

Proceedings of the 2020 International Conference "ECONOMIC SCIENCE FOR RURAL DEVELOPMENT" No 54
Jelgava, LLU ESAF, 12-15 May 2020, pp. 130-138
DOI: 10.22616/ESRD.2020.54.016

THE ROLE OF STATE PROGRAMS IN THE TRANSFORMATION OF THE AGRARIAN SECTOR IN AJARA AR

Nato Jabnidze[1], Doctor of Business Management / Assistant Professor; **Leila Tsetskhladze**[2], Doctor of Business Management / Assistant Professor;**Ia Meskhidze**[3], Doctor of Business Management / Associate Professor
[1,2,3]Batumi Shota Rustaveli State University

Report The Georgian economy has significant potential of growth and for enhancing competitiveness. Consequently, the state periodically encourages the creation of a favourable entrepreneurial and investment climate that is also systematically affected by active globalization processes on the world market. In order to alleviate these processes, the state is modernizing the economy and infrastructure sectors, part of which is the Autonomous Republic of Adjara and its agriculture. Promoting its development is important to the extent that addressing food security and sustainable development, increasing rural well-being, and reducing economic inequality between the village and the city depends on it.

The purpose of this paper is to study the role of state programs in the transformation of the agricultural sector, as we believe that minimizing state interference in the functioning of the agrarian sector cannot withstand global challenges, key financial, technical and technological support for the sector is relevant in the wake of negative external and internal economic conjuncture changes, which further aggravate food security and its financial sustainability. We believe that the development of effective mechanisms of optimizing and spending the integration of state and private resources needed for the socio-economic development of the country is still relevant today.

Keywords: Agriculture, Transformation, Government Programs, Agricultural Policy.
JEL code: Q01, Q10

Introduction

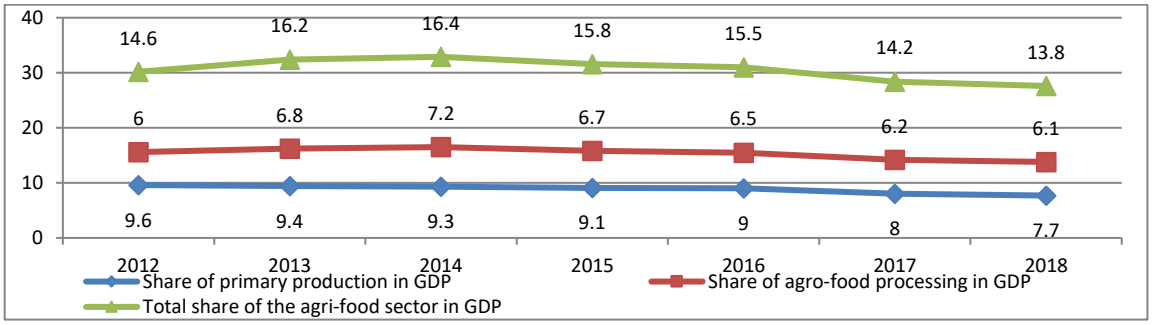
The emergence of a market economy since the 1990s has put the need to transform the real economy sectors on the agenda. For the past twenty years, the agricultural sector has not played a key role in our country's development strategy, priority was given to areas requiring urgent reform, in particular effective governance and the promotion of free trade. However, implementation of the transformation process was also necessary in agriculture, which would take into account the development of business-oriented agriculture in addition to traditional household-based agriculture. Since 2010, this approach has been supported by the business sector, NGOs and donors.

Since the end of 2012, the Ministry of Agriculture has launched various programs in the agrarian sector and continues to this day. The Government of Georgia has taken significant and unprecedented steps for the country to develop agriculture and rural development, which has been reflected in large public investment in these areas. However, Georgia's rural development is still facing many challenges.

The decline of the mentioned field is indicated by the fact that, in the rural households' monetary income, only 21 % of the income comes from the sale of agricultural products, while only 28 % of the incomes from the agricultural sector of these households are commodities, the remaining 72 % are natural incomes. In other words, under the conditions of a market economy, the level of per capita output produced by households is lower than that of a non-market planned economy. In the 1980s, 45 % of the total output of the private auxiliary population was cattle, 82 % in 1989, 22 % in 1998, and now 18 %. Therefore, we are dealing with the naturalization of agricultural production, which is an indicator of its low profitability. National Statistics Office of Georgia confirms this is in the share of agro-sector in total GDP. As shown in Figure 1, the share of primary agricultural production

[1]Nato Jabnidze e-mail: N.jabnidze@gmail.com
[2]Leila Tsetskhladze e-mail: Cecxladze.leila@bsu.edu.ge
[3]Ia Meskhidze e-mail: Meskhidze.ia@bsu.edu.ge

in GDP does not reach even 10 %. And the share of the whole agrarian sector, which includes the processing of products, ranges from 13.6 to 16.4 % over the years (2012-2018), which is extremely low.



Source: edited by the author based on data from the National Statistics Office of Georgia.

Fig. 1. **Share of agribusiness sector in Georgian GDP (%)**

It is important that agricultural policy is not only a strategy for the development of farms, but also an integral part of regional policy.

The purpose of this paper is to discuss the transformation of the agrarian sector in one of the largest regions of Georgia, the Autonomous Republic of Adjara, as well as identifying the problems that may arise during their implementation and selecting solutions.

The objectives of the study are to assess the general situation of the Georgian agricultural sector; Justify the necessity of the transformation process to increase the commercial load of products produced by family and farm businesses; To study the effectiveness of producing some traditional and new cultures and to develop recommendations for the problems we see in implementing state programs.

Theoretical-methodological bases of the research are methods of analysis, synthesis and comparison. The normative acts of economic and legal nature adopted by the government, scientific works of Georgian scientists and economists, statistical materials published by government and non-governmental organizations on economics and agriculture, conclusions prepared by international organizations on agrarian policy implemented in the country and the reports prepared by the Ministry of Agriculture have been studied. Interviews were also conducted with various representatives of the agricultural sector, agrarian policy makers and other stakeholders, which enabled us to delve deeper into the issues under study and formulate recommendations.

Research results and review

There are different approaches to the development of the agricultural sector in Georgia today. Questions arise about the role of agriculture in Georgia's economy, development potential, opportunities to meet local demand for agricultural products, and the relative advantages. Most of the food consumed in Georgia today is actually imported. Consequently, the question arises as to what making agriculture a priority area will give us, what place does this sector occupy in Georgia's sectoral structure, whether it will be effective focusing on it and making additional investment, will we achieve economic growth, will poverty be reduced or not and etc.

Georgian scholars are of the same opinion that agriculture is an essential part of the country's economic development, that agriculture and food production cannot play a secondary role, as overcoming the poverty in Georgia cannot be achieved without the development of this sector. We believe that the decision to invest money in the development of the sector and to promote high quality products and export them is out of an alternative. We need to produce biologically pure and knowledgeable consumer-oriented products.

Authorities have been confronted with the difficulties created by the inadequate attitude towards agriculture for decades. Consistent implementation of complex activities, support for farmers and agro-entrepreneurs are reflected in their awareness and consultation activities, direct implementation of programs and active involvement and financial and technical support by international donor organizations. As for foreign direct investment, agriculture is a field where the quality of foreign direct investment is very low. Currently, agriculture in Georgia is not an attractive field for foreign investment. The volume of FDI in Georgia is only 1 % of total annual investments (2012-2018). However, the number of products produced by the sector as well as the added value shows an upward trend. In 2012, for example, agricultural sector output totalled GEL 3 615.2 million, up 19 % from 2010. The products released in 2018 are up 17.4 % compared to the same period of 2017 and amounted to 4884.7 million. Gel. The value added in agriculture in 2014 exceeds that of 2013 by 40%, while in 2018 the value added in 2017 and 2016 exceeds 8 % and 23 %, respectively (National Statistics Office of Georgia, https://www.geostat.ge/ka/modules/categories/191/pirdapiri-utskhouri-investitsiebi).

One of the key contributors to the development of agriculture is the Deep and Comprehensive Free Trade Area Agreement (DCFTA) with the EU, which provides for the bilateral and phasing-out of barriers to market access. Entering the EU market, in turn, requires the production of products that meet the standards set for the EU market, which are currently insufficiently secured. The EU's agricultural support strategy focuses on new aspects of production and safe food production. This means a return to traditional methods of production, where farmers receive added value. Concepts such as 'traditional food', 'organic food', 'local' or 'regional' are gaining new meaning. In developed countries, big attention is paid to agribusiness financing. The situation is similar in EU countries where food quality control and targeted assistance are brought to the level of state policy. We think that by enhancing the competitiveness of the Georgian product, we can gain a niche in the world market: Wine, nuts, tea, citrus, beekeeping products, fruits and more.

Proper agricultural policy implies a structural transformation that will not only enable the country to meet social goals, such as poverty alleviation in rural areas, but will also increase its commercial importance. We believe it is necessary to increase private equity investments and improve infrastructure together with the state. Approaches to regionalization and specialization of agriculture, sectoral integration and their development in regional-economic and technological problems require a new solution, with two key criteria in mind: Local environmental and economic conditions and internal and external marketing motivations, requirements, constraints, strategies that characterize and gradually characterize market relations. With the right organization of program-targeted budgeting, the quality of budget management is increased, substantially simplifying the implementation of public programs, monitoring process, and increasing the efficiency of public spending.

Since the emergence of agriculture as a priority sector, it has been necessary to ensure the involvement of private financial institutions, implementation of government programs, implementation of the insurance system, realization of projects of international organizations, private investment and other activities. The purpose of our study is to identify the role of government programs in the transformation process.

In Georgia, by the National Agency for Agricultural Projects Management are being prepared and implemented projects, such as: Preferential agro-credit, co-financing project for processing and

saving enterprises, agro-support program, "Plant the future" Program, Tea Plantation Rehabilitation Program, Young Entrepreneur Program, agro insurance and more.

For example, the agro-production support program is being implemented under the AMMAR project. The program is funded by the International Fund for Agricultural Development (IFAD) and the Global Environment Facility (GEF). The project started in 2016 and consists of a component of primary production and a component of processing and savings enterprises. Total amount of investments in 2016-2018 amounted to GEL 21 414 161, with 39.5% share of state co-financing. One GEL grant invested by the state within the agri-production promotion program has attracted a GEL 1.53 investment. A total of 441 projects were funded (Ministry of Agriculture of Georgia).

The aim of the "Plant the future" project is to implement efficient cultivation of agricultural lands in Georgia by cultivating intensive perennial crops, introducing high-yielding varieties, replanting the varieties, replacing imported products with Georgian products, increasing exports, providing raw materials to processing plants, improving socio-economic situation of the rural population. Within the framework of this project, 1 GEL investment by the state has attracted 0.81 GEL private investment. From 31 December, 2015 to 31 December, 2018, 993 orchards of 6347 347 ha are in total cultivation or are under cultivation.

Table 1

Crops and investments that have been cultivated or are under cultivation in Georgia (2015-2018)

Crops	Area (ha)	Full investment (GEL)	State co-financing (GEL)	Share of state co-investments in total investment (%)
Walnut	2308	18677542	11 055189	59
Almond	893	6 121690	3 266410	53
Apple	868	13 697185	7 022947	51
Nuts	611	2 266307	1 184730	52
Blue cranberries	286	7 145078	4 027380	56
Plum	248	2 199895	1 161506	53
olive	232	1 826064	1 145982	63
Raspberry	145	2 305042	1 315492	57
other	757	7 685919	3 995932	52
Total	**6347**	**61 924722**	**34 175567**	**55**

Source: Ministry of Environment Protection and Agriculture of Georgia, Annual Report (2018).

Many projects approved by the Government of Georgia were implemented in 2013-2019, including in the Autonomous Republic of Adjara. Namely: promotion of small-scale farmers' spring works, preferential agro-credit project, co-financing of processing plants, agro-insurance program, industrial tangerine realization program, "Plant the future" program and more.

Since 2013, funding to support agro-sector development has increased substantially, and the programs under the Autonomous Republic's budget allocations have therefore consisted mainly of: 1) development and management of agricultural sector development policy; 2) facilitating the provision of mechanization facilities to farmers and agro-entrepreneurs; 3) supporting the development of the field of breeding; 4) supporting the development of the livestock sector; 5) agro-service development in the region 6) Laboratory research services. It should be noted that budgetary allocations of Ajara AR for each of these programs are increasing every year. In 2019, this indicator amounted to 9 346 354 GEL, which is 55% more than in 2015.

In Adjara, Autonomous Republic lowland protection and sustainable use of agricultural land is one of the priority directions. Improper agricultural practices, erosive landslides, soil contamination, soil

degradation, climatic and anthropogenic factors are reducing land use, increasing food shortages and ensuring proper and rational management is a key issue in agricultural development.

It should also be noted that soil surveys and fertility monitoring are not systematically carried out and appropriate recommendations are not systematically developed. Fertilizer application is practically natural without any justification, causing a shortage of nutrients needed in almost all types of soil. Negative processes in the soil, such as moisture, secondary swamping, and leaching, have been strengthened, creating conditions for agricultural land to drop out of thousands of hectares and to move from high to low soils. 40% of agricultural land is characterized by high, 21% medium and 39% low natural fertility (Meskhidze A., Abuladze J., 2016).

In Adjara, as one of the small territories of the region with unique natural-climatic conditions, it is important to develop the agrarian sector in terms of rational protection and use of natural resources. Land fund of the Autonomous Republic of Adjara is 290 000 ha, which is 4.2% of the territory of Georgia. Of these, only 72862 ha are agricultural land, 52 % of which is pasture land, 14% are arable land, 22% are perennial, 10 % are mowing, and 2 % are arable land (Meskhidze A., Abuladze J., 2016). The overwhelming majority of agricultural land registered to individuals in the Adjara region does not exceed 0.3-0.5 ha on average, which indicates a high fragmentation rate. Under such conditions, the cost of agro-technical activities and logistics services increases, which increases the cost of production, hence the price.

The population of the Autonomous Republic of Adjara is 349 thousand people. The city has a population of 197.7 thousand and a population of 151.4 thousand. The percentage of rural population is 43.4 % of the total population of the region. The overwhelming majority of them are involved in agricultural activities. Accordingly, for Adjara, agriculture is a prerequisite for the incomes and prosperity of half the population (Statistics, https://www.geostat.ge/regions/).

In the Autonomous Republic of Adjara, single-family and multi-year agricultural land can be differentiated by self-sufficient, potential commercialization and commercial opportunities. In the region, 85 893 households are self-sufficient in terms of annual and perennial crop production in terms of potential commercialization opportunities and 23 234 hectares of arable and perennial crops. The farms are grouped as follows.

1) 32 272 households (37.6 %) have the opportunity to produce only products sufficient for their own needs, with a total of 3 312 (14.2 %) ha. The overwhelming majority of such farms produces not one monoculture product for its subsequent sale (with rare exceptions), but mixed one-year agricultural crops, which are limited to producing a small number of different varieties.
2) 27 408 family farms (31.9 %) have the opportunity to realize surplus products produced for their own use, with total use of 7345 ha (31.6 %).
3) 26 213 Family farms (30.5%) have the opportunity to develop farms for the purpose of sale of products, which use a total of 12 587 (54.2 %) ha. (Putkaradze Z; Abuladze J; 2019).
4) As we can see, most of the family farms are not interested in producing products which later will be delivered to market. Therefore, the goal of the state should be to increase the motivation of family farms in this regard, requiring the transformation of the agrarian sector, one of the components of which may be the introduction of new crops that have the potential to be introduced in international markets due to high demand from consumers. This does not exclude the possibility of reviving traditional crops that require renewal, breeding, etc.

Governmental programs for rural development in the Autonomous Republic of Adjara aim to achieve goals such as promoting agriculture, agro-industry, regional development and stimulating

exports. Another important consideration is to be taken into account: 54.4 % of the territory of Georgia is located at 1000 meters above sea level. Opportunities for intensive agricultural production in most of these areas are limited. The development and traditions of environmentally friendly products in the economic uplift of Adjara Mountain and Highland Zone can make a significant contribution to the delivery of differentiated agrotourism products and the development of agrotourism.

Adjara's natural conditions are favourable for a wide variety of agricultural crops, including the main agricultural crops are tea, citrus fruits, fruits and vegetables. Citrus fruits are still in the first place among export crops. Subtropical technical crops were also planted in Adjara: Tung, bay leaf, bamboo, eucalyptus. Tobacco was the main technical culture in Adjara. Adjara was in second place in Georgia (after Abkhazia) in terms of quality tobacco.

Tea-growing is a traditional branch of agriculture in Georgia. This sector significantly contributed to the income of the population of Western Georgia and the country as a whole, as a large part of the volume of tea was exported. The average yield per hectare was 5.78 tonnes. Exports of Georgian tea peaked in 1984. In addition to the post-Soviet countries, 26,271 tonnes of tea were exported this year, including 5,719 tonnes in Mongolia, 5,250 tonnes in Poland, 5,500 tonnes in England and 6,000 tonnes in the Netherlands. By 1990, tea plantations occupied an area of 6,500 hectares in Adjara, most of which are now privatized in small plots (0.75-1.5 hectares on average), with mostly one-year crops cultivated, and by 2016, only 678 hectares of tea are cultivated in Adjara. Which makes up 6.7% of the total tea area in Georgia.

In our opinion, Adjara region tea can become competitive on the world market and occupy a niche market for biologically pure products. Therefore, the issue of planting new plantations of high productivity varieties and clones is on the agenda. Since 2016, the Tea Plantation Rehabilitation Project "Georgian Tea" has been under way, aiming to rehabilitate both the private sector and state-owned tea plantations, make effective use of the potential of tea, create modern tea processing plants and support the growth of local tea (including bio-tea) production. However, we believe that some of the constraints related to production, processing and marketing will need to be overcome in the development of the tea sector. 44 projects have already been funded in 2016-2018, 2 403 060 GEL has been invested for 959 ha rehabilitation area.

Tangerines have significant export potential, with average yields in Georgia being low at 3.6 tonnes per hectare and about 20 tonnes according to the Ministry of Agriculture of Georgia. Similar rates are much higher in other countries. For example, the average hectare yield in Turkey is 28.7 tonnes, in Peru 29.5Ctonnes. It is 30.9ctonnes in Korea and 36.4 tonnes in the US. The low average hectare yield of tangerines in Georgia is due to the large number of outdated and often depreciated crops. In order to solve this problem, the Ministry of Agriculture of Adjara has launched 28 different varieties of tangerine nursery in Chakvi cistern for demonstration. We think that tangerine is one of the most important crops of Georgian agribusiness, in order to increase export potential, it is necessary to increase competitiveness and improve the local product range. Promoting early maturity, frost-resistant, high-yielding varieties is of particular importance for promoting tangerine production in the country, enabling us to obtain quality and competitive fruit. The investment capital for cultivating 1 hectare of tangerine is GEL 13390, the return period is 7Cyears and IRR is 11c% (Georgia Agri-Food Sector - For Your Investment. https://mepa.gov.ge/Ge/Page/investor).

Table 2

Production of tea and citrus in Georgia (thousand tones)

	2006	Share in %	2010	Share in %	2015	Share in %	2016	Share in %	2017	Share in %	2018	Share in %
Tea production Total	**6.6**	**100**	**3.5**	**100**	**2.1**	**100**	**3.0**	**100**	**2.3**	**100**	**1.7**	**100**
Adjara AR	0.0	0.0	1.0	28.5	0.9	42.8	0.8	27.0	0.4	17.0	0.6	35.0
Guria	3.9	59.0	1.4	4.0	0.4	19.0	0.4	13.0	0.5	22.0	0.4	24.0
Imereti	0.4	6.0	0.0	0.0	0.0	0.0	0.7	23.0	0.3	13.0	0.1	6.0
Samegrelo-Upper Svaneti	2.3	34.8	1.1	31.4	0.8	38.0	1.1	37.0	1.1	48.0	0.6	35.0
Citrus Production Total	**52.2**	**100**	**52.1**	**100**	**77.6**	**100**	**65.5**	**100**	**58.2**	**100**	**66.3**	**100**
In Adjara AR	31.9	61.1	24.7	47.4	60.4	78.0	**39.6**	60.4	**46.1**	79.2	**48.2**	72.7
Guria	11.3	21.6	24.2	46.4	13.3	17.0	22.4	34.1	10.9	18.7	13.3	20.0
Imereti	0.0	0.0	0.1	0.2	0.4	0.5	0.4	0.6	0.2	0.3	0.4	0.6
Samegrelo-Upper Svaneti	9.0	17.2	3.1	6.0	3.5	4.5	3.1	4.7	1.0	1.7	4.4	6.6

Source: Compiled by the authors based on data from the National Statistics Agency of Georgia.

Given the current market demands and the comparative advantage of the Adjara region, blueberry is a promising field. Given that the market trend is towards sustainable and healthy foods, berries have the greatest market potential. Currently the supply of blueberry on the world market cannot meet demand. This berry needs about 30 460 GEL per hectare for cultivation. The return period is 5 years, with an IRR of 32 %. With proper planning and good management, blueberry plantation is profitable and can have a serious economic impact on small-scale farmers. (Berries on the European market USAID, REAP) Despite a number of problems related to logistics, scarcity of refrigerated farms, and lack of financial resources, at least 184.6 tonnes of blueberries were exported last season, almost double the previous year's figure. 90 % (166.6 t) of export volume went to the Russian market.

To this day, one of the major impediments to agricultural development and competitiveness remains a difficult political situation (1992-1998). Implemented land reform that led to the fragmentation of small farms and the naturalization of production. One of the major challenges in the region remains the high level of fragmentation of agricultural land, which in turn has a significant negative impact on the efficiency and competitiveness of agricultural production. Insufficient attention is paid to unused or inefficient resources. By this we mean the improper or inappropriate use of techniques, seedlings, and other resources provided for free and / or by sharing. In Adjara, there is land use without registration, which impedes the development and consolidation of the land market, so the idea of promoting cooperatives was widely adopted.

It should be noted that the main problem of selling Georgian farmers' products is the fact that they enter the market separately, with inadequate knowledge and ineffective marketing measures, competing with each other and minimizing the cost of production. We believe that in the future it will be possible to unite them in order to deliver high quality products both domestically and abroad.

Due to the scarcity of technology, knowledge and financial resources, small farms cannot prevent major risks to agricultural products and ensure a stable supply of key markets. If small-scale farms make all the necessary investments to prevent these risks, then their activities will become economically disproportionate and unprofitable. Despite the hundreds of millions of GEL spent from the state budget, neither the spatial areas have increased nor the productivity of spatial areas increased to the required level, which indicates the inefficiency of budget spending.

The challenge remains to strengthen each value chain, train highly skilled staff, access to up-to-date technologies, qualitatively and quantitatively increase local production, import substitution, export product growth, market diversification, bio-production, legislative regulation.

We have not limited our views only and conducted in-depth interviews with representatives of the Ministry of Agriculture of Adjara, experts and beneficiaries benefiting from these programs in order to evaluate the state programs implemented in the agrarian sector of Adjara. The respondents were asked to rate the priorities of the programs, their strengths and weaknesses, the motivating factors for the programs, the existing gaps or expected difficulties that accompany the implementation of the program.

According to the direct implementers of the state programs, the measures are consistent and serve to increase the motivation of practitioners, resource provision, qualification, expansion of market opportunities based on sector development etc.

Through a survey of farmers, we found that the number and motivation for applying for the program were increasing, however; problems related to the lack of service centres for agro-technical repair were highlighted, difficulties in joining the program because of small land, lack of financial and other resources in many cases when requesting participation, the quality of nursery or seed material supplied and non-compliance with local conditions, etc. It is difficult for farmers to find export markets, and also in cases of falling prices due to abundant harvest may minimize profitability.

Experts in the field believe that programs implemented in the agrarian sector are inconsistent and not based on the needs and beliefs of farmers, farmer engagement rates are also considered to be unsatisfactory and indicate poor quality of nursery / seed material, the lack of consideration for climate conditions and traditions of farm development, the failure of land reform, the weakness of monitoring the spending of beneficiaries participating in the program.

Conclusions and suggestions

Thus, the study of the current state of the agro-food sector shows that the problem of providing the population with food products is worsening. Current trends in the modern global environment suggest that countries need both self-sufficiency and competitiveness to sustain, which is why we consider it necessary at the local level to implement the following:

- Proper agricultural policy implies a structural transformation that will not only enable the country to meet social goals, such as poverty alleviation in rural areas, but will also increase its commercial importance. We believe it is necessary to increase private equity investments and improve infrastructure together with the state. Approaches to regionalization and specialization of agriculture, sectoral integration and their development in regional-economic and technological problems require a new solution, with two key criteria in mind: local environmental and economic conditions and internal and external marketing motivations, requirements, constraints, strategies that characterize and gradually characterize market relations.
- Scientific research is needed to support the introduction of environmentally friendly, resource-saving crop technologies and the production of competitive domestic crops. When implementing agro-programs it is necessary to take into account the knowledge and recommendations of experts in the field, which avoids unnecessary and inefficient use of resources.
- To enhance the competitiveness of agriculture, it is necessary to strengthen each value chain, introduce state-of-the-art technologies / innovations, expand the skills and capabilities of farmers. Technology-based industrial production is the only viable way to develop the agricultural sector. We also consider the importance of promoting and regulating bio-production.
- There has been a trend of increasing private investment in the agricultural sector lately, but access to financial resources is one of the major challenges for small and medium-sized

entrepreneurs as well as for primary producers of agricultural products. There is a need for increased budgetary funds and active involvement of the banking sector.

- We consider it advisable to set up a system that would allow the state to lease land from unwilling landowners and transfer it to a farmer interested in producing agricultural produce. This, of course, requires strong political will, but it will be productive in terms of investment and increased production.
- Monitoring the spending of funds received from beneficiaries participating in public programs and monitoring the use of assets, which will facilitate the efficient spending and targeted use of budget funds.

Bibliography

1. Investigation of the Potential of Agricultural Products Produced in the Adjara Region in the Twentieth Century. (2017) Iberge Consulting LLC. Retrieved: http://adjara.gov.ge/uploads/Docs/b9dfb8d36c0f47359ee83072ef64.pdf
2. Berries on the European market. Export Guide. USAID,REAP
3. Georgian Agriculture., (2019). A statistic publication. Retrieved: https://www.geostat.ge/media/24487/soflis-meurneoba_2018.pdf
4. Georgian Agriculture., (2018). A statistic publication. Retrieved: https://www.geostat.ge/media/13795/2017-wlis-soflis-meurneoba.pdf
5. National Statistics Office of Georgia, Retrieved: https://www.geostat.ge/regions/.
6. National Statistics Office of Georgia, FDI in Georgia; Retrieved: https://www.geostat.ge/ka/modules/categories/191/pirdapiri-utskhouri-investitsiebi. Viewed: 15.02.2020
7. Statistical Yearbook (2019). Retrieved: https://www.geostat.ge/media/28915/Yearbook_2019.pdf
8. Georgian agri-food sector - for your investment. Retrieved: https://mepa.gov.ge/Ge/Page/investor. Viewed: 29.02.2020).
9. Meskhidze A. Abuladze J. (2016). "Agriculture in the Autonomous Republic of Adjara 2013-2016", Publishing Company "Geoprint", Tbilisi
10. Transformation of Georgia's agricultural sector: 20 Years of Independence, Interim Report, EI-LAT 2012 "European Initiative - Liberal Academy Tbilisi" 2015 Retrieved: http://adjara.gov.ge/uploads/Docs/fe90b91bc588426284035fb42e8d.pdf
11. Tea-growing in Georgia; Value chain analysis. (2015), Georgia, Tbilisi. TSU International School of Economics ISET;
12. Putkaradze Z., Abuladze J., 2019. Family Farms and Their Development Prospects in Adjara. J. Economics and Business, # 4.
13. Cheng, K. (2015). Tea Production and Trade Worldwide: Current and Future Development. FAO Intergovernmental Group on Tea;
14. Ministry of Agriculture of Georgia. Retrieved: www.moa.gov.ge
15. Ministry of Agriculture, Agriculture Sector Strategy, 2020-2027.
16. Jabnidze N., Gurgenidze L., (2016). Support of Small Business and Tax Differentiation In Georgia. Innovative Economics And Management Volume 1 Ussue 1 ISSN:2449-2418 ISBN 977 244 92410 09
17. Jabnidze N., (2016). Land Use Recommendations For Sustainable And Safe Development Of The Agricultural Sector. Periodical Scientific Journal "Khandzta" 13 (18). ISSN 15 12-3812 Kutaisi-Tbilisi, 139-149 pp.
18. Jabnidzde N., Meskhidze I., (2017). Role Of The State In The Process Of Creation And Functioning Of A Business Environment In Georgia. 18-19 MAY ISBN978-966-304-210-7 ST 200-204
19. Manvelidze I., Manvelidze R., (2019). Regional Peculiarities Of Public Political Communication According To The Example Of The Autonomous Republic Of Adjara. Conference Agenda SGEM. Conference Programme. Retrieved: https://sgemvienna.org/index.php/sgem-vienna-art-deadlines/conference-programme
20. Manvelidze R., Tsetskhladze L. (2018). Innovative Business: Development, Strategy, Prospects. IV International Scientific and Practical Conference "Strategic Imperatives of Modern Management". "". 19-20 april, Kyiv. Retrieved: http://ir.kneu.edu.ua/handle/2010/24199
21. Tsetskhladze L (2018). Trends of Impact of State Strategy On The Development of Entrepreneurship In Georgia. Monograph "Innovations in science: the challenges of our time" ISBN 978-1-77192-422-1. pp.390-398.
22. Tsetskhladze M., (2016). Economic Potential of Georgia and Perspectives of Economic Integration with Europe" – Lupcon Center for Business Research – Finance and Economics Conference 2016 – in Frankfurt am Main, Germany August 1 until August 3.
23. Tsetskhladze M., (2017). Touristic Potential Of Adjara And Its Perspectives Of Sustainable Development. Scientific Letters Of Academic Society Of Michal Baludansky. ISSN 1338-9432. Volume 5, no. 5A/2017. Academic Society of Michal Baludansky, Kosicc, Slovakia,. Pp. 138-142;

Proceedings of the 2020 International Conference "ECONOMIC SCIENCE FOR RURAL DEVELOPMENT" No 54
Jelgava, LLU ESAF, 12-15 May 2020, pp. 139-147
DOI: 10.22616/ESRD.2020.54.017

THE INTERNATIONALISATION OF HIGHER EDUCATION IN THE REGIONS: CASE OF LATVIA

Inga Jekabsone[1], Dr.sc.admin., assist.prof.
[1]RISEBA University of Applied Sciences

Abstract. Internationalisation is set as a horizontal priority of higher education in the context of the quality assurance by the government of Latvia. However, higher education institutions (hereinafter – HEI) in Latvia find it challenging to attract talented international students and academic staff, especially in the regions, thereby the internationalisation rates in HEI differ. The internationalisation is a complex concept – it is understood not only by the attraction of international students and academic staff, but also by internationalisation of local students and staff as well as by creation of inclusive environment for both – international and local students and staff.

Taking into account before mentioned, the aim of the research is to analyse the dimensions of the internationalisation of regional HEI in Latvia.

During the research, six regional HEI in Latvia were analysed in the context of diverse aspects of internationalisation. Recommendations to regional HEI were developed based on the analysis of case studies.

The analysis showed that the internationalisation in the regional HEI in Latvia are mainly focused on attraction of international students and on student and academic staff mobility. At the same time, some of the regional HEI set the internalisation as a priority while others focus more on local students and regional needs. However, most of regional HEI in Latvia lag behind the average EU un national internationalisation rates.

Key words: higher education, internationalisation, regions, Latvia.
JEL code: I23, I25, R11

Introduction

In general, internationalisation of higher education promotes higher quality of the education. One of the mostly used definitions of internationalisation is provided by Knight (2008) who defines internationalisation as 'the process of integrating an international, intercultural or global dimension into the purpose, functions or delivery of post-secondary education' and is recognised as a key component of higher education institutions. The European Parliament (2015) offers revised definition of internationalisation as 'the intentional process of integrating an international, intercultural or global dimension into the purpose, functions and delivery of post-secondary education, in order to enhance the quality of education and research for all students and staff, and to make a meaningful contribution to society'. This definition reflects the increased awareness that internationalisation has to become more inclusive and less elitist.

Pertaining to the features of the internationalisation of higher education, this process has become a global phenomenon which embraces all aspects of service provision in this key education sector (Bernnell, 2020; Altbach and Knight, 2007; Ennew and Greenaway, 2012; Kapur and Crowley, 2008). There are different focuses of internationalisation, e.g. in the Europe, most of universities are focusing on the delivery of the academic study programmes in English, while Scandinavian universities concentrate on mobility, in turn, in the UK internationalisation has focus on student recruitment (Clarke et al., 2018).

At political level the importance of internationalisation of higher education is highly stipulated. The EU Member States have committed themselves to promoting the learning mobility of young people following the Communication on an agenda for the modernisation of Europe's higher education system (European Commission, 2011). The Council conclusions on a benchmark for learning mobility specified that by 2020 'an EU average of at least 20% of higher education graduates should have

[1] jekabsone_inga@inbox.lv; +371 27116147

had a period of higher education-related study or training abroad' (The Council of the European Union, 2011).

Many case studies (Andalusia, Spain; Wroclaw, Poland) prove that at regional level higher education institutions are key stakeholders of the economy and society by developing study programmes that satisfy regional needs and develop human capital, ensuring research specialisation and institutional innovation that corresponds to the regional development (OECD, 2010; OECD, 2012). However, HEI located in the regions tend to struggle when it comes to attracting talented students and academic personnel as well as competitive funding. In many cases, regional higher education institutions lack in-house research capacity that limits their impact on regional development of the area (Pinheiro et al., 2018).

One of analysed examples of HEI internationalisation in the regions is Poland's case study. In Poland, some regions have taken the initiative to promote their local area to foreign students. Local governments and local HEIs have co-operated to attract foreign students looking for long-term and short-term study opportunities within European programmes and those who are interested in learning more about the city and region where they will study. For example, Wroclaw local government has an initiative administered jointly with participating universities (Study in Wroclaw, n.d.) and directed at Eastern European students (mostly Ukrainians and Belarusians); Lublin City Council (n.d.) and Poznan City Council (n.d.) have region-wide promotion projects. Poznan is thinking comprehensively about internationalisation and does have a strategy of internationalisation, which was initiated by the Adam Mickiewicz University of Poznan (the only HEI in Poland which has a separate institutional internationalisation strategy). Moreover, one regional initiative has been operating without the support of local government or authorities, namely the Silesian University Network (n.d.). The network provides information about nine public higher education institutions from Silesia and their offer to the Erasmus exchange student (European Parliament, 2015).

The Ministry of Education and Science of Latvia has set the internationalisation of higher education and science as a horizontal priority in the planning period 2014-2020 (Ministry of Education and Science, 2014). Recent official results on the number of foreign students state that 8310 international students are studying in Latvia (or 10% of all students) (Ministry of Education and Science, 2019). According to the ongoing debate on change of internal governance model of higher education institutions, the Ministry of Education and Science has proposed criteria to universities (*universitate*) and universities of applied sciences (*augstskolas*) regarding attraction of international students and international academic personnel, e.g. until 2027, every university ensures 15% share of international students (university of applied sciences – 10%) and 10% share of international academic staff (the same for universities of applied sciences). In addition, the Ministry also has proposed stricter rules regarding opening of branches of HEI abroad (Ministry of Education and Science, 2020).

In case of regional HEI in Latvia, the internationalisation is also on their agenda taking into consideration the need for increasing the academic as well as scientific capacity. Regional HEIs - Latvia University of Life Sciences and Technologies (hereinafter – LLU), Daugavpils University (hereinafter – DU), Vidzeme University of Applied Sciences (hereinafter – ViA), Ventspils University of Applied Sciences (hereinafter – VeA), Rezekne Academy of Technologies (hereinafter – RTA), Liepaja University (hereinafter – LiepU) - show stable internationalisation rates or rather positive dynamics. However, the approaches of regional institutions are different and most of the regional

higher education institutions would have challenges to meet new requirements of the Ministry of Education and Science regarding the share of international students and international academic staff.

Research question: On what dimensions of internationalisation of higher education do regional HEI in Latvia focus?

Taking into account the before mentioned facts, the aim of the research is to analyse the dimensions of the internationalisation of HEI in the regions of Latvia.

The tasks are formulated as follows:

1) to review scientific background and empirical research on different dimensions of internationalisation of higher education;
2) to assess the internationalisation approaches of the regional HEI in Latvia;
3) to provide recommendations for regional HEI in Latvia how to enhance internationalisation.

In order to achieve the aim, the following research methods are used: scientific literature studies, statistical data analysis, case study method, expert interviews.

Delimitations of the research subjects: only state funded higher education institutions would be analysed: LLU, DU, ViA, VeA, RTA, and LiepU. The impact of the HEI on regional development will not be analysed.

Main information sources: scientific literature, published studies, political planning documents and normative legal acts, as well as official statistical databases.

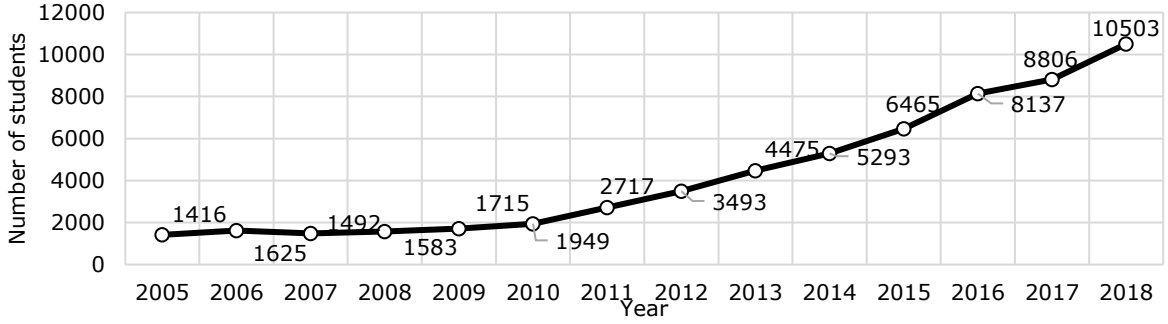
Novelty and topicality of the research includes the analysis of the regional HEI in Latvia in the context of ongoing reforms on changing internal governance (dimension "regional development" and "internationalisation").

Research results and discussion

In this section, the analysis of the regional HEI in Latvia is provided, taking into consideration different dimensions of internationalisation of higher education.

1. General analysis of regional HEI in Latvia

According to the recent available data, in Latvia there are 16 state HEI and 13 private HEI. Total number of students in academic year 2018/2019 is 80 355 students. 10 % of them are international students (10 503 students), while 6% all total academic staff is from abroad (Ministry of Education and Science, 2020). The number of foreign students tends to increase each year (Fig.1). Thereby, the objective stated at the Guidelines for the Development of Education 2014-2020 is fulfilled – 10 % of all students are foreign students (Latvijas Vestnesis, 2014). From the perspective of Latvian HEI, the growing reliance on international students as a major source of income is linked with significant declines in government funding, as well as the demographic calculus in Latvia (Chankseliani and Wells, 2019). However, in the next decade these statistics may deteriorate as it is predicted that outbound student mobility will likely decline globally because of the dampening effect of the improved domestic provision on outbound student flows (British Council, 2018).



Source: author's visualisation based on data of the Ministry of Education and Science

Fig. 1. **Number of foreign students in Latvia 2005-2018**

There are 6 state funded regional HEI in Latvia: LLU, DU, ViA, VeA, RTA, and LiepU. Main statistics of these HEI is illustrated in Table 1.

Table 1

Main statistics of regional HEI in Latvia in 2018/2019 academic year

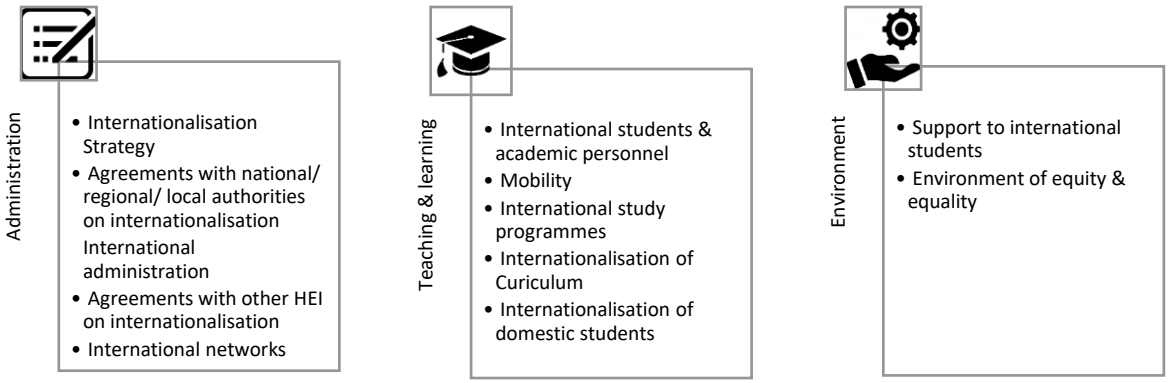
HEI	Number of students	Number of academic staff	Number of international students (% of total number of students)	Number of international academic staff (% of total number of academic staff)	Number of Latvian mobility students (% of total number of students)
LLU	3880	438	77 (2 %)	15 (3 %)	110 (3 %)
DU	2514	213	43 (2 %)	2 (1 %)	91 (4 %)
ViA	742	115	7 (1 %)	19 (17 %)	26 (4 %)
VeA	794	121	39 (5 %)	3 (2 %)	34 (4 %)
RTA	1753	145	169 (10 %)	12 (8 %)	47 (3 %)
LiepU	1373	212	97 (7 %)	13 (6 %)	33 (2 %)

Source: The Ministry of Education and Science, 2019

LLU is the 4th largest HEI in Latvia regarding the number of students. According to the proposal of the Ministry of Education and Science (Ministry of Education and Science, 2020), LLU is the only regional HEI that could meet the criteria regarding of the number of students to be called the university (requirement: at least 4000 students). By this scenario, DU and LiepU will lose the status of the university and would be classified as the universities of applied sciences. In turn, ViA and VeA do not meet the criteria to be called the universities of applied sciences as the number of students in these HEI is below 1000 students. Pertaining to the number of international students, in the regional HEI it varies from 1% to 10%. In ViA, the share of international students is only 1%, in turn, in DU and LLU it is only 2%. Only in RTA the share of international students corresponds to the national tendencies. As concerns the international academic staff, in ViA and RTA the share of international academic staff exceeds the average national level of international academic staff. Regarding to DU and VeA, there are only few cases of international academic staff employment. The share of mobility students is slightly higher in the regional HEI than the average in Latvia, where 2% of all Latvian students use mobility possibilities.

2. Methodology of analysis of internationalisation of higher education

Considering the versatile nature of internationalisation of higher education as well as conclusions of the scientific literature review, the analysis of regional HEI in Latvia is provided focusing on these dimensions: administrative perspective, teaching and learning perspective, environmental perspective (Fig. 2).



Source: author's visualisation based on Clarke et al., 2018; Smaliakou, 2019; Bernnell, 2020

Fig. 2. **Dimensions of higher education internationalisation**

Taking into account these criteria, the case study analysis is provided for regional HEI in Latvia. For this purpose, the publicly available information (HEI website, reports, interviews with employees, statistical data, scientific publications etc.) was studied as well as the interviews with high level representatives of the HEI were organised.

3. Analysis of regional HEI in the context of internationalisation of higher education

All six regional HEI in Latvia were analysed in the context of internationalisation. The results of the study are displayed in Table 2.

Table 2

Analysis of internationalisation aspects in the regional HEI in Latvia

HEI	Internationalisation dimensions		
	Administration	**Teaching and learning**	**Environment**
LLU	**Internationalisation Strategy**: In the Development Strategy, one of medium-term objectives for higher education – to ensure internationalisation of studies un lifelong learning. In addition, internationalisation plans have been prepared. **Agreements on internationalisation:** LLU is a member of Latvian Higher Education Export Association; signed agreement with Ministry of Education and Science on good practice in attracting foreign students. **International administration:** LLU has established International Advisory Board. **Agreements with other HEI on internationalisation:** a large number of agreements (161) within Erasmus+; bilateral agreements with 24 foreign HEI and with 37 international associations. **International networks:** wide network of international partners (e.g. The International Association of Universities, The European Association of Universities).	**International students & academic personnel:** The share of international students and academic staff is relatively small (respectively 2% and 3%). In the Development Strategy it is stipulated that LLU shall provide an offer that attracts international students. **Mobility:** both inbound and outbound student and academic staff mobility tends to increase, however the numbers are relatively small. More focus is on academic staff mobility (inbound mobility 103; outbound mobility 73). **International study programmes:** 5 bachelor programmes, 8 master programmes and 13 doctoral programmes in ENG. **Internationalisation of Curriculum:** ESF project "Improvement of Management of LLU" that includes adjustment of curriculum to the internationalisation trends. **Internationalisation of domestic students:** Relatively small share of students uses mobility possibilities (3 %).	**Support to international students:** 52 international recruitment agents. The webpage with relevant information for international students was developed. The Centre for International Cooperation and Language Centre was established. **Environment of equity and equality:** not highlighted.

HEI	Internationalisation dimensions		
	Administration	**Teaching and learning**	**Environment**
DU	**Internationalisation Strategy:** In the Development Strategy, the internationalisation of HEI is not highlighted as the priority. **Agreements on internationalisation:** signed agreement with the Ministry of Education and Science on good practice in attracting foreign students. **International administration:** non. **Agreements with other HEI on internationalisation:** a large number of agreements (129) within Erasmus+, bilateral agreements with 48 foreign HEI and with 3 international associations. **International networks:** wide network of international partners (e.g. The European Union Universities of Small States, The European Association of Universities).	**International students and academic personnel:** The share of international students and academic staff is relatively small (respectively 1% and 2%). **Mobility:** outbound student mobility 91 students (slight increase over the last years). **International study programmes:** 5 bachelor programmes, 7 master programmes. and 11 doctoral programmes in ENG. **Internationalisation of Curriculum:** ESF project "Reducing fragmentation of study programmes and strengthening resource sharing at Daugavpils University" that includes adjustment of curriculum to the internationalisation trends. **Internationalisation of domestic students:** Relatively small share of students that use mobility possibilities (4%).	**Support to international students:** Department of International and public relation provides the support for international students. The webpage with relevant information for international students was developed. **Environment of equity & equality:** In the Development Strategy it is indicated, that flexibility of study programmes allows to combine studies with work, child care, health care and other aspects of personal life.
ViA	**Internationalisation Strategy:** In the Development Strategy, it is mentioned that an important precondition for the development of ViA has been international cooperation and the study process internationalisation. However, the internationalisation of HEI is not highlighted as the priority. Horizontal direction – strengthening national and international collaboration networks. **Agreements on internationalisation:** signed agreement with the Ministry of Education and Science on good practice in attracting foreign students. **International administration:** non **Agreements with other HEI on internationalisation:** a large number of agreements (120) within Erasmus+. **International networks:** non.	**International students and academic personnel:** The share of international students is relatively small (respectively 1 %). However, the share of international academic staff exceeds the average level (17 %). **Mobility:** outbound student mobility - 26 students (slight increase over the last years). **International study programmes:** 1 bachelor programme, 5 master programmes and 1 doctoral programme in ENG. **Internationalisation of Curriculum:** 1 joint master programme; NORDPLUS project "Integrating responsible consumption in higher education programmes". **Internationalisation of domestic students:** Relatively small share of students uses mobility possibilities (4 %).	**Support to international students:** the webpage with relevant information for international students was developed. One position of international studies specialist. **Environment of equity and equality:** Open university and remote work place opportunities for stakeholders.
VeA	**Internationalisation Strategy:** In the Development Strategy, one of the objectives indicates the need to strengthen the national and international collaboration networks. However, the internationalisation of HEI is not highlighted as the priority. **Agreements on internationalisation:** signed agreement with the Ministry of Education and Science on good practice in attracting foreign students. **International administration:** International Advisory Council. **Agreements with other HEI on internationalisation:** a large number of agreements (96) within Erasmus+, bilateral agreements with 28 foreign HEI and with 3 international associations. **International networks:** non.	**International students and academic personnel:** The share of international students and academic staff is relatively small (respectively 5% and 2%). **Mobility:** outbound student mobility - 32 students (slight increase over the last years). **International study programmes:** 5 bachelor programme and 1 master programme in ENG. **Internationalisation of Curriculum:** ESF project "Improvement of VeA study programme content quality, resource efficiency and better management" that includes adjustment of curriculum to the internationalisation trends; 1 joint master programme. **Internationalisation of domestic students:** Relatively small share of students uses mobility possibilities (4 %).	**Support to international students:** the webpage with relevant information for international students was developed. Two positions for a foreign affairs specialists, one position of an expert in attracting foreign students. **Environment of equity and equality:** not highlighted.
RTA	**Internationalisation Strategy:** As stated in the Development Strategy, one of the RTA's priorities is the internationalisation of the study and research process. The internationalisation of HE is understood as exchange of students and academic staff, development of study programmes in ENG and joint programmes, attraction of foreign students. **Agreements on internationalisation:** non. **International administration:** non **Agreements with other HEI on internationalisation:** a large number of agreements (101) within Erasmus+. **International networks:** non.	**International students and academic personnel:** The share of international students and academic staff is on average national level (respectively 10% and 8%). **Mobility:** outbound mobility - 47 students (slight increase over the last years). **International study programmes:** 5 bachelor programmes, 7 master programmes and 2 doctoral programmes in ENG. **Internationalisation of Curriculum:** ESF projects on reducing fragmentation of study programmes and strengthening resource sharing. **Internationalisation of domestic students:** Relatively small share of students uses mobility possibilities (3 %).	**Support to international students:** the webpage with relevant information for international students was created. Established position of study process specialist for working with foreign students. **Environment of equity and equality:** not highlighted.

HEI	Internationalisation dimensions		
	Administration	**Teaching and learning**	**Environment**
LiepU	**Internationalisation Strategy:** The internationalisation of HEI is not highlighted as the priority. **Agreements on internationalisation:** signed agreement with the Ministry of Education and Science on good practice in attracting foreign students. **International administration:** non. **Agreements with other HEI on internationalisation:** a large number of agreements (112) within Erasmus+. **International networks:** non.	**International students and academic personnel:** The share of international students and academic staff is slightly below the average national level (respectively 7% and 6%). **Mobility:** outbound student mobility - 33 students (slight increase over the last years). **International study programmes:** 3 bachelor programmes, 3 master programmes and 2 doctoral programmes in ENG. **Internationalisation of Curriculum:** ESF projects on reducing fragmentation of study programs and strengthening resource sharing. **Internationalisation of domestic students:** Relatively small share of students uses mobility possibilities (2 %).	**Support to international students:** the webpage with relevant information for international students was developed. Foreign communications department (4 employees) was established **Environment of equity and equality:** not highlighted.

Source: websites of the HEI and interviews with administrative personnel

Referring to the administrative aspects of the internationalisation of the higher education, most of the HEI have signed the agreement with the Ministry of Education and Science of Latvia on good practice in attracting foreign students (except RTA). The Ministry had come up with this initiative in order to focus its marketing and administrative resources to promote only those HEI who attract foreign students according to the good practice. Some of the HEI (ViA and LLU) have International Advisory Board that brings additional international aspect to the management of the HEI. However, none of the HEI has foreign representatives in the government. All HEI have a large number of agreements with other HEI within Erasmus+, so there are wide opportunities for students and academic staff for mobility. At the same time, the number of students going on mobility could be higher. Larger HEI like LLU and DU are members of international organisations and networks, other HEI develop collaboration based on bilateral agreements with other HEI. In the Development Strategies of the HEI, mostly the international cooperation is set as a horizontal priority. Internationalisation of higher education directly is indicated as a priority in the case of LLU and RTA. No HEI has developed separate strategy for internationalisation. Also, at national level such strategy is not developed yet.

As concerns teaching and learning dimension, in this planning period all HEI are using the ESF funds for improvement of the content quality of the study programmes. It refers to the study programmes in English as well. In some cases, the internationalisation aspects are taken into account. All HEI offer the wide spectrum of study programmes in English, so foreign students can choose to study in the regions. The data show that in the most cases the share of international students and international staff is below the average national level. Only in RTA the share of international students and academic staff corresponds to the average national level. All HEI uses opportunities of Erasmus+, both students and academic staff; however, the share of mobility of students and academic staff is still not sufficient.

Pertaining to the environmental dimension, all regional HEI offer information about the study possibilities in English. There are special positions for employees who work with international students. In case of smaller HEI, the support function is executed by the Erasmus+ coordinators or employees of Student Department. Concerning the implementation of concept of environment of equity and equality, regional HEIs do not highlight this concept – taking into account that accessibility and availability of the higher education in Latvia in general remainsat good positions in the EU, especially regarding the gender balance. Environmental accessibility is regulated by the law.

To sum up, the regional HEI in Latvia mostly associate the concept of internationalisation of the higher education with attraction of international students and with student and academic staff mobility. Other aspects of internationalisation such as internationalisation of curricula, internationalisation of local students or internationalisation of the governance of the HEI are not highlighted. This could be explained by the negative demographic tendencies and the need of the HEI for additional financial resources.

Conclusions, proposals, recommendations

1) The internationalisation of higher education is topical challenge for all HEI as it enhances both the quality of higher education and financial well-being of HEI. Taking into consideration the various aspects of the internationalisation concept, the most important dimensions of this concept are following: administrative, teaching and learning, and environmental.
2) In case of Latvia, the internationalisation of higher education is stated as a horizontal priority – HEI have been actively working on attraction of international students. Regional HEI focus on attraction of international students as a major source of income due to significant declines in government funding, as well as the demographic calculus in Latvia.
3) In case of regional HEI in Latvia, mostly they are focusing on attraction of international students via widening the offer for study programmes in English. Also, regional HEI use Erasmus+ possibilities for student and staff mobility. As concerns other dimensions of internationalisation of higher education, regional HEI do not focus on creation of environment of equity and equality that supports inclusion of international students and staff to the daily life of HEI. Also, the internationalisation of the governance of the HEI is not implemented according to the good governance practice.
4) Regional HEI in Latvia should pay more attention to more comprehensive understanding of the internationalisation concept, covering various dimensions of it. The role of internationalisation of the higher education should be more clearly indicated in the strategic documentation of the HEI, indicating objectives and tasks towards implementation of it. In addition, the HEI should focus on development of inclusive environment that supports international students and staff as well as promotes the internationalisation of local students.

Bibliography

1. Altbach, P.G., Knight, J. (2007). The Internationalization of Higher Education: Motivations and Realities. *Journal of Studies in International Education*, Volume 11, p. 290.
2. Bernnell, P. (2020). The Internationalisation of Higher Education Provision in the United Kingdom: Patterns and Relationships between Onshore and Offshore Overseas Student Enrolment. *International Journal of Educational Development*, Volume 74, pp. 102-112.
3. British Council (2018). EI Feature – International Student Mobility to 2027: Local Investment, Global Outcomes. Report, British Council, UK, January. Retrieved: https://ei.britishcouncil.org/educationin telligence/ei-feature-international-student-mobility-2027-local-investment-global-outcome. Access: 05.03.2020.
4. Chankseliani, M., Wells, A. (2019). Big Business in a Small State: Rationales of Higher Education Internationalisation in Latvia. *European Educational Research Journal*, Volume 18, Issue 6, pp. 639–655.
5. Clarke, M., Hui Yang, L., Harmon, D. (2018). The Internationalisation of Irish Higher Education Retrieved: http://eurireland.ie/assets/uploads/2018/07/report_internationalisation_of_education_2018.pdf. Access: 04.02.2020.
6. Ennew, C., Greenaway, D. (2012). *The Globalisation of Higher Education*. Houndmills, Basingstoke, U.K.
7. European Commission (2011). Supporting Growth and Jobs – An Agenda for the Modernisation of Europe's Higher Education Systems. COM (2011) 567. Retrieved: https://ec.europa.eu/assets/eac/education/library/policy/modernisation_en.pdf Access: 05.03.2020.
8. European Parliament (2015). Internationalisation of Higher Education – Study. Retrieved: http://www.europarl.europa.eu/RegData/etudes/STUD/2015/540370/IPOL_STU%282015%29540370_EN.p df.Access: 04.02.2020.

9. Guidelines on the Development of Education 2014-2020. Latvijas Vestnesis, No. 103. Retrieved: https://m.likumi.lv/doc.php?id=266406. Access: 05.03.2020.
10. Kapur, D., Crowley, M. (2008). *Beyond the ABCs: Higher Education and Developing Countries*. Centre for Global Development, Washington D.C.
11. Knight, J. (2008). *Higher Education in Turmoil. The Changing World of Internationalisation*. Rotterdam, the Netherlands: Sense Publishers.
12. Ministry of Education and Science (2014). Guidelines for the Development of Education for 2014-2020. Retrieved: https://rio.jrc.ec.europa.eu/en/library/guidelines-development-education-2014-2020 Access: 04.02.2020.
13. Ministry of Education and Science (2019). Parskats par augstako izglitibu 2018 (Report on Higher Education). Retrieved: https://www.izm.gov.lv/images/statistika/augst_izgl/Augstakas_izglitibas_LV_parskats_2018.pdf. Access: 04.02.2020.
14. Ministry of Education and Science (2020). Konceptualais zinojums "Par augstskolu ieksejas parvaldibas mainu" – projekts (Draft Conceptual Report on Changing Internal Governance in Higher Education Institutions). Retrieved: https://izm.gov.lv/images/sabiedribas_lidzdaliba/KZ_augstskolu_parvaldiba_24012020.pdf. Access: 04.02.2020.
15. OECD (2010). Higher Education in Regional and City Development: The Autonomous Region of Andalusia, Spain. OECD Publishing, 284 p.
16. OECD (2012). Higher Education in Regional and City Development: Wroclaw, Poland OECD Publishing, 276 p.
17. Pinheiro, R., Young, M., Sima, K. (2018). *Higher Education and Regional Development: Tales from Northern and Cenral Europe*. Springer International Publishing, 258 p.
18. Smaliakou, D.A. (2019). The Genesis of Higher Education Internationalisation. *Education and Science*, Volume 21, Issue 8, pp. 9-28.
19. The Council of the European Union (2011). Council Conclusions on a Benchmark for Learning Mobility. (2011/C 372/08). Retrieved: https://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:C:2011:372:0031:0035:EN:PDF. Access: 05.03.2020.

Proceedings of the 2020 International Conference "ECONOMIC SCIENCE FOR RURAL DEVELOPMENT" No 54
Jelgava, LLU ESAF, 12-15 May 2020, pp. 148-154
DOI: 10.22616/ESRD.2020.54.018

COMMUNITY COOPERATION FOR TOURISM DEVELOPMENT

Dace Kaufmane[1], Dr.oec; **Liga Paula**[2], Dr.sc.soc.
[1,2]Latvia University of Life Sciences and Technologies

Abstract. Cooperation and research on related issues in the tourism sector is still topical as virtually no new tourism offer is possible without cooperation. This has been confirmed by previous studies. However, in the context of community initiatives, cooperation in tourism has not been analysed very much. The aim of the paper is to analyse community cooperation in rural tourism development on the basis of content analysis of the LEADER projects and previous studies on collaboration. Cooperation is based on the understanding and exchange of information facilitated by existing and new forms of common actions between public and private actors. The results reveal that community cooperation for the development of rural tourism in Latvia can be seen as structural with the Rural Support Service as a central actor, which is responsible for the uniform implementation of the state's and European Union's support policy in Latvia, monitors compliance with agricultural legislation and regulates the conditions of all involved. At regional level, cooperation is coordinated by rural partnerships and governed by their strategies that sets clear objectives for local action in communities.

Key words: community, cooperation, LEADER, Local Action Groups, rural tourism.
JEL code: R19, Z32

Introduction

In market economy, tourism is analysed as both a form of leisure activities and an important sector of national economy. Businesses develop their offer, thus in the context of tourism development the main research object is providers of tourism services in both urban and rural areas. However, many studies have confirmed a need for cooperation in the creation of tourism services. The quality of tourism services depends not only on the innovations created by the entrepreneurs, but also on the environment, and the infrastructure that ensures opportunities to reach desired destinations. There are challenges which tourism business cannot address alone. This is especially crucial in rural areas, therefore in the paper the authors specifically focus on solving rural tourism development issues through the lens of cooperation, which involves local communities as partners. To the great extent, involvement of local communities in rural development in Latvia, similarly to other member states of the European Union, is implemented as a part of the Common Agricultural Policy through the LEADER program and bottom-up approach. In Europe, since the late 20th century, the philosophical basis of rural development policy is developed on an idea of balance between exogenous and endogenous factors, which means that neo-endogenous development schemes include both participatory approach and facilitative role of the state (Shucksmith, 2010). In Latvia, 35 Local Action Groups (LAGs) cover its territory supporting local development through diverse projects and involvement of local communities. Among other projects, great part of local initiatives is related to rural tourism. Therefore, community activities in development of rural tourism can be analysed by reviewing LEADER projects. The aim of the paper is to analyse community cooperation in rural tourism development on the basis of content analysis of the LEADER projects and previous studies. The tasks of the paper are as follows: to describe the nature of communities and the role of the Rural Support Service in local tourism, to reveal conceptual cooperation models of community involvement. Content analysis was used as a research method to reach the aim.

[1]Dace Kaufmane e-mail**:** Dace.Kaufmane@llu.lv, +371 29904840
[2] Liga Paula e-mail: Liga.Paula@llu.lv, +371 26321667

Research results and discussion

Tourists are mainly interested in regions where, in addition to the initial offer, visitors can enjoy an attractiveness of a place and brand-new activities. In order to be sufficiently attractive and, over time, to become a specific tourism product for the region, it should be based on cooperation and evaluation of this cooperation. The unifying element and driving force behind the development of tourism is the institutional and legal framework, enforced by public authorities, which in a sense reflects the social agents involved in the tourism industry and their responsibility in co-operating and generating tourism offerings. Collaboration is important in solving different problems. It is emphasized in the literature that cooperation mainly takes place to solve structural problems, not just occasional situations (Biel A., Snyder M., Tyler T., Vugt M., 2000). However, emphasis is also placed on aspects of cooperation, such as volunteering by stakeholders to share common interests and objectives, visible different problem aspects, action, decision-making, leadership, research and communication through common institutions, laws and regulations (Fyall A., Garrod B., 2005; Kaufmane D., 2011).

Coordination is essential for cooperation and is characterized by different policies, strategies and measures that coordinate the activities of different actors, both public and private, in the tourism industry, although each has its own tasks. A variety of means can be used to achieve cooperation - joint venture, tourism councils, foundations, joint institutions, and other forms of cooperation (Briesch R., 2005). Sharing experience and skills and long-term investment projects are key aspects of collaboration and optimization efforts. It is important to note that such cooperation is most effective at the local level, where public and private interests are most directly and directly exposed (Briesch R., 2005; Kaufmane D., 2011).

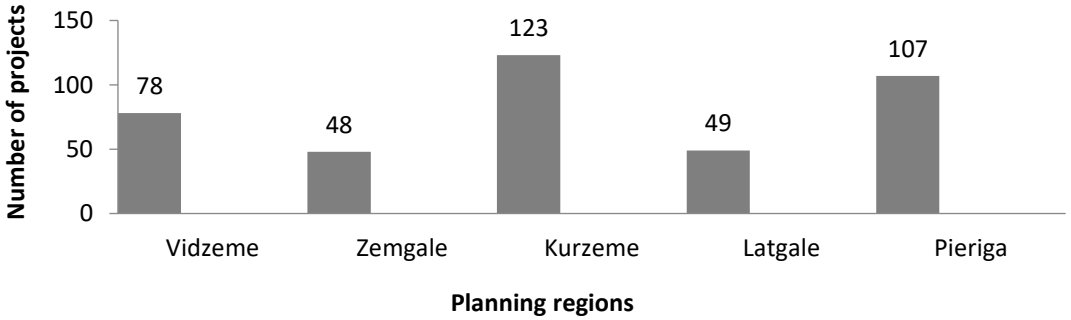
In rural areas of Latvia, small tourism providers offer services as tourism destinations, but in essence, any business at a tourism destination place does not operate in isolation, because cooperation with other tourism partners depends on the entrepreneur's recognition, which in turn affects turnover. Tourism entrepreneurs form a system of cooperation with specific cooperation partners, each of which has a role to play in developing a tourism product (Kaufmane D., 2011). From 2009 to 2011, the research was carried out in Zemgale region in order to identify cooperation models in rural tourism at micro level, revealing the networks of tourism entrepreneurs (Kaufmane D., 2011). The data showed that the tourism supply creation process is an activity influencing an involvement of new partners in the tourism cooperation system. The collaboration is formed and changed by the purposeful cooperation of the tourism service providers with the partners directly and indirectly involved in tourism. Research on cooperation motives in rural tourism revealed that entrepreneurs, based on subjective but substantiated motives, cooperate with 28 social agents: tourism information centres, industry associations, non-governmental organizations, rural consultancy offices, educational and cultural institutions, museums and collectors, municipalities, advertising agencies, publishers, banks, security companies, insurance companies, companies providing household services, farms, tourism companies, media, craftsmen, souvenir producers, transport companies, catering companies, hotels, rental companies, and Rural Support Service (Kaufmane D., 2011). Most of the agents represent local communities, therefore, the authors of the paper emphasize a need for more detailed research of some cooperation agents in the context of future cooperation. In this case, the authors focus more precisely on the role of the Rural Support Service and local communities in the development of rural tourism.

Community is a socially constructed concept that has several meanings. Sociologists define a community in three ways: as a social system, as a fixed locality, and as a quality of relationships. This applies both to the area where group members interact and to a set of people that do not represent a single geographic area but are united on the basis of common interest. These types of communities often overlap. A community as a social system meets the needs of its members. Essential features of a community are, for example, common identity, sense of place, human relationships, environment, and culture. Community relationships are based on shared history, values and norms, status and role models, mutual expectations. These elements create a sense of identity that is psychologically and socially significant (Blackshaw T., 2010).

The internal environment of the community determines the capacity of the community to take advantage of different opportunities (Paula L., 2016). What matters is whether the locals themselves can see how they can contribute to the quality of life in the community. In Latvia, rural initiatives are supported by various associations of non-governmental organizations, such as the Civic Alliance, the Latvian Rural Forum, the Community Initiative Fund and others. Municipalities also support local initiatives to the extent possible within the budget. There are LEADER Local Action Groups (rural partnerships) throughout the territory of Latvia, which are active in implementing diverse community projects that are more culturally and socially oriented; however, there is also a tendency to implement initiatives which support local businesses. The Rural Support Service (RSS) is a state direct administration institution, which is responsible for the unified implementation of state's and the European Union's (EU) support policy in Latvia. It supervises compliance with regulatory enactments in the field of agriculture and performs other functions related to implementation of agricultural and rural support policy. Within its competence, the RSS administers state support and the European Union support for rural, agriculture, forestry and fisheries - adopts and evaluates applications for support, decides on granting or refusing to grant funding, decides on the payment or refusal to pay support, and records the paid support and utilization control (Lauku atbalsta dienests).

It is essential for entities to use their strengths and work with others to achieve their goals. Entrepreneurs need to innovate to add value to goods and services they offer. Cooperation between rural tourism service providers emphasizes a new offer as a result of cooperation (Kaufmane D., 2011). RSS is one of the organizations most often contacted by rural tourism businesses for financial support to expand their tourism product. The LEADER approach, which is based on the development of a local development strategy 2015-2020 in the form of projects, has the possibility to attract support from measures co-financed by the European Agricultural Fund for Rural Development (EAFRD) and the European Fisheries Fund (EFF). Central element of local rural environment and its development are people who are the main drivers of development. In order to reduce rural depopulation and the degradation of rural areas, it is important to improve the quality of rural environment so that inhabitants can secure their social and economic activities as close to their place of residence as possible and see themselves in rural areas in the future. To conclude, the LEADER program is an important instrument for the preservation and development of rural areas in order to strengthen community resilience, which is the basis for sustainable development of the area. Content analysis was used in the paper to analyse aspects of community cooperation. Information on partnerships in Latvia and publicly available information on projects implemented since 2009 on the websites of these partnerships has been selected as the subject of the study (Latvijas Lauku Forums). 35 LAGs or partnerships covering the whole territory of Latvia are registered as members of the

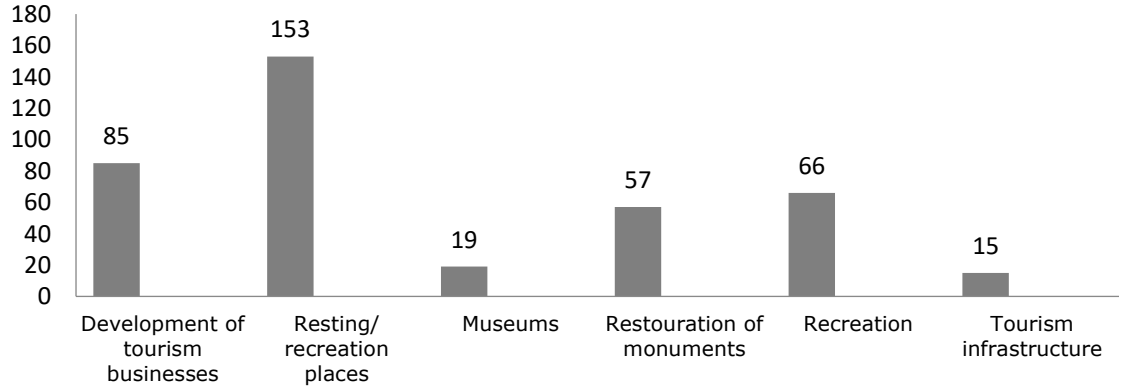
Latvian Rural Forum. The partnership is an open organization and brings together members from a variety of sectors such as municipal representatives, the non-governmental sector, business, and individuals who meet at least once a year. Approved strategies for all partnerships are available on the Rural Support Service website. These documents also include tourism development tasks (Projekti un investicijas). However, development of tourism is not just an activity of one business; it should be understood that the scenery and offerings publicly available in the surrounding area at tourism destinations are important to travellers. Analysing the projects applied and implemented by the communities in Latvia, it was noticed that many of them both improve the quality of life of the local population and have a positive impact on the travellers' rating of the place visited. According to publicly available information on the websites of all partnerships, 405 LEADER projects could be attributed to tourism development in Latvia (both programming periods 2007-2013 and 2014-2020). The most tourism related projects are in the planning regions of Kurzeme and Pieriga (Figure 1), which may be explained by the more active tourism sector in Kurzeme, especially in the coastal areas. The case of Pieriga phenomenon can be at least partially explained by the density of partnerships - there are nine partnerships.



Source: author's calculations based on Latvijas Lauku Forums, Vietejo ricibas grupu (VRG) karte

Fig. 1. **Number of LEADER supported projects in Latvia's regions directly and indirectly related to tourism, programming periods 2007-2013 and 2014-2020**

The information available on the partnership websites shows that the activities of local communities are related to various project applications: improving tourist accommodations, starting a tourism business, and developing a new product. Projects include activities related to infrastructure improvements and other activities that enhance the attractiveness of the site. Communities are interested in preservation of local historical heritage, creation of exhibitions of collections, in commemoration of important personalities, and preservation of traditional rural landscapes by cleaning up nature objects, parks and bathing areas. Figure 2 presents the main themes of projects.

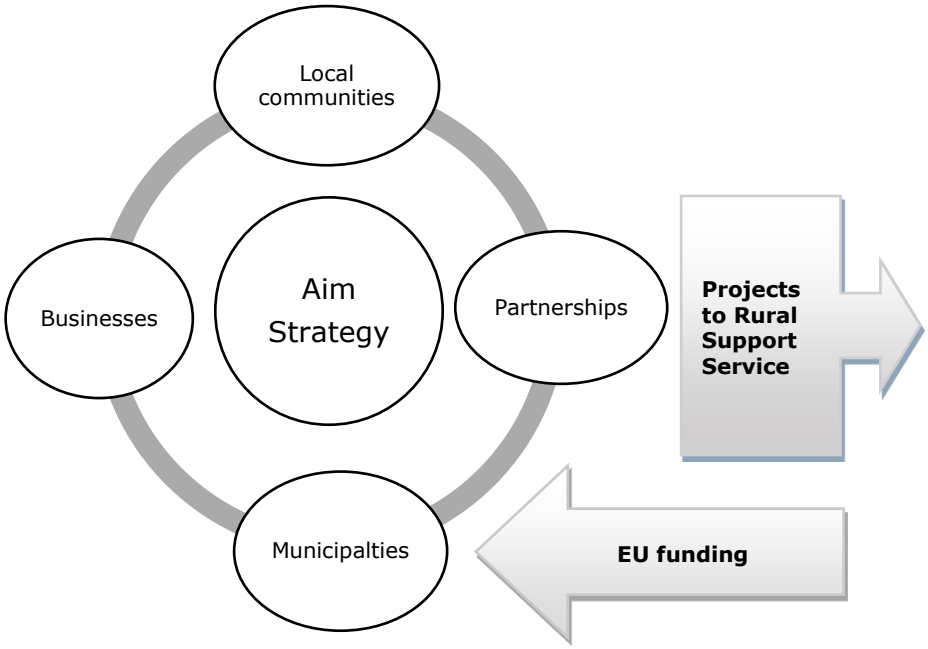


Source: author's calculations

Fig. 2. **Number of LEADER supported tourism projects in Latvia by their content since 2009**

The data show that many projects have been implemented specifically for the diversification of tourism services and also for starting new business. These include projects related, for example, to repairs of the guest houses, camping outfitting, purchasing bath equipment, setting up a spa, setting up tour farms, opening cafes and other activities directly related to tourism. In the category of *resting/recreation places*, the authors included projects for specially designed recreation areas, as well as the improvement of nature trails, access to objects or bathing areas. The tourism industry is also interested in projects that supplement or form a *museum* foundation. Some examples can be mentioned such as the creation of an exhibit on the cultural heritage of Seda town (Vidzeme region), improvements to the Museum ”Pastarins”, and synergies between the Livonian and underwater heritage of Kolka. Local communities also work together to preserve the tangible cultural and historical heritage (category *restoration of monuments*). Small projects related to the maintenance of sacred tourism resources (restouration of churches, mainly in Latgale region), as well as improvement of castles and manor territories, are being implemented, thus making them more attractive to both local communities and visitors. In the category of *recreation*, projects for custom-made objects and offers are included. Examples include the creation of Rope Park in Broceni Mezaparks (Kurzeme region), rope trails in trees in Rezekne municipality, an archery, modernization of the cross-country skiing track at Milzkalns Recreation Complex, and diversification of the services provided by Wakeboarding Park in Marupe (Pieriga region). Projects to improve *tourism infrastructure*, involve activities directed towards renewal of tourist information signs, information and improved surrounding of facilities, such as reducing anthropogenic pressures and climate change by using environmentally friendly resources and installing alternative energy-powered lanterns. Interesting example is a project "Let the world see us" submitted by the association ”Rajumi” (Matkule *pagasts*), whithin which the Google's free software and Google Earth information system displays digital photographs of objects placed by PANORAMIA, and are linked to the geographic coordinates of the location of the object, thus increasing popularity of natural and cultural sites of Kandava municipality.

Analysis of cooperation in LEADER projects in the context of communities allows to identify two conceptual models of collaboration. The first model, which is between communities, takes place through the preparation and implementation of a particular project (Figure 3).



Source: author's construction

Fig. 3. **Cooperation agents in preparation and implementation of LEADER projects**

For the development of tourism in rural areas, LEADER projects are submitted by tourism businesses, domestic producers and individuals. Municipalities are also cooperating with the partnerships on projects to improve recreation facilities, improve bathing areas, infrastructure and other conditions. There are also several museums under municipal administration implementing LEADER projects, for example, there is a restoration project of V. Pludonis Museum granary in Ceraukste (Zemgale region).

The Law on Local Governments defines the functions which the local government must perform independently (Likums "Par pasvaldibam"). They are linked to the promotion of the socio-economic environment as well as education and culture and the quality of the performance of these functions can also have a positive impact on the development of tourism. A broader spectrum of this collaborative model is the range of local communities. Churches, volunteers, hunters, anglers, sports and various other local initiative groups are involved here. In rural tourism, interaction focuses on cooperation where partners work together to address specific challenges. The networks of rural tourism providers are not static; they are shaped by economic and social rules, opportunities, and new situations. Partnerships in this model can be seen as centres for project synergies that maintain up-to-date strategies and collaborate with the RRS. Thus, the second cooperation model can be identified as collaboration between partnerships. In major projects that could promote the development of tourism in larger areas, partnerships implement common projects. For example, six partnership associations (LAGs) from Pieriga region have developed a joint tourism project offering visitours a tour around Riga city. It was expected that 14 municipalities from Pieriga region (Babite, Olaine, Marupe, Kekava, Baldone, Salaspils, Ikskile, Stopini, Ogre, Ropazi, Garkalne, Adazi, Kegums, and Lielvarde) will be involved in the implementation of the project in order to offer Pieriga region as one united tourism destination thus empowering capacity of tourism businesses.

The results of the community cooperation analysis complement existing studies on cooperation in rural tourism and clarify the role of the RSS in tourism development. Collaboration occurs when goals are unattainable as a result of individual action and require joint action by several partners. Cooperation optimization is based on the understanding and exchange of information facilitated by

existing and new forms of common actions between public and private actors (e.g. public-private partnership, public consultations, exchange of experience, development of centres). In the case of rural communities, sectoral policies, such as rural development policy and regional development at national and EU level, are also important, defining and influencing local development priorities and schemes of the external resources available for development.

Conclusions

1) Community cooperation for the development of rural tourism in Latvia can be seen as structural with the Rural Support Service as a central actor, which is responsible for the uniform implementation of the state's and European Union's support policy in Latvia, monitors compliance with agricultural legislation and regulates the conditions of all involved. At regional level, cooperation is coordinated by rural partnerships and governed by their strategies that sets clear objectives for local action in communities.
2) The Local Action Groups play an important role in conceptualising projects and programs aimed at identifying social and economic needs, some of which are directly and indirectly linked to the development of the tourism industry in rural areas. Community projects are another way in which associations, municipalities and businesses can contribute to improving the quality of life.
3) Projects directly related to tourism development aim to diversify rural tourism services in rural tourism businesses by developing new innovative recreation facilities, increasing the capacity of holiday homes and improving the area's capacity for rural tourism. Creation of new jobs in local areas generates additional farm income while strengthening the local economy.
4) The main results of community-based cooperation projects from tourism-related projects are improvement of the environment and infrastructure, and the preservation and promotion of the cultural and historical heritage.

Bibliography

1. Blackshaw, T. (2010). *Key Concepts in Community Studies*. Los Angeles, London, New Delhi, Singapore, Washington DC: SAGE, p. 232.
2. Biel, A., Snyder, M., Tyler, T., Vugt, M. (Eds.) (2000). *Cooperation in Modern Society. Promoting the Welfare of Communities, States and Organizations*. London*:* Routledge, p. 264.
3. Briesch, R. (2005). Eiropas Ekonomikas un socialo lietu komitejas atzinums par Turisma politiku un valsts un privata sektora sadarbibu (Opinion of the European Economic and Social Committee on Tourism policy and public - private partnerships). *Eiropas Savienibas Oficialais Vestnesis*, C74/02, 7.-14. lpp.
4. Fyall, A., Garrod, B. (2005). *Tourism Marketing. A collaborative Approach. Aspects of Tourism*. Channel view publications, p. 383.
5. Kaufmane, D. (2011). Cooperation Systems in Tourism: The Case of Zemgale Region. PhD thesis, Latvia University of Agriculture, Jelgava.
6. Lauku atbalsta dienests. Retrieved: http://www.lad.gov.lv/lv/par-mums/vispariga-informacija/vispariga-informacija/ Access: 15.02.2020.
7. Latvijas Lauku Forums Vietejo ricibas grupu (VRG) karte. Retrieved: http://llf.partneribas.lv/vrg-karte-2 Access: 16.02.2020.
8. Likums "Par pasvaldibam". Retrieved: https://likumi.lv/ta/id/57255-par-pasvaldibam Access: 16.02.2020.
9. Paula, L. (2016). Community Capability for Rural Development in Latvia. Doctoral Thesis. University of Latvia, Faculty of Social Sciences, Department of Sociology.
10. Projekti un investīcijas. LEADER. Apstiprinatas strategijas. Retrieved: http://www.lad.gov.lv/lv/atbalsta-veidi/projekti-un-investicijas/leader/apstiprinato-strategiju-saraksts-2/ Access: 16.02.2020.
11. Shucksmith, M. (2010). Disintegrated Rural Development? Neo-endogenous Rural Development, Planning and Place Shaping in Diffused Power Contexts. *Sociologia Ruralis*, No 50(1), pp. 1-14.

Proceedings of the 2020 International Conference "ECONOMIC SCIENCE FOR RURAL DEVELOPMENT" No 54
Jelgava, LLU ESAF, 12-15 May 2020, pp. 155-162
DOI: 10.22616/ESRD.2020.54.019

SUSTAINABLE PROJECT MANAGEMENT: CASE OF CULTURE PROJECTS IN ZEMGALE PLANNING REGION

Sandra Kauranena[1], Mg.proj.mgmt.; **Dina Bite**[2], Dr.sc.soc. and **Zenija Kruzmetra**[3], Dr.geogr.
[1,2,3]Latvia University of Life Sciences and Technologies

Abstract. Adherence to the principles of sustainability in the acquisition of different funds and financial instruments is one of the basic conditions for obtaining funding. In the field of cultural project management, sustainability is more difficult to assess because the concept of culture is multifaceted and not always quantifiable. Identifying and promoting the sustainability of the results of cultural projects outside large cities and in rural areas is particularly important, as each project implemented should serve the growth and cultural development of the area. Unfortunately, the lack of research on this issue proves the need to invest a great deal in identifying and analysing the situation. There is a lack of studies analysing the contribution of cultural projects to the development of regional territories and their long-term benefits. To do this, the research set a goal: to study the practice of ensuring sustainability of results of cultural projects in Zemgale planning region, Latvia. The research used quantitative and qualitative research methods - content analysis of Zemgale Planning Region municipal websites, document research and analysis of Zemgale Planning Region (state institution), as well as semi-structured interviews. The study reveals certain practices that municipal authorities are pursuing to ensure the sustainability of cultural projects, such as linking different activities, using the 'project basket' principle etc., but overall it has to be concluded that sustainable cultural project management still needs to be expanded and improved. There is often a lack of links and feedback between project applicants and final beneficiaries. There are no clear indicators to measure sustainability. New approaches need to be found not only to learn how to integrate sustainability principles into project management, but also to introduce a set of convenient and practical steps to make the desirable sustainability scenario described in theory a common practice in cultural project management.

Key words: culture projects, sustainability, sustainability assessment, regional development.
JEL code: H43, O22, Z10

Introduction

The role of culture in the context of sustainability has been discussed since the concept of sustainable development first began. Various key organizations such as the World Summit on Sustainable Development and UNESCO have also expressed the belief that culture should be included in the concept of sustainable development. UNESCO has publicly expressed this conviction in its "Universal Declaration on Cultural Diversity" (2001) and in the Convention on the Diversity of Cultural Expressions (2005), stating that "creativity, knowledge, diversity and beauty are inevitable space for dialogue on peace and progress, since they are directly related to human development and freedom". Culturally sustainable behavior encourages the public to recognize and identify themselves. Thus, a society that loves the human and social as well as the natural and created environment in which it lives is more prepared, informed, free, caring and willing to engage in other sustainable development issues such as social inclusion, economic growth and environmental balance (Environmental, Cultural…; A New European..., 2018, Council conclusions..., 2014; Asare et.al., 2013). Denise Scammon (Scammon, 2012) justifies adding culture to the concept of sustainability by the importance of a sense of cultural identity and belonging, making sustainability inclusive and contributing to environmental, economic and social goals.

Although different authors have similar views and justifications on the role of culture in sustainable development, the links between culture and sustainability are interpreted differently. First, culture is given an independent role in sustainability, becoming the fourth element of sustainability. The

[1] Sandra Kauranena e-mail:Sandra.Kauranena@gmail.com
[2] Dina Bite e-mail: Dina.Bite@llu.lv
[3] Zenija Kruzmetra e-mail: Zenija.Kruzmetra@llu.lv

concept is linked to safeguarding, preserving and preserving cultural capital in its various forms, such as art forms, historical heritage, knowledge and cultural diversity, for future generations. The second way is to interpret culture as a mediator for environmental, social and economic sustainability. In this case, both tangible and intangible culture is seen as an important resource for local and regional economic development, and cultural values and perceptions must be taken into account when assessing ecological and social sustainability. Third, culture is seen as a necessary basis for achieving overall sustainability goals. Culture is viewed as an overarching dimension of sustainability, incorporating elements of sustainability - environment, economy and society. In other words, sustainability becomes integrated into culture, not the other way around, and leads to eco-cultural civilization (Soini and Dessein, 2016).

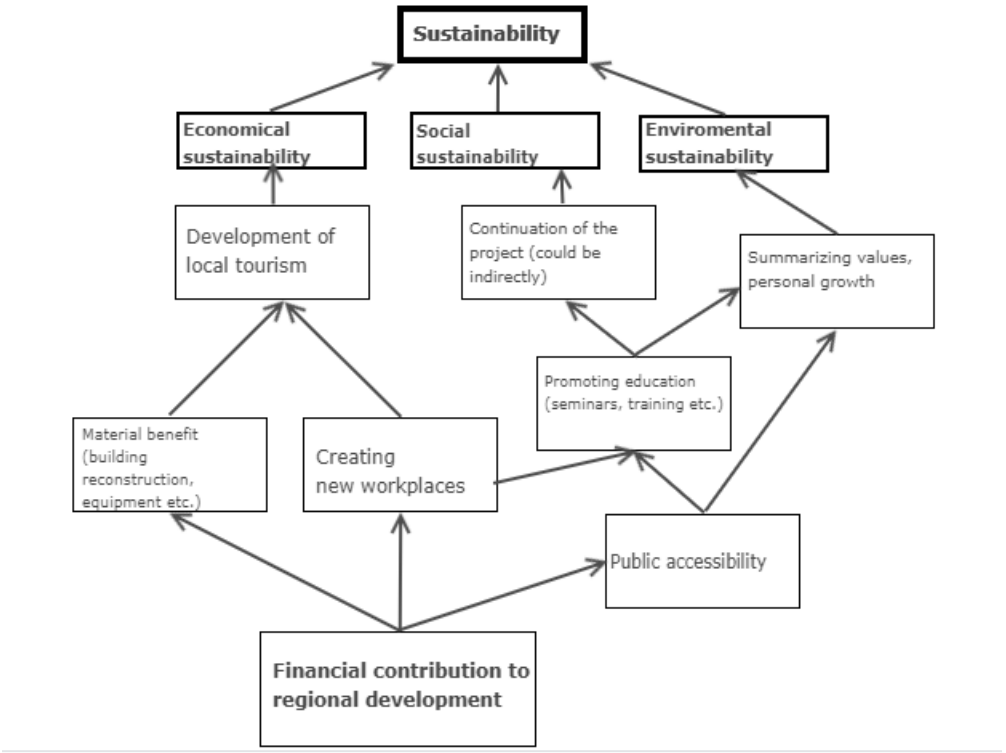
One of the latest modernizations of the concept of sustainable development came into existence in Slovenia in 2016. The stimulus to the classic model was born because in recent years the EU has witnessed an unprecedented influx of political and economic migrants leaving their homeland to secure a better future in more developed countries. The importance of this process is such that it has already begun to influence the cultural, social and political structures of some EU Member States, and therefore geostrategic security and cultural sustainability, in addition to economic, social and environmental sustainability, should become topical issues for researchers, entrepreneurs and policy makers. Based on these factors, the authors of the study, M.Bervar and A.Bertoncelj propose to develop the concept of sustainable development from five basic elements - economy (material welfare through sustainable growth), justice (social welfare including social cohesion), ecology (environmental prosperity), culture (cultural prosperity through intercultural dialogue) and security (peace and sustainable stability) (Bervar, Bertoncelj, 2016).

The concept of sustainability development often associates with offered models that are similar in content and in substance, differing only in complementary and refinement elements, but there are also different versions in the literature that alter the previously identified approach to sustainability. One example is the three-pillar model of sustainable development developed in 2018 by Clune and Zender. It is a multidisciplinary, solution-based approach, based on three elements: technology and innovation, law and governance, economics and financial incentives. Unlike the classical approach of sustainability, the authors of this model emphasize the transition from the conceptual framework to the implementation and operational structure. While the classical approach defines the potential for sustainability, this approach shows ways to achieve sustainability (Clune, Zender, 2018).

At the same time, specific criteria are needed to answer the questions above about how to ensure this and evaluate results in the field of project management, which combine historical, social and societal challenges, while forming the understanding and values of today's society. English scholars G.B. Guy and J.C. Kibert, in their study on culture as a promoter of development, concluded that growth criteria should be understandable, easy to apply, accessible, and open-ended, meaning unlimited over a given period of time. They should be based on regular (annual) data collection, reflecting an analysis of the current situation and outlining a certain direction (Guy, Kibert, 1998).

Identifying and promoting the sustainability of the results of cultural projects outside large cities and in rural areas is particularly important, as each project implemented should serve the growth and cultural development of the area. Unfortunately, the lack of research on this issue proves the need to invest a great deal in identifying and analysing the situation. There is a lack of studies analysing the contribution of cultural projects to the development of regional territories and their long-term benefits (Silvius et.al, 2017; Silvius, Schipper, 2014; Tufinio et.al., 2013).

Based on literature analysis and research, it is important to set criteria that allow understanding and analysing the implementation of the desired development scenario in practice, taking into account the need for quantitative indicators. Figure 1 presents a scheme for assessing the sustainability of cultural project results.



Source: Created by authors using information from research (Grincheva, 2016) and European cultural policy guidelines

Fig. 1. **Matrix of evaluation of sustainability of results of cultural projects**

The matrix includes a set of quantitative and qualitative data for analytical evaluation, covering both financial and social aspects and indicators allowing to evaluate the contribution of the implemented cultural projects to the overall development strategy, for instance, horizontal priorities - macroeconomic stability, balanced territorial development, sustainable development analysis, as it includes indicators of the use of cultural resources, the financial potential used, social inclusion, etc. The use of well-defined indicators gives a clearer understanding of how to ensure the sustainability of results in the cultural project sector; whereas most of these indicators cannot be measured by specific figures, such as value gains or opportunities for self-learning, both practical analysis of quantitative data and analytical assessment of qualitative data are necessary.

Purpose of the article: to study the practice of ensuring sustainability of results of cultural projects in Zemgale planning region by answering the following research questions: 1) What are the sustainable conditions for the results of cultural projects? 2) What methods are used to ensure the sustainability of cultural projects? What are the key challenges in ensuring the sustainability of cultural projects?

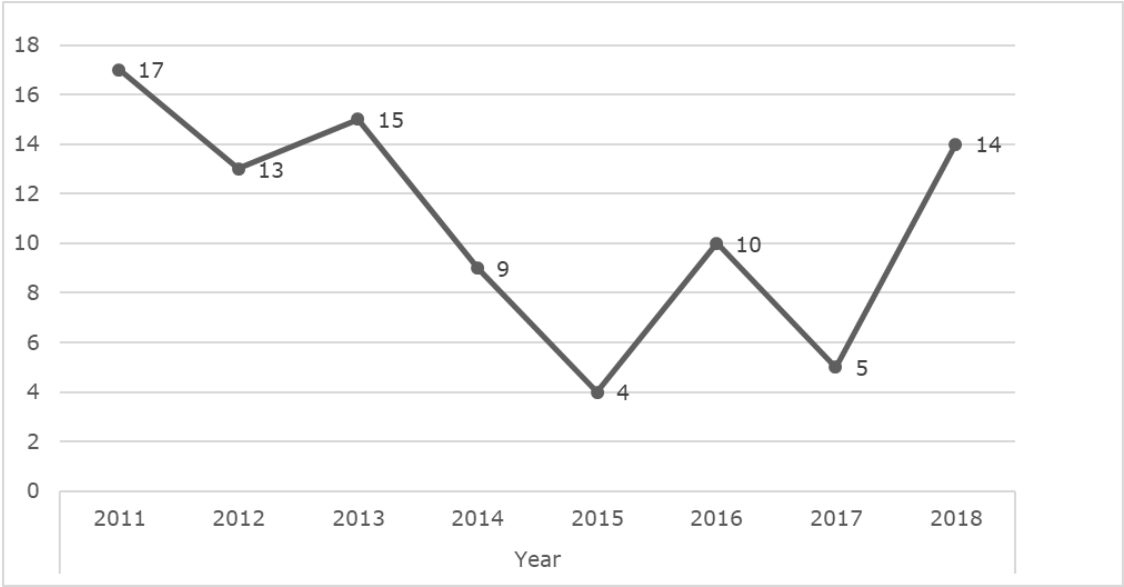
The study is based on two important planners and implementers of cultural policy and projects - Zemgale Planning Region and municipalities. Zemgale Planning Region (hereinafter - ZPR) is a derivative public person under the supervision of the Ministry of Environmental Protection and Regional Development of the Republic of Latvia (hereinafter - MEPRD), which ensures Zemgale region development planning, coordination, cooperation between municipalities and state administrations. (Zemgales Planosanas regiona nolikums…, 2019; Zemgales planosanas regiona publiskais…, 2019;

Zemgales Planošanas regiona attīstības…, 2015). The institution implements and monitors the Zemgale Culture Program (hereinafter - ZCP), an initiative developed and implemented by ZPR since 2011, financed by the State Joint Stock Company "Latvijas valsts mezi" and the State Culture Capital Fund (hereinafter - SCCF) and State Culture Capital Foundation… (Latvijas valsts mezu…, 2019), which is an important financial instrument for implementing cultural projects in Zemgale planning region. The aim of the cultural program is to promote the preservation, popularization, development and accessibility to the general public of the cultural values characteristic to the Zemgale region by contributing to the balanced and qualitative development of the Latvian cultural environment.

The study uses a qualitative and quantitative research approach: a content analysis of cultural projects implemented in Zemgale Planning Region (2011-2018) and documentation of the Zemgale Culture Program implemented by ZPR. The second content analysis collected data on the municipalities in which the ZCP projects were carried out, summarizing the number and distribution of recipient municipalities from the available information. 18 semi-structured interviews were conducted - 12 with cultural project managers from the ZCP and 6 with cultural experts. The study was carried out in 2019.

Research results and discussion

The summary analysis of the general data shows that 87 different projects related to the cultural sector were implemented in the Zemgale Planning Region during the period under review, of which the most active were 2011 with 17 implemented projects and 2013 with 15 implemented cultural projects.



Source: Created by the authors based on content analysis materials

Fig. 2. **Dynamics of implemented municipal cultural projects (2011-2018)**

The data collected reveal an ambiguous picture of the cultural projects implemented. It has to be taken into account that municipalities implement more financially intensive projects, using EU funds, and co-financing is often necessary, which is often a difficult condition for small municipalities due to limited budget. Funding provided by large funds such as the ERDF, the EAFRD and such allows large-scale projects to be implemented over several years; consequently, depending on the human resources capacity of the municipality, it is possible to carry out several projects at the same time or to participate in project competitions every year.

According to the collected data, the leader of project implementation is the Jelgava Municipality with 38 projects implemented in the field of culture in 2011-2018, which significantly exceeds other

municipalities in the Zemgale Planning Region. This has been the position of the municipality and one of the driving forces is the cultural sector; active participation, allocation of resources and priorities within the budget are good for cultural projects. This is the prerequisite for sustainable project management at municipal level.

As the content analysis shows, there is a significant potential for sustainability when cooperating with related institutions (libraries, cultural centres etc.) within municipalities, and it is one of the preconditions for sustainability as project results are channelled to meet different local needs; one example is the reconstruction and extension of the Zorgi Library premises by the Iecava Municipality, thus creating an active public centre.

The most important challenges that have emerged in the issue of sustainability of the results of cultural projects implemented by municipalities are meeting individual needs based on the supply of EU funds. Although this tendency is not widespread, as most Zemgale municipalities strive to create a "basket of ideas and needs", the existence of this indicator is important if we consider the contribution to sustainability that is not only meeting current needs but investing in all opportunities that will be realized.

The study was continued with the analysis of ZPR documents, which gathered information on cultural projects implemented under the program, which is the second most important opportunity within the region under review. Project promoters mostly represent the same municipalities, which could be explained by successful communication, interest and clear goals. Continuity is not a clear concept in the projects implementing the competition - the vast majority are independent promoters, most often providing some form of entertainment or recreation. From the collected data, it was concluded that a number of projects initially implemented as a one-off event became a tradition due to demand, such as the Liepaja Symphony Orchestra Music Festival in the Rundale Palace Garden, which attracts both museum and local tourism. Another positive example is the early music festival "Sanssouci" in Jekabpils region, which, like Rundale, has become a sign of recognition in a small village far from regional centres. These are positive examples of succession where the implemented cultural projects create new traditions which are particularly important for the development of rural areas. However, most of the projects do not continue and with such a wide representation of promoters within the program do not form a common strategic direction, but rather serve as opportunities for cultural activities.

According to the data, the lowest number of project applicants and implementers is natural persons - 6% during the reporting period. The project is a team effort; it requires management and implementation that requires human resources. Individuals are most often unable to realize project intentions because the workload and management format - public benefit objectives and results - make it more difficult for individuals to accomplish. This is one of the reasons why the number and activity of unions is growing - it is easier to implement ideas and deliver results that are conducive to the growth of society by uniting in communities of interest and gaining a legal basis, and the specificity of culture requires teamwork. A significant influencing factor is that the statute provides that natural persons may only qualify for financial support for research work by claiming it and receiving it as royalty. The relatively low demand leads to the conclusion that the number of such persons is small and that the research work is either carried out through other funding channels or in a relatively small number.

There is a growing interest in society for a wide range of public events that include not only entertainment and cultural education, but also leisure and communication. As the overall financial

situation of the population improves, so does the demand for this type of project - as the purchasing power of the population increases, cultural activities are of a more commercial nature, which, on the one hand, is undesirable as it suppresses the focus on mental development; but, on the other hand, brings economic benefits to the venue and the business community around it, which is a positive thing. As the population becomes more active, the cultural supply changes along with it and cultural projects have to address the function of improving the current situation. According to the data collected, the lowest activity was observed in video and film production projects (3 %), book and print publishing activities, which could be partly explained by the VKKF-managed project implementation program, which financially supports this type of activity required under the Culture Program. Also, there is little demand for funding for theatrical performances, although amateur collectives operate in several municipalities in Zemgale.

The sustainability criterion for assessing overall strategic development objectives is fully met, as each project activity contributes to the development of the sector, with particular emphasis on cultural heritage conservation and recreational activities as an important contribution to social sustainability.

The results of the analysis confirm that Zemgale region has the opportunity to more purposefully implement its ideas and move towards the set strategic goals in terms of cultural project management, promoting the development and visibility of the cultural sector, as well as accessibility and quality of services. The decrease in the number of implemented projects indicates a loss of interest, while the number of large-scale cultural projects is increasing. The municipality should have a clear plan of action in each of the authorities it oversees; at the same time, the fragmented network of municipalities and the lack of transparency of implementing organizations complicate the efficiency of cultural policy implementation in the region. There is a lack of results analysis both in the field of cultural projects and transparency of economic data, as there is a lack of the mutual communication system that would be needed for the development of cultural projects and cultural sector in Zemgale.

Summarizing the lessons learned from the practical experience of the interviewed project managers, there are a number of key conditions to ensure the sustainability of results:

- When planning project objectives, they must comply with local and / or regional (depending on the scope of the project) regional medium and long term strategies and guidelines;
- All parties involved in decision-making should be involved in planning the implementation of the project idea, collecting opinions and needs;
- Planned results should complement the achievements of previous projects;
- Project results are not only monitored in the form of reports, but are included or, as far as possible, included in the course of other activities;
- Organize an exchange of information and knowledge between the best practices sharing experience and lessons learned on how to deliver the project results after the goal has been achieved;
- Sustainability of the results can be achieved if the project has a partnership that continues the ideas that have been started, in the event that the promoter itself ceases.

Conclusions, proposals, recommendations

1) Theoretically, sustainability of results is often perceived as an objective, but it should be the foundation of cultural project management - a set of activities and measures that incorporate the principles of sustainability and achieve a result that ensures these activities continue to the next level.
2) Municipalities should have an obvious plan of action in each of the bodies they oversee; at the same time, the fragmented network of municipalities and the lack of transparency of implementing organizations complicate the effectiveness of cultural policy implementation in the region. There is a lack of results analysis both in the field of cultural projects and transparency of economic data due to the lack of a mutual communication system that would be necessary for the development of cultural projects and cultural sector in Zemgale.
3) Zemgale Planning Region is widely represented in terms of implemented cultural projects by municipalities, associations, institutions, etc. in the sector, as evidenced by the demand for cultural project programs, the funding acquired and the results achieved, but the concreteness for sustainability has more to do with implementer's theory and formal reporting.
4) The feasibility of any cultural project implemented is based on the fulfilment of development plans, but not always this approach is capable of objectively evaluating the implementation of potentially good ideas, which in the long run would make a more valuable contribution to regional development.
5) There is a lack of clearly defined criteria and schemes for assessing the sustainability of the results of cultural projects, which would lead to the collection, analysis and regular evaluation of indicators at regional level, helping to find transparent utility and justification in the use of funding.
6) Defining qualitative and quantitative criteria for the sustainability of results would facilitate a quality cultural project management process as well as project decision-making for future project activities.
7) The most effective methods for ensuring the sustainability of results, according to practical examples from cultural project implementers in Zemgale Planning Region, are planning various activities instead of the implemented project; implementation of related and complementary future projects; planned and regular attraction of investments for the continuation of the project results; regular publicity; regular monitoring to determine visitor satisfaction / needs / ratings.
8) The most important indicators of the contribution of sustainable cultural projects to regional development are the emergence of new traditions, the renewal of cultural heritage, the promotion of local community activity, the creation of new museums, libraries, cultural centres, crafts houses, a noticeable increase in local tourism development, new jobs created and/or existing jobs preserved and so on – all carried out as part of a coherent development strategy.

This work was supported by the National Research Program Project grant number VPP-IZM-2018/1-0015.

Bibliography

1. *A New European Agenda for Culture.* European Commission (2018). Retrieved: https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52018DC0267&from=EN. Access: 11.09.2019.
2. Asare, I., Hermane, A., Lake, A., Tjarve, B. (2013) *Demokratiskas kulturpolitikas veidosana: kultura ka ilgtspejigas attīstības faktors*. Vidzemes kulturas un makslas biedriba "Haritas", R., 30 lpp.
3. Bervar, M., Bertoncelj, A. (2016). *The Five Pillars of Sustainability: Economic, Social, Environmental, Cultural and Security Aspects*. Retrieved: http://www.hippocampus.si/ISBN/978-961-6984-26-3/151.pdf. Access: 11.12.2019.
4. Clune, W.H., Zender, A.J.B. (2018). The Three Pillars of Sustainability Framework: Approaches for Laws and Governance (Vol. 9, 18 March 2018), Journal of Environmental Protection, pp. 211-240
5. *Council conclusions on participatory governance of cultural heritage* (2014/C 463/01). Official Journal of the European Union (Vol. 54, 23 December 2014), EU, Brussels, 32 p.
6. *Environmental, Cultural, Social and Economic sustainability* [s.a.]. Retrieved: http://www.morethangreen.es/en/ideology/four-sustainabilities-cultural-economic-social-environmental-sustainability/#sthash.J58OpbWg.qtdSAPJ1.dpbs. Access: 20.12. 2019.
7. Grincheva, N. (2016). *Sustainable Development in Cultural Projects: Mistakes and Challenges*. Development in Practice, 26, pp. 236-250.
8. Guy, G.B., Kibert, J.C. (1998). *Developing Indicators of Sustainability: US experience*, Building Research & Information, 26:1, pp. 39-45.
9. Latvijas valsts mežu un Valsts Kultūrkapitāla fonda atbalstītās "Zemgales kultūras programmas 2019" nolikums. Retrieved: https://www.zemgale.lv/nozares/kultura/zemgales-kulturas-programma. Access: 15.12.2019.
10. Scammon, D. (2012). Sustainability and Culture: *How do they work together?* Retrieved: http://www.academia.edu/1817961/Sustainability_and_Culture_How_do_they_work_to. Access: 25.11.2019.
11. Silvius, G., Schipper, R., Planko, J., Van der Brink, J., Kohler, A. (2017). *Sustainability in Project Management*. Routledge, ProQuest Ebook Central, 42 p.
12. Silvius, A.J.G., Schipper, R.P.J. (2014). *Sustainability in Project Management: a Literature Review and Impact Analysis. Social Business,* Vol. 4, No. 1, pp.63-96. Retrieved: https://pmworldlibrary.net/wp-content/uploads/2018/06/2014-Silvius-Schipper-Sustainability-in-project-management.pdf. Access: 22.10.2019.
13. Soini, K., Dessein, J. (2016). *Culture-Sustainability Relation: Towards a Conceptual Framework*. Retrieved: https://www.mdpi.com/2071-1050/8/2/167/html. Access: 18.12. 2019.
14. Tufinio, P.S., Mooi, H., Ravestijn, W., Bakker, H., Boorsma, M. (2013). *Sustainability in project management: where are we?* International Journal of Engineering, Tome XI (Year 2013), Fascicule 1 (ISSN 1584-2665), pp. 91-100.
15. *Zemgales Planošanas regiona attistibas programma 2015 – 2020,* (2015), *1. redakcija*. Apstiprinata ar 18.08.2015. ZPRP lemumu Nr. 131 (protokols Nr.27).
16. Zemgales Planošanas regiona nolikums (2017). (Izdots saskana ar Regionālās attistibas likuma 161.panta 2. dalu). Retrieved: https://www.zemgale.lv/par-zpr/nolikums. Access: 10.01.2020.
17. *Zemgales planošanas regiona publiskais parskats 2018*, (2019). Apstiprinats 2019.g.18. junija ar ZPRAP lēmumu Nr. 111. Retrieved: https://www.zemgale.lv/par-zpr/publiskie-parskati. Access: 15.01.2020.

Proceedings of the 2020 International Conference "ECONOMIC SCIENCE FOR RURAL DEVELOPMENT" No 54
Jelgava, LLU ESAF, 12-15 May 2020, pp. 163-155
DOI: 10.22616/ESRD.2020.54.020

THEMING DISCOURSE IN VILLAGE DEVELOPMENT

Ingrida Kazlauskiene[1], Phd. stud.; **Vilma Atkociuniene**[2], Prof. dr.
[1,2]Vytautas Magnus University

Abstract. The scientific bases do not create opportunities to understand what it is village theming and what are the opportunities for theming to influence village area development. In order to analyse the phenomenon of village theming and its impact on the development of the village area, the analysis, comparison and synthesis of scientific literature was carried out. It has been investigated that theming in scientific literature is presented as an experience and sensory marketing strategy, which incorporates marketing decisions and actions that focus on the needs of postmodern society. Postmodern society acquire not only a product or service but also new experiences and senses. The results of the study show that village theming is a marketing strategy of turning the village into a tourist attraction. It combines a theme-driven set of visitors' senses and experiences with local products and services. This strategy is being used by village communities and other stakeholders to transform their village into a unique, attractive area for locals and visitors. A village theming marketing strategy contributes to the economic, environmental and social development of the area today and in the future.

Key words: thematic village, theming, village area development.
JEL code: Q010, R000, R110

Introduction

In the 21st Century the villages are going through a period of change. Village communities are looking for new ways to ensure the social, economic and environmental development of their village. Scientific literature has argued that one of the ways to promote long-term development in village areas is through village theming. The creation of a theme village enables the local community to generate revenue from tourism and to strengthen the local economy (Frenkel S. & Walton J., 2000; Dombrowicz M., 2013; Szcesna J. & Welosowska M., 2015 etc.). Thematic villages promote the entrepreneurship of local people and increase the economic competitiveness of the area (Vaznonis V. & Ciutaite D., 2010). Villages theming brings not only economic value but also and social value to local people through cooperation, self-realization, identity (Kloczko-Gajewska A., 2013; 2014). Theming creates an opportunity for competition and increases the communality of the villages inhabitants (Wachter M. & Wytrzens K. H., 2016). The establishment of a thematic village is a strategic breakthrough for village development (Atkociuniene A. & Vaiksnoraite R., 2012), theming can be seen as an adapted vision of village development (Idziak W., Majewski J. & Zmyslony P., 2015) and it is one of the most promising ways to increase village vitality (Vidickiene D., Gedminaite-Raudone Z. & Vilke R., 2016). Village theming strategy is a tool to manage territorial development and increase its value (Atkociuniene A. & Kaminaite G., 2017), village theming is village development strategy that helps to restore social capital in village areas (Kloczko-Gajewska A., 2018). On the basis of the analysed scientific literature about thematic villages results, it is assumed that the theming is used by village communities, who seeking to make the village area attractive to tourists and themselves, thereby ensuring the economic, environmental and social development of the village area in the present and future.

There is a debate in the scientific community about the phenomenon of theming it‘s links with the development of the village area. Therefore, it is assumed that the link between the effects of village theming and the village area development is a relevant subject for research. However, only separated dimensions of village development are linked to theming in analysed scientific literature. There is no

[1] Phd student Ingrida Kazlauskiene, Vytautas Magnus University, Kaunas, Lithuania, e-mail: ingrida.kazlauskiene@vdu.lt
[2] Prof. dr. Vilma Atkociuniene, Vytautas Magnus University, Kaunas, Lithuania, ORCID: 0000-0001-6908-9339, e-mail: vilma.atkociuniene@vdu.lt

detailed discussion in the scientific literature of what village theming is and what influence it has on village area development. The existing scientific bases do not provide an opportunity to assess the potential influence of village theming on village area development. Therefore, this study is aimed at a broader understanding of the phenomenon of village theming and its influence on village area development. **The research hypothesis:** village theming is a strategy that influences development of village area. **Limitations of the research:** this study is theoretical and includes analysis of the scientific literature. An empirical study of the village theming influence on village area development is planned in the future. **The purpose of the research** is to determine what village theming is and how it may influence village area development. **Research tasks:** 1) to analyse the phenomenon of theming; 2) to analyse the phenomenon of village theming; 3) to identify the potential influence of village theming on the development of the village area.

Research methods

In order to analyse the phenomenon of village theming and its influence on the development of the village area, the analysis, comparison and synthesis of scientific literature was carried out. From various databases, scientific publications on the theming itself and it‘s impact on the development of the thematic object and it‘s area were selected. The research analysed scientific articles on various thematic objects: thematic locations, services, products, cities, villages, cruises, tourist routes, parks, restaurants, hotels.

Research results and discussion

Theming is linked to the economic, cultural and social phenomenon of consumerism, competitive exclusivity, differentiation and the development of the thematic object and its area. Recently, researchers are discussing that theming not only promotes tourism, but it also drives demand for thematic products, services, cultures, places, spaces, landscapes and other products or public goods. Likewise, theming influences the development of the theming object and the area in which it is located.

Thematic objects are developed to meet the needs of consumers, as determined by analysing the decisions making process of thematic restaurant customers in the context of theory of Planned Behavior. The theme is used as an effective marketing strategy that differentiates restaurants from other competitors (Meng B. & Choi K., 2018). The authors argue that associating objects with a theme is a trend in modern society. Theming is a management method that enables to create a value for consumers through the using of a theme (Stromberg P., 2015). Value is the added benefit that consumers gain from providing services. Thus, theming creates added value for consumers, gives the thematic object a competitive distinctiveness and promotes the consumption of services or goods. Theming is a market phenomenon of authenticity and exclusivity that helps attract customers to restaurants (Sinha N., Chaudhuri H. R., Fowler J. G. & Mazumdar S., 2018).

A study of tourist expectations for themed religious hotels found that, as competition in the hotel market intensified, theming was the best choice. Theming is useful when it comes to improving business performance and gaining a competitive advantage (Hung K., Wang S. & Tang Ch., 2015). Theming is a strategy of differentiating between identical and non-distinctive places and products (Bryman A., 2004). Theming is a marketing strategy, by using it, service providers seek to attract consumers and gain a competitive advantage in the market (Dale C. & Robinson N., 2001). Marketing focuses all activities of an organization on meeting current and potential consumer needs to achieve

business goals. A proper marketing strategy helps meet consumers' needs, meet their expectations and gain their trust (Piliutyte J., 2005).

Theming is a way of developing a consumer-based cultural service system. Thematic spaces in theme parks provide services and goods for sale in ways appropriate to the themes. Theming - like a never-ending movie, with scenery, storyline, actors and viewers, it helps mimic original places, take advantage of them and obscure reality (Lukas S., 2007). All these methods, according to the author, are intended to meet the needs of consumers, to encourage purchase and to create exclusivity. Theming is a process that combines entertainment and narrative with a theme, creating an authentic environment designed to stimulate consumption (Milman A., 2013).

Theming is not only about creating competitive exclusivity and authenticity, but also about addressing the economic and other problems of the thematic object and its area. Theming promotes the harmonious development of an area. The analysis of Leavenworth, a USA based Bavarian town, showed, that theming gives opportunities for small towns facing resource scarcity to adopt a new commercial strategy, to boost local economic development (Frenkel S. & Walton J., 2000). Theming aim is to attract tourists to the thematic objects and increase the competitiveness of the area (Milman A., Okumus F. & Dickson D., 2010). These researchers emphasize that theming is a marketing strategy that enables the thematic object to develop.

Stromberg P. (2015) proposes to understand theming in the context of the capitalism dilemma. Gottdiener M. (1997) calls the capitalism dilemma "the problem of realization". The capitalism dilemma arises when products and services can be sold but without profit. In today's capitalist world, producing products or providing services on a large scale is not difficult. Problems arise when it comes to sell products profitably. According to the authors, today's excess of homogenization and standardization of products and services has made widespread use of theming as strategy of competition and differentiation. Typically, theming is used in a commercial context, it helps to sell products and services - this is one of the goals of a marketing strategy.

After exploring the potential of wine tourism to provide tourist experience, it was found that theming is used when there are difficulties to adapt areas and objects to tourism and to develop packages of tourism products and services (Pikkemaat B., Peters M., Boksberger P. & Secco M., 2009). A marketing strategy based on the theming is tailored to attract customers, and to promote the use of products and services. Chang T. C. (2010), who analysed the thematic development of the Little India Historic District asserts, that theming is used to strengthen provinces and cities, and to promote tourism. Theming creates exclusive, innovative, imaginative offers for a wide range of audiences: investors, tourists, residents, entrepreneurs. Theming helps to attract income and investment to thematic sites (Chang T. C., 2010).

Researchers emphasize the links between theming and the promotion of consumerism, theory of Consumerism. Theming is identified as a marketing strategy for a postmodern consumer society (Stronberg P., 2015; Meng B. & Choi K., 2018). Modern society has postmodern elements, especially consumerism. Postmodern society, through consumption, seeks to create its own identity, to fulfil the needs of socialization and community. Also, they need experiences and sensations. These users are characterized by the pursuit of hedonism, pleasure, and experience through consumption (Raksnys A. V. & Guogis A. 2015). Thematic objects offer products, services for leisure, entertainment and other activities, experiences and sensations within a certain theme. Theming provides an opportunity to engage and attract consumers interested in a theme. Theming enables

consumers to take interest in their favourite theme, understand it in a related environment, learn new things and thus express themselves and find like-minded people.

Most of the researchers who have analysed the phenomenon of theming (Meng B. & Choi K., 2018; Sinha N., Chaudhuri H. R., Fowler J. G., & Mazumdar S., 2018; Astrom J. K., 2017; Hung K., Wang S. & Tang Ch., 2015; Stronberg, P., 2015) state that a theme gives clients thematic experiences and makes them feel as if they are in another world, another culture, another place, another time or even a fantasy. According to the pioneer of the marketing concept for experience, experience is private events that respond to certain stimuli (which can be used as marketing tools). Experiences are the result of direct observation or involvement in events. Experience-creating events can be real, coveted, or virtual (Schmitt B. H. & Rogers D. L., 2008). Customer experiences: these are all consumer experiences that occur before consumption when a consumer hears an advertisement, becomes aware of a product brand, product packaging, communication tools, company staff, other users and so on; user experience gained through contact with the organization, its physical environment, when the user interacts with product vendors, interaction with service personnel, interaction with other buyers or consumers; post-consumer experiences that evoke feelings, emotions, behaviours for the user. Therefore, marketers need to create environments and relationships that can lead to consumer experiences. In thematic objects, the theme is revealed through the following elements: the environment, interior and exterior, narratives, symbols, service and speaking behaviour, scenography, brand and name, staff clothing, cooking and other theme expression characteristics. These theme expression characteristics are used to make thematic objects attractive to consumers. Since the mid-1990s, when adventure tourism, eco-tourism, heritage tourism and cultural events have become more and more popular, a whole new field of experience tourism has emerged (Frenkel S. & Walton J., 2000). This type of tourism is a result of the post-industrial economy, during which the importance of cultural or symbolic capital in tourism has increased. The users of experience tourism services identify themselves by their choice of trips and consume the landscape and culture.

The purpose of cruise theming is to create an unforgettable impression on clients (Astrom J. K., 2017). Over the last decade, tourism services have been increasingly focused on creating experiences for tourists, but not just on selling goods and providing services to tourists. This change is mainly due to the publication of Pine B. J. & Gilmore J. H. (2006) significant book "Economics of Experience". It challenged suppliers to sell their commercial offerings as an experience to customers, but not simply as products and services. From this came experience as a concept and an independent paradigm in marketing and management theory. In the scientific literature service quality, emotions, loyalty, satisfaction and engagement are the heart of customer experience. The author observes that the components of the theme act and as sensory marketing, providing stimuli of varying degrees of subtlety.

Sensory marketing is the pursuit of sensory experiences that enable organizations to differentiate themselves, to motivate consumers and to increase their value. Sensory marketing is accomplished by stimulating the senses of customers, providing pleasure, excitement or satisfaction with aesthetics. The theme expression characteristics create experiences and sensations for clients, thus motivating them to visit thematic objects. They increase the value and competitiveness of the products and services that consumers receive at thematic objects. Thus, theming adds value to consumers through experience, encourages suppliers to meet their expectations and requirements, and promotes consumerism (Bryman A., 2004). Theming is the construct of the entertainment and

experience economy. Therefore, consumers not only buy a product or service, but also buy experience, sensories and entertainment at the same time.

Table 1

Sensory and experiential marketing links to village theming marketing strategy

The goals of Sensory marketing →	**The goals of Theming strategy** ↔	**The goals of Experience marketing** ←
The goal is to use senses and to create sensory experiences that enable organizations to differentiate themselves or products, to motivate consumers and to increase the value they receive. It is implemented by stimulating the senses of the consumers, providing pleasure, excitement or satisfaction with the aesthetics.	Theme expression tools create experiences, senses and feelings for consumers and motivate them to visit thematic objects. Theming provides experiences that allow consumers to feel as if they are in another world, another culture, another place, another time or even a fantasy.The goal is to increase the consumption of homogenized and standardized products and services, and to sell them profitably, by reinforcing the competitiveness of the thematic object.	Consumers experience is based on quality of service, emotions, loyalty, satisfaction and direct involvement in real, coveted or virtual events. The goal is to create an environment and relationships that can create experiences for consumers that arise before, during and after usage. The focus is not only on the product or service, but also on the stimuli associated with the offer.
The goals of Theming marketing strategy Combines the sensory, experience, and theming marketing features and enables to create a unique offer for consumers with theme-inspired experiences and sensations. The aim is to create a competitive, exclusive offer that meets the needs of postmodern consumers.		
The goals of Village theming marketing strategy The theme of the village is revealed through certain sets of elements: environment, interior and exterior, narratives and narratives, symbols, service and speaking manner, scenography, village sign and name, staff clothing, culinary, educational, activities and other means of expression. These theme expressive tools create opportunities for theme-based experience and sensory suggestions for thematic village visitors. The goal is to enhance the village exclusivity and competitive position through the Theming marketing strategy. Village theming marketing strategy is realised through the development of thematic stimuli, experiences, sensory and other user experiences, providing unique, user engagement with services or products that promote real, coveted, or virtual events. Village theming marketing strategy is applied, when there are needs ato solve social, economic, resource lack and other village development problems.		

Source: prepared based on results of the authors survey

In the light of the researcher's views discussed above, it can be argued that theming combines experiences and sensories marketing strategy features (Table 1). Theming encompasses marketing decisions and actions that focus on the needs of post-modernistic consumers need to acquire not only the product or service, but also the experiences associated with it. Theming implements a theme that provides customers experiences and sensories through exclusivity and identity that are created through the thematic environment, services, products, activities, communication and other elements. This marketing strategy involves the creation, development and management of a thematic object that focuses on customers emotional, sensory, social and other experiences within the scope of the theme. The goal of Theming marketing strategy is to create mutual value, both for the users and the for actors of the thematic object. Theming marketing strategy creates opportunities for the thematic object and its area to become competitive and to promote its economic, social and environmental development.

Competitive struggle in the market involves not only entrepreneurs and organizations, but areas also. Area marketing provides an opportunity for the areas to strengthen its competitive position at various levels. It helps local actors to answer to the question how the area can become more attractive to residents, investors and tourists. Area marketing - a marketing activity that aims to

promote or create a positive view of an area or region (Atkociuniene V. & Poceviciute D., 2010). It has been identified that experiential and sensories marketing is a marketing strategy that creates exclusivity, it can be assumed that village theming can enhance the identity of the village area, enhance its distinctiveness and competitiveness, and create demand and attractiveness for the locals and visitors to the area.

The scientific literature that discusses thematic villages confirms this assumption. The purpose of developing the American small city of Leavenworth was to promote the economic development of unattractive area to tourists through the creation of an exceptional tourist attraction. So theming is part of a small city marketing strategy (Frenkel S. & Walton J., 2000).

Thematic villages are community-based enterprise that doesn't require large investments but promote the entrepreneurship of local people and increase the economic competitiveness of the area (Vaznonis V. & Ciutaite D., 2010). The creation of a thematic village enables the local community to generate revenue from tourism and to strengthen the local economy and other developing areas (Dombrowicz M., 2013). These research findings are also supported by Idziak, W., Majewski, J. & Zmyslony P. (2015), who further add that theming functions as a means of village renewal, enabling even small villages to thrive in the age of globalization. According to the authors, village theming should be treated as an adapted vision of village development. Thematic villages are visitors' attractions created and developed by local communities that provide visitors experiences and create value for communities through participation and increased opportunities for village development.

Researchers Szcesna, J. & Welosowska, M. (2015) notice village theming strategy as one of the most appropriate way to promote village tourism development, which provides opportunities to solve economic, unemployment, emigration problems. The authors have identified thematic villages as interesting regional tourism attractions that present local customs and events, daily and holiday rituals, traditional and other crafts, and help preserve village history. According to the authors, theming gives the local communities opportunities to learn, develop their business and raise awareness of the village area.

According to Kloczko-Gajewska A. (2013), a thematic village researcher, one of the ways to revitalize village areas and generate income is village theming strategies that help to orient the attitudes and activities of village development actors on a particular topic: local food, crafts, history or other ideas. The author notes that thematic villages are villages whose inhabitants have jointly decided to develop their surrounding environment according to the theme that makes them recognizable. They attract tourists with their unique culture, nature and social heritage. Thus, theming creates opportunities for the rural area to be unique and competitive and promotes its development. Thematic villages are also the social innovations that help to solve the social village problems (Kloczko-Gajewska A., 2014). And thematic villages creation is a village development strategy that helps to rebuild social capital in the village, to learn, to disseminate knowledge, to fight with unemployment and demographic decline, and to improve the village environment and infrastructure (Kloczko-Gajewska A., 2018).

The establishment of a thematic village provides a strategic breakthrough in the development of the area through a positive impact on local culture. Village theming enhances cooperation, solidarity and responsibility of local people and encourages innovative decision-making (Atkociuniene V. & Vaiksnoraite R., 2012). Authors Wachter M. & Wytrzens K. H. (2016), also argue that theming enhances communality and activism among villagers. Village theming strategy is a tool to manage the development of the village and develop its value by creating and selling goods, services and

integrated activities. It also generates public benefits, enhances the vitality of the villages, integrates economic and social activities, and enhances the image of the village (Atkociuniene V. & Kaminate G., 2017). From a marketing point of view, a theme village is a product with a strong brand name that arouses interest and is more attractive to customers than other villages. The main task of village theming marketing is to provide a unique sales proposition. Community marketing knowledge is the key to the success of a thematic village. It is not enough to create an interesting theme and apply it, you need to be able to use it as a marketing strategy (Idziak W., Majewski J. & Zmyslony P., 2015).

This scientific discussion suggests that village theming has features of experience and sensory marketing strategy (Table 1). The village theming creates the uniqueness and competitiveness of the village, creates conditions for attracting visitors to the village and giving them new experiences and sensations within the scope of the theme. Visitors stimulate economic and social activities in village areas and contribute to solving village development problems. Village theming marketing strategy is chosen when the village community seeks to increase village development issues.

Conclusions, proposals, recommendations

1) Theming is driven by the postmodern economic, it is for the postmodern society and for hedonistic consumers who seek sensation and experience through consumption. Theming is a marketing strategy to enhance competitive exclusivity and advantages, create a user-friendly object within the scope of the theme. Theming has experience and sensory marketing features because it is implemented through thematic products and services by creating theme-related experiences and sensations for consumers. Theming enables consumers to buy experiences and sensations that are associated with theme, not just products and services.
2) Thematic village - a village where a creative, entrepreneurial, collaborative and innovative community, which creates, develops and enhances a unique theme united offer of experiences and senses for visitors through village cultural, heritage, natural, infrastructural and knowledge resources. This offer is presented to visitors in the form of a set of local products and services that can be sold profitably. The thematic village is positioned by visitors through a thematic marketing strategy.
3) Village theming marketing strategy allows to select a unique theme that reflects the uniqueness and identity of the area, providing the direct experience and sensation of the visitor through direct involvement in real, coveted or virtual events (through environment, services, products, activities, communication and other elements). This strategy involves the creation, development and management of a thematic village, focusing on customers emotional, sensory, social and other experiences within the scope of the chosen theme and in order to create mutual value for both the users and the actors of the thematic object.
4) Implementing a village theming marketing strategy gives the village opportunities to strengthen its competitive position in the markets of tourist destinations, helps communities to find ways to make the village more attractive to residents, investors and tourists. Implementing a village theming marketing strategy has an economic impact on the village area through increased demand for local products and services, involvement in the tourism sector, business opportunities, job growth and revenue. The social impact of theming is felt in in the behaviour of the people involved in thematic village development activities. They become more socially active, interact and collaborate, create, learn new things, increase their self-confidence and sense of community social identity. The impact of the environmental dimension of village thematic activities manifests

through opportunities to improve, beautify and change village infrastructure, landscape and nature, and to conserve resources.

Bibliography

1. Astrom, J. K. (2017). Theme Factors that Drive the Tourist Customer Experience. International Journal of Culture, Tourism and Hospitality Research, Vol. 11, Issue 2, pp. 125-141.
2. Atkociuniene, V., Kaminaite, G. (2017). Lietuvos teminiu kaimu vystymosi varomosios jegos stiprinant ju gyvybinguma. Vadybos mokslas ir studijos. Vol. 39, Issue 2, pp. 139-147.
3. Atkociuniene, V., Poceviciute, D. (2010). Kaimo vietoviu rinkodaros komplekso formavimo principai. Vadyba: mokslo tiriamieji darbai. Vol. 1, Issue 17, pp. 187-193.
4. Atkociuniene, V., Vaisnoraite, R. (2012). Kaimiskuju vietoviu vystymo strateginio proverzio salygos. Zemes ukio mokslai, Vol. 19, Issue 3, pp. 180–191
5. Bryman, A. (2004). The Disneyization of Society. London: Sage.
6. Chang, T.C. (2003). Theming Cities, Taming Places: Insights from Singapore. Geografiska Annaler. Volume 82, Issue1, pp. 35-54.
7. Dale, C., Robinson, N. (2001). The Theming of Tourism Education. International Journal of Contemporary Hospitality Management, Vol. 13 No. 1, pp. 30-35.
8. Dombrowicz, M. (2013). Chrystkowo - A Thematic Tourist Village, is a New Offer for Tourism. Journal of Health Sciences, Vol. 3, Issue 15, pp. 297-301.
9. Frenkel, S., Walton, J. (2000). Bavarian Leavenworth and the Symbolic Economy of a Theme Town. Geographical Review, Vol. 90, Issue 4, pp. 559-584.
10. Gottdiener, M. (1997). The Theming of America. Colorado. Westview Press.
11. Hung, K., Wang, S., Tang, Ch. (2015). Understanding the Normative Expectations of Customers toward Buddhism-Themed Hotels. International Journal of Contemporary Hospitality Management, Vol. 27, Issue 7, pp.1409-1441.
12. Idziak, W., Majewski, J., Zmyslony P. (2015). Community Participation in Sustainable Rural Tourism Experience Creation. Journal of Sustainable Tourism, No. 23, Vol. 8, Issue 9, pp. 1341-1362.
13. Kloczko-Gajewska, A. (2013). General Characteristics of Thematic Villages in Poland. Visegrad Journal on Bioeconomy and Sustainable Development, Vol. 2, pp. 60-63.
14. Kloczko-Gajewska, A. (2014). Can We Treat Thematic Villages as Social Innovations? Journal of Central European Green Innovation, Vol. 2, Issue 3, pp.49-59.
15. Lukas, S. (2007). The Themed Space: Locating Culture, Nation and the Self. Lathman: Lexingtom Books.
16. Meng, B., Choi K. (2018). An Investigation on Customer Revisit Intention to Theme Restaurants. International Journal of Contemporary Hospitality Management, Vol. 30, Issue 3, pp.1646-1662.
17. Milman, A. (2013). Guests' Perception of Staged Authenticity in a Theme Park. Tourism Review, Vol. 68 Issue: 4, pp.71-89.
18. Milman, A., Okumus, F., Dickson, D. (2010). The Contribution of Theme Parks and Attractions to the Social and Economic Sustainability of Destinations. Worldwide Hospitality and Tourism Themes, Vol. 2 No. 3, pp. 338-345.
19. Pikkemaat, B., Peters, M., Boksberger, P., Secco, M. (2009). The Staging of Experiences in Wine Tourism. Journal of Hospitality Marketing and Management, Vol. 18, Issue 2, pp. 237-253.
20. Pine, B. J., Gilmore, J.H. (2011). The Experience Economy. Harvard Business Press, Boston, MA.
21. Piliutyte J. (2005). Theoretical Aspects of Application of Marketing Methods in Urban Development. Public Policy and Administration. Vol 1, no 11. ISSN online 2029-2872 / ISSN print 1648-2603
22. Raksnys A. V., Guogis A. (2015). Postmodernistinis vartotojiskumas kaip gentines rinkodaros formavimosi priežastis ir vystymosi tikslas. Tiltai. Vol 70, No 1.
23. Schmitt, B. H., Rogers, D. L. (2008). Handbook on Brand and Experience Management. Great Britain: MPG Books
24. Sinha, N., Chaudhuri, H. R., Fowler, J. G., Mazumdar, S. (2018). Marketmediated Authenticity in Culturally Themed Culinary Space. Qualitative Market Research: An International Journal Vol. 21, Issue 3, pp.353-374.
25. Stromberg, P. (2015). Theming. The Wiley Blackwell Encyclopaedia of Consumption and Consumer Studies, First Edition, JohnWiley and Sons, Ltd.
26. Szcesna, J., Welosowska, M. (2015). Tourism as a Chance for Development of Peripheral Rural Areas. Barometr Regionalny, Vol.13, Issue 1, pp. 85-90.
27. Vaznonis, V., Ciutaite, D. (2010). Links between Rural Economic Competitiveness and Local Entrepreneurship. Management Science and Studies for the Development of Rural Businesses and their Infrastructure, Vol. 22,
28. Wachter, M., Wytrzens, K. H. (2016). The Impact of a Local Thematic Focus on Community Building Activities in Rural Villages. Erschienen im Jahrbuch der osterreichischen Gesellschaft fur Agrarokonomie.
29. Vidickiene D., Gedminaite-Raudone Z. & Vilke R., (2016). Kaimiskuju regionu gyvybingumo veiksniai: Mokslo studija. Vilnius: Lietuvos agrarines ekonomikos institutas. p.p. 99.

Proceedings of the 2020 International Conference "ECONOMIC SCIENCE FOR RURAL DEVELOPMENT" No 54
Jelgava, LLU ESAF, 12-15 May 2020, pp. 171-179
DOI: 10.22616/ESRD.2020.54.021

ENVIRONMENTAL BARRIERS IN SPATIAL DEVELOPMENT: JUDICIAL AND ECONOMICAL PERSPECTIVE

Maciej J. Nowak[1], Professor; **Pawel Mickiewicz**[2], Professor;
[1,2]West Pomeranian University of Technology Szczecin, Poland

Abstract. The purpose of the paper is to determine the main environmental and natural reasons on the basis of which the entry into force of two key spatial policy tools is blocked: local spatial development plans and decisions on building development conditions. As part of the research objective, judgments, in which environmental protection authorities refused to accept a given act/decision, were distinguished and verified, which resulted in a complaint to the court by a dissatisfied user of the space. On this basis, an economic and legal perspective related to the relationship between environment and spatial management system was determined.

Key words: local development, nature protection forms, housing investments.
JEL code: R11, R58

Introduction

Environment and nature protection is one of the key issues related to the spatial management system. There is no doubt that without ensuring proper mechanisms (legal and economic, i.e. broadly related to public policy), it is impossible to conduct rational spatial policy. The purpose of this paper is to identify the main environmental and natural reasons, on the basis of which the entry into force of key spatial policy tools is blocked in the spatial management system. In this context, the focus was put on two key (effective at the implementation stage) spatial policy tools: local spatial development plans and building development decisions. If they cover (territorially) the forms of nature protection, they must be approved by the environmental protection authorities (regional environmental protection directors) when preparing them. Dissatisfied spatial users may challenge administrative courts to refuse such tools. The fact of referring the case to such courts indicates a very large spatial conflict and leads to the resolution of these conflicts to a lesser extent on the basis of environmental and natural arguments, and to a greater extent - formal and legal reasons.

As part of the research objective, the following items were separated from a group of several thousand judgments and analysed:

- all decisions of administrative courts regarding refusal by the environmental protection authorities to agree on local spatial development plans;
- decisions of administrative courts regarding refusals to agree on development conditions by environmental protection authorities.

A legal and economic analysis of these statements was performed, indicating first of all the key reasons for refusing to make arrangements and the final settlement of the case, giving conclusions of the analysis a more general character. An innovative element of the paper is the isolation and analysis of the indicated case-law theses (not comprehensively carried out in this way to date) and a combination of economic, legal and public policy perspectives in this context.

A research hypothesis was put forward: the procedure of environmental arrangements of draft planning acts is, on an individual scale, a real verification and determination of access to the environment as a public good.

Research results and discussion

Space and environment (both of these areas must be connected) are a public good. Therefore, it seems fully justified to adapt economic theories regarding public goods and principles of disposing

[1] Maciej J. Nowak Tel.: +48914496900; e-mail: macnowak@zut.edu.pl
[2] Pawel Mickiewicz Tel.: +48914496900; e-mails: pmickiewicz@zut.edu.pl

of shared resources to the issues of the spatial management system, also in the institutional dimension (Ostrom E., 2013; Schumpeter J., 2005; Cowen T., 1998; Furuboth E., Pejovich S., 1974; Williamson O., 2000; Mc Cann B., Folta T., 2008; Krueger, 1991; Nowak M., 2017). It is the emphasis that environmental and natural values are limited on the one hand and, on the other hand, ensuring universal access (in various dimensions) to justify the role of environmental protection authorities in spatial policy. Excluding the environmental impact assessment procedure (analysed in other publications by Nowak M., 2014), this role boils down to agreeing on projects for spatial policy tools during their preparation. The condition for granting the competence to make the agreement is to include a specific spatial policy tool in the form of nature protection (Federczyk W., Fogel A., Kosieradzka-Federczyk A., 2015, Nowak M., Mickiewicz P., 2012). And it is at this stage that a conflict may occur. On the one hand, one can distinguish the investor perspective (boiling down to the development of specific buildings in a given area in general), while on the other, issues related to the protection of environment and nature (Zielinska A., 2013; Habuda A., 2013; Tomczak A., Sowa D., 2011). And it is precisely with these conflicts that the problem related to the access to public goods can best be seen. From an economic perspective, it can be assumed that the institution of agreeing on a draft planning act in the analysed area determines in detail in individual cases how access to the environment should look like. Adopting an economic perspective must, however, be subject to the reservation that the assessment of the legitimacy of access to the public good under the reconciliation procedure may not always be linked to the essence of the problem. Sometimes, it will come down to procedural issues that are sideways in this perspective.

There is no doubt that the environmental protection authorities focus not on the entire content of a given spatial policy tool, but only on those parts that may pose a threat to natural values. However, they do not take into account the conditions or economic aspects related to spatial policy. From an economic perspective, therefore, there is a noticeable problem related to the uniform economic verification of economic issues by various bodies involved in the spatial planning process. Some basis for them are acts establishing forms of nature protection, also containing certain restrictions on the use of space (Zimniewicz K., 2008). Environmental protection authorities first of all verify that the tools of spatial policy will not be in contradiction with these acts (Fogel A., 2011). This translates into the final content of spatial policy tools, which is reflected, for example, in specific restrictions contained in local spatial development plans, as well as in the absence of provisions authorizing specific buildings (in the case of decisions on building conditions, this is simply manifested in blocking these decisions). It seems important, as pointed out by P. Mickiewicz, to draw attention to issues related to space management, which can be perceived at various levels (regional or local). Certainly, the local (municipal) perspective seems to be the most important here. It is at this level that the widest possible impact on the development of specific areas and the restrictions associated with their use, including environmental restrictions, can be exerted (Mickiewicz, 2015). Analysis of the content of local spatial development plans in valuable natural areas leads to the conclusion that the prohibitions contained in these local plans are not excessively extensive (Nowak M., 2015). The optionality of local plans means that there is no systemic guarantee that all environmental (system-defined) guidelines will be implemented (Nowak M., 2013, Sleszynski P., Komornicki T., Solon J., Wieckowski M., 2012, Drzazga D., 2018). Also the research by R. Giedych concludes that there is a lack of full coherence between spatial planning and nature protection (Giedych R., 2018). Baran-Zglobicka also draws attention to the diagnostic weaknesses of the acts establishing nature forms themselves, which is also strongly felt at the planning stage (Baran-Zglobicka B., 2017). Therefore,

it seems even more important to verify the second group of cases, i.e. not only which elements from the environmental and natural perspective are included in the spatial policy tools, but also what elements of indicated tools are blocked from this perspective. On the other hand, it should be noted that there is a kind of dissonance between instruments of environmental protection and shaping the spatial policy. This can be expressed by provisions in decisions on environmental conditions for supra-local investments, which may affect (also negatively) the shaping of space in the commune, which may also force actions contrary to the spatial policy of the commune (Mickiewicz and Nowak 2018). The necessity to use the spatial policy tools, including environmental policy, based on the principles arising from the theory of regional development and economic development, and especially the aspect resulting from location rent, seems obvious.

Results

All cases, in which there was an advanced conflict between the spatial (investment) and environmental perspective, were analysed in detail. It was considered that degree of advancement of the conflict best reflects the fact of filing a complaint to the administrative court against decision of the regional director for environmental protection regarding refusal to agree on the project of the local spatial development plan or decision on building conditions. The decision serves the commune/applicant authorities (in the case of decisions on building conditions) a complaint to the General Director for Environmental Protection. However, the matter still remains within the scope of arrangements with nature protection authorities. It is only lodging a complaint against the last decision (maintaining the refusal to agree) to the administrative court that leads to the unequivocal conclusion that the conflict cannot be resolved in the basic procedure. Then it is necessary another entity to intervene - the court - and a broader reliance on legal regulations, less on a substantive assessment of environmental issues. Therefore, a comprehensive analysis of individual rulings seems to be very important in this context (and the analysis is not limited to the case-law alone, but the overall context of individual cases).

The focus was put on two key spatial policy tools: local spatial development plans and development decisions. As indicated above, they perform extremely different roles in the spatial management system itself. Nevertheless, environmental protection authorities (regional directors of environmental protection in the first place) have the right to verify the projects of these acts from an environmental perspective (the requirement is one: the area must be covered by the form of nature protection). If they do not like them - they can refuse to agree. The focus below is put on cases, in which environmental protection authorities have consistently maintained their position on refusals until the start of the administrative court case and, as a consequence, the verdicts have been decided by the courts. The focus was put on what these cases were, what the allegations of environmental authorities were specifically about, and how the above cases were judged by the courts. Based on the analysis of results, an attempt was made to express broader assessments in the context of the spatial policy - environmental and nature protection relation.

Table 1

Intervention of environmental protection bodies with draft local plans - jurisprudence perspective

Criteria	Total	Refusals	Agrees	Forms of nature protection
Number	18 administrative court cases (in the years 2010-2019)	11	7	Protected landscape areas, landscape parks, Natura 2000 areas
Scope	Moderate	Moderate	Insignificant	The broadest for protected landscape areas

Source: authors' study

Table 1 includes all matters related to the arrangements for projects of local spatial development plans, pending before administrative courts under the Act of 26 March 2003 on spatial planning and development. There are not many of them. Therefore, it can be pointed out that, for the most part, environmental protection bodies (either at the level of regional director for environmental protection or also at the level of General Director for Environmental Protection) are able to effectively impose their vision of developing forms of nature protection on their municipal authorities. In other words, it can be stated that environmental protection authorities are responsible for the development of these areas, which should also be perceived in economic terms (these bodies are entities that can limit the implementation of investments and strengthen the natural values protection of the area). However, it should be remembered that such an approach harms the interests of the investor, and the environmental protection authorities in their decisions are not guided by economic reasons.

However, judgments extracted from rulings competent in the case of the Provincial Administrative Court in Warsaw (in general, this court considered over 1700 cases concerning local spatial development plans in 2003-2019), allow verifying cases, in which spatial conflicts are so far-reaching that they had to exceed the competence of environmental protection authorities. Matters related to them concern two forms of nature protection - usually protected landscape areas and landscape parks. These two forms of nature protection, in terms of impact on the municipal spatial policy, can be assessed as similar. In this context, the Natura 2000 area is rarer.

It is also worth emphasizing that despite the uncommon practice of commune complaints to the courts for decisions of environmental protection bodies (which is indeed a factor that actually hampers such a complaint as an above-standard one from the perspective of ordinary practice), a significant part of these complaints is considered.

Table 2

Refusals and agreements of local spatial development plans

Situations related to refusals	1. Prohibition of elimination and destruction of tree stands 2. Buildings within a strip of 100 m from the coastline 3. Negative impact on the Natura 2000 area 4. Exceeding the forest function assigned to the area 5. Unacceptable replacement of agricultural use with services 6. The investment specified in the draft plan is contrary to the requirement of active protection of ecosystems.
Evaluation of the dominant direction	Environmental protection as a public good
Situations related to revocation of refusals	Exceeding the scope of nature protection acts, exceeding the competences (blocking land

	change for non-agricultural and non-forest purposes), procedural issues.
Evaluation of the dominant direction	Procedural issues

Source: authors' study

The substantive reasons for annulment or upholding of refusals to agree on draft local plans by administrative courts are presented in Table 2. On its basis, it can be indicated that they can be included in two main groups:

- exceeding the competence of the coordinating authority;
- other procedural issues.

While procedural errors of public administration bodies occur in all categories of proceedings, the cases, in which the coordinating authority exceeds the scope of its competence are particularly important. It usually means that the authority tries to influence on the content of the local plan to a greater extent than it results from the legal framework. The tendency, according to which the bodies agreeing the spatial policy acts try to broaden the scope of their competences, is common. It should also be added that, for the most part, this extension of competence is successful. Table 2 shows that the verification of the lack of consent for a change in the agricultural or forestry plan to a non-agricultural and non-forest purpose remains a border point in this respect. Other bodies and practices of environmental protection bodies are appointed to the above, the blocking of the above actions in several cases was unsuccessful (which does not change the fact that in independent cases, such practices are also implemented by administrative courts). This illustrates the wider problem. Environmental protection authorities, sensitive to the issues of uncontrolled development, are reluctant to look at new investments in protected areas. This is also confirmed in Table 2 by the description of cases, in which the administrative court upheld the refusal to agree on a draft plan. According to the authorities, the draft local plans in these situations exceeded the prohibitions regarding the forms of nature protection. Premises included in these bans (presented in Table 2) are assessed from a formal and legal perspective. However, this does not change the fact that general tendency of the spatial conflicts caused on this ground is that the commune authorities wanted to implement some form of development in the local area (usually, it was not about residential or commercial buildings), and the environmental protection authorities recognized that this does not fall within the scope of permissible bans. Generally, in the context of key problems of the spatial management system (especially uncontrolled suburbanization), this tendency should be assessed positively. On the other hand, from the investor's perspective, the lack of consent on the part of environmental protection authorities limits the development possibilities of the commune and negatively affects the possibility of attracting an investor. Environmental authorities are not guided by the economic calculation in their decisions and do not take into account the cost of lost opportunities. From this perspective, this approach should be considered negative.

Table 3

Intervention of environmental protection bodies in draft decisions on building conditions in 2017-2018 - jurisprudence perspective

Criteria	Total	Refusals	Agrees	Forms of nature protection
Number	35	29	6	Protected landscape areas, nature and landscape complexes, landscape parks, Natura 2000 areas
Scope	Essential	Essential	Insignificant	The broadest for protected landscape areas

Source: authors' study

It can also be emphasized that refusals to agree involve shaping access to the environment as a public good at this procedural stage. The reasons for refusal relate to individual cases in which such

access was considered blocked by other cells (related to buildings). Situations, in which courts revoke refusals to agree are completely different. They have a dominant procedural dimension.

The subsequent stage of research concerned decisions on building conditions. This tool threatens to disintegrate the space to a much broader extent than local spatial development plans. Individual nature of these decisions means that development concepts associated with them are primarily based on the needs and private interests of individual investors. It is only at the stage of proceedings that such concepts are verified from different perspectives, including those related to forms of nature protection and protection of their environmental and natural values.

Table 3 analyses cases concerning refusals to agree draft housing development decisions by environmental protection authorities, which in 2017-2018 went to administrative courts. The procedure is similar to that regarding the reconciliation of draft local plans. Also in this case, spatial conflicts mostly end at the stage of taking a position by regional director for environmental protection or general director for environmental protection. However, in the present case, there is one significant difference: a complaint to the administrative court is lodged by the applicant regarding the issuance of a decision on development conditions (and not by municipal authorities, as in the case of local plans). Thus, there is definitely a more explicit spatial conflict and a clear collision of the individual interest with the public interest. Also for this reason, there are definitely more cases of this type in administrative courts. However, it is worth emphasizing that as part of final court decisions, there are far fewer judgments expressing consent to the investment (also in proportion) than in the case of local plans. From the perspective of the spatial management system, its problems and the need for broader protection of spatial values, this should be assessed as positive. It can be assumed that in recent years, the refusal to agree the decision on building conditions by the environmental protection authority is almost synonymous with the impossibility of implementing a specific investment. It is worth adding that the subject of the analysed decisions on building conditions were primarily (differently than in the case of local plans) residential, holiday and service buildings. Therefore, in this case, it was about wider development in valuable natural areas (apart from the forms of nature protection listed in Table 1, there are also nature and landscape complexes).

In the analysed context, it is also necessary to identify the main reasons (justifications) for maintaining in force both the refusals to repeal the provisions of environmental protection authorities, as well as the repeal of such decisions. Table 4 shows that courts indicated too broad understanding of some terms as a justification for questioning the positions of environmental protection bodies. It can again be added that many spatial conflicts boil down to a specific way of understanding the individual natural prohibitions. Terminological diversity is also an important problem. The way, in which specific bans are included in the acts on forms of nature protection, is not always fully coherent with the terminology proper in the conduct of spatial policy (the best example of which may be the phrase 'prohibition to change the land use'). However, general trend is that doubts are overwhelmingly resolved in favour of the environment and nature. This is also confirmed by the results contained in Tables 3 and 4.

Separate evaluation issues should be distinguished here. Among the reasons for refusing to make decisions (upheld by administrative courts), issues related to projects that may have significant impact on the environment and potential impact of investments on the Natura 2000 area occupy an important place. Here, however, one should remember the context of sustainable development, which is based on three equally considered reasons: social, ecological and economic. Failure to

consider all aspects, natural + social + economic, together should be considered as contrary to the principle of sustainable development.

Table 4

Refusals and agreements on building conditions

Evaluation of the dominant direction	1. Prohibition on changing the land use 2. Prohibition on implementing projects that may significantly affect the environment (6) 3. Prohibition of building new buildings within a 100-metre wide strip from water reservoirs (15) 4. Prohibition of destruction, damage or transformation of the area, prohibition of works that permanently distort the relief of the land (2) 5. Requirement to conduct an impact assessment on a Natura 2000 area
Evaluation of the dominant direction	Environmental protection as a public good
Situations related to revocation of refusals	1. Too broad understanding of the prohibition to change water relations 2. Too broad understanding of the ban on locating objects within a 100 m strip from the river banks, except for water facilities and facilities for rational farming, forestry or fishing 3. Too broadly understood prohibition on changing the land use.
Evaluation of the dominant direction	Protection of property rights

Source: authors' study

It should also be emphasized what is the percentage share of changes by the courts in the position of environmental protection authorities in all cases. In the case of cases concerning the local spatial development plans, this value is 38.89%, and in the case of proceedings regarding the determination of building conditions - 17.14%. However, these values must be assessed from the perspective of specifics of both proceedings, especially those regarding local plans and a much larger number of procedural reasons when questioning the positions of environmental protection authorities regarding the local plans.

In the analysed case, it can be said that the verification of the method and scope of access to the environment as a public good is even broader than at local plans. There is a dominant regulation of this access here. However, unlike the arrangements for draft local plans, the courts also emphasize a separate perspective related to the individual rights of property owners/investors. This applies to judgments revoking the refusal to agree.

Conclusions

The research shows that environmental protection bodies significantly affect the final shape of spatial development of nature protection forms. This should be assessed unambiguously positively, especially in the context of general inefficiency of the spatial management system in Poland and the lack of real protection of numerous land values related to spatial order. The above is confirmed by:

- relatively small (especially in the case of agreeing on draft local spatial development plans) number of cases pending at administrative courts;

- dominant tendency, according to which the majority of such cases ends with taking into account the position of environmental protection authorities.

These results should be evaluated positively. At the same time, it is worth emphasizing the key role of environmental protection authorities in creating the possibility of developing areas covered by forms of nature protection. This is done within the framework of acts prepared for specific forms of nature protection, but it is the environmental protection bodies that determine their actual interpretation (which is largely confirmed by court rulings). Particularly noteworthy is the fact that the questioning of a specific concept of the land use by a planning authority is the basis for admission with probability that borders with certainty that there will be no possibility of a given development in a given area. According to the authors, the above circumstance should definitely be more categorically than currently emphasized also in economic literature (in a context also related to the understanding of space as a public good). On the other hand, this scope of activities of environmental protection bodies has much smaller impact on other cases, in particular those of valuable natural and environmental conditions, which are not forms of nature protection. It is in these areas that particular threats to the environmental and natural values of spaces (e.g. in urban areas) should be identified.

In addition to positive assessments related to the role of environmental organs and their impact on spatial development, it should be noted that relying only on natural premises is not always right and may be associated with the negation of the idea of sustainable development, which presupposes balancing the argument between the social and economic aspects ecological, and thus not recognizing the cost of lost opportunities when making negative decisions. When referring to the research hypothesis, please indicate the following.

1) Environmental arrangements of draft spatial policy acts can be considered to be a real verification of access to the environment understood as a public good.
2) For the most part, this regulation ends at the judicial stage confirming the position of a public administration body consisting in broader protection of the environment (i.e. blocking a specific development option). From an economic perspective, this means limiting individual access to the environment at the expense of universal one (a different option would risk treating the environment as a club good, which in this perspective would only bring short-term benefits).
3) In the case of agreeing draft decisions on building conditions, however, there is a noticeable tendency in which the courts also focus on the interests of individual property owners. However, this scale is very limited. It should be recognized that this trend should not change significantly.

Bibliography

1. Baran – Zgłobicka, B. (2017). Srodowisko przyrodnicze w zarzadzaniu przestrzenia I rozwojem lokalnym na obszarach wiejskich, Wydawnictwo Marii Curie – Skłodowskiej, Lublin, p. 420.
2. Cowem, T. (1998). Public goods and externalities (w:) T. Cowen (red.) The Theory of Market Failure. A Critical Examination, George Mason University Press, Fairfax, p. 1.
3. Drzazga, D. (2018). Systemowe uwarunkowania planowania przestrzennego jako instrument osiagania sustensywnego rozwoju, Wydawnictwo Uniwersytetu Lodzkiego, Lodz, p. 432.
4. Federczyk, W., Fogel, A., Kosieradzka – Federczyk, A. (2015). Prawo ochrony srodowiska w procesie inwestycyjno – budowlanym, Wolters Kluwer, Warszawa, p. 99.
5. Fogel, A. (2011). Prawna ochrona przyrody w lokalnym planowaniu przestrzennym, Instytut Gospodarki Przestrzennej I Mieszkalnictwa, Warszawa, p. 169.
6. Furuboth, E., Pejovich, S. (1974). The economics of property rights, Ballinger Publishing Company, Cambridge, pp. 367.
7. Giedych. R. (2018). Ochrona przyrody w polityce przestrzennej miast, Studia KPZK t. CXC, Warszawa, p. 204.
8. Habuda A. (2013). Obszary Natura 2000 w prawie polskim, Difin, Warszawa, p. 104.

9. Krueger, (1990) Governance failures in development, NBER, Working Paper no 3340/1990, Cambridge, p. 4.
10. Mc Cann, B., Folta, T. (2008). Location matters. Where we have been and where we might go in agglomeration research "Journal of Management" no 34/2008, p. 534.
11. Mickiewicz, P. (2015). Zarzadzanie przestrzenia w zarzadzaniu publicznym. Marketing i Rynek, 10 (CD): 199-204.
12. Mickiewicz, P., Nowak, M. (2019). The impact of nature conservation types on the house investments development. In: Economic Science for Rural Development Conference Proceedings.
13. Nowak, M., Mickiewicz, P. (2012). Plan zagospodarowania przestrzennego wojewodztwa jako instrument zarzadzania rozwojem regionalnym (Spatial development plan for the voivodeship as an instrument for regional development management), CeDeWu, Warszawa, p. 53-60.
14. Nowak, M. (2013). Ochrona srodowiska jako jeden z celow zarzadzania przestrzenia na szczeblu lokalnym i regionalnym „Ekonomia i Srodowisko" nr 12013, Wydawnictwo Ekonomia i Srodowisko, Bialystok, p. 205.
15. Nowak, M. (2015). Postanowienia planow miejscowych a ochrona srodowiska w gminach cennych przyrodniczo „Samorzad Terytorialny" nr 11/2015, Wolters Kluwe, Warszawa, p. 40 – 44.
16. Nowak, M. (2014). The evaluation of the influence on the environment as an instrument of sustainable development management, Ecological Chemistry and Engineering S, t. 21, p. 155 – 162.
17. Nowak, M. (2017). Niesprawnosc wladz publicznych a system gospodarki przestrzennej, Studia KPZK, t. CLXXV, Warszawa, p. 45 – 52.
18. Ostrom, E. (2013). Dysponowanie wspolnymi zasobami, Wolters Kluwer, Warszawa, p. 12 – 30.
19. Schumpeter, J. (2005). Development "Journal of Economic Literature", t. XLIII/2005, p. 108 - 120.
20. Sleszynski P., Komornicki T., Solon J., Wieckowski M. (2012) Planowanie przestrzenne w gminach, Polska Akademia Nauk, Warszawa, p. 147.
21. Tomczak, A., Sowa, D. (2011) Ochrona przyrody jako wyznacznik ksztaltowania przestrzeni (w:) M. Gorski (red.) Prawo ochrony przyrody a wolnosc gospodarcza, Lodz – Poznan, p. 419 – 422.
22. Williamson, O. (2000). The new institutional economics: Taking Stock, Looking Ahead "Journal of Economic Literature" t. XXXVIII/ 2000, p. 15.
23. Zielinska, A. (2013). Gospodarowanie na obszarach przyrodniczo cennych w Polsce w kontekscie zrownowazonego rozwoju, Wydawnictwo Uniwersytetu Ekonomicznego we Wroclawiu, Wroclaw, p. 105 – 109.
24. Zimniewicz, K. (2008). Bariery w zarzadzaniu parkami krajobrazowymi w Polsce, Polskie Wydawnictwo Ekonomiczne, Warszawa, p. 69.

Proceedings of the 2020 International Conference "ECONOMIC SCIENCE FOR RURAL DEVELOPMENT" No 54
Jelgava, LLU ESAF, 12-15 May 2020, pp. 180-188
DOI: 10.22616/ESRD.2020.54.022

COMPARATIVE ANALYSIS OF SMART DEVELOPMENT OF TERRITORIES: THE EXAMPLE OF DAUGAVPILS AND ILUKSTE MUNICIPALITY

Inta Ostrovska[1], Dr.paed.; **Baiba Rivza**[2], Dr.oec., prof.; **Ludmila Aleksejeva**[3], Dr.oec. and **Brigita Kusina**[4], Mg.oec.
[1,3,4]Daugavpils University, Latvia,
[2]Latvia University of Life Sciences and Technologies, Latvia

Abstract. Today, the development of a region is characterized by a paradigm shift, as regional growth should be analysed based on the preconditions of sustainable and smart growth, i.e. sustainability, knowledge and interaction among the stakeholders involved in regional development. A region's smart growth, based on knowledge and innovation, is considered to be a driving force for an area's growth. However, the development of an area has to occur in a prudent way, without endangering future generations' opportunities, and combining three dimensions: environmental, economic and social, thereby causing sustainable growth, promoting resource efficiency, reproducing resources and building a more competitive economy. Innovative regional development strategies employ the concept of smart specialization, assuming that the characteristics that ensure the development of a region's competitive advantages have to be identified and made use of. Smart specialization means innovation-oriented growth and identification and development of an area's potential, which contributes to the region's competitiveness.

The research compared smart development between the municipalities of Daugavpils and Ilukste based on a methodology and an index designed and findings made under the national research programme EKOSOC-LV, project 5.2.3 Rural and Regional Development Processes and Opportunities in the Knowledge Economy Context, as well as within the project Challenges for the Latvian State and Society and the Solutions in International Context (INTERFRAME-LV).

Key words: region, area, smart growth, smart specialization.
JEL code:.

Introduction

People want to live in a space that is friendly to society and each individual. The wellbeing of the population requires jobs, good living conditions, an active cultural life and a beautiful and tidy environment. Ensuring the wellbeing of society and eradicating poverty is a guideline for regional development and one of the key objectives at regional and national level, thereby creating favourable changes in the social and economic situation in the whole territory of the country or in some parts thereof. After identifying the specific needs of and development potential for an area, regional development support measures should be designed accordingly in order to promote the creation of equal social and economic preconditions in the entire territory of the country. This is because the development of and growth opportunities for areas differ even within one region due to certain factors. In addition, the socio-economic situation in various areas differs owing to monocentric development that concentrates all growth opportunities in one location. This creates disparities in the level of development across regions, and the viability of rural areas has to be considered as urban areas tend to develop fast.

The legal framework of the Republic of Latvia stipulates that it is necessary to promote and ensure balanced and sustainable national development, taking into account the specifics of and opportunities for the whole area and its parts, reduce unfavourable disparities among them, as well as preserve and develop the natural and cultural characteristics of and development potential for each area. The research intends to give insight into relevant trends in two rural areas of Latvia – the municipalities of Daugavpils and Ilukste.

1 Inta Ostrovska e-mail: inta.ostrovska@du.lv
3 Ludmila Aleksejeva e-mail: ludmila.aleksejeva@du.lv

Role of smart specialization in regional development

Regional development is a continuous process of short- or long-term social, cultural or demographic developments that make certain spatial effects or cause spatial consequences that arise from the implementation of decisions of individuals, households, enterprises, national and international institutions. Many of the decisions are driven by different interests and are not always linked to regional development. Therefore, regional growth is always spontaneous and unbalanced, as the locations of human and natural resources, as well as infrastructures, differ from area to area. This leads to discussions on regional development assessment mechanisms and the development assessment indicators employed (Capello, 2015).

In recent years, smart specialization has become a guideline for the economic development of any particular area and growth policy or the way of thinking in European circles. The European Commission emphasizes the importance of smart specialization as one of the key factors referred to in the Europe 2020 strategy, which was discussed in the last Communication on the Europe 2020 strategy in relation to the Innovation Union initiative. The conception particularly emphasizes the reform of European cohesion policy, which is currently based on "smart growth", "green growth" and "inclusive growth", as a key element of development. To take advantage of future opportunities, three types of abilities are required: (1) the ability to identify strengths; (2) the ability to coordinate political actions and build critical mass; (3) the ability of any region to create a vision and implement a strategy (Rivza, 2018).

Theoretical aspects of smart development and research approaches

Smart development means consolidating knowledge and increasing innovation, which is the driving force for future growth. It has to raise the quality of education, increase the effect of research results, foster innovation and knowledge transfer across the European Union, make full use of information and communication technologies and ensure that innovative ideas are turned into new products and services that create growth and high-quality jobs and help to deal with global societal challenges. However, to be successful, it has to be combined with business and finance while focusing on user needs and market opportunities (Rivza, 2018).

Focusing on regional disparities in regional intelligence that is called inspiration and determined by the availability of human capital and the development of technological infrastructure, creative workers are considered to be a key element of regional innovation. According to research findings by L. Sleuagens and P. Boiardi, the innovative performance of a region is influenced by the availability of human capital and a well-developed institutional system supporting entrepreneurship, as well as the activities of individuals with higher education taking creative positions and engaged in creative fields (high-tech industries as well as culture) (Sleuwaegen, Boiardi, 2014). L. Sleuagens and P. Boiardi suggest focusing not only on improving the entrepreneurial environment and attracting investment but also on implementing the most appropriate regional innovation policy and instruments for the region (Ostrovska, Sipilova, Aleksejeva, Jermolajeva, Oļehnovics, 2016).

There are common trends in rural development in Europe in relation to the diversification of economic activities, the migration of population and labour away from the outermost and economically weaker regions and the political concentration of resources. Rural areas need to take into account the mentioned macro-level processes and, at the same time, take advantage of micro-level specific opportunities related to both tangible factors (e.g. raw material resources, landscape, physical infrastructure) and intangible factors (e.g. knowledge and skills of local people, business culture, governance). It is interesting that employing the EDORA cube – a 3 dimensional framework

for analysis – reveals that the rural areas of Latvia's regions reflect certain disparities. For example, Riga and Zemgale are sparsely populated but well-accessible regions, while Vidzeme is both sparsely populated and poorly accessible. The population density of Latgale and Kurzeme rural areas is similar, yet among the regions the internal accessibility of Latgale is rated higher. However, since regional competitiveness is also affected by the other two dimensions and the economic performance of the regions of Riga and Kurzeme is higher, the situation in the rural areas of Vidzeme and Latgale is less favourable, and the rural areas of the regions could still be rated as less competitive (Rivza, 2018a).

In 2014, the national research programme EKOSOC-LV was implemented in order to create a knowledge base on sustainable development processes in the state and society by doing interdisciplinary scientific research and a theoretical basis for sustainable development strategies and policies. Under the programme, research was done on current developments in economics, demography, government, law, regional development, environmental protection and other areas, with a special focus on economic transformation, innovation processes and environmental conservation (Latvian Academy of Sciences, 2014).

The goal of project 5.2.3 Rural and Regional Development Processes and Opportunities in the Knowledge Economy Context of the national research programme EKOSOC-LV was to assess rural and regional development processes and opportunities in Latvia in the context of a knowledge economy and design a strategy for further development of rural areas as a systemic component on the way towards a smart regional economy. Project 5.2.3 researchers, based on a number of European research studies, have identified the characteristics of a smart region and divided them into four categories: a smart population, smart governance, a smart economy and smart use of resources. The project created a unique database, which contains data on the number of enterprises operating in all the municipalities of Latvia, the kinds of economic activity the enterprises are engaged in, their turnover and number of employees, road infrastructure and many other indicators. Based on the indicators, the researchers have identified the municipalities where the indicator values were higher than the national average.

In the course of the project, an innovative indicator was developed – the municipality smart development index (Rivza, 2018b). Next, the authors performed a comparative analysis of two municipalities of Latvia – Daugavpils and Ilukste – by using the methodology developed and findings made in the above-mentioned project.

Comparative analysis of smart development of Daugavpils and Ilukste municipalities

Daugavpils municipality is the 4th largest municipality in Latvia (by area) and the 13th largest municipality in Latvia (by population). The area of Daugavpils municipality is 1 872.39 km^2. On 1 January 2018 in Daugavpils municipality, the workforce totalled 15 658 working-age individuals, most of which were men. The over-working-age population was larger than the under-working-age population, which indicated negative natural population growth. The largest rural territory (civil parish) in terms of area was Demene, yet by population – Naujene. In terms of area, Daugavpils municipality with 19 rural territories was larger than Ilukste municipality with six rural territories and two towns. As regards population density, there was a slight difference between the municipalities because in terms of area, Ilukste municipality was two times smaller.

In Ilukste municipality, the total population was 7131, of which: 4614 were at working age, 1713 were over working age and 804 were under working age. The total area was 648.40 km^2.Ilukste municipality lies next to Daugavpils municipality. The research analysed smart development in the

two neighbouring municipalities as well as compared the smart development index values and the constituent component values of the index for the municipalities and the advantages of the municipalities. The authors believe that comparative analysis should be applied to areas having at least equal preconditions, e.g. the development of a particular enterprise should be assessed through comparing enterprises within the same industry in order to determine whether the enterprises are efficient and competitive. That is why, based on the data obtained by the project EKOSOC-LV on the development of smart territories, smart development in Daugavpils municipality was compared with that in Ilukste municipality. According to the modern paradigm of regional development, one of the most important drivers of development is the individual (Jermolajeva, Aleksejeva, Ostrovska, Sipilova 2018). Therefore, it is important to examine population density in both municipalities.

Table 1

Population density in Daugavpils and Ilukste municipalities in 2018

Municipality	Population density (inhab./km^2, RDIM data)		
	2016	2017	2018
Daugavpils	13.27	12.82	12.41
Ilukste	12.42	12.03	11.63

Source: authors' calculations based on RDIM (Regional Development Indicator Module) data

Overall, there was a decrease in population density in both municipalities because the municipalities experienced negative natural population growth, which was aggravated by the consequences of migration.

The researchers of the EKOSOC-LV Latgale region working group divided Latgale region municipalities by pace of regional development and by population. Most municipalities, i.e. 11 out of 19, had a small population, ranging from 1112 to less than 7682 people. Most of the municipalities represented rural areas, and only three municipalities had a population of above 14 256 and an above-average pace of development: Kraslava, Daugavpils and Rezekne. A causal relationship is observed – more densely populated areas have a better opportunity of achieving a higher pace of development. Conversely, less densely populated areas perform poorly, with a low pace of development or a pace of below the average, as well as stagnation is observed there – as it is in Ilukste municipality. An expert evaluation, employing the AHP, confirmed that the leading scenario for smart development in Latgale as well as in each individual municipality has to target the population. The smart development index, which encompasses all the dimensions capturing the development of a region (resources, population, the economy and governance), allows identifying new trends in development in Latgale region (Jermolajeva, Aleksejeva, Ostrovska, Sipilova 2018).

Table 2

Four ranges of growth pace and population size for Latgale region municipalities

(I) SLOW PACE	(II) BELOW AVERAGE PACE	(III) ABOVE AVERAGE PACE	(IV) FAST PACE
population (thou.)			
1112-7686	7686-14256	14256-20826	20826-27396
Municipality: Aglona Baltinava Cibla Rugaji Varkava Zilupe Riebini Vilaka Karsava Ilukste Vilani	**Municipality:** Balvi Dagda Ludza Livani Preili	**Municipality:** Kraslava	**Municipality:** Daugavpils Rezekne

Source: EKOSOC-LV data, RDIM data

Natural resources are considered to be one of the greatest assets of any area; therefore, sustainable and efficient management of resources serves as a guideline for successful economic development. Within the project, smart resources are defined as efficient exploitation and management of natural and other resources.

Table 3

Comparison of smart resource dimension indicators for Daugavpils and Ilukste municipalities

Indicators	Daugavpils municipality	Ilukste municipality
UAA, %	0.79	0.89
Forest area, %	0.34	0.38
Mineral resources, thou.m^3	6661.67	116.18
RSS-administered support per 1000 capita, EUR	55 932 060	11 688 011
Road network, km.km^2	0.82	1.09

Source: authors' calculations based on EKOSOC-LV data

The indicators of the resource dimension are intended for capturing the situation with utilized agricultural land (UAA). The intensity of use of this resource determines whether the resource is used efficiently. It has been observed that in Daugavpils and Ilukste municipalities this resource is particularly important. Compared with Daugavpils municipality, Ilukste municipality has a larger area of natural resources to be managed. This could be explained by the fact that the most important industries in the municipalities are mostly agriculture and forestry.

The smart population dimension shows not only the level of qualification or education of the population but also the quality and quantity of social interaction in the context of municipal non-governmental organizations (NGOs). This aspect was recognized by the EKOSOC-LV experts as one of the most important one in terms of growth and development (Jermolajeva, Aleksejeva, Ostrovska, Sipilova 2018).

Table 4

Comparison of smart population dimension indicators for Daugavpils and Ilukste municipalities

Indicators	Daugavpils municipality	Ilukste municipality
Proportion of population with tertiary education, %	11.7	14.1
Employment in primary sector, %	9.25	14.03
Long-term unemployment rate, %	51.88	47.84
NGOs per 1000 capita	5.7	5.3

Source: authors' calculations based on EKOSOC-LV data

The smart development index for Daugavpils municipality was -0.402. Daugavpils municipality had a high development level, and its pace of development was above the average. For the municipality, an association with the population dimension was stronger, which was mainly characteristic of municipalities with a negative smart development index value. There was an indication that residents as a significant component of smart development were not of sufficient quality and quantity.

A smart economy is characterised by indicators of innovative entrepreneurship in knowledge-intensive service industries as well as in high and medium-high technology industries (Jermolajeva, Aleksejeva, Ostrovska, Sipilova 2018).

Table 5

Comparison of smart economy dimension indicators for Daugavpils and Ilukste municipalities

Characteristics	Indicators	Daugavpils municipality	Ilukste municipality
Characteristics of innovative enterprises	Number, %	8.55	12.12
	Turnover, %	1.73	4.15
	Number of employees, %	5.08	17.31
	Turnover per employee, EUR	11241	11453
Self-employment per 1000 capita		22.96	31.84

Source: authors' calculations based on EKOSOC-LV data

As shown in Table 5, the situation with the number of innovative enterprises was better in Ilukste municipality, which also improved other dimension indicators. One of the most important indicators of economic activity is the number of self-employed individuals per 1000 capita, which was also higher in Ilukste municipality than in Daugavpils municipality. Overall, the indicators of the smart economy dimension for Ilukste municipality were higher than those for Daugavpils municipality.

Political participation, assessment of the quality of services by citizens and administrative performance are part of smart governance. The indicators chosen were as follows: EU funding allocated; voter turnout in local elections; changes in the Latvian e-index: the index captures data and indicators on how actively, under the current circumstances, local governments use the solutions offered by modern information and communication technologies to improve the quality and accessibility of services for citizens and enterprises; and Internet coverage (Jermolajeva, Aleksejeva, Ostrovska, Sipilova 2018).

Table 6

Comparison of smart governance dimension indicators for Daugavpils and Ilukste municipalities in 2017

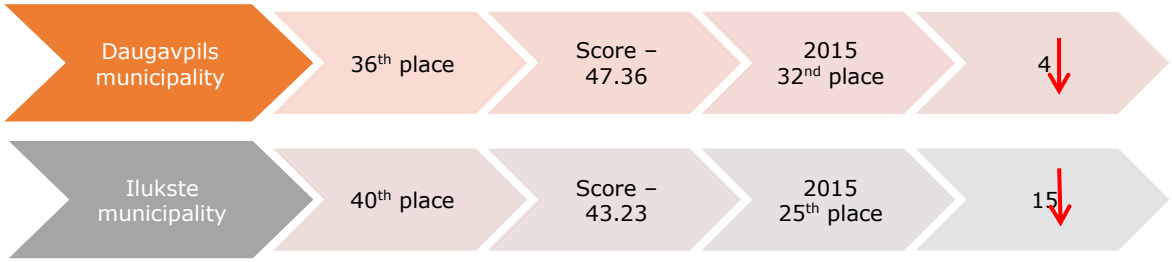
Indicators	Daugavpils municipality	Ilukste municipality
ES funding for development, EUR per 1000 capita	469 777.49	575 357.67
EU funding for agriculture, EUR per 1000 capita	15 368 288.33	6 367 487.83
Voter turnout, %	36.18	47.94
Change in the e-index, %	47.36	43.23
Internet coverage, zones	1	1

Source: authors' calculations based on RDIM data, Central Election Commission data, e-index

In order to ensure balanced development in the territory of Daugavpils municipality, investments were attracted to and projects were implemented in the municipality in accordance with the policy documents of the municipality, incl. the Investment Plan of the Development Programme for Daugavpils municipality (Daugavpils novada attistibas programma 2012.-2018. gadam). The ESF funding allocated and drawn down for development was larger in Ilukste municipality than in Daugavpils municipality, although, according to the territorial development index, which is used in designing national support programmes for regional development, differentiating the financial support provided by the EU Funds and assessing the effects of financial instruments on the development and economic efficiency of territories, Ilukste municipality was ranked 92nd.

One of the factors of the governance dimension is voter turnout in a territory, which determines whether the municipality has an inclusive administration, or how actively the residents of the municipality participate in the governance system. In 2017, Daugavpils municipality had 17 060 residents with the right to vote, who were able to decide the future administrative prospects for their municipality, be active and get involved in the administration of their municipality. Voter turnout in Daugavpils municipality was relatively low, only 36.18 % of the total number of eligible residents of the municipality.

The Latvian e-index is an assessment of the e-environment in public administration institutions and local governments. It gives insight into how actively, under the current circumstances, institutions and local governments use the solutions provided by modern information and communication technologies to contribute to the quality and accessibility of the services provided to the population and businesses. The Latvian local government e-index captures the practices implemented by local governments in the field of e-government and e-environment. Participation in the measurement of the practices implemented by local governments is voluntary, and the local governments could use the index to identify their situation, compare what has already been achieved with the performance of other local governments, as well as be inspired by the best practices implemented (Latvijas e-indekss 2018).



Source: authors' construction based on the Latvian e-index

Fig. 1. **Total e-index values for Daugavpils and Ilukste municipalities in 2017**

Figure 1 shows total e-index values for Daugavpils and Ilukste municipalities and the rankings of both municipalities among municipalities with a population of more 7000. The score is an arithmetic mean of the ratings of the e-environment infrastructure, population e-skills, the availability and use of e-services and the convenience and security of computer systems in the municipality.

Summary of smart development trends and proposals

Smart resource dimension. The Sustainable Development Strategy of Daugavpils Municipality for 2015-2030 stipulates that the economic specialization of Daugavpils municipality is based on the following industries: agriculture; forestry and fisheries; mining and quarrying; tourism and recreation; freight transport; and green energy (Daugavpils novada ilgtspejigas attistibas strategija 2015.-2030. gadam). The Sustainable Development Strategy of Ilukste Municipality for 2013-2030 prescribes the economic specialization of Ilukste municipality is based on the following industries: agriculture, especially organic farming; wood processing; and tourism (Ilūkstes novada ilgtspejigas attistibas strategija 2013.-2030. gadam). The strategy makes a proposal: the future prospects of traditional agriculture should be linked to organic farming and the production of organic products in line with the principles of smart development.

Smart population dimension. The Sustainable Development Strategy of Daugavpils Municipality for 2015-2030 states that the driving forces of development are skilled, enterprising as well as socially and economically active. They are innovative, creative-minded residents who would create the development of the region Daugavpils novada ilgtspejigas attistibas strategija 2015.-2030. gadam. The Sustainable Development Strategy of Ilukste Municipality for 2013-2030 states that the most pressing problem to be tackled in the coming years is unemployment. Promoting the creation of new jobs, support for entrepreneurs and farmers and the development of manufacturing and tourism are essential to ensure the preservation of the population and the development of the municipality (Ilūkstes novada ilgtspejigas attīstības strategija 2013.-2030. gadam). The strategies should take into account that the key to long-term economic development of any territory is considered to be the interaction of science and the economy, which would result in a science-intensive model!

Smart economy dimension. The Sustainable Development Strategy of Daugavpils Municipality for 2015-2030 states that the specialization and economic breakthrough of Daugavpils municipality is based mostly on agriculture, forestry, fisheries, mining etc., which contradicts the Development Programme of Daugavpils Municipality for 2012-2018 prioritizing an innovative and eco-efficient economy focusing on mass creativity and innovation (Daugavpils novada ilgtspejigas attistibas strategija 2015.-2030. gadam; Daugavpils novada attistibas programma 2012.-2018.gadam). A comparison of the indicators of dimension showed that the indicators of Ilukste municipality were higher than those of Daugavpils municipality. In Daugavpils municipality, the knowledge-based economy segment should be significantly developed, which includes high-tech and medium-high-tech industries and knowledge-intensive services. An innovative, knowledge-based economy would create high-tech and medium-high technology and knowledge-intensive services, increasing the value added for the growth of the municipality.

Smart governance dimension. The municipalities need to introduce and improve information and communication technologies and related services. The information technology environment is an essential element for the smart development of the municipality, thereby promoting the expansion and efficiency of business and the use of innovations, developing high-tech and medium-high-tech enterprises and providing knowledge-intensive services to the residents of the municipality.

Conclusions

1) Smart development in Daugavpils and Ilukste municipalities was examined in more detail according to the project EKOSOC-LV methodology focusing on four dimensions of development – a smart population, a smart economy, smart resources and smart governance. It could be concluded that overall, the development of both municipalities was not in line with trends in smart development, which was confirmed by the smart development index and the Sustainable Development Strategies of Daugavpils and Ilukste municipalities, as the prospects for development were not oriented towards smart growth. The Sustainable Development Strategy of Ilukste municipality showed a greater observance of the principles of smart development than the Sustainable Development Strategy of Daugavpils municipality did, as Ilukste municipality had a higher territorial development index and a higher smart development index as well as its strategy emphasized smart development as a future prospect.
2) In essence, the development of the municipalities was focused on the traditional economic development pattern, yet it is necessary to create a science-intensive economic model, in which innovative and flexible management ensure the viability of Daugavpils municipality and Ilukste municipality as rural areas.

ACKNOWLEDGEMENTS

The paper was supported by the national research programme EKOSOC-LV, project 5.2.3 Rural and Regional Development Processes and Opportunities in the Knowledge Economy Context and the project Challenges for the Latvian State and Society and the Solutions in International Context (INTERFRAME-LV)

Bibliography

1. Capello, R. (2015) *Regional Economics*. NewYork, Routledge.
2. Centralas velesanu komisijas statistika par 2017.gada 3.junija pasvaldības velesanam. Available: http://pv2017.cvk.lv/ElectionResults/Location?locationId=Mu46R4nSnNm3fD3ehE1Ffw%3D%3D
3. Daugavpils novada attistibas programma 2012.-2018.gadam. Retrieved: https://www.daugavpilsnovads.lv/Media/Default/file/DND_AP_Ricibas_plans1.pdf
4. Daugavpils novada ilgtspejigas attistibas strategija 2015.-2030. gadam. Retrieved: https://www.daugavpilsnovads.lv/pasvaldiba/attistiba/daugavpils-novada-ilgtspejigas-attistibas-strategija/
5. Ilukstes novada ilgtspejigas attistibas strategija 2013.-2030.gadam. Retrieved: http://www.ilukste.lv/images/stories/Dokumenti_pdf/Att_programma_IAS/Ilukstes_novada_IAS.pdf
6. Jermolajeva, E., Rivza, B., Aleksejeva, L., Sipilova, V., Ostrovska I. (2017) Smart Growth as a Tool for Regional Convergence: Evidence from Latgale Region of Latvia. *Economics and Sociology*, 10 (4), pp. 203-224. http://www.economics-sociology.eu/?550,en_smart-growth-as-a-tool-for-regional-convergence-evidence-from-latgale-region-of-latvia
7. Latvijas e-indekss 2018 https://mana.latvija.lv/e-indeksa-rezultati/
8. Latvijas pasvaldību e-vides merijums. 2017.gadā, Retrieved: http://www.eindekss.lv/userfiles/files/Latvijas_pasvaldibu_e-indekss_210418.pdf
9. Rivza, B., editor (2018)a *Simtam pari. Vieda Latvija*. Riga: LZA.
10. Rivza, B., editor (2018)b Zinasanu ekonomika Latvijas lauku un regionu dzivotspejai. Riga.
11. OECD Innovation – driven Growth in Regions: The Role of Smart Specialisation 2013. Retrieved: http://www.oecd.org/sti/inno/smart-specialisation.pdf
12. Sleuwaegen, L., Boiardi, P., (2014) *Creativity and Regional Innovation: Evidence from EU regions*. Elsevier, vol. 43(9), pages 1508-1522.
13. Sipilova, V., Ostrovska, I., Jermolajeva, E., Aleksejeva, L., Olehnovics, D. (2017) Evaluation of Sustainable Development in Rural Territories in Latgale Region (Latvia) by Using the Conception of Smart Specialization. *Journal of Teacher Education for Sustainability Volume* 19, issue 1, 2017. Institute of Sustainable Education. Pp. 82-104. https://doi.org/10.1515/jtes-2017-0006
14. Sipilova, V., Aleksejeva, L., Ostrovska, I. (2016) Testing the Approaches of Regional Development in Small Municipalities. *IBIMA Publishing Journal of Eastern Europe Research in Business & Economics* Vol. 2016, http://ibimapublishing.com/articles/JEERBE/2016/677185/

Proceedings of the 2020 International Conference "ECONOMIC SCIENCE FOR RURAL DEVELOPMENT" No 54
Jelgava, LLU ESAF, 12-15 May 2020, pp. 189-189
DOI: 10.22616/ESRD.2020.54.023

THEORETICAL ASPECTS OF REMUNERATION AND PERFORMANCE IN THE CONTEXT OF PROVIDING GENERAL EDUCATION IN THE CONDITIONS OF LATVIA REGIONAL DISPARITIES

Ilze Prizevoite[1], Mg.oec.; **Gunta Grinberga-Zalite**[2], Dr.oec.
[1,2]Latvia University of Life Sciences Technologies

Abstract. Ensuring a consistently high level of education performance across Latvia is difficult because the current funding arrangements do not provide equal opportunities to pay for all teacher responsibilities in regional and urban schools. As a result, teachers' performance may vary. The article introduces the key elements between remuneration and performance. Remuneration is defined as a motivating factor for employees and the organization. The aim of the study was to investigate the theoretical aspects of remuneration and to identify performance determinants. This article addresses two research questions: 1) whether remuneration and salary have different meanings, and 2) wheather remuneration is closely linked to performance. The study used a monographic or descriptive method, a graphical method, and a synthesis and analysis method. The results revealed that remuneration and salary have different meanings. Literature research involves a theoretical framework that reflects the relationship between remuneration and performance. This relationship is based on motivation that has been researched by using equity theory. Remuneration is part of the system as motivational element that provides specific performance in organizations. The system also identified the potential impact of organizational culture and policy on performance. It was also recognized that the level of skills and knowledge can influence performance. The elements of remuneration, performance, motivation, politics and cultural elements of organization are combined in a system. Thus, in the context of current regional development in Latvia, the authors assume that the "Money follows the student" financing model has adversely affected teacher performance, as remuneration is a key motivational component.

Key words: financial remuneration, non-financial remuneration, motivation, regional disparities.
JEL code: I22; I28

Introduction

The issue of the reform of the education system, the need to improve the quality of education, the efficiency and effectiveness of the education system is becoming more and more topical in Latvia. New ideas on the reform of the education system show that the teaching profession has long been at the centre of public debate. One of the most important topics of discussion is remuneration, quality and performance. The teaching profession is becoming increasingly complex and demands are increasing. In contrast, remuneration is not commensurate with the economic changes of our time. This problem is particularly pronounced in schools in the regions of Latvia. Since the introduction of the teacher payroll financing model in 2009, "Money follows the student", there has been a large differentiation in wage of teachers per one pedagogical rate between teachers in large, medium, and small rural schools. Teachers are not provided with fair and motivating remuneration. Teachers organize strikes and pickets expressing their dissatisfaction with low wages. The government, in turn, calls for an increase in the quality of education alongside wage increases, emphasizing that wages go hand in hand with the quality of education. Thus, the study focuses on the relationship between remuneration and performance. Given that no definition of remuneration has been identified in Latvia and that it is currently being compared to salary, it was important to analyse whether the two terms are equivalent.

The aim of the study was to investigate the theoretical aspects of remuneration and to identify the determinants of performance. Tasks of the research: 1) to characterize the financial and non-financial dimension of remuneration; 2) to explore the theoretical basis of performance; 3) to explore

[1] Ilze Prizevoite e-mail: i.prizevoite@gmail.com ; Tel.:+371 26683551
[2]Gunta Grinberga-Zalite e-mail: gunta.grinberga@llu.lv ; Tel.:+371 29463545

the relationship between remuneration and performance. The hypotheses put forward in the study: 1. remuneration and salaries have different meanings; 2. remuneration is closely linked to performance. Several research methods have been used: 1. monographic or descriptive method, the application of which helped to find a detailed idea of the problem under investigation from a theoretical viewpoint, based on a broad review of scientific literature; 2. graphic method - using graphical method helped to clearly and efficiently reveal object's relationships and dynamics; 3. method of synthesis and analysis - separate elements of the object under investigation were connected in a single system by studying their interrelations.

Research results and discussion

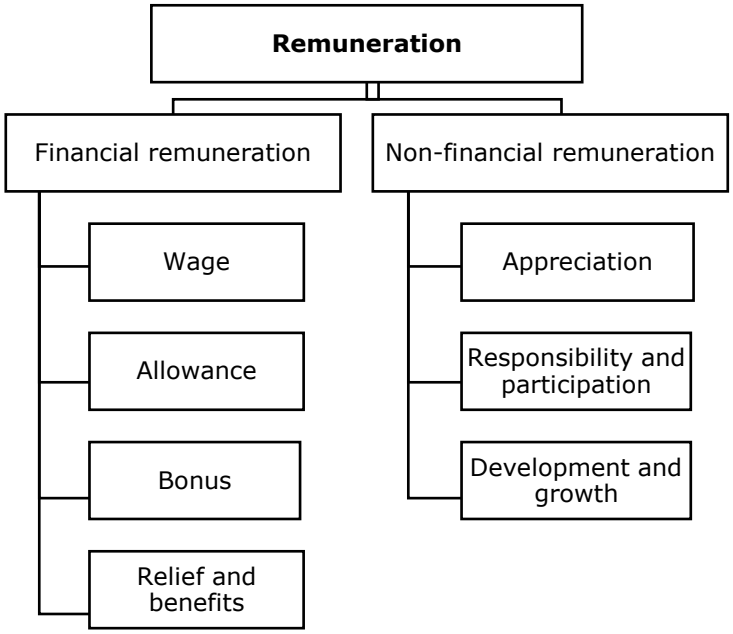
1. The financial and non-financial dimensions of remuneration

The concept of remuneration has emerged quite recently and has a significant impact on remuneration management. WorldatWork (2006) defines remuneration as all tools available to an employee that are used to attract, motivate and retain employees, and includes everything that the employee sees as value. In defining remuneration, P. Thompson (2002) emphasizes that it should include not only traditional, quantifiable elements such as wages and allowances, but also intangible elements such as career prospects, learning and development, self-motivation and work organization quality of working life. The conceptual basis of remuneration is recruitment so that different remuneration processes are interrelated, complementary and mutually reinforcing (Armstrong M., 2006).

There are two main types of remuneration systems, which can be divided into categories - financial remuneration and non-financial remuneration. Financial remuneration plays an important role in retention of the most reasonable and competent employees, thus rewarding them for their excellent work (Olubusayo F. H., Stephen I. A., Maxwell O., 2014; Terera S. R., Ngirande H., 2014). Financial remuneration can be measured as wages, bonuses, transportation options, medical treatment and life and health insurance (Yousaf S., Latif M., Aslam S., Saddiqui A., 2012). F. H. Olubusayo, I. A. Stephen, O. Maxwell (2014) stated that retirement plans, employee funds, and benefit sharing are also one of the benefits of financial remuneration that could attract and retain employees in an organization. Employees' need for financial remuneration is considered an essential element. This has to do with the stress of the high cost of living, especially for workers who have to support a family (Mustapha N., 2013). In addition, employees think that higher incomes might raise the confidence about their future lives (Ozutkua H., 2012).

However, according to J. W. Nyaga (2015), financial remuneration does not affect employees' daily lives, as what employees are really looking for is their work experience and quality. In addition, it is supported by S. R. Terera and H. Ngirande (2014), who stated that financial remuneration is one of the worst motivation factors when companies provide competitive wages. According to D. Jensen, T. McMullen, M. Stark (2007), non-financial remuneration determines why an employee chooses one company rather than another if the financial remuneration is the same. This is a way for organizations to truly stand out from the rest with non-financial remuneration. The nature of work has recently changed workers' demand for incentives, not just financial, but also their need for non-financial incentives (Nyaga J. W., 2015). J. W. Nyaga (2015) also stated that nowadays managers need to be aware of the needs of employees and provide different kinds of remuneration. F. H. Olubusayo, I. A. Stephen, O. Maxwell (2014) found that non-financial remuneration stems from regular psychological needs, such as the need for responsibility and decision-making. In addition, challenging tasks, career development and recognition could be rewarded by employees who excel

in their duties (Aktar S., Uddin Z., Sachu M. K., 2013). B. Nelson (2004) stated that praise and recognition are the most effective remuneration employees want to hear because employees want to feel their contribution to the workplace. He quoted in his article Elisabeth Kanter, who mentioned that remuneration is a right, appreciation is a gift. B. Nelson (2004) also mentioned that appreciation, in particular when displayed publicly in front of other employees, sends positive signals to other employees about what management supports and wants. Based on the analysed literature, the authors developed the scheme of remuneration system, which is presented in Figure 1.



Source: authors' illustration

Fig. 1. **Remuneration system**

The remuneration system consists of financial remuneration: wages, allowances, bonuses, relief and benefits, as well as non-financial remuneration: appreciation, responsibility and participation, development and growth. In the following study, the authors will examine each component of the remuneration system separately.

By analysing the literature on financial remuneration and non-financial remuneration, the authors conclude that financial remuneration is the reward for work. The major part of the financial remuneration consists of the basic wage. In Latvia, the minimum wage for teachers is set by regulatory enactments. Pursuant by the Cabinet of Ministers Regulations No. 445 in 2019/2020 the lowest monthly wage of teachers per one pedagogical rate is EUR 750 (Noteikumi par pedagogu darba…, 2016). Allowances, bonuses are payable in addition to the basic wage and are not periodic and mandatory (except for night work, overtime or public holidays). Allowances are paid for extra work and work in special circumstances. In Latvia, teachers have the opportunity to receive a monthly allowance if, in accordance with the Cabinet of Ministers Regulation No. 501 it has been obtained from one of three possible levels of quality. The level of quality is the result of the evaluation of the professional activities of the teacher and is valid only in the educational establishment where the teacher is evaluated (Noteikumi par pedagogu profesionalas…, 2017). Bonuses are awarded for the overall performance of a company or for a particular employee during a previous period. In Latvia, teachers may be awarded bonuses by the director of the educational institution within the framework

of the salary fund or by the municipality. Financial remuneration also includes relief - designed to make the job easier and benefits - designed to make the job enjoyable and comfortable, support employees at important events in their lives, and encourage employee motivation and loyalty to the employer.

Non-financial remuneration, on the other hand, is out of salary because it is not related to money or remuneration for work reward. Non-financial remuneration are moral values - employer appreciation, gratitude, praise, honour, participation in decision-making, challenging tasks and challenges with greater responsibility, opportunities for development and growth based on the employee's interests and needs.

The authors, when carrying out literature analysis, concluded that there is no definition of remuneration in microeconomics, macroeconomics or Latvian legislation. The word "remuneration" is often heard in Latvian media, but the authors understand that remuneration equates to salary, thinking that the meaning is one. Based on these facts, the authors propose a definition of remuneration based on the definition of salary in the Labour Law: remuneration means the regular rewards to an employee for work, which include the wages and law, collective agreement or contract of employment specified allowances, bonuses and any other reward in relation to work, as well as moral incentives - appreciation, responsibility and participation, development and growth.

2. Theoretical basis of performance

According to G. Bouckaert and J. Halligan (2008), it is impossible to agree on a single definition of performance, and it is remaining indirect in numerous studies. The authors emphasize the fact that performance has different meanings and can vary according to discipline and other factors. For instance, when E. M. Berman (2006) defined performance, he emphasized "the effective use of resources to achieve results". G. Bouckaert and J. Halligan (2008) followed E. M. Berman (2006) for thinking, saying that "performance is the tangible use of results" (Bouckaert G., Halligan J., 2008). In spite of the discrepancies in definitions, there is some common ground, and in general, performance definitions generally refer to management, operations and achievement of results. Thus, performance stems from the ways organizations use employees and other resources to reach organizational goals.

Definitions of achievement seem to refer to high performance rather than low performance. The focus is on achieving targeted and good results. For example, and especially in connection with this work, a teacher is employed to teach well. If he/she does not do well in relation to the training standard, a variety of factors will testify. Campell et al. (as mentioned in S. Sonnentag, M. Frese (2001)) emphasized that, "performance is when organizations hire someone to do, and do well.". However, to ensure good performance and increase productivity, as well as to achieve the desired quality of products and services, performance must be managed.

Performance management is defined as "a process of developing a shared understanding of what needs to be achieved and how to achieve it; an approach to managing people increases the likelihood of success" (Armstrong, M., Murlis H., 2004). With this definition, performance management becomes one of the most powerful management structures and tools to ensure that desired and expected results are achieved. As reported by C. Helm (2007), performance management can, "Measure the effectiveness of aligning individual performance goals with organizational goals and linking performance with remuneration" (O'Donnel M., Turner M., 2005).

Extensive research can be found in literature on organizational behaviour that highlights three key factors in determining employee performance. They are motivation, ability/capacity (including

skills and knowledge) and organizational support (including knowledge of facts, rules, principles, and organizational procedures) (Lawler III EE, 1973; Wood J., Zeffane R., Fromholtz M., Fitzgerald J. A., 2006). It has been expressed in the equation as follows:

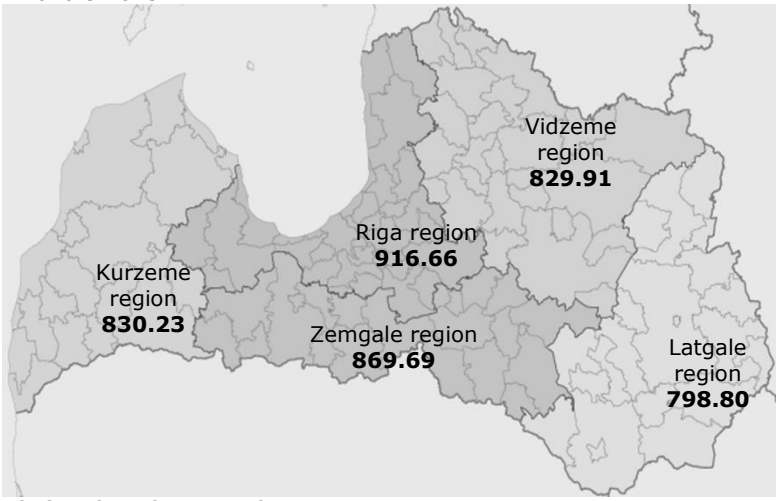
Performance = motivation x ability x organization support

This equitation shows that performance is the product of multiplication by following factors: motivation, ability and organizational support. In the previous formula it was stated that performance consists of motivation and ability (Lawler III E. E., 1973), but recent scholars have added organizational support to the earlier formula (Wood J., Zeffane R., Fromholtz M., Fitzgerald J. A., 2006).

3. Motivation and the link between remuneration and performance

Motivation has been a major issue for researchers working on organizational and employee performance for many years. It is considered to be a key determinant of performance, and there is a strong link between remuneration and performance - remuneration is seen as a factor that motivates employees to perform. Motivation theories can be grouped into two types: content and process (Wood J., Zeffane R., Fromholtz M., Fitzgerald J. A., 2006). Content motivation theories refer to special needs or motives that motivate people to do their jobs. Content motivation theories are needs-based theories and include a hierarchy of needs theory (by A. Maslow) and two-factor theory (by F. Herzberg). Both theories speak of the nature (content) of employees' needs, but they do not address the reasons why employees choose to do something different to meet their needs. An organization manager cannot influence the content of an employee's needs (intrinsic motives), but can influence the way in which an employee responds to the needs. Meanwhile, motivation theory at the heart of the process is the reasons why employees choose certain actions to meet their needs, as well as the emphasis on measuring people's satisfaction based on meeting goals (Wood J., Zeffane R., Fromholtz M., Fitzgerald J.A., 2006). Process motivation theories include expectancy theory, reinforcement theory and equity theory.

Given the current model of teacher funding "Money follows the student" the authors believe that the equity theory plays an important role in the relationship between remuneration and performance. The equity theory proposes: people make subjective judgments about the relationship between effort (or input) and remuneration (or outcome). They then compare this relationship with the performance of other employees (Wagner III J.A., Hollenbeck J.R., 2010). Feelings of injustice can become motivators or de-motivators for workers. As long as employees do not feel they receive a fair remuneration, they will be interested in reducing their efforts, including: productivity, use of skills, and use of knowledge (Wood J., Zeffane R., Fromholtz M., Fitzgerald J.A., 2006). The regulations of the Cabinet of Ministers set the minimum monthly wage per rate for teachers at EUR 750, but in educational establishments in Latvia they are very different - the primary factor is the number of students in the educational institution, because each student follows the amount of money. Due to this aspect, inequality is created in the salaries of teachers in the regions of Latvia for one rate, which is shown in Figure 2.



Source: authors' calculations based on VIIS data

Fig. 2. **The average salary of teachers per one pedagogical rate in general education institutions in the planning regions of Latvia in 2019/20, EUR**

There are five regions in Latvia and the average teacher pay gap in the regions is up to 15 percent. The highest rates are in the schools of Riga region (916.66 EUR) because of the large number of students and the large classes in the educational institutions. The lowest rates are in the schools of Latgale region (798.80 EUR), which means that there are many educational institutions with a small number of students in Latgale region. Such educational institutions cannot pay teachers for correction of students' home-works/papers, preparation for lessons, or individual work with students, since the number of students is so small that funding is limited to implementing the curriculum. Inequality in salaries is also reflected in Table 1 - tarifficiation for two Latvian language teachers who work in two different schools of the same county that are located only in 11 km distance from each other.

Table 1

Salaries of two Latvian language teachers in different local schools representing the same county 2019/20

Tarifficiation	Smiltene secondary school	Bilska primary school
Contact hours (lessons)	21	21
Correction of student's works/papers	4	1
Preparation for lessons	4	0
Consultations	4	0
Total workload:	33	22
Salary per rate, EUR:	942.87	796.40
Total salary, EUR:	1037.16	584.03
Difference, EUR:	453.13	

Source: authors' calculations based on VIIS data

Both teachers teach 21 contact hours per week, but due to insufficient funding, the extra work is paid in different amounts. For one teacher, 4 hours are calculated for the correction of student work, the other – 1 hour. For one teacher, 4 hours are calculated for preparation for lessons, the other is not paid at all. For one teacher, 4 hours are listed for the consultation, the other is not paid at all. Total hours and pay per rate are variable and the pay gap is 453.13 EUR, despite the fact that the number of contact hours per week does not differ.

4. Organizational culture and politics

One of the factors influencing individual performance is the culture and politics of the organization, and these factors have a significant impact on employee performance. Thus, school culture is one of the factors that determine the level of achievement of teachers, motivation of activities, cognitive

activity, emotional mood, trust in a particular educational institution. Figure 3 illustrates the structural model of the culture of educational institutions, where the culture of the organization is the teacher.

Source: authors' illustration

Fig. 3. **Cultural elements of educational institutions**

In April 2015, one of the leading organizations cultural researchers, D. R. Denison and colleagues published the results of a six-year study to determine whether there is a causal relationship between organizational culture and performance. The results supported the assumption that desirable changes in organizational culture are a prerequisite for employee satisfaction and consequently job performance (Boyce A. S., Nieminen L. R., Gillespie M. A., Ryan A. M., Denison D. R., 2015).

The political environment is also considered to be a "key determinant of performance" in public and private organizations. The behaviour of political or organizational leaders refers to "activities that are not necessary as part of a formal role in the organization but that influence or attempt to influence the distribution of strengths and weaknesses within the organization". Although political behaviour is not a formal job requirement, it is nevertheless a way of life in all organizations and has a significant impact on organizational performance (Robbins S. P., Judge T. A., Millett B., Jones M. 2010). The political environment is also observed in Latvian educational institutions. Based on the research conducted by I. Prizevoite, 16 % (n = 854) of teachers of general education institutions in the regions of Latvia believe that the tarifficiation process is not carried out objectively (Prizevoite I., 2013).

Conclusions and recommendations

1) The study of theoretical sources has shown that remuneration and salaries have different meanings. Salaries are financial remuneration paid to an employee in monetary terms, while remuneration have a broader meaning. Remuneration consists of both financial remuneration and the moral incentives of the employer (appreciation, praise, trust) - non-financial remuneration.
2) The findings of the authors' study show that remuneration is closely linked to performance and that this relationship is formed through motivation, which can be explored using four types of theory: need-based theories, reinforcement theory, expectancy theory and equity theory. Remuneration is considered an element of motivation that generates specific behaviours related to performance. The theory also recognizes the potential impact of an organization's cultural and political environment, as well as the fact that the level of skills and knowledge influences the performance level. However, according to this study, it is assumed that the level of skills and

knowledge of teachers is neutral. In this paper, the explanatory power of the theoretical framework was used to test the relationship between remuneration and performance in relation to teachers in general education in Latvia.

3) The current payroll financing model for teachers in Latvia creates a situation where teachers with the same workload have different wage per one pedagogical rate – the average teacher pay gap in the regions is up to 15 percent and different hours for extra work, which is a particular problem in rural schools. As a result, teachers' performance in different regions of Latvia may vary. This highlights the need for the Ministry of Education and Science to review funding arrangements for low-achieving educational institutions and to conduct research to determine whether remuneration is a key driver of performance. In order to further explore this issue, the author's forthcoming research will focus on researching teacher wage rates at each Latvian general education institution and identifying teachers' views on the impact of performance on remuneration to make proposals to the Ministry of Education and Science.

Bibliography

1. Aktar, S., Uddin, Z., Sachu, M.K. (2013). The Impact of Rewards on Job Satisfaction and Employees' Performance in Bangladesh : A Comparative Analysis between Pharmaceutical and Insurance Industries. *International Journal of Business and Management Invention*, Volume 2, Issue 8, pp. 1–8.
2. Armstrong, M. (2006). *A Handbook of Human Resource Management Practice* (10th ed.). Kogan Page Limited, London.
3. Armstrong, M., Murlis, H. (2004). *Reward Management: A handbook of remuneration strategy and practice* (5th ed.). London; Sterling, VA: Kogan Page.
4. Berman, E.M. (2006). *Performance and Productivity in Public and Non-profit Organizations* (2th ed.). Armonk, New York: M.E. Sharpe, Inc., p. 226.
5. Bouckaert, G., Halligan, J. (2008). *Managing Performance - International comparisons*. New York: Routledge, p.459.
6. Boyce, A.S., Nieminen, L.R., Gillespie, M.A., Ryan, A.M., Denison, D.R. (2015). Which comes first, organizational culture or performance? A longitudinal study of causal priority with automobile dealerships. *Journal of Organizational Behavior*, Volume 36, Issue 3, pp. 339-359.
7. *Darba likums* (Labor Law). Retrieved: https://likumi.lv/doc.php?id=26019 Access: 30.01.2020.
8. Helm, C. (2007). The Performance Management System: applying and evaluating a pay-for-performance initiative. *Journal of Healthcare Management*, Volume 52, Issue 1, pp. 49-62.
9. Jensen, D., McMullen, T., Stark, M. (2007). *The Manager's Guide to Rewards: What You Need to Know to Get the Best for – and from – Your Employees*. USA: Hay Group Inc, pp. 240.
10. Lawler III, E.E. (1973). *Motivation in Work Organisations. Monterey*. Calif: Brooks/Cole Publishing Company, p.224.
11. Mustapha, N. (2013). The influence of financial reward on job satisfaction among academic staffs at public universities in Kelantan, Malaysia. *International Journal of Business and Social,* Volume 4, Issue 3, pp. 244-248.
12. Nelson, B. (2004). Misunderstanding rewards hampers motivation. *Canadian HR reporter*. Volume 17, Issue 10, pp.14-17.
13. *Noteikumi par pedagogu darba samaksu Nr. 445* (Regulations on teachers' salary No 445) (2016). Retrieved: https://likumi.lv/ta/id/283667-pedagogu-darba-samaksas-noteikumi Access: 04.02.2020.
14. *Noteikumi par pedagogu profesionalas darbibas kvalitates novertesanas organizesanas kartibu Nr. 501* (Regulations on the arrangements for the organization of the evaluation of teachers' professional activities No 501) (2017). Retrieved: https://likumi.lv/ta/id/293176 Access: 14.02.2020.
15. Nyaga, J.W. (2015). Non Financial Reward and Employee Retention in Private Primary Schools in Kenya (Kiambu County). *International Journal of Management and Commerce Innovations ISSN*, Volume 3, Issue 1, pp. 240–254.
16. O'Donnel, M., Turner, M. (2005). Exporting New Public Management: performance agreements in a Pacific microstate. *International Journal of Public Sector Management*, Volume 18, Issue 7, pp. 615-628.
17. Olubusayo, F.H., Stephen, I.A., Maxwell, O. (2014). Incentives Packages and Employees' Attitudes to Work : A Study Of Selected Government Parastatals In Ogun State, SouthWest, Nigeria. *International Journal of Resaerch in Business and Social Science*, Volume 3, Issue 1, pp. 63–74.
18. Ozutkua, H. (2012). The Influence of Intrinsic and Extrinsic Rewards on Employee Results : An Empirical Analysis in Turkish Manufacturing Industry. *Business and Economics Research Journal*, Volume 3, Issue 3, pp. 29–48.

19. Prizevoite, I. (2013). *Pedagogu darba samaksu ietekmejosie faktori visparejas izglitibas iestades Latvija* (Factors Affecting Salaries of Pedagogues at General Educational Institutions in Latvia). Riga: Latvijas Izglitibas un zinatnes darbinieku arodbiedriba, pp. 74.
20. Robbins, S.P., Judge, T.A., Millett, B., Jones, M. (2010). *OB: The essentials.* Australia, Sydney: Pearson Higher Education.
21. Sonnentag, S., Frese, M. (2001). Performance Concepts and Performance Theory. *Psychological Management of Individual Performance*, Volume 16, Issue 43, pp. 3-25.
22. Terera, S.R., Ngirande, H. (2014). The Impact of Rewards on Job Satisfaction and Employee Retention. *Mediterranean Journal of Social Sciences*, Volume 5, Issue 1, pp. 481–488.
23. Thompson, P. (2002). *Total Reward*. London: Chartered Institute of Personnel Development (CIPD).
24. Valsts izglitibas informacijas sistema (VIIS) (The State Education Information System). Retrieved: https://www.viis.lv Access: 30.01.2020.
25. Wagner III, J.A., Hollenbeck, J.R. (2010). *Organisational Behaviour: Securing Competitive Advantage*. New York: Routledge.
26. Wood, J., Zeffane, R., Fromholtz, M., Fitzgerald, J.A. (2006). *Organisational Behaviour: Core Concepts and Applications* (1th ed.). Milton, Australia: John Wiley & Sons, p. 584.
27. WorldatWork. *Total Rewards Model*. Retrieved: https://www.worldatwork.org/docs/marketing/1610_BRO_TRModel- _ Update_J5613_FNL.pdf Access: 30.01.2020.
28. Yousaf, S., Latif, M., Aslam, S., Saddiqui, A. (2012). Case Study : the Impact of Financial and Non-Financial Rewards on Non-Financial Rewards on Employee. *International Journal of Business*, Volume 21, Issue 10, pp. 1776–1786.

Proceedings of the 2020 International Conference "ECONOMIC SCIENCE FOR RURAL DEVELOPMENT" No 54
Jelgava, LLU ESAF, 12-15 May 2020, pp. 198-205
DOI: 10.22616/ESRD.2020.54.024

INTANGIBLE RESOURCES FOR RURAL DEVELOPMENT: ASSESSMENT APPROACH

Maria Tereshina[1], Dr.oec. / professor; **Tatjana Tambovceva**[2], Dr.oec. / professor and
Inna Miroshnichenko[3], Dr. sc. pol. / professor
[1,3]Federal State Budget Education Institution of Higher Education "Kuban State University";
[2]Riga Technical University

Abstract. Recently, significant economic, social and cultural changes take place in rural areas. Most countries faced the challenges of rural development, when the focus on agricultural and agro-industrial production and support for farming ceased to produce tangible socio-economic results. The potential for sustainable development of rural areas is based on a whole range of material and intangible resources that can act as drivers of economic growth and achieve the quality of socio-ecological environment by attracting investment, stimulating innovative processes and engaging highly qualified human capital. The interdisciplinary approach can help to open up instrumental opportunities for developing methods for assessing and analysing intangible resources for rural development. The aim of the research is to identify the advantages and limitations of using an intangible-oriented approach to the justification and implementation of rural development policies, and to identify various types of intangible resources for rural development. The authors solve the problem of assessing the efficiency of use and the subsequent build-up of intangible resources for the development of rural territories based on building of an appropriate toolkit. The authors propose an interdisciplinary instrumental approach to assessing intangible resources for rural development, which is the basis for the subsequent development of taxonomic signs of empirical models of rural development policy depending on the availability and characteristics of intangible resources, as well as introducing model strategies for incorporating intangible resources into rural development policies.

Key words: rural territories, intangible resources, sustainable development, assessment of intangible resources.
JEL code: Q01, R11

Introduction

Recently, significant economic, social and cultural changes take place in rural areas. Most countries faced the challenges of rural development, when the focus on agricultural and agro-industrial production and support for farming ceased to produce tangible socio-economic results. In post-rural studies, rural areas are viewed in lesser degree as passive recipients of external influences, but to a greater extent as new "growth points" of social, economic and environmental innovations. The potential for sustainable development of rural areas is based on a whole range of material and intangible resources that can act as drivers of economic growth and achieve the quality of socio-ecological environment by attracting investment, stimulating innovative processes and engaging highly qualified human capital. At the same time, on the one hand, the objective deficit and instability of the results of using internal and external material resources for rural development determines the need to identify and include new drivers in rural development policies. On the other hand, more and more empirical data are accumulating in modern economic science about the role of intangible development resources as drivers of sustainable socio-economic dynamics. We believe that the interdisciplinary approach of this study opens up instrumental opportunities for developing methods for assessing and analysing intangible resources for rural development. The aim of the research is to identify the advantages and limitations of using an intangible-oriented approach to the justification and implementation of rural development policies, and to identify various types of intangible resources for rural development. It will help to solve the problem of assessing the efficiency of use

[1] Maria Tereshina, Tel.: +7 861 219 96 27, e-mail address: mwstepanova@mail.ru
[2] Tatjana Tambovceva, Tel.: +371-29492724, e-mail address: Tatjana.Tambovceva@rtu.lv
[3] Inna Miroshnichenko, Tel.: +7 861 219 96 27, e-mail address: mirinna78@mail.ru

and subsequent building up of intangible resources for rural development based on the development of appropriate tools.

To achieve this specified aim, the following tasks were identified:

- on the basis of theoretical sources to identify the main types of rural areas and the main factors of the rural development;
- to systematize the diversity of intangible resources;
- to outline the main advantages and limitations of the non-material approach to the justification and implementation of rural development policies;
- to propose an approach to assessing intangible resources for rural development, which is the basis for the subsequent development of taxonomic signs of empirical models of rural development policy depending on the availability and characteristics of intangible resources.

The research methodology included the analysis of the scientific and other publications, reports, studies and other literature sources on various aspects of resources influencing the development of rural areas, case analysis, system and comparative analysis.

The novelty of the research is the interdisciplinary instrumental approach to assessing intangible resources for rural development, which is the basis for the subsequent development of taxonomic signs of empirical models of rural development policy depending on the availability and characteristics of intangible resources.

Current state of research

Modern approaches to the spatial aspects of development are presented in the works of J. Kotkin (2000), P. Krugman (1997), Y. -F. Tuan (1977), A. Filippov (2000), L. V. Smirnyagin (2007). These research works draw attention to the increasing role of intangible resources in the development of territories. Factors such as proximity to raw materials and markets no longer dominate. New types of businesses are more likely to invest into high standard of living; they have become "sophisticated consumers of space" (Kotkin J., 2000).

Interdisciplinary rural studies aimed at identifying the role of various kinds of resources (internal, external, material, intangible) in rural transformations are differentiated into a number of areas:

A) Rural development policy concepts.

So, F. Barca, P. Mc Cann, A. Rodriguez-Pose (2012) reveal differences between two approaches in the framework of regional economic development policy: place-based versus place-neutral approaches. The starting point of the place-based policy is the idea that the knowledge necessary to use the potential of the area is not always available and is produced with the participation of external and local agents of rural changes. A comparative analysis of various models of rural development is presented in the studies of M. Gkartzios, M. Scott and P. Lowe (2019), P. Lowe and J. Phillipson (2006), K. Salemink, D. Strijker and G. Bosworth (2017), B. Bock, K. Kovacs and M. Shucksmith (2015), G. Bosworth et al. (2015). Endogenous approaches gained popularity after the 1980s, when the exogenous approach did not lead to sustainable economic development. British researcher C. Ray developed a neo-endogenous approach and formulated its basic principles (Neoendogenous Development…, 2020); P. Lowe and J. Phillipson (2006), M. Gkartzios and P. Lowe (2019) write about the formation of a new model of networked development of rural territories based on the interaction of internal and external stakeholders. B. B. Bock, K. Kovacs and M. Shucksmith (2015) conceptualized the neo-exogenous approach and described the new elements of rural innovation initiatives against previous approaches.

Innovation as a driver of growth, sustainability and competitiveness of rural areas are expressed in the works of L. Madureira and A. Torre (2019). They designed a comprehensive indicators system, the RIIS (Rural Innovation Indicator System), for commercial and non-profit organizations working in rural areas with a low population density. Portuguese researchers T. M. Gamito, L. Madureira and J. M. Lima Santos (2019) classify traditional and new rural innovation development resources; identify assets whose potential has not been fully embraced by rural development policies; describe innovation models based on various resources. The authors demonstrate how the use of traditional and new resources contributes to the identification of new productive specializations in rural areas, and how the dynamics of innovation in rural areas correlate with the structure of current rural assets.

B) Social capital as a source of rural change.

M. Rivera et al. (2019) identify the importance of social capital in rural development processes by analysing the results of case studies carried out in the framework of the European RETHINK Project. Highlighting trust, cooperation, culture, a sense of community and tradition as components of social capital, researchers consider its transposition into an economic resource in various rural contexts, the impact on self-organization processes. Paper written by J. D.Van der Ploeg, J. Ye and S. Schneider (2015) highlights the potential of social capital in integrated rural development strategies, conceptualizing social capital as one of the key building blocks of the "rural web" for solving the problems of the local economy in order to increase rural competitiveness. J. Lee, A. Arnason, A. Nightingale and M. Shucksmith (2005) study the role of identity, social capital in mobilizing positive socio-economic changes in rural areas, the development of networking among various local politics stakeholders.

C) Territorial identity as a resource for rural development policy.

The theme of identity is gradually entering the mainstream of economic discourse. Thus, G. M. Kazakova (2017) describes regional identity as a driver of the economic development of a region and a city. R. Capello and C. Lenzi (2013) characterize territorial identity as a special economic asset that promotes the convergence of private and collective attitudes, the formation of a sense of loyalty to the local community.

D) Rural social entrepreneurship as a resource for local development.

The researchers note the role of social entrepreneurship in the development of social capital and the formation of a sustainable rural local community. Networking enables rural social entrepreneurs to overcome location-related problems and thereby contribute to rural development, especially in terms of skills acquisition and knowledge transfer, as well as offering innovative solutions to meet community needs. R. Eversole, J. Barraket and B. Luke (2014) define the ingenuity of rural social business as a resource of the (neo) endogenous rural transformation policy.

E) Rural local communities as a subject, object, resource of rural development policy.

Many researchers view community-based development practices as the predominant paradigm of rural transformation. Some paper findings consider social, economic and environmental aspects of rural transformations (Fabricius C., 2013; M. Shucksmith, 2010; J. De San Eugenio-Vela and M. Barniol-Carcasona, 2015), the role of culture in community development (M. Gkartzios and M. Scott, 2014).

Approaches to assessing rural development resources are diverse. Most of them are based on a quantitative assessment of the available statistical data taken as the basis for the selection of indicators, which is quite clear from the point of view of their meaningful content. However, both the continuing problem of the quality of statistics and the impossibility to reflect many qualitative aspects

of intangible resources using exclusively quantitative indicators do not allow taking into account the complexity and ambiguity of the context of the formation and development of intangible resources of rural territories. Thus, the development of integrated approaches and methods for assessing the intangible resources of rural development remains a kind of "gap" in the research discourse.

Research methods

The research methodology included the analysis of the scientific and other publications, reports, studies and other literature sources on various aspects of resources influencing the development of rural areas, case analysis, system and comparative analysis.

The methodological basis of this study is an interdisciplinary approach, including a comparative analysis of the scientific discourse on intangible development resources, as well as analysis of studies on various aspects of rural development, case studies and statistical data. The community development concept is a key theoretical construct integrating rural areas and intangible development resources.

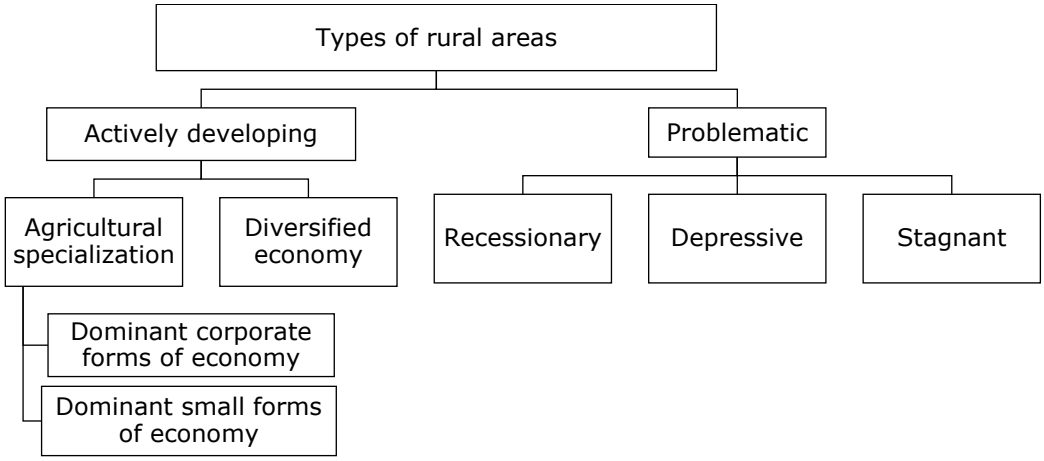
Research results and discussion

Researchers trying to assess the availability and quality of the resource potential of the development of rural territories inevitably encounter the ambiguity of the definition of the concept "rural territory". In Russian legislation, for example, there is no unambiguous definition of rural territory, nor are there criteria for its identification. In international practice, several approaches have developed. Thus, Eurostat classifies territories on the basis of indicators of population size and density, dividing them into densely populated (mainly urban), intermediate density and sparsely populated (mainly rural). Urban areas include a population density of 300 people/km² and a population of at least 5 thousand inhabitants. Whatever is not urban is considered rural. The Organization for Economic Co-operation and Development (OECD) identifies rural areas based on population density and the proportion of the population living in rural areas: predominantly rural areas (more than 50 % of the population); largely rural areas (15 to 50 %). Communities with a population density of less than 150 people / km² relate to rural areas. OECD identifies 3 types of rural areas: economically integrated rural areas; transitional rural areas; remote rural areas. The lack of a universally recognized concept of "rural territory" and "intangible resources", as well as criteria for their classification, determines the need for some explanations.

In this study, we understand rural areas as the low-density places of residence, located in a specific natural and geographical landscape, having certain sources of food and agricultural raw materials, natural resources and a certain "non-urban" lifestyle. Significant differences between rural areas, determined in particular by their resource potential, create the need for their typology. The classification is based on economic characteristics that allowed us to distinguish the following types of rural areas (Fig. 1).

Authors propose to understand the concept "intangible resources of rural development" as a complex of multilevel and multifunctional components that have different genesis, do not have physical or financial embodiment and are able to level natural, technological and financial restrictions, as well as mobility limitations of production factors in order to produce new types of goods and services. Such an approach makes it possible to systematize the whole diversity of intangible resources within the framework of five groups: symbolic, network, management, information and communication and innovation (Table 1).

Many researchers note that, despite their intangible nature, intangible resources have value and usefulness, and the efficiency of their use is largely correlated with the achievement of material indicators. The few current approaches to assessing intangible development resources focus on regional and sectoral systems that integrate various actors and levels, as well as the emergent characteristics of intangible resources necessary for sustainable area development.



Source: created by authors

Fig. 1. **Types of rural areas**

The specificity of rural territories, their integration into cultural, historical, administrative and environmental contexts, determines the need to find a methodological approach to the assessment (which territories and how developed are they?) and analysis (why these, how to develop their potential?) of intangible resources. Such an approach should, on the one hand, take into account the complexity of the system dynamics of rural development processes, and, on the other hand, to be relevant for specific managerial decisions.

Table 1

Types of intangible resources for rural development

Resource Type	Content
Symbolic	Local identity Territory image Public values enshrined in development strategies
Network	Level of interpersonal trust Institutional confidence level The density of interpersonal and institutional ties
Management	Leadership (formal and informal) Professional competencies of decision makers Local Government Institutions Institutions of self-organization of citizens
Information and communication	Local print and electronic media Community digital resources Interactive interfaces for interaction between community members and development policy agents
Innovation	Technological, marketing, "green" and organizational innovations; mechanisms for their production and diffusion in the context of rural development policy

Source: created by authors

The analysis of existing approaches and methods developed on their basis allows us to highlight the advantages as well as possible limitations in comparison with the traditional assessment of material resources in relation to rural development policy.

Table 2

Advantages and limitations of the non-material approach to the justification and implementation of rural development policies

Advantages	Limitations
An objective increase in the value of intangible assets over time	The difficulty of formalizing indicative characteristics
Compliance with the general trends for the knowledge economy, social economy, identity economy	The potential subjectivity of the assessment and the controversy of the validity of the results
Maximum consideration of the characteristics of a specific territory, the creation of unique context-sensitive techniques	The inability to create universal tools. The meaningful content of indicators involves an independent empirical study based on qualitative methods.

Source: created by authors

Taking into account the opportunities and risks involved in developing analytical tools for assessing the potential of intangible resources of rural development will make it possible to classify empirical models of rural development policy based on intangible resources. It will also allow developing model strategies for incorporating intangible resources into the development policy of rural territories in the conditions of heterogeneity of the socio-economic and socio-cultural space of regions and assessing the possible multiplier effects.

The set of parameters characterizing each type of resource can be fixed in a function where each type of resource is characterized by a set of parameters and has the same relevance:

$$Y(t) = f\,(Syma., Netb., Orgc., Infd., Inne,) \quad (1)$$

The combination of these components of intangible resources forms various types of relationships. Such relationships underlie practices that produce and reproduce cultural landscapes and ultimately determine the level of socio-economic development. Thus, by "using the intangible resources of the region" we mean the process of their transformation into tangible results, expressed in the growth of competitiveness, investment attractiveness of the territory and an increase in socio-economic indicators. We believe that an effective combination of these components of the intangible resources of rural development in combination with other elements of the resource potential will provide the synergistic effect necessary to give impetus to rural development.

The system for assessing intangible resources for rural development has a number of requirements. Validity of the assessment is key. Moreover, the accuracy of the assessment should be sufficient but not excessive, and the methodology itself should be sufficiently stable and not depend on the experts. In addition, the methodology should be flexible, have the ability for "an upgrade".

The development of such a system has the following stages:

- selection of input data;
- formation of an appropriate system of criteria;
- operationalization of each criterion by highlighting specific parameters (questions);
- development of an assessment scale;
- development of analytical tools (expert questionnaire);
- determination of the procedure and expert assessment.

Thus, the calculated index value for each specific territory is formed on the basis of an integrated assessment of the level of development of intangible resources. The proposed methodological approach includes, along with the methods of collecting quantitative data traditional for economic research, some specific sociological and statistical-mathematical research methods "dealing with"

with large amounts of empirical data. Expert assessments include two projections: the current state of the intangible resources of rural territories ("what is") and the target, reference state ("what should be") and are ranked in three intervals of a 100-point scale. The reliability of the consistency of expert estimates is verified by the method of canonical correlation and positional analysis.

Conclusions, proposals, recommendations

1) A variety of theoretical and empirical approaches to the study of rural development processes opens up broad prospects for their integration and emphasizes the importance of studying intangible resources that form the potential for sustainable development and shape the success of rural development policies. The definition and operationalization of the intangible resources of rural development is extremely important. As well as the development of high-quality monitoring methods and a comprehensive assessment of the effectiveness of rural development policies. The current approaches to the assessment of intangible assets focus mainly on the organizational level and are poorly applicable to the territorial context.
2) The trend to include the assessment of intangible resources in the process of justification and implementation of rural development policies has both advantages and limitations. At the same time, taking into account possible limitations when developing analytical tools for assessing the potential of intangible resources of rural development makes it possible to improve the quality of rural management.
3) The authors propose an instrumental approach to assessing intangible resources for rural development based on three interval measurements of five types (symbolic, network, managerial, information and communication, innovation) of intangible resources in two projections (standard and current). The proposed approach broadens the scope of research on rural development resources by including, along with traditional economic methods of the collection of quantitative data, specific sociological and statistical-mathematical research methods "dealing with" with large amounts of empirical data. Currently, the toolkit is undergoing testing and verification of indicators to evaluate the results and existing opportunities.

Bibliography

1. Barca, F., McCann, P., Rodriguez-Pose, A. (2012). The Case for Regional Development Intervention: Place-based Versus Place-neutral Approaches. *Journal of Regional Science,* Volume 52, Issue 1, pp. 134–152.
2. Bock, B.B., Kovacs, K., Shucksmith, M. (2015). *Changing Social Characteristics, Patterns of Inequality and Exclusion*. In A. Copus and P. De Lima (eds), Territorial Cohesion in Rural Europe: The Relational Turn in Rural Development, Oxon/New York: Routledge, pp. 193-211.
3. Bosworth, G., Annibal, I., Carroll, T., Price, l., Sellick J., Sheperd, J. (2015). Empowering Local Action Through Neoendogenous Development. Sociologia Ruralis, Volume 56, Issue 3, pp. 427–449. https://doi.org/10.1111/soru.12089
4. Capello, R., Lenzi, C. (2013). Territorial Patterns of Innovation and Economic Growth in European Regions. Growth and change. Volume 44, Issue 2, pp. 195–227.
5. De San Eugenio-Vela, J., Barniol-Carcasona, M. (2015). The Relationship Between Rural Branding and Local Development. A Case Study in the Catalonia's Countryside. *Journal of Rural Studies*, Volume 37, pp.108–119.
6. Eversole, R., Barraket, J., Luke, B. (2014). Social Enterprises in Rural Community Development. *Community Development Journal*, Volume 49, Issue 2, pp.245-261.
7. Fabricius, C. (2013). The Fundamentals of Community-Based Natural Resource Management. In *Rights Resources and Rural Development*. Routledge. pp. 18–58
8. Filippov, A. (2000) Sociologija prostranstva: obshhij zamysel i klassicheskaja razrabotka problem (Sociology of Space: General Concept and Classical Development of the Problem). Logos. Moscow, № 5. Retrieved: http://www.ruthenia.ru/logos/number/2000_2/09.html. Access: 10.01.2020.
9. Gamito, T.M., Madureira, L., Lima Santos, J.M. (2019). Unveiling and Typifying Rural Resources Underpinned by Innovation Dynamics in Rural Areas. *Regional Science Policy and Practice*, pp. 1–21. https://doi.org/10.1111/rsp3.12228

10. Gkartzios, M., Lowe, P. (2019). *Revisiting Neo-Endogenous Rural Development*. In: Scott, M., Gallent, N. and Gkartzios, M. (eds). The Routledge Companion to Rural Planning, Routledge: New York.
11. Gkartzios, M., Scott, M. (2014). Placing housing in rural development: exogenous, endogenous and Neo-Endogenous Approaches. *Sociologia Ruralis*, Volume 54, Issue 3, pp. 241–265.
12. Kazakova, G.M. (2017). Regional'naya identichnost' kak faktor innovatsionnogo razvitiya reǵiona (Regional Identity as a Factor in the Innovative Development of a Region). Kazakova, G.M., Rjazanova, A.J. // *Scientific schools. Youth in Science and Culture of the XXI Century: Materials of the International Scientific and Creative Forum*, Chelyabinsk. pp. 80–82.
13. Kotkin, J. (2000). *The New Geography: How the Digital Revolution is Reshaping the American Landscape*. Random House, N.Y., p. 242.
14. Krugman, P. (1997). *Development, Geography, and Economic Theory*. MIT Press, Cambridge, p. 117.
15. Lee, J., Arnason, A., Nightingale, A., Shucksmith, M. (2005). Networking: Social Capital and Identities in European Rural Development. *Sociologia ruralis*, Volume 45, Issue 4, pp.269–283.
16. Lowe, P., Phillipson, J. (2006). Reflexive Interdisciplinary Research: the Making of a Research Programme on the Rural Economy and Land Use. *Journal of Agricultural Economics*, Volume 57, Issue 2, pp. 165–184.
17. Madureira, L., Torre, A. (2019). Innovation Processes in Rural Areas. *Regional Science Policy & Practice*, Volume 11, pp. 213–218. https://doi.org/10.1111/rsp3.12215
18. Neoendogenous Development in European Rural Areas: Results and Lessons. (2020). Cejudo E., Navarro F. (Ed.): Springer. p. 304.
19. Rivera, M., Knickel, K., Díaz-Puente, J.Maria, Afonso, A. (2019). The Role of Social Capital in Agricultural and Rural Development. *Sociologia Ruralis*, Volume 59, Issue 1, pp. 66–91.
20. Salemink, K., Strijker, D., Bosworth, G. (2017). Rural Development in the Digital Age: A Systematic Literature Review on Unequal ICT Availability, Adoption, and Use in Rural Areas. *Journal of Rural Studies*, Volume 54, pp. 360–371.
21. Shucksmith, M. (2010). Disintegrated Rural Development? Neo-endogenous Rural Development, Planning and Place-Shaping in Diffused Power Contexts. *Sociologia ruralis*, Volume 50, Issue 1, pp.1–14.
22. Smirnjagin, L.V. (2007) *O regional'noj identichnosti // Voprosy jekonomicheskoj i politicheskoj geografii zarubezhnyh stran (On Regional Identity // Issues of Economic and Political Geography of Foreign Countries)*. Moscow, Smolensk, Vyp. 17, p. 21–49
23. Tuan, Y.-F. (1977). *Space and Place: The Perspective of Experience*. University of Minnesota Press, Minneapolis – Minn, p. 235.
24. Van der Ploeg, J., Ye, J., Schneider, S. (2015). Rural Development: Actors and Practices, Constructing a New Framework for Rural Development. Research in Rural Sociology and Development, Volume 22, pp.17–30.

NEW DIMENSIONS IN THE DEVELOPMENT OF SOCIETY

Proceedings of the 2020 International Conference "ECONOMIC SCIENCE FOR RURAL DEVELOPMENT" No 54
Jelgava, LLU ESAF, 12-15 May 2020, pp. 207-214
DOI: 10.22616/ESRD.2020.54.025

MOTIVATIONAL FACTORS OF CULTURE SECTOR HUMAN RESOURCES IN THE CONTEXT OF GENERATIONS

Sanita Bethere[1], MBA; **Lasma Licite**[2], Dr.oec., associate professor;
[1,2]Latvia University of Life Sciences and Technologies

Abstract. The culture sector is an important component of the economy of Latvia, yet the sector as well as its human resources have been relatively little researched. The Board of Culture of Jelgava municipality employs individuals of various generations, with different life experience and value systems, and, consequently, the employer has been able to understand the differences in order to ensure productive mutual cooperation among the employees. Accordingly, the present research aims to examine motivational factors in the work environment for the human resources of the Board of Culture of Jelgava municipality. The authors conducted a survey of the employees of the Board of Culture of Jelgava municipality (the sample comprised 133 employees). The research found that the human resources of the Board of Culture of Jelgava municipality were represented by four generations. The most employees belonged to the Baby Boomer (54 employees or 41% of the total) and Generation X (52 or 39%); therefore, there is a risk of failure to replace the human resources in the next few years. The survey found that, overall, there were no significant differences in motivational factors in the work environment among the generations. However, a number of issues revealed statistically significant differences among generational groups in terms of motivational factors in the work environment, such as importance of education, prioritization of one's own desires and needs, the need for career growth, working from home, flexible working hours and employer-paid communication services.

Keywords: generations, human resources, culture sector.
JEL code: O15, J21, J82

Introduction

The culture sector is an important component of the economy of Latvia, yet the sector as well as its development and human resources have been relatively little researched or the scope of the research has been narrow. In the research studies, the research object usually focused on economic and social returns on a cultural event, leading to a lack of a broader vision of the culture sector as a whole. Some research studies focused on the effects of cultural consumption and participation, the role of song and dance festivals in a changing economic environment, the development of cultural education, the effectiveness of museums, the incorporation of culture into the economy etc. Overall, it could be concluded that the culture sector and the human resources are under-researched and, compared with other sectors of the economy of Latvia, only indirect attention is paid to it. However, research on the culture sector is important because it is not only a consuming sector, as is often considered (Kilis R., 2007), but it has an economic effect on the economy of Latvia.

During the economic crisis, salaries were lowered for those working in the culture sector. Although the national economy experiences economic growth, the salaries of people working in the culture sector are not competitive, with the average salary in the culture sector in Latvia being EUR 780 before taxes (Bormane A., 2019), while in Jelgava municipality it is EUR 662 before taxes. The low salaries facilitate the outflow of professional specialists and a high turnover of human resources in organizations throughout Latvia. An analysis of human resources in the culture sector has to focus not only on their salaries but also on cooperation among the generations. Employers need to understand and be able to adapt to the differences in order to ensure productive mutual cooperation among their employees, effectively design strategies and make decisions (Baldonado M. A., 2013). Besides, understanding generational differences allows employers to effectively attract, motivate and retain human resources of various generations and avoid misunderstandings and conflicts (Gursoy D.

[1] *Corresponding author. E-mail address: sanita.bethere@gmail.com*
[2] *Corresponding author. E-mail address: lasma.licite@llu.lv*

et al., 2008). Each generation is characterized by its own behaviour, attitudes and motivation for working. Age is one of the most common predictors of differences in attitudes, values and behaviours. Age or generational classification gives researchers a tool to analyse changes in attitudes and behaviours over time (Bochert R. et al., 2017).

A lot and various research studies on generations and their characteristics have been done in the world (Bochert R. et al., 2017; James R. O., 2017; Kane S., 2019; Heyns P. E. et al., 2019), yet unlike in Western Europe or America, in Latvia the formation of generations has been affected by other factors. In Latvia, generations are researched by researchers such as professor Z. Rubene (2018), R. Baltusite and B. Briede (2018), L. Licite and L. Janmere (2017; 2018). Nevertheless, there is a lack of research studies on human resources in the culture sector in the intergenerational context. The human resources of the Board of Culture of Jelgava municipality have been chosen as the research object because the particular organization employs individuals of various generations, with different experience and value systems. The authors used a classification of generations that is available in the scientific literature (Erickson T., 2012) and classifies the generations by birth year range: Traditionalists – born before 1945, Baby boomers – born between 1946 and 1964, Generation X – born between 1965 and 1981, Generation Y – born between 1982 and 2000.

The following **hypothesis** is put forward – motivational factors in the work environment for the human resources of the Board of Culture of Jelgava municipality are related to their generational differences.

The research **aim** is to examine motivational factors in the work environment for the human resources of the Board of Culture of Jelgava municipality. To achieve the aim, the following specific research **tasks** are set: 1) to describe the human resources of the Board of Culture of Jelgava municipality in the generational context; 2) to examine the motivational factors of human resources of the Board of Culture of Jelgava municipality.

A number of **research methods** were employed to do the research: monographic and descriptive for theoretical discussion and interpretation of the research results based on scientific findings and generational theory; analysis and synthesis for examination of problem elements and identification of regularities; induction for making assumptions based on individual elements or facts; deduction for logical systematization and interpretation of empirical data; a survey and interviews with culture sector experts for identification of motivational factors in the work environment for the human resources of the Board of Culture of Jelgava municipality; and a nonparametric method – a Kruskal-Wallis H-test – was used to identify statistically significant generational differences.

The present research used the following information sources: research papers of international scientific conference proceedings and journals, electronically available national and foreign periodicals focusing on generational values and motivations for employment, internal legal documents of the local government of Jelgava municipality as well as unpublished materials.

1. Characteristics of the human resources of the Board of Culture of Jelgava municipality in the generational context

The Board of Culture of Jelgava municipality is a subordinate institution established by the local government (29 April 2015 Decision of the Council of Jelgava municipality) that aims to create, disseminate and maintain cultural values. The Board of Culture is responsible for 14 cultural centres, 22 public libraries and 98 folk art and craft or amateur groups. The Board of Culture provides totally 194 job positions, and the work of the personnel is managed, planned and organized by the head, the deputy head and two key specialists of it. On 2 September 2019, there were 180 filled positions

and 14 vacancies. The 180 positions were taken by 133 individuals who were employed both full- and part-time; of the total personnel, 33 took more than one position, being employed not more than 40 hours a week as prescribed by the Labour Law. According to the Board of Culture, 30 % of their personnel were employed for 1 to 5 years, which revealed employee turnover in the period 2014-2019; 59 % of the personnel were employed for 6 and 40 years, while 11 % were employed for less than a year.

To better understand the human resources in the generational context, the research divided the personnel of the Board of Culture into three categories:

- creative personnel – managers of amateur art groups, concertmasters, choir masters and other specialists, genre leaders, sound and light operators;
- cultural personnel – administrators, cultural supervisors and event organizers;
- library personnel – library heads, librarians and local history specialists.

The human resources of the Board of Culture are also divided by generation (Fig. 1).

Source: authors' construction based on an unpublished list of personnel provided by the Personnel Department of Jelgava municipality

Fig. 1. **Distribution of the personnel of the Board of Culture of Jelgava municipality by generation in 2019**

As shown in Figure 1, Baby boomers represented by 54 (41 %) personnel made up the highest percentage. Generation X represented by 52 (39 %) personnel had the second highest percentage; it was followed by Generation Y representing 23 (17%) personnel, while Traditionalists accounted for only 3 %. The longest employment relationship was 38 years. In view of the fact that the Board of Culture are mainly represented by Baby boomers and Generation X, this situation can make a threat to the replacement of the human resources over the next years. The replacement of human resources could make the most significant impact on a particular group of library personnel, as some of the personnel are of pre-retirement or retirement age. Besides, Generation Y personnel tend to leave the Board of Culture more often than the others owing to low salaries and often owing to the specifics of the culture sector, e.g. being a cultural employee often involves working in evenings and on weekends. Consequently, when employees do not receive competitive and motivational pay, they more often decide to change jobs. There is also a lack of qualified specialists among creative personnel. Creative personnel work part-time, resulting in low and non-motivational pay. Of the total creative personnel working for the Board of Culture, 25 took several part-time positions (were managers of several amateur art groups), which could be explained by a lack of qualified specialists in the vicinity of Jelgava municipality and Jelgava city; however, in order to attract qualified specialists, a competitive salary has to be paid because long-term employment based on enthusiasm and for a low salary does not meet the expectations of any employee.

2. Motivational factors of human resources in the generational context

To identify and examine the factors affecting the motivation of human resources of the Board of Culture in the generational context, a survey among the personnel of the Board of Culture as well as

three semi-structured interviews with culture sector experts were conducted to gain a more detailed understanding of the relevant causes.

The general population was comprised of 133 personnel of the Board of Culture. The total number of respondents who took part in the survey was 107, meaning that totally 80 % of the personnel completed their questionnaires. Before processing the questionnaire data, the sample was classified by two characteristics – the personnel's belongingness to a particular generation and their job specificity (creative, cultural and library personnel). Of the total number of the respondents, 62 personnel (58 %) represented creative personnel, 19 personnel (18 %) – cultural personnel and 26 personnel (24 %) – library personnel. Of the total number of the respondents, 47 personnel (44 %) represented the Baby Boomer Generation, 37 (35 %) – Generation X, while 22 (20 %) – Generation Y. In view of the fact that only one employee represented the Traditionalist Generation, this personnel group was not analysed, yet this employee's opinion was included in the analysis of total indicators.

To examine the motivational factors of human resources of the Board of Culture in the generational context, the questionnaire's questions were divided into four blocks: key values, job importance, the type of communication and motivation. The questionnaire was developed to include a semantic differential scale of 7 categories, each of the 52 proposed measurements was expressed as a pair of two opposite assertions. The survey measured personnel opinions by using 52 variables. Each variable consisted of a pair of assertions to be rated on a scale from 1 to 7 points, with the respondent choosing the assertion that best fits his/her values, thereby setting priorities. If the respondent agrees with the first assertion in a pair, then 1-3 points are chosen, yet if she/he more agrees with the second assertion in the pair, 5-7 points are chosen, while 4 points is a neutral answer.

An analysis of the results of the survey on personnel motivation allowed concluding that the opinions expressed by the generational groups on various matters tended to be similar and the differences found were not statistically significant ($p>0.05$). The personnel of all the generations were motivated by competitive pay, various monetary and non-monetary bonuses and involvement in decision-making, as it was important for them to have their voices heard and be appreciated in general. The employer should regularly provide feedback on the work done, as it was important for the personnel to receive objective praises, both privately and publicly, that motivated them to engage in the work more enthusiastically. The matters in which the research found statistically significant differences are summarized in Table 1.

Statistically significant differences in opinion among the generational groups were found in relation to the **need for education**. The differences in opinion among the generational groups could be explained by the fact that 41 % of the personnel of the Board of Culture represented the Baby Boomer Generation, some of them were close to retirement age or already in retirement age. For these employees, education and new skills were no longer as relevant as they were for the other generations. The deputy director of the Jelgava City Library agreed with this opinion, stating in the interview that "Just before pre-retirement and retirement age, employees often think that acquiring a new knowledge is superfluous because they know everything and it is good the way it is. But, of course, the same cannot be said about all employees of this age because it depends on each individual's personality. Young employees, however, feel a great need for education and want to apply a new knowledge quickly in their daily work".

However, when it comes to a **"preference for one's own desires and needs"**, a higher proportion of the respondents who represented Generation Y expressed their stronger preference for

their own desires and needs. The disagreement between the generations could be explained by the fact that the respondents of the Baby Boomer Generation and Generation X were ready to set aside their desires and needs and dedicate their time to others and their work, which had been greatly affected by their upbringing and societal influence when they grew up and started their careers. In contrast, younger employees thought more about themselves and achieving their own goals than about achieving common goals or helping others, as their own wishes and needs were a priority. Statistically significantly different opinions of the generational groups on both previous matters were confirmed by the results of a Kruskal-Wallis H-test ($p<0.05$).

The opinions on intergenerational matters in relation to **career growth** and working from home were different. Career growth was important to 100 % Generation Y respondents, while the opinions of Baby boomers and Generation X personnel varied. To understand the survey results in more detail, the matters pertaining to career importance was also analysed by personnel group. The results of the Kruskal-Wallis H-test showed that the differences in opinion among the personnel groups were statistically significant. The different results acquired could be explained by the fact that the need for career growth of the personnel of the Board of Culture was difficult to meet. Both cultural and library personnel held the highest possible positions in their institutions, so the reality might have influenced the opinions expressed about career growth. Besides, some of the personnel held their positions for more than 15 years and did not think about changing their jobs, thereby making it impossible for them to advance their careers without changing their jobs or organisational units. The personnel of Generation Y had a broader view on the matter – careers were important to them, and it was not dependent on their current jobs. If the institution did not provide the desired job, Generation Y individuals were ready to invest their built-up experience and professional knowledge in another institution for faster career growth.

Only 49 % of the respondents surveyed appreciated an **opportunity to work from home**, the opinions expressed were not unanimous and could be characterized as dispersed, as there were no clear answers in favour of this assertion. Overall, it was a medium priority, as 32 % of the respondents chose the neutral answer, while 19 % of the respondents with different levels of agreement said they had to perform their duties only at the workplace ($M=3.47$; $SD=1.53$). The differences in opinion expressed across all the generations tended to be similar. The largest disagreement was observed among the Baby Boomer Generation, as 36 % of the respondents agreed that work duties could be done from home, yet at the same time 26 % of the respondents with different levels of agreement expressed an opinion that work duties should be performed at the workplace, while 38% agreed with both assertions ($M=3.90$; $SD=1.48$). This disagreement across all the generations might be explained by the fact that the personnel of the Board of Culture could perform their duties both inside and outside the workplace, as there was no requirement to be at the workplace at all times. However, library personnel need to work fixed hours, which involves being at the workplace and it is not possible to perform the work duties from home, as one of their main duties is to serve library visitors. The largest disagreement was observed among the respondents of the Baby Boomer Generation, which could be explained by the fact that 36 % of the baby boomers represented library personnel. Significant differences in opinion among the generations was also evidenced by the Kruskal-Wallis H-test results ($p<0.05$).

Statistically significant differences in opinion were found among both the generational groups and the personnel groups concerning **flexible working hours** and phone bills paid by the employer, which was also evidenced by the Kruskal-Wallis H-test results. An analysis of a preference for flexible

working hours allows concluding that differences in opinion among the generations and the personnel groups are affected by the specifics of the culture sector. Flexible working hours were important to 84% of the surveyed creative personnel and 95 % of the surveyed cultural personnel because their work duties were often done outside "normal" working hours, as they organized events and participated in the events in weekday evenings or on weekends; therefore, it was important that the personnel themselves might determine their own working time and duration according to the specifics of the duties they performed. The situation with library personnel was different, as they were only partly motivated by flexible working hours. The librarians worked for the benefit of the population and provided librarian services during fixed working hours. The head of the Board of Culture said that "in certain cases, the library opening hours approved may be revised in favour of the library personnel member if it relates to the availability of public transport to or from work."

There were also divergent opinions across the generational groups on **employer-paid communication bills** (mobile phone bills). The opinions tended to be similar among the respondents of the Baby Boomer Generation and Generation X, as 68 % with different levels of agreement believed that paying for communication services by employers was a motivational factor. In contrast, the respondents of Generation Y gave significantly different opinions. Although 32 % of the Generation Y respondents, with different levels of agreement, considered employer-paid communication bills to be a motivational factor, 36 % believed that employer-paid communication bills were not important to them. Statistically significant differences in opinion among the generational groups on this matter were evidenced by the results of the Kruskal-Wallis H-test as well ($p<0.05$).

The differences in opinion among the generational groups regarding motivational factors in the work environment are summarized in Table 1.

Table 1

Differences in opinion among the generational groups regarding motivational factors in their work environment

Pair of assertions	Baby boomers (M)	Generation X (M)	Generation Y (M)	Total (M)
Education is important / Education is not important	1.62	2.13	2.09	1.90
Preference for one's own wishes and needs / Preference for the wishes and needs of others	3.49	3.51	2.77	3.36
Career growth is important / Career growth is not important	2.26	2.24	1.64	2.12
Opportunity for working from home / Work duties must be performed only at the workplace	3.89	3.32	2.77	3.47
Flexible working hours / Fixed working hours	2.77	2.41	1.91	2.46
Phone bill is paid by the employer / Phone bill is not paid by the employer	2.83	2.95	4.05	3.13

Source: authors' survey results

One can conclude that those working in the culture sector represent different generational groups, which partly affects their motivational factors at the workplace, especially the motivational factors such as education, career growth, an opportunity for working from home, flexible working hours and paid communication services.

Conclusions and proposals

1) The culture sector and its human resources have been little researched, and the scope of the research has been narrow. Compared with other sectors of the economy of Latvia, only indirect attention is paid to it. However, research on the culture sector is important because it encompasses also libraries, folk art, theatre, music, museums, the creative industry and other industries. There is a lack of research studies not only on the culture sector itself but also on the human resources in the context of generations.

2) The human resources of the Board of Culture of Jelgava municipality were represented by four generations. The most employees belonged to the Baby Boomer Generation (54 employees or 41 % of the total) and Generation X (52 or 39 %); therefore, there is a risk of failure to replace the human resources in the next few years. Significant replacement of human resources could directly affect library personnel, as 17 employees or 63 % of the total were of pre-retirement or retirement age.
3) The duration of employment relationships of Generation Y personnel working for the Board of Culture of Jelgava municipality was variable; 78 % of the total Generation Y personnel (18 personnel) had employment relationships of less than 5 years, which could be explained by the need to develop themselves and the desire for career growth, which was practically impossible to implement if working for the Board of Culture. The decision to change jobs is influenced by low salaries and often the specifics of the culture sector. Library personnel are the most loyal to their employer, with 54 % (13) of all the personnel having employment relationships of 16-38 years and representing the Baby Boomer Generation. Besides, there is a tendency for creative workers to change their jobs, as they are employed part time and, consequently, the remuneration is not motivational enough.
4) The survey of the human resources of the Board of Culture of Jelgava municipality revealed statistically significant differences with regard to the following motivational factors in the work environment among the generational groups:

- education is important. The differences could be explained by the fact that 41 % of the total personnel of the Board of Culture of Jelgava municipality represented the Baby Boomer Generation, of which 30 % were of pre-retirement or retirement age. For these employees, education and new skills were no longer as relevant as they were for Generations X and Y;
- a preference for one's own wishes and needs. The personnel of Generation Y preferred their own wishes and needs, whereas the Baby Boomer Generation and Generation X were ready to set aside their desires and needs and dedicate their time to others and their work. That has been greatly affected by their upbringing and societal influence when they grew up and started their careers;
- the need for career growth. A stronger wish for fast career growth was observed among the personnel of Generation Y than among those of the Baby Boomer Generation and Generation X, yet the career growth was difficult to implement at the Board of Culture of Jelgava municipality. Consequently, there was a risk of a high personnel turnover, particularly among those who had reached their career "ceiling" and wanted career progression;
- working from home. The differences in opinion on working from home were related to both the specific nature of the work to be done and the views of the generations. Compared with the Baby Boomers generation, the personnel of Generations X and Y were much more flexible on this matter. The differences in opinion among creative, cultural and library personnel could be explained by the specific nature of the work to be done, as the creative and cultural personnel could perform their duties outside the workplace, yet this was not possible for the library personnel;
- flexible working hours. The personnel of Generation Y agreed that flexible working hours were a strong motivational factor, while those of the Baby Boomer Generation and Generation X were not unanimous;

- employer-paid communication services. It was a strong motivational factor for the Baby Boomer Generation and Generation X, but not for Generation Y. The differences in opinion on this matter among creative, cultural and library personnel could be explained by the specific nature of their work to be done.

5) The research found that, overall, there were no significant generational differences in motivational factors in the work environment (out of the 52 pairs of motivational assertions, statistically significant differences were identified for only six matters). This means that the hypothesis put forward in the research only partly proved to be true. This was due to the fact that although 80 % of the human resources of the Board of Culture were surveyed, the sample was relatively small in general, which did not allow drawing any broader conclusions on the generational differences in the culture sector.
6) The personnel of the Board of Culture as well as students of national educational institutions need to continue research on generational differences in human resources in Latvia and conduct surveys in other municipalities. If employees of the entire culture sector of Latvia were researched, it would be possible to discover significant differences in motivational factors in the work environment among the culture sector employees.

Bibliography

1. Baldonado, M.A. (2013). Motivating Generation Y and Virtual Teams. *Journal of Business and Management*, Vol. 1. pp. 39-44.
2. Baltusite, R., Briede, B. (2018). Implementation of Findings of Generation Theories in Engineering Studies. In: Engineering for Rural Development: proceedings of the international scientific conference, No. 17. Jelgava: LLU. pp. 1-6.
3. Bochert, R., Cismaru, L., Foris, D. (2017). Connecting the Members of Generation Y to Destination Brands: A Case Study of the CUBIS project. *Sustainability*, No. 9. pp. 1-20.
4. Bormane, A. (2019). Algu pieaugums atkal atlikts. Kultura starp augsto misiju un "cipargalvam" (A Salary Rise is Postponed Again. Culture between the High Mission and "Digit Heads"). Retrieved: http://www.la.lv/kultura-starp-savu-augsto-misiju-un-cipargalvam Access: 16.12.2019.
5. Erickson, T. (2012). *Generations and Geography. Understanding the Diversity of Generations around the Globe*. Retrieved: http://www.tammyerickson.com/images/uploads/TEA_Generations-and-Geography.pdf Access: 16.12.2019.
6. Gursoy, D., Maier, T.A., Chi, G.C. (2008). Generational Differences: An Examination of Work Values and Generational Gaps in the Hospitality Workforce. *International Journal of Hospitality Management*, Vol. 27, Issue 3. pp. 448-458.
7. Heyns, P.E., Eldermire, R.B.E., Howard, A.H. (2019). Unsubstantiated Conclusions: A Scoping Review on Generational Differences of Leadership in Academic Libraries*. The Journal of Academic Librarianship*, Vol. 45, Issue 5.
8. James, R.O. (2017). *Generation X, Y and the Baby boomers*. Hauppauge, New York: Nova Science Publishers, Inc. p. 81
9. Kane, S. (2019). Common Characteristics of Traditionalists – the "Silent Generation". Retrieved: https://www.thebalancecareers.com/workplace-characteristics-silent-generation-2164692. Access: 16.12.2019.
10. Kilis, R. (2007). Kulturas sektora ekonomiska nozime un ietekme Latvija (The Economic Role and Effect of the Culture Sector in Latvia). SIA "Analitisko petijumu un strategiju laboratorija", Riga.
11. Licite, L., Janmere, L. (2018). Student Expectations towards Physical Environment in Higher Education. In: Engineering for Rural Development: proceedings of the international scientific conference, Jelgava, May 23 – 25, 2018 Latvia University of Life Sciences and Technologies, Faculty of Engineering. Latvian Academy of Agricultural and Forestry Sciences, Jelgava, 2018. Vol. 17. Jelgava, p. 1198-1203.
12. Licite, L., Janmere, L. (2017). Millennial Student Expectations towards Higher Education in Latvia. In: Engineering for Rural Development: proceedings of the international scientific conference, Jelgava, May 24 – 26, 2017 Latvia University of Agriculture, Faculty of Engineering. Jelgava, 2017. Vol. 16. Jelgava, pp. 1440-1445.
13. Rubene, Z. (2018). Vai Millenium paaudzei ir svariga izglitiba? (Is Education Important to the Millennial Generation?). Retrieved: https://irir.lv/2018/02/20/vai-millenium-paaudzei-ir-svariga-izglitiba Access: 16.12.2019.

Proceedings of the 2020 International Conference "ECONOMIC SCIENCE FOR RURAL DEVELOPMENT" No 54
Jelgava, LLU ESAF, 12-15 May 2020, pp. 215-222
DOI: 10.22616/ESRD.2020.54.026

EVALUATION OF GENERAL EDUCATION SCHOOL STUDENTS' CAREER SELF-MANAGEMENT SKILLS AND THEIR FORMATION CONDITIONS IN THE CONTEXT OF COMPETITIVENESS

Dagnija Cedere[1], Dr. chem.; **Inese Jurgena**[2], Dr. paed. and **Irena Katane**[3], Dr. paed.
[1,2]University of Latvia; [3]Latvia University of Life Sciences and Technologies

Abstract. The sustainability of today's education depends on the extent to which education is diverse, flexible, mobile and changing and whether it corresponds to interests, needs and development aims of the evolving and changing modern society as well as the future society. One of the objectives of education is to promote the development of young people's competitiveness so that they are able of living and self-realization in the conditions of the changing environment (social environment economics, labour market, profession environment, etc.). An important component of the competitiveness structure is self-management, including career self-management in which the professional self-management takes a significant place. During schooling the career self-management of young people is connected with future intentions and aims, firstly, with choosing one's own career, incl. profession and thus also the future educational institution. The career support system established and offered by the school, namely, conditions in which the students' career self-management skills are formed largely defines how successful this choice has been. The aim of the study is to evaluate students' career self-management skills and the conditions of their formation. The study surveyed 162 students of general comprehensive schools. The findings show that in general students' career self-management skills are insufficiently developed in relation to the choice of their future profession. Diverse events organized in school and outside it, the correspondence of their themes to students' interests and needs as well as the cooperation of school and other educational institutions in the frame of supporting career development guidance influence positively the formation of career self-management skills.

Key words: career development guidance, career self-management skills, the choice of the profession, general comprehensive schools, students' competitiveness.
JEL code: I250

Introduction

Education for sustainable development, sustainability in education and sustainable education are reciprocally connected topicalities of the modern society because education has to promote and ensure sustainable development (Nounsheen A. et al., 2020; Vargas V. R. et.al., 2019), and at the same time the sustainability of education itself depends on the extent to which education is diverse, flexible, mobile and changing and whether it corresponds to interests, needs and development aims of the evolving and changing modern society as well as the future society (Aleixo A. N., Leal S., & Azeteiro U. M., 2018).

During modern globalization and the age of fourth industrial revolution the question about the advancement and competitiveness in the rapidly changing education and employment environment stands out as an intrinsic necessity. In order to reach one of the Sustainable Development aims defined by the United Nations (Transforming our world …, 2015) about qualitative education which leads to the acquisition of such knowledge, skills and competences that promote successful integration in the labour market and productive employability. Thus, one of the most important objectives of today's education is to help the young generation to accept changes, to get along with these continuous transformations as well as to self-actualize in the conditions of change. Nowadays, in the context of changes one of the most important tasks of the pedagogical process at schools is to promote the development of young people's competitiveness in the environment of formal and non-formal education both on the district and regional levels as well as national and international levels (Dementjeva O., 2012; Katane I. & Kalnina I., 2010). One of the components of the individual's competitiveness in the view of the new paradigm is self-management, including career self-management which is a lifelong process. A competitive personality as a result of the career self-

management, incl. professional self-management, owing to the acquired knowledge, skills, competences and experience is able to ensure one's own self-development and thus also demand and employability in the changing social, economic, labour market, field/profession environment.

Based on the synergetic approach, the idea that the career development, incl. professional development, is a non-linear development process in which there can be peaks of achievements and success as well as failures in professional performance becomes more topical. Career self-management skills and competences help the person to overcome the career failures and find motivation in oneself and internal resources for a new development stage ensuring the advancement of the career (Katane I. & Katans E., 2016).

The aim of the study: to evaluate students' career self-management skills and conditions of their formation.

The theoretical basis of empirical studies: literature review

Several scientific publications of the recent years establish the importance of career self-management in a person's life (Coetzee M., 2019; Krouwell S., van Luijn A., & Zweekhorst M., 2019; Lent R.W. et al., 2019; Lopez M.C., Gozalez-Lopez M.J., & Rodríguez-Ariza L., 2019; Paradnike K., Endriulaitiene A., & Bandzevičiene L., 2016; Secundo G. et al., 2019; Tims M. & Akkermans J., 2020). It is important for the individual in the career self-management process to be aware of his knowledge, skills, competences, abilities, experience to form the cooperation network and relations that can help him to attain the desired outcomes, to explore and understand oneself as well as in the interaction with the changing surrounding environment, incl. the labour environment, to see the diverse possibilities of the development and self-actualization (Arthur M.B., Inkson K., & Pringle J.K., 1999; Arthur M. B., Khapova S. N., & Wilderom C.P.M., 2005; Paradnike K., Endriulaitiene A., & Bandzeviciene L., 2016). Therefore already during schooling children and young people should accumulate knowledge, develop skills and along with experience develop also their competences that will be useful in the career self-management, and first of all, in choosing the future profession.

Studies of several authors (Ananina E.V., 2006; Aron I.S., 2015; Aron I.S., 2017; Besklubnaja A. B., 2013; Hirschi A. & Lage D., 2007; Imakaev V. et al., 2015; Katane I. et al., 2017; Klimov E. A., 2004; Koch M., Park S., & Zahra Sh.A., 2019; Sokolova D.V., 2015; Solomin I.L., 2006; Strods G., 2012; Wilhelm F. & Hirschi A., 2019) in which the authors of the current paper have singled out, summarized and systematized several career self-management skills: self-exploration and self-evaluation skills, the skill to explore and analyse the demands of the labour market, as well as to approximate personal interests and needs with one's knowledge, skills and competences in choosing the profession as well as with the demand of the concrete professions in the labour market can serve as the methodological basis for evaluating the career self-management skills; the skill to explore and sketch out the future intentions, to formulate aims, to draw future plans regarding education and/or professional activities; the skill to organise purposefully and guide the learning process, the skill to learn with motivation, independently and meaningfully; the skill to make decisions, incl. the skill to choose the profession and to take the responsibility for these decisions; the self-employment skills in the context of career self-management.

Until now several empirical studies have been performed in Latvia in the frame of which methods for evaluating career self-management skills have been developed and approbated experimentally (Lemesonoka I., 2017; Saulite M. & Andersone R., 2016). For instance, the following skills are singled out in the group of skills necessary for employability (Saulite M. & Andersone R., 2016): 1) the skill

to work in a team; 2) the skill to make decisions; 3) the planning and self-assessment skills; 4) the entrepreneurial skills; 5) the innovative technology skills.

The findings of researches performed by several authors (Tamaki M., Yamamoto K., & Managi Sh., 2018; Tomaszewski W., Perale F., & Xiang N., 2017) allow making the conclusion: the success of the students' career self-management, incl. the choice of the future profession and next educational institution, largely is defined by the career development guidance system established and developed in school, namely, conditions in which students' career self-management skills are formed. Self-exploration of students' interests and needs as well as self-assessment of oneself, incl. the career self-management skills is promoted in the frame of career development guidance (Aron I. S., 2017; Crisan C., Pavelea A., & Ghimbulut O., 2015; Katane I. et al., 2017; Wilhelm F. & Hirschi A., 2019;). The experience proves that many schools ensure a range of diverse activities to promote students' career self-management skills in the frame of career development guidance which has great importance.

Methodology

The empirical study is based on students' survey which was performed in 2019. It was a *case study* often used in educational sciences. This research took place in 7 comprehensive education schools of Aluksne district (Latvia).

In total, 162 students of Grade 7 - 9 from Latvia's general comprehensive schools, including urban and rural schools, participated in the survey. Group A includes 99 (61 %) students (49 boys and 50 girls), the distribution of respondents by grades: Grade 7 – 54, Grade 8 – 20, Grade 9 – 25 students. Group B comprises 63 (39 %) students (23 boys and 40 girls) with the following distribution of respondents: Grade 7– 25, Grade 8– 18, Grade 9 – 20 students. The sample comprises two groups of respondents – Group A and Group B. Group A includes students who participated in diverse events at school and outside it (class lessons with the career consultant; sessions of the mobile demonstration laboratories "TehnoBuss"; visits to the regional museum learning about the historian's work; meetings with businesspeople getting acquainted with entrepreneurship in the countryside; involving students in experiments testing the materials of the construction company; meetings and master cases with experts on art, etc.), the aim of which was the promotion of the career management skills of Grade 7 – 9 students. These students participated in different career guidance events at school and outside it. Group B students did not participate in these events.

The aim of the research was to evaluate students' career self-management skills and conditions of their formation. *The tasks of the research:* 1) to obtain students' self-management skills evaluation data using survey; 2) to compare the self-assessment data between both groups obtained during the experiment to determine the impact of school career development guidance measures on student self-esteem; 3) to perform data processing to obtain conclusive statistics.

The methodology of evaluating the career self-management skills developed and experimentally approbated by I. Lemeshonoka (Lemesonoka I., 2017) served as a basis when developing authors' questionnaire. Five groups of questions that describe students of the respective age group – Grade 7-9, were developed according to the career self-management skills included in the study (Table 1).

The questionnaire comprised 31 closed questions the answers to which were coded on 4-point scale (1-strongly disagree, 4-strongly agree). The Cronbach's alpha 0.77 describes the internal coherence of questions. Students filled in the questionnaires electronically.

Table 1

Career Self-Management Skills and their Indicators

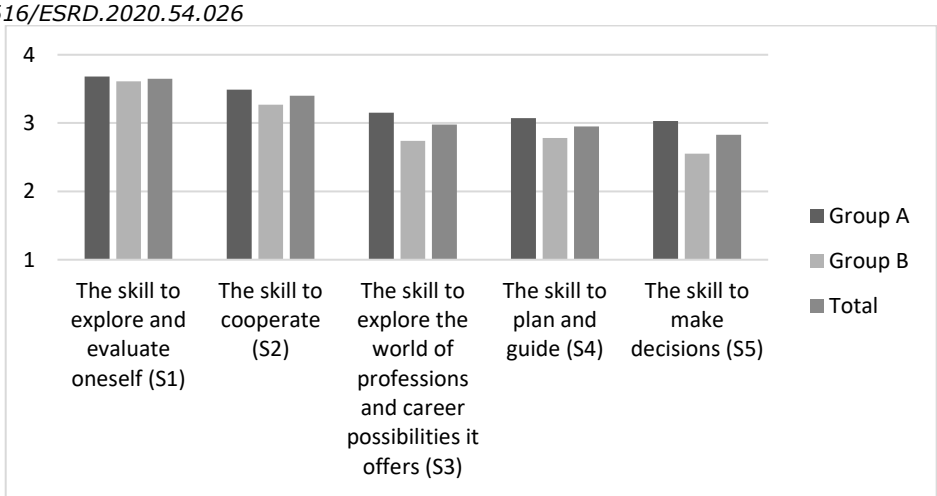
Career Self-Management Skills	Indicators
The skill to explore and evaluate oneself (S1)	• The student is aware of his possibilities and is able to relate realistically his interests. • The student is able to define the most important conditions that affect his attitude to learning. • The student can do a presentation and present oneself. • The student reacts to changes adjusting to new circumstances. • The student is able to summarise, maintain and apply his personal information.
The skill to cooperate (S2)	• The student is able to cooperate with classmates. • The student is able to cooperate with school mates. • The student is able to cooperate with school staff.
The skill to explore the world of professions and career possibilities it offers (S3)	• The student is able to obtain information about the local labour market. • The student knows that his personal health conditions could be an obstacle in choosing different professions. • The student is able to apply knowledge about the employment world. • The student is able to formulate his education possibilities after acquiring basic education.
The skill to plan and guide (S4)	• The student is able to evaluate factors related to finances. • The student is able to plan in real his actions. • The student is able to find adequate sources of information about the career possibilities. • The student overcomes stereotypes in forming the career.
The skill to make decisions (S5)	• The student uses the knowledge about himself to make decisions. • The student is able to express his personal opinion. • The student is able to listen to others' opinions and find a compromise. • The student performs research on the level of basic skills. • The student is able to express himself creatively.

Source: The questionnaire developed by the authors based on the research methodology by I. Lemeshonoka (Lemesonoka I., 2017)

The SPSS programme was used for data processing. Using the one sample Kolmogorov-Smirnov test, it was found out that data did not correspond to the normal distribution therefore further in the study the authors used non-parametric data analysis methods. The Mann-Whitney U test was used to compare differences between two independent groups.

Research results and discussion

Survey data were summed according to indicators obtaining the mean values of respondents' answers for each skill which were then used for evaluating students' career self-management skills. As seen in Figure 1, all skills of Group A are higher in comparison with Group B. The Mann-Whitney U test showed that there were significant differences between groups in the self-evaluation of the four skills: $U=2222$, $p=0.005$ (S2); $U=1926$, $p<0.001$ (S3); $U=2154$, $p=0.003$ (S4); $U=1485$, $p<0.001$ (S5).

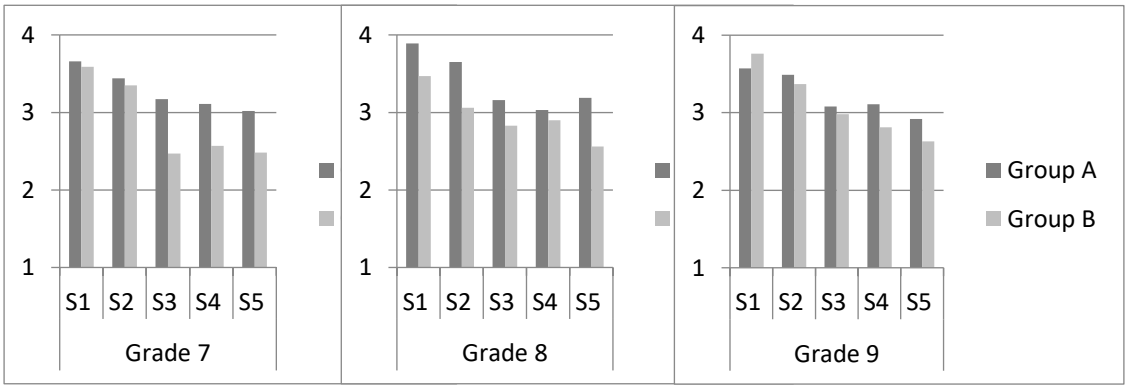


Source: authors' survey

Fig. 1. **Mean values of evaluations of Group A and Group B students' career self-management**

Thus, Group A respondents, judging by mean indicators, are able to cooperate better with school mates and school staff, to obtain information about the local labour market; they are able to evaluate better factors related to finances and are able to plan their actions and make decisions. The findings of the study allow concluding that the first *skill to explore and evaluate oneself* (S1) *develops in a longer period of time therefore students have not improved it in the frame of the study; the respondents' self-evaluation in relation to self-exploration has risen in both the groups therefore no differences have been established*.

Comparing students' skills per grades, it is evident that differences in skill levels are bigger between A and B groups in Grades 7 and 8 than between these groups in Grade 9 (Figure 2).



Source: authors' survey

Fig. 2. **Comparison of students' career self-management skills per grades**

The Mann-Whitney U test shows that the differences between Group A and Group B of Grades 7 and 8 are statistically significant (Table 2).

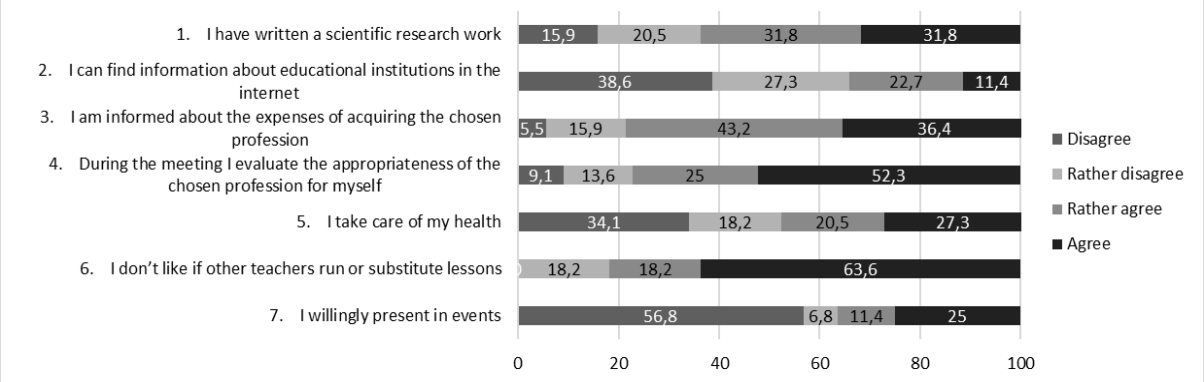
Table 2

Comparison of Group A and Group B respondents' skills: Results of Mann-Whitney U test

Grades	Values	S1	S2	S3	S4	S5
Grade 7	Mann-Whitney U p-value	594.000 0.388	561.500 0.220	269.500 <0.001*	290.000 <0.001*	319.500 <0.001*
Grade 8	Mann-Whitney U p-value	73.000 0.008*	74.000 0.008*	108.000 0.131	126.500 0.375	48.000 <0.001*
Grade 9	Mann-Whitney U p-value	175.000 0.121	191.500 0.240	215.500 0.559	177.500 0.136	157.000 0.048

**** - statistically significant differences***
Source: authors' survey

The majority of Grade 9 students only with difficulties can adjust to new circumstances (Item 6), la large part of students lack the necessary planning and self-management skills – they can hardly find information about educational institutions in the internet (Item 2), they have not been interested in finding out the expenses related to acquiring the chosen profession (Item 3). *Results of the evaluation of the above mentioned career self-management skills allow judging about the insufficient introduction into the self-managed learning process and the acquisition of innovative technologies, besides the application of the above mentioned skills in life activity is not directed towards the student's individual development aim* (Figure 3).



Source: authors' survey

Fig. 3. **Distribution of Grade9 students' responses (%):some examples to illustrate the insufficient skills**

The readiness of Grade 9 students to choosing the future profession is an important issue. Mean values of answers to this question of Group A students in Grade 9 (M=2.50, SD=1.25) do not differ significantly from Group B answers (M=2.75, SD=1.07), therefore the analysis was performed for all Grade 9 students together. The distribution of answers on whether a student has already chosen the future profession shows that only 30 % of students have already made their choice, 27 % of students are not yet sure about their choice and there are 18 % of students who have different versions of professions in mind but have not yet chosen it. The disturbing fact is that a quarter (25 %) of the surveyed Grade 9 students have not yet thought about the choice of the profession although 60 % of them participated in the events promoting the development of career self-management skills. *These data prove that in the context of the modern new competitiveness paradigm students are only partly aware of the fact that only people who are able to attune their personal aims that are directed to self-development and self-actualization, including the choice of the future profession, the development of the career self-management skills, to the transformations taking place in the society are successful*.

The evaluation of the obtained results allows concluding that in general Group A has higher career self-management skills than Group B. If students are compared by grades then one has to conclude that the carried out events have little impact on Grade 9 students. Thus, the events have been more valuable for Grades 7 and 8, encouraging students to start thinking about the future career in good time. *These data will be specified in further research*.

Conclusions

1) There are differences between self-evaluations of four career skills between Group A and Group B students that proves the impact of career guidance events on the self-evaluations of the career self-management skills of Group A students, except the skill to explore and evaluate oneself that

develops in a longer period of time therefore no differences have been stated in the frame of evaluating these differences between groups A and B.

2) The diverse events organized at school and outside it, the correspondence of their themes to students' interests and needs as well as the cooperation between school and other educational institutions in the frame of supporting the career development guidance influence positively the formation of students' self-management skills, therefore it is important to ensure a diverse support system of the career development guidance.
3) Without the support on the part of professional pedagogical staff and introduction into self-guided learning process students find it difficult to make rational decisions independently in the situations of choosing the career because they have not yet developed sufficient career self-management skills, including self-exploration and self-evaluation skills. Grade 7 – 9 students, students of the second stage of basic education, are not yet able to fully orient themselves in the process of social economic transformations, to evaluate the opportunities offered by the environment, and to define self-development aims in the everyday learning experience.

Bibliography

1. Aleixo, A.N., Leal, S., & Azeteiro, U.M. (2018). Conceptualization of sustainable higher education institutions, roles, barriers, and challenges for sustainability: An exploratory study in Portugal. *Journal of Cleaner Production,* Volume 172, pp. 1664-1673. DOI: https://doi.org/10.1016/j.jclepro.2016.11.010
2. Ananina, E. V. (2006). Gotovnost starsheklassnikov k professionalnomu samoopredeleniju (High School Student Readiness for Professional Self-Determination). *Vestnik JuUrGU*, Tom 9, s. 62–67.
3. Aron I.S. (2017). Agency in Professional Self-Determination of Adolescentswith Special Social Situations of Development. *Cultural-Historical Psychology*, Volume 13, Issue, 4, pp. 64-72. DOI: 10.17759/chp.2017130407.
4. Aron, I. S. (2015). Motivacija k professional'nomu samoopredeleniju podrostkov, nahodjashhihsja v osoboj social'noj situacii razvitija (Motivation for Professional Self-Determination of Adolescents in a Special Social Development Situation). *Psihologicheskaja nauka i obrazovanie,* Tom 7, Nomer 1, s. 154–164.
5. *Arthur, M.B., Khapova, S.N., & Wilderom C.P.M. (2005). Career Success in a Boundaryless Career World. Journal of Organizational Behavior, Volume* 26, Issue 2*, pp. 177-202.* DOI: https://doi.org/10.1002/job.290
6. Arthur, M.B., Inkson, K., & Pringle, J.K. (1999). *The New Careers: Individual Action and Economic Change.* Thousand Oaks, CA: Sage.
7. Besklubnaja, A.B. (2013). *Formirovanie gotovnosti starsheklassnikov k vyboru professii (Formation of Readiness of Senior Pupils to Choose a Profession).* Avtoreferat. Nizhnij Novgorod: Nizhegorodskij gosudarstvennyj arhitekturno-stroitel'nyj universitet. Retrieved: http://www.dslib.net/orders/?action=list&id=4264747. Access: 04.03.2020.
8. Coetzee, M. (2019). The Value of Future-Fit Psychosocial Career Self-management Capabilities in Sustaining Career Wellbeing. In I. Potgieter, N. Ferreira, & M. Coetzee, (Eds.), *Theory, Research and Dynamics of Career Wellbeing* (pp. 139-157). Springer, Cham. DOI: https://doi.org/10.1007/978-3-030-28180-9_7
9. Crisan, C., Pavelea, A., & Ghimbulut, O. (2015). A Need Assessment on Students' Career Guidance. *Procedia - Social and Behavioral Sciences,* Volume 1805, pp. 1022-1029.
10. Dementjeva O. (2012). *Profesionalas vidusskolas audzeknu konkuretspejas attistiba studijam Eiropas augstakas izglitibas telpa (Development of vocational learners' competitiveness for studies in European higher education space)*. Riga: LU, 167 lpp.
11. Hirschi, A. & Lage, D. (2007). The Relation of Secondary Student's Career Choice Readiness to a Six-Phase Model of Career Decision-Making. *Journal of Career Development*, Volume 34, Issue 2, pp. 164–191.
12. Imakaev, V., Gadzhieva, L., Vihman, A., & Popov, A. (2015). Gotovnost' starsheklassnikov k professional'nomu samoopredeleniyu: empiricheskaja model' i eyo interpretacija (Senior Students' Readiness for Professional Self-Determination: An Empirical Model and Its Interpretation), *Uspehi Sovremennoy nauki, Tom 3, s.* 78-84. Retrieved: http://presto-online.ru/content/gotovnost-starsheklassnikov-k-professionalnomu-samoopredeleniyu-empiricheskaya-model-i-ee. Access: 04.03.2020.
13. Katane I.,& Kalnina I. (2010). *Skolenu personibas konkuretspejas attistiba neformalas komercizglitibas vide (The Development of Secondary School Pupils' Competitiveness within the Environment of Non-Formal Commercial Education)*. Jelgava: LLU, 331 lpp.
14. Katane I., & Katans E. (2016). Programming Specialist's Professional Development as Lifelong Self-Determination and Self-Organization Process. In Proceedings of the International Scientific Conference *Society. Integration. Education*, Vol. 2 (pp. 535- 548). Rezekne: RA. DOI: http://dx.doi.org/10.17770/sie2016vol2.1422
15. Katane I., Katans E., Korna E., & Kristovska I. (2017). Students' Professional Direction Towards Engineering Professions at Comprehensive Secondary Schools in the Context of Self-Determination. In A. Aboltins (Ed.),

Proceedings of the 16th International Scientific Conference *Engineering for Rural Development,* Vol. 16 (pp. 811- 818). Jelgava: LLU TF. DOI: 10.22616/ERDev2017.16.N165

16. Klimov, E. A. (2004). *Psihologija professional'nogo samoopredeleniya (Psychology of Professional Self-Determination)*. Moskva: Akademija. Retrieved: http://padaread.com/?book=3942&pg=1. Access: 04.03.2020.
17. Koch, M., Park, S., & Zahra, Sh. A. (2019). Career Patterns in Self-Employment and Career Success. *Journal of Business Venturing,* 105998**.** DOI: https://doi.org/10.1016/j.jbusvent.2019.105998. Retrieved: https://www.sciencedirect.com/science/article/abs/pii/S0883902618307316. Access: 16.03.2020.
18. Krouwel, S., van Luijn, A., & Zweekhorst, M. (2019). Developing a Processual Employability Model to Provide Education for Career Self-Management. *Education + Training*. DOI: https://doi.org/10.1108/ET-10-2018-0227 Retrieved: https://www.emerald.com/insight/content/doi/10.1108/ET-10-2018-0227/full/html. Access: 16.03.2020.
19. Lemesonoka, I. (2017). *Skolena karjeras vadibas prasmju veidosanas visparizglitojosas skolas pedagogiskaja procesa (Development of pupils' career management skills in the pedagogical process of general education schools)*. Doctoral Thesis. Riga: RPIVA.
20. Lent, R.W., Morris, T.R., Penn, L.T., & Ireland, G.W. (2019). Social–Cognitive Predictors of Career Exploration and Decision-Making: Longitudinal Test of the Career Self-Management Model. *Journal of Counselling Psychology,* Volume 66, Issue 2, pp. 184-194. DOI: https://doi.org/10.1037/cou0000307
21. Lopez M.C., Gozalez-Lopez M.J., & Rodriguez-Ariza L. (2019). Applying the Social Cognitive Model of Career Self-Management to the Entrepreneurial Career Decision: The Role of Exploratory and Coping Adaptive Behaviours. *Journal of Vocational Behavior,* Volume 112, pp. 255-269.
22. Nounsheen, A., Zai, S.A.Y., Waseem, M., & Khan, Sh.A. (2020). Education for Sustainable Development (ESD): Effects of Sustainability Education on Pre-Service Teachers' Attitude Toward Sustainable Development (SD). *Journal of Cleaner Production, vol. 250.* DOI: https://doi.org/10.1016/j.jclepro.2019.119537. Retrieved: https://www.sciencedirect.com/science/article/pii/S0959652619344075. Access: 03.02.2020.
23. Paradnike, K., Endriulaitiene, A., & Bandzeviciene, L. (2016). Career Self-Management Resources in Contemporary Career Frameworks: A Literature Review. *Organizacijų Vadyba: Sisteminiai Tyrimai*, Volume 76, pp. 91-106. DOI: http://dx.doi.org/10.7220/MOSR.2335.8750.2016.76.6
24. Saulite, M. & Andersone, R. (2016). Identification of Career Management Skills Related Problems in the Study Process of Podologists. in Proceedings of the International Scientific Conference *Society. Integration. Education* (pp. 221 - 230). Rezekne: RTA.
25. Secundo, G., De Carlo, E., Madaro, A., Maruccio, G., Signore, F., & Ingusci, E. (2019). The Impact of Career Insight in the Relation with Social Networks and Career Self-Management: Preliminary Evidences from the Italian Contamination Lab. *Sustainability*, Volume 11, Issue 21, 5996. DOI: https://doi.org/10.3390/su11215996 Retrieved: https://www.mdpi.com/2071-1050/11/21/5996/htm. Access: 28.02.2020.
26. Sokolova, D.V. (2015). Izuchenie psihologicheskogo aspekta professional'nogo samoopredeleniya obuchajushhihsya (The Study of the Psychological Aspect of Professional Self-Determination of Students). *Mir nauki*, Tom 3, s. 1 – 10. Retrieved: http://mir-nauki.com/PDF/33PSMN315.pdf. Access: 28.02.2020.
27. Solomin I.L. (2006). *Sovremennyje metody psikhologicheskoi ekspress-diagnostiki i professional'nogo konsul'tirovaniya (Contemporary Methods of Rapid Psychological Diagnostics and Career Counselling)*. Sankt-Peterburg: Rech.
28. Strods G. (2012). *Studentu pašnotStrods G. (2012). Studentu pasnoteiksanas veicinasana kooperativas macisanas procesa augstskola (Promotion of Students' Self-direction in Cooperative Learning in University)*. Promocijas darbs. Rīga: LU
29. Tamaki, M., Yamamoto, K., & Managi, Sh. (2018). The Relationship Between School-Based Career Education and Subsequent Incomes: Empirical Evidence from Japan. *Economic Analysis and Policy*, Volume 58, pp. 70-87. DOI: https://doi.org/10.1016/j.eap.2017.12.007
30. Tims, M., & Akkermans, J. (2020). Job and Career Crafting to Fulfil Individual Career Pathways. In J. W. Hedge, & G.W. Carter (Eds.). *Career Pathways: From School to Retirement* (pp. 165-189). Oxford: Oxford University Press.
31. Tomaszewski, W., Perales, F., & Xiang, N. (2017). Career Guidance, School Experiences and the University Participation of Young People from Low Socio-Economic Backgrounds. *International Journal of Educational Research*, Volume 85, pp.11-23.
32. *Transforming Our World: the 2030 Agenda for Sustainable Development*. (2015). United Nations General Assembly, 70/1. Retrieved: https://www.un.org/en/development/desa/population/migration/generalassembly/docs/globalcompact/A_RES_70_1_E.pdf. Access: 22.02.2020.
33. Vargas, V.R., Lawthom, R., Prowse, A., Randles S., & Tzoulas K. (2019). Implications of Vertical Policy Integration for Sustainable Development Implementation in Higher Education Institutions. *Journal of Cleaner Production*, Volume 235, pp. 733-740. DOI: https://doi.org/10.1016/j.ijme.2019.100322.
34. Wilhelm, F., & Hirschi, A. (2019). Career Self-Management as a Key Factor for Career Wellbeing. In I.L. Potgieter, N. Ferreira & M. Coetzee (Eds.). *Theory, Research and Dynamics of Career Wellbeing*. Switzerland: Springer.

Proceedings of the 2020 International Conference "ECONOMIC SCIENCE FOR RURAL DEVELOPMENT" No 54
Jelgava, LLU ESAF, 12-15 May 2020, pp. 223-230
DOI: 10.22616/ESRD.2020.54.027

AGE AND GENDER–BASED DIFFERENCES IN MOTIVATION OF CREATIVE EMPLOYEES: CASE OF IT PROFESSIONALS IN LATVIA

Svetlana Gribanova[1], Mg.soc.; **Anna Abeltina**[2], Dr.oec.
[1,2]Turiba University, Latvia

Abstract. The purpose of this research is to identify differences in the perception of motivation level in terms of gender, age and job category. The results of our research confirmed that such differences exist. The age-based differences in the system of motivation of IT professionals in Latvia are much more significant than gender-based differences. The differences between men and women exist only in the younger age group. The most significant differences there are between two professional positions: managers (people who have subordinates), and performers (people who do not have subordinates). Gender-based differences in the system of motivations for performers and managers were not found.

Key words: motivation to work, stable development, quality of human resource, creative employees
JEL code: M15, O15, M12

Introduction

The market of IT technologies in modern Latvia is promising and rapidly developing. According to the Central Statistical Bureau, the number of employees in this sector over the last 10 years has increased by 58 %, from 18.9 thousand in 2008 to more than 30 thousand in 2018. The number of IT companies in Latvia in 2008 was 2.6 thousand, now there are already more than six thousand. The share of IT sector in Latvia's GDP has grown to 4.2 %.

Success of a company mostly depends on stability in business processes management (Dominguez, 2018; Graa, Abdelhak, 2016). Human resources are often considered as one of the most important factors in achievement of sustainable management (Zaborova, Markova, 2018; Vetrakova et al., 2014). That applies particularly to creative employees, i.e. employees who create new products, processes and promote a company in the market (Stachova, et al.;2018, Burton, 2014). The productivity of creative employees, their new ideas, as well as their efforts to promote the company create the company value (Bartuska, Hanzl, Lizbetinova, 2016), and business success or failure depends on their productivity (Mura, Rozsa, 2013). Motivation of employees influences labour productivity of creative employees (Schwartz, 2018). It is a complex and purposeful process of creating working environment and atmosphere that helps to meet expectations, needs, and interests of employees, stimulates their actions (Diefendorff, Seaton, 2015).

The key factor influencing the company management and its stable development is the quality of human potential. Successful companies are always aware of importance of positive motivation of their employees, perceiving them as the greatest company asset. In information economy, in IT sector, human resources are becoming the biggest competitive advantage (Iqbal, 2019). Effective management of human resources is connected with maintaining motivation of employees.

Motivation to work is a very complicated system, representing a combination of separate motives. Motives are elements of personality psychology that stimulate human activity to achieve certain goals (Stone, 2005; Artz, 2008). Motives can be considered as "motor" of someone's actions or a driving force of people's behaviour (Vokoun et al., 2018). Needs, as a source of ulterior motives, together with interests, values and ideals belong to the structure of human motivation, and are the most powerful concepts of human behaviour. This creates a certain hierarchy of human motives. Stronger motives (aspirations and ambitions, for instance) appear only when weaker motives are satisfied (Xu et al., 2017).

An approach based on assessment of personnel management results should be focused on maintaining the creativity of employees, increasing their labour productivity and creating conditions encouraging team work within the company (Panday, 2017). The purpose of this research is to analyse and determine the differences in the motivation system of IT professionals in Latvia in terms of gender, age and professional position.

Literature review

There is a wide range of tools used for motivation of employees. F. Taylor defined money as the most important factor in motivating employees to achieve high labor productivity in industry (Bernad, Walsh, Mills, 2005). This form of reward, according to Taylor, leads to employee's satisfaction and directly affects his work. Salary plays an important role in maximizing efficiency of employees (Kampkötter, 2015). Some researches (Plessis, Douangphichit, Dodd, 2016; Zameer, Ali, Nisar, Amir, 2014) demonstrate that most companies to increase efficiency of employees use that salary, promotion, bonuses and other types of reward. However, other researches reveal that verbal encouragement, setting of a realistic and achievable goal, employee involvement, responsibility, feedback, and leader personality are also considered as very important motivation factors (Sanchez-Sellero, MC; Sanchez-Sellero, P., 2018).

The role of business management is to identify motivational factors effective for employees of a particular area and a particular company. A number of studies point out that there are significant differences connected with age of employees (Idrees, Hafeez, Kim, 2017, Rabl, 2010) and their position in the company. For example, heads of departments, except for financial factors, are often motivated by freedom in decision-making (Mikkelsen, Jacobsen, Andersen, 2017), desire to have independence, an opportunity for self-realization (Majumder, Hossain, 2012). Employees having a lower level of job are more often motivated by financial rewards (Manzoor, 2011).

Another factor that has a significant impact on the structure of motivational factors is gender. Men, according to the researches, make more efforts to achieve wellbeing, whereas women strive for balance between work and private life (Inceoglu, Segers, Bartram, 2012; Arnania-Kepuladze, 2010).

Research methodology

The purpose of this research is to find out whether there are statistically significant differences in motivations of IT professionals in Latvian companies based on gender, age and professional position in the company. To determine the level of motivation, we used an online survey method. The questionnaire consisted of closed questions. In the first part of the questionnaire social, demographic and qualification characteristics of employees in companies are examined. The second part of the questionnaire was focused on motivation factors. By means of these data, such parameters as material rewards, freedom and independence in decision-making, career prospects and an opportunity to improve qualification, get new knowledge and skills were determined.

The survey was carried out in 2019. The sample size was 350 people. All interviewed people worked in the field of information technologies in Latvian companies. 77 % of the respondents were men, 23 % - women.

For studying the motivational structure, respondents were asked to rate the following statements on a scale from 1 to 7, where 1 means-completely wrong, and 7-absolutely true,

- It is very important for me that my job allows me to improve my qualification and get new skills.
- I will never work where I won't be able to determine myself how I do my job.

- I really appreciate my job, I'm scared to lose it.
- I was intentionally looking for a job where I have career prospects.
- I am not very satisfied with my salary, but in this job I have career prospects.
- I have a good job, but if I am offered a higher salary, I will definitely agree.
- I am ready to lose a little in salary in order to be able to determine myself when my working day begins and ends.
- I am not very satisfied with my salary, but this job gives me useful experience, knowledge and skills.

Then, using average values of each motivational factor, we determined an order of importance of each factor and differences in the average values depending on gender, age and professional position (a manager or a performer). Respondents were divided into four groups: 17-24 years (7 %), 25-34 years (34 %), 35-44 years (33 %), over 45 years (26 %).

The research results and discussion

Table 1 presents average values of motivational factors for men and women, as well as the results of t-test for two independent samples, showing the significance of differences in the system of motivation of men and women among IT professionals.

Table 1

Average values of men and women motivational factors

Motivational factors	Man	Woman	p-value
It is very important for me that my job allows me to improve my qualification and get new skills.	5.52	5.53	0.968
I will never work where I won't be able to determine myself how I do my job.	4.74	5.35	0.742
I have a good job, but if I am offered a higher salary, I will definitely agree.	5.35	5.19	0.363
I'm ready to work overtime and without weekends if I'm paid well.	5.41	5.01	0.048**
I always do my job equally well, no matter how much I get paid for it.	5.34	5.46	0.501
I am ready to lose a little in salary in order to be able to determine myself when my working day begins and ends.	4.45	4.17	0.165
I am not scared of losing my job, as I am sure that I will always find a new job that will satisfy my needs.	4.59	4.27	0.135
When I participate in an interesting project, I forget about working time, and I am ready to work as much as necessary.	5.24	5.28	0.821
I was intentionally looking for a job where I have career prospects.	4.73	4.78	0.804
I really appreciate my job, I'm scared to lose it.	4.61	4.82	0.266
I am not very satisfied with my salary, but in this job I have career prospects.	3.94	3.91	0.893
I am not very satisfied with my salary, but this job gives me useful experience, knowledge and skills.	4.45	4.28	0.371

***** P-value < 0.05***
Source: author's calculations

The table above demonstrates that the opinions of men and women IT professionals on what motivates them to work, hardly differ. The significance of t-test (p-value) in all cases, except one, is more than 0.05. The exception is in the attitude to work overtime for extra money. As the results of research evidence, women less often agree to work without weekends and in the evenings, even if they are paid well for it. Evidently, women after a working day have additional responsibilities related to family and domestic work, they cannot delegate to anyone else and have to perform themselves. Men IT professionals in Latvia feel more free after work, and are ready to work overtime.

In this way, there is only one difference in motivational factors, which is explained by gender differences. All other motives for work, such as career prospects, opportunities to improve

qualification, freedom in decision making, challenges connected with complicated and interesting tasks, are equally important for both men and women working in the field of IT technologies in Latvia.

Table 2 presents average values of the same motivational factors, but tests differences related to age, not gender. The significance of differences in this case were tested using one-factor analysis of variances.

Table 2

The influence of age on the average value of motivational factors

	17-24	25-34	35-44	45 +	Total	p-value
It is very important for me that my job allows me to improve my qualification and get new skills.	4.4	5.78	5.39	5.34	5.52	0.002***
I will never work where I won't be able to determine myself how I do my job.	4.4	4.93	4.42	4.64	4.7	0.04***
I have a good job, but if I am offered a higher salary, I will definitely agree.	4.4	5.42	5.31	5.23	5.31	0.104
I'm ready to work overtime and without weekends if I'm paid well.	5	5.32	5.56	5.1	5.32	0.223
I always do my job equally well, no matter how much I get paid for it.	4.7	5.42	5.27	5.46	5.37	0.369
I am ready to lose a little in salary in order to be able to determine myself when my working day begins and ends.	4.6	4.34	4.49	4.33	4.39	0.833
I am not scared of losing my job, as I am sure that I will always find a new job that will satisfy my needs.	4.1	4.73	4.67	4.06	4.52	0.014***
When I participate in an interesting project, I forget about working time, and I am ready to work as much as necessary.	5	5.32	5.2	5.21	5.25	0.858
I was intentionally looking for a job where I have career prospects.	4.8	5.11	4.74	4.12	4.74	0. 000***
I really appreciate my job, I'm scared to lose it.	3.9	4.7	4.55	4.79	4.65	0.272
I am not very satisfied with my salary. but in this job I have career prospects.	3.7	4.12	3.88	3.7	3.93	0.221
I am not very satisfied with my salary, but this job gives me useful experience, knowledge and skills.	4	4.34	4.54	4.44	4.41	0.612

****** P-value < 0.05***
Source: author's calculations

The analysis of variances indicates that age-based differences in the system of motivation of IT professionals in Latvia are much more significant than gender-based differences. An opportunity to improve qualification is more important for people over 25 years old. Young professionals much rarer choose a job on this basis. The same conclusion can be drawn concerning the importance of determining the content of work on their own. This motive is more important for middle-aged and older people.

Professionals under 25 years old and over 45 years old are more scared of losing their job, as they are not very confident that they will be able to quickly find another one. People of middle generation feel much more confident in IT market.

What's more, older people are less career-oriented. They are less often attracted by work that will allow them to move up the career ladder. Managing positions in their motivation system do not take the first places.

During the research, we tested the hypothesis of whether there are gender-based differences in the motivation system of different age groups. The results evidence that the differences between men and women exist only for the younger age group. These differences are presented in Table 3. The significance of the differences was tested using the t-test.

Table 3

Gender-based differences in the motivation system in age group of 17-25 years old

	Male	Female	p-value
It is very important for me that my job allows me to improve my qualification and get new skills.	4.5	4	0.735
I will never work where I won't be able to determine myself how I do my job.	4.88	2.5	0.076
I have a good job, but if I am offered a higher salary, I will definitely agree.	4.63	3.5	0.512
I'm ready to work overtime and without weekends if I'm paid well.	5.25	4	0.341
I always do my job equally well, no matter how much I get paid for it.	4.63	5	0.782
I am ready to lose a little in salary in order to be able to determine myself when my working day begins and ends.	4.88	3.5	0.245
I am not scared of losing my job, as I am sure that I will always find a new job that will satisfy my needs.	4.63	2	0.113
When I'm participating in an interesting project, I forget about working time, and I am ready to work as much as necessary.	5.25	4	0.007***
I was intentionally looking for a job where I have career prospects.	5.25	3	0.316
I really appreciate my job, I'm scared to lose it.	3.63	5	0.031***
I am not very satisfied with my salary, but in this job I have career prospects.	3.88	3	0.001***
I am not very satisfied with my salary, but this job gives me useful experience, knowledge and skills.	4.25	3	0.344

****** P-value < 0.05***
Source: author's calculations

According to the data presented in Table 3, we can see that young women are much more scared of losing their jobs than men of the same age, less often choose a job that can provide career opportunities, and are less motivated by the content of work. Men are more often ready to refuse free time for the sake of working at an interesting project. In older age groups, gender-based differences in the motivation system were not found.

Table 4

Professional differences in average values of motivational factors

	Manager	Performer	p-value
It is very important for me that my job allows me to improve my qualification and get new skills.	5.64	5.42	0.141
I will never work where I won't be able to determine myself how I do my job.	4.85	4.58	0.071
I have a good job, but if I am offered a higher salary, I will definitely agree.	5.27	5.34	0.625
I'm ready to work overtime and without weekends if I'm paid well.	5.62	5.09	0.002***
I always do my job equally well, no matter how much I get paid for it.	5.36	5.37	0.981
I am ready to lose a little in salary in order to be able to determine myself when my working day begins and ends.	4.58	4.24	0.048***
I am not scared of losing my job, as I am sure that I will always find a new job that will satisfy my needs.	4.68	4.4	0.125
When I'm participating in an interesting project, I forget about working time, and I am ready to work as much as necessary.	5.6	4.97	0.000***
I was intentionally looking for a job where I have career prospects.	5.25	4.34	0.000***
I really appreciate my job, I'm scared to lose it.	4.81	4.53	0.081
I am not very satisfied with my salary, but in this job I have career prospects.	3.99	3.88	0.514
I am not very satisfied with my salary, but this job gives me useful experience, knowledge and skills.	4.42	4.41	0.988

****** P-value < 0.05***
Source: author's calculations

One of the objectives of the research was to assess the influence on importance of motivational factors of professional position. In this research, we identified two professional positions: managers, i.e. people who have subordinates, and performers (people who do not have subordinates). In the Table 4 we can see how the motivations of managers and performers differ.

As can be seen from the data presented in Table 4, performers less often look for a job that provides professional growth, are less ready to work overtime doing some interesting job, and value material income higher than an opportunity to do an interesting job. Gender-based differences in the system of motivations for performers and managers were not found.

Based on the results of our research, we concluded that motivational factors such as salary, career prospects, independence and professional growth are motivating for all employees, regardless of gender and age. Men are simply more motivated by career and can spend more overtime on work than women. This leads to the fact that women lose to men in moving up the ladder. The results obtained contradict many studies, where it is said that men are more oriented to salary, while women consider working conditions and workplace organization to be more important (Arnania-Kepuladze, 2010; Bazydlo, 2016).

Our research demonstrates that there is a certain gender equality in the information technology market in Latvia, as it is shown in the study (Freund, 2006). The results of our research show that the motivation programme for IT professionals can be created regardless of gender, and we do not see any significant differences in the motivational needs of men and women.

If we talk about age-based differences, the results of the research evidence that the age group up to 25 years old feels the most vulnerable in the labour market in Latvia. Therefore, they are more motivated by availability of work than by its content and prospects. They value job and are not ready to change it for the sake of unclear career prospects. The same can be said about the group of professionals over 45 years old.

In case of young employees, statistically significant gender-based differences were confirmed. It is necessary to take into account the needs of separate groups due to statistically significant differences. Among young people, men tend to rate analysed motivational factors higher than women. Women are more inclined to stability.

There were statistically significant differences in the motivation system of performers and managers. Therefore, a separate motivational programme should be created for each of these categories.

Furthermore, the results of our research prove that performers are more motivated by material motivators and this is confirmed by other studies (Manzoor, 2011; Kim, et al., 2015).

Motivational programmes can be created for managers and performers regardless of gender.

Conclusion

The statement that qualitative human resources have become an integral part of the company's strategy has been confirmed (Klement, Hurakova, 2016). Employees play a key role in realization of overall strategy in business development. The values of motivated employees influence on efficiency of business processes and, consequently, the overall success of the company (Zaborova, Glazkova, Markova, 2017).

The purpose of this research was to identify differences in the perception of motivation level in terms of gender, age and job category. The results of our research confirmed that such differences exist. In case of mixed groups of employees, this fact should be taken into account in the process of motivational programmes development. Despite the similarity in the order of importance of some

motivational factors from the point of view of men and women, they perceived individual motivation differently. Thus, the purpose of the research was achieved.

Bibliography

1. Arnania-Kepuladze, T. (2010). Gender Stereotypes and Gender Feature of Job Motivation: Differences or Similarity? Problems of Perspective Management, No. 8, pp. 84–93.
2. Artz, B. (2008). "The Role of Firm Size and Performance Pay in Determining Employee Job Satisfaction Brief: Firm size, Performance Pay, and Job Satisfaction," Labour 2018; 22(2), pp. 315-343.
3. Aydin, A., Tiryaki, S. (2018). "Impact of Performance Appraisal on Employee Motivation and Productivity in Turkish Forest Products Industry: A Structural Equation Modelling Analysis," Drvna Industrija 2018; 69(2), pp. 101-111.
4. Bartuska, L., Hanzl, J., Lizbetinova, L. (2016). Possibilities of Using the Data for Planning the Cycling Infrastructure. Procedia Engineering, No. 161, pp. 282–289.
5. Bazydlo, A. (2016). What Motivates Managers? Money, Yes, but so Much More. Clark University and Center for Creative Leadership: Worcester. p. 53.
6. Bernad, L.C., Walsh, R.P., Mills, M. (2005). The Motivation Analysis Test: An Historical and Contemporary Evaluation. Psychological Reports, No. 96, pp. 464–492.
7. Burton, K. A Study of Motivation: How to Get Your Employees Moving. Bloomington: SPEA honours. p. 33.
8. Daud, N. (2015). "Determinants of Job Satisfaction: How Satisfied are the New Generation Employees in Malaysia?" Procedia - Social and Behavioral Sciences, No. 219, pp. 208-213.
9. Diefendorff, J.M., Seaton, G.A. (2015). Work Motivation. The University of Akron: Akron, OH, USA, p. 6.
10. Dominguez, N. (2018). SME Internationalization Strategies: Innovation to Conquer New Markets. Hoboken: Wiley Backwell. p. 360.
11. Freund, A.M. (2006). Age-differential Motivational Consequences of Optimization Versus Compensation Focus in Younger and Older Adults. Psychology and Aging 2006, No. 21, pp. 240–252.
12. Graa, A., Abdelhak, S. (2016). A Review of Branding Strategy for Small and Medium Enterprises. Acta Oeconomica Universitatis Selye, No. 5, pp. 67–72.
13. Idrees, M.D., Hafeez, M., Kim, J.Y. (2017). Workers' Age and the Impact of Psychological Factors on the Perception of Safety at Construction Sites. Sustainability, No. 9, p. 745.
14. Inceoglu, I., Segers, J., Bartram, D. (2012). Age-related Differences in Work Motivation. The Journal of Occupational and Organizational Psychology, No. 85, pp. 300–329.
15. Iqbal, A. (2019). The Strategic Human Resource Management Approaches and Organisational Performance: The Mediating Role of Creative Climate. Journal of Advanced Research in Management, No. 16, pp. 181–193.
16. Kampkötter, P. (2015). Performance Appraisals and Job Satisfaction. The International Journal of Human Resource Management, No. 28, pp. 750–774.
17. Kim, S., Jin-Dong, K., Yoonseok, S., Gwang-Hee, K. (2015). Cultural Differences in Motivation Factors Influencing the Management of Foreign Laborers in the Korean Construction Industry. International Journal of Project Management, No. 33, pp. 1534–1547.
18. Klement, I., Hurakova, T. (2016). Determining the Influence of Sample Thickness on the High-temperature Drying of Beech Wood (Fagus sylvatica L.). BioResources, No. 11, pp. 5424–5434.
19. Majumder, M., Hossain, T. (2012). Human Resource Management Practices and Employees' Satisfaction towards Private Banking Sector in Bangladesh. The International Journal of Management Education, No. 2, pp. 55–58.
20. Manzoor, Q.A. (2011). Impact of Employees' Motivation on Organizational Effectiveness. European Journal of Business and Management, No. 3, pp. 36–45.
21. Mikkelsen, M.F., Jacobsen, C.B., Andersen, L.B. (2017). Managing Employee Motivation: Exploring the Connections between Managers' Enforcement Actions, Employee Perceptions, and Employee Intrinsic Motivation. International Public Management Journal, No. 20, pp. 183–205.
22. Minarova, M. (2015). "Managers in SMEs and Their Emotional Abilities," Acta Oeconomica Universitatis Selye 2015; 4(1), pp. 83-92.
23. Mura, L., Haviernikova, K., and Machova, R. (2017). "Empirical Results of Entrepreneurs' Network: Case Study of Slovakia," Serbian Journal of Management 2017; 12(1), pp. 121-131.
24. Mura, L., Rozsa, Z. (2013). The Impact of Networking on the Innovation Performance of SMEs. Prague: The 7th International Days of Statistics and Economics. p. 6.
25. Panday, J. (2018). Managing Emotional Labor for Service Employees: An HRM-based Approach. Human Resources Management International Digital, No. 26, pp. 1–4.
26. Plessis, A.J., Douangphichit, N., Dodd, P. (2016). HRM in Relation to Employee Motivation and Job Performance in the Hospitality Industry. Journal International Business Resource Marketing, No. 1, pp. 12–21.
27. Rabl, T. (2010). Age, Discrimination, and Achievement Motives—A Study of German Employees. Personnel Review, No. 39, pp. 448–467.
28. Robbins, S. P., Odendaal, A., Roodt, G. (2007). Organizational Behaviour: Global and Southern African Perspectives, Cape Town: Pearson Southern Africa (Pty) Ltd. P. 243.

29. Sanchez-Sellero, M.C., Sanchez-Sellero, P. (2018). Determinants of Job Satisfaction in Wood and Paper Industry: Study in Spain and Findings in Other Countries. Maderas-Ciencia Y Tecnologia, No. 20, pp. 641–660.
30. Sanchez-Sellero, M.C., Sanchez-Sellero, P., Cruz-González, M.M. (2018). Determinants of Job Satisfaction in the Spanish Wood and Paper Industries: A comparative Study Across Spain. Drvna Industrija, No. 69, pp. 71–80.
31. Schwartz, M. (2018). The Motivation of Employees is Becoming More and More Important. Stahl und Eisen, No. 138, pp. 61–63.
32. Stachova, K., Stacho, Z., Blstakova, J., Hlatká, M., Kapustina, L.M. (2018). Motivation of Employees for Creativity as a Form of Support to Manage Innovation Processes in Transportation-Logistics Companies. Nase More, No. 65, pp. 180–186.
33. Stone, R. J. (2005). Human Resource Management. Milton: John Wiley & Sons.
34. Vetrakova, M., Durian, J., Sekova, M., Kascakova, A. (2014). Employee Retention and Development in Pulp and Paper companies. BioResources, No. 11, pp. 9231–9243.
35. Vokoun, M., Caha, Z., Strakova, J., Stellner, F., and Vachal, J. (2018). "The Strategic Importance of Human Resources Management and the Roles of Human Capital Investment and Education," Scientific Papers of the University of Pardubice 2018; 42(1), pp. 258-268.
36. Xu, Y., Wang, Y., Tao, X., Lizbetinova, L. (2017). "Evidence of Chinese Income Dynamics and its Effects on Income Scaling Law," Physica A: Statistical Mechanics and its Applications, No. 487, pp. 143-152.
37. Zaborova, E., Markova, T. (2017). Human Capital as a Factor of Regional Development. In Proceedings of the 12th International Days of Statistics and Economics, Prague, Czech, pp.1981-1990.
38. Zaborova, E.N., Glazkova, I.G., Markova, T.L. (2017). Distance Learning: Students' Perspective. Sotsiologicheskie Issledovaniya, No. 2, pp. 131–139.
39. Zameer, H., Ali, S., Nisar, W., Amir, M. (2014). The Impact of the Motivation on the Employee's Performance in Beverage Industry of Pakistan. International Journal of Academic Research in Accounting, Finance and Management Sciences, No. 4, pp. 293–298.

Proceedings of the 2020 International Conference "ECONOMIC SCIENCE FOR RURAL DEVELOPMENT" No 54
Jelgava, LLU ESAF, 12-15 May 2020, pp. 231-238
DOI: 10.22616/ESRD.2020.54.028

REGIONAL DEMOGRAPHIC TRENDS IN ACCORDANCE WITH THE NEW MODEL OF TERRITORIAL DIVISION IN LATVIA AND FUTURE DYNAMICS IN STATISTICAL REGIONS OF THE BALTIC STATES

Juris Krumins[1], dr. oec.; **Atis Berzins**[2], dr. oec. and **Aleksandrs Dahs**[3], dr. demog.
[1,2,3]University of Latvia

Abstract. Considering the proposed new administrative territorial reform in Latvia, regional demographic implications of such municipal restructuring should be evaluated and placed in line with the advancements of the two neighbouring Baltic countries. This study aims to develop an indicative demographic outline of Latvian municipalities proposed under the 39-municipality model and identify main regional demographic peculiarities in Latvia, Lithuania and Estonia for the next two decades. Literature review, statistical and geospatial methods, as well as recalculation, estimation and forecasting of the regional demographic data are used as research tools within this study. Study results indicate that despite expected structural changes proposed by the reform, Latvia could expect continuation of the two-speed demographic development pattern and core-periphery divide in regional development. However, judging upon experience in regional demographic developments of the two neighbouring countries, the new structure may prove to be more robust and manageable, linking rural municipalities and their respective regional development centres under "one roof", thus allowing for easier control and implementation of the corrective policy measures.

Key words: regional demography, administrative-territorial reform, demographic projections.
JEL code: J11, I38, R11

Introduction

Discussions about the next administrative territorial reform in Latvia are outlining creation of a new model of 39 municipalities (MEPRD, 2019). Thus demographers, like other social scientists, are challenged with implied consequences for the regional policy. Proposed restructuring of a municipal setup rises issues of data availability and use of data sets for modelling and forecasting, including previously unstudied territorial units - to test hypotheses developed under the conditions before the reform.

Authors aim to develop an indicative demographic portrait of the new municipalities, proposed under the 39-municipality model, and identify corresponding regional demographic trends in Latvia. Regional policy responses to the newly emerged regional demographic challenges in Estonia and Lithuania could give us probable scenarios for expected demographic changes and policy responses in Latvia. A brief literature overview on the role and methods of regional demography is useful in understanding a context as well. Authors use available statistical and geospatial data on regional and sub-regional level to conduct recalculation of the demographic data for the proposed 39 municipalities in Latvia and to perform population projections for statistical regions until 2040.

In many Eastern European countries, the Baltic States included, a methodologically diverse empirical studies dealing with the regional population development are frequently merged into interdisciplinary frame of Regional demography. Despite suggested structural changes, newly proposed municipal set-up in Latvia will be prone to problems of a deep core-periphery divide in demographic development. However, judging upon the experience of Estonia and Lithuania, from a perspective of regional demographic policy, the new structure may prove to be more robust and manageable, linking rural municipalities and their respective regional development centres under "one roof" and allowing for easier control and implementation of the corrective policy measures and investments.

[1] Juris Krumins e-mail: Juris.Krumins@lu.lv
[2] Atis Berzins e-mail: Atis.Berzins@lu.lv
[3] Aleksandrs Dahs e-mail: Aleksandrs.Dahs@lu.lv

Research results and discussion

This paper includes three research dimensions: review of the literature addressing the concept of regional demography, development of the basic demographic portrait of the proposed new municipalities in Latvia and elaboration of population projections for statistical regions of Latvia and Estonia.

1. Regional demography – an insight

Interest in adding a regional perspective to the demographic studies is driven by the availability of quantitative and qualitative data on the population dynamics, the associated socio-economic conditions and other underlying factors on the regional and local (sub-regional) territorial levels. Sustainable demographic development is important precondition for successful regional development as depopulation and reduction of human capital lead to serious socio-economic implications (Dahs A., 2017).

One can look at Regional demography by placing it at the crossroads of population statistics and human geography, connecting both disciplines by adding the theory-based interpretations and region-specific information to the spatial / geographical data (Voss R. et al., 2006). Another interpretation presents Regional demography as traditional population statistics, set within the framework of regional development processes. Donald J. Bogue referred to such studies as "micro demography" (Bogue D., 1957). However, recent studies in Latvia often present Regional demography as population research with the limited geographical scope (see Zvidrins P., 2009).

It may be also concluded that Regional demography is closely linked with the field of Spatial demography. For example, most of the demographic papers and other studies involve elements of Spatial demography. Exception to this custom includes mostly pioneering works of anthropologists, statisticians and mathematical demographers who have elaborated general theories and causalities of population development, free from the empirical factors like time and space (Dahs A., 2017).

Although all the above arguments are true, there is a strong evidence that concept of Regional demography outgrows the framework of Spatial demography by adding regional policy and urban / rural development context to the analysis of population data. Such perception considerably widens the research field, as processes and implications of social, economic, historical and even political regional development must be analysed along with the population changes.

In the current European academic environment, specific insight into Regional demography most often derives from the analysis of NUTS level 3 regions of the EU, incorporating also metropolitan regions (urban agglomerations, where at least 50% of the population lives inside a functional urban area that is composed of at least 250 000 inhabitants), and particularly those metropolitan regions which include capital cities and surrounding NUTS level 3 regions. Particularly interesting cases are presented by the capital cities of Latvia and Estonia (Riga and Tallinn) and their metropolitan regions (Riga and Pieriga together, and Northern Estonia). These areas are among the leading in the EU by metropolitan agglomeration– accordingly 52 and 45 per cent of the total country's population in 2019 (Eurostat, 2020) lived in the capital, which heavily affects both countries' regional development.

2. Regional policy responses to demographic challenges in Lithuania and Estonia

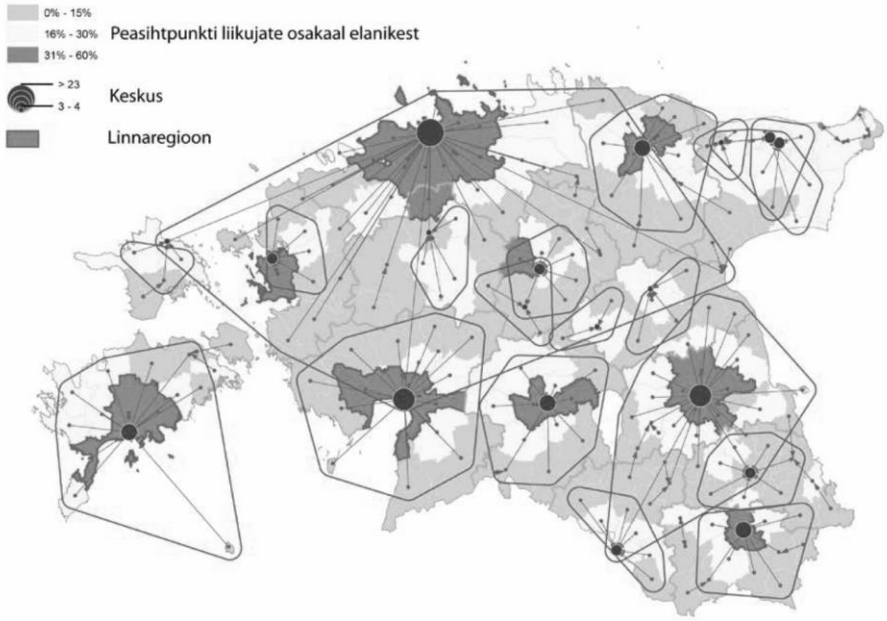
Despite the inherent differences, all three Baltic States face similar challenges in regional demographic development. Among them the most prominent are core-periphery divide, population ageing and high out-migration rates of economically active population (Pociute-Sereikiene G., 2019;

Zvidrins P., 2009 or Eesti Riigikogu, 2018). However, judging from the policy planning documents, each country applies a somewhat different approach in addressing abovementioned issues.

In Lithuania, continuing out-migration of economically active population from multiple regions is accompanied by high rates of natural population decline and recovery of the population is only possible in a limited number of regions that can find niche markets. It is important to ensure the standard of living for those who are left behind in the declining regions and as experiences of other countries have shown, the best strategy to cope with shrinkage is through encouragement of local incentives and citizen participation (Ubareviciene R. and van Ham M., 2016).

From the official perspective, one of the reasons why people migrate from smaller towns to major cities and from there – to other countries, are living standards that do not meet their needs, as well as lack of quality services. In terms of their size, Lithuanian municipalities are some of the largest in the European Union. Their sizes also differ considerably (e.g., the population of Vilnius and Neringa, or Kaunas and Rietavas are hardly even comparable), which raises several challenges in coordinating the provision of services to residents and the joint activities of municipalities. If, as a result of the evaluation of the achievements of the revised regional policy in 2021 it is concluded that the newly introduced mechanisms for municipal cooperation were not sufficiently effective and that greater/further achievements are impeded by the existing administrative boundaries of the municipalities, reform of the municipal administrative boundaries will be considered before the 2023 municipal council elections.

At the moment, the most innovative trend of the population development policies in Lithuania prioritizes the provision of adequate public service quality for all residents of Lithuania, regardless of where they live, through gradual transfer of public services to social business entities in the regions (Lithuanian National Regional Development Council, 2017). Whereas Estonia continues to strive for nationwide balance in the settlement system, above all through the network of county centres. Estonian planning document "National spatial plan 2030+" identifies that towns and rural urban communities are unable to provide enough of sufficiently diverse jobs or services to those of their residents, whose education levels and requirements with respect to their standard of living are increasing in line with the wishes of the national population overall (Eesti Siseministeerium, 2013).



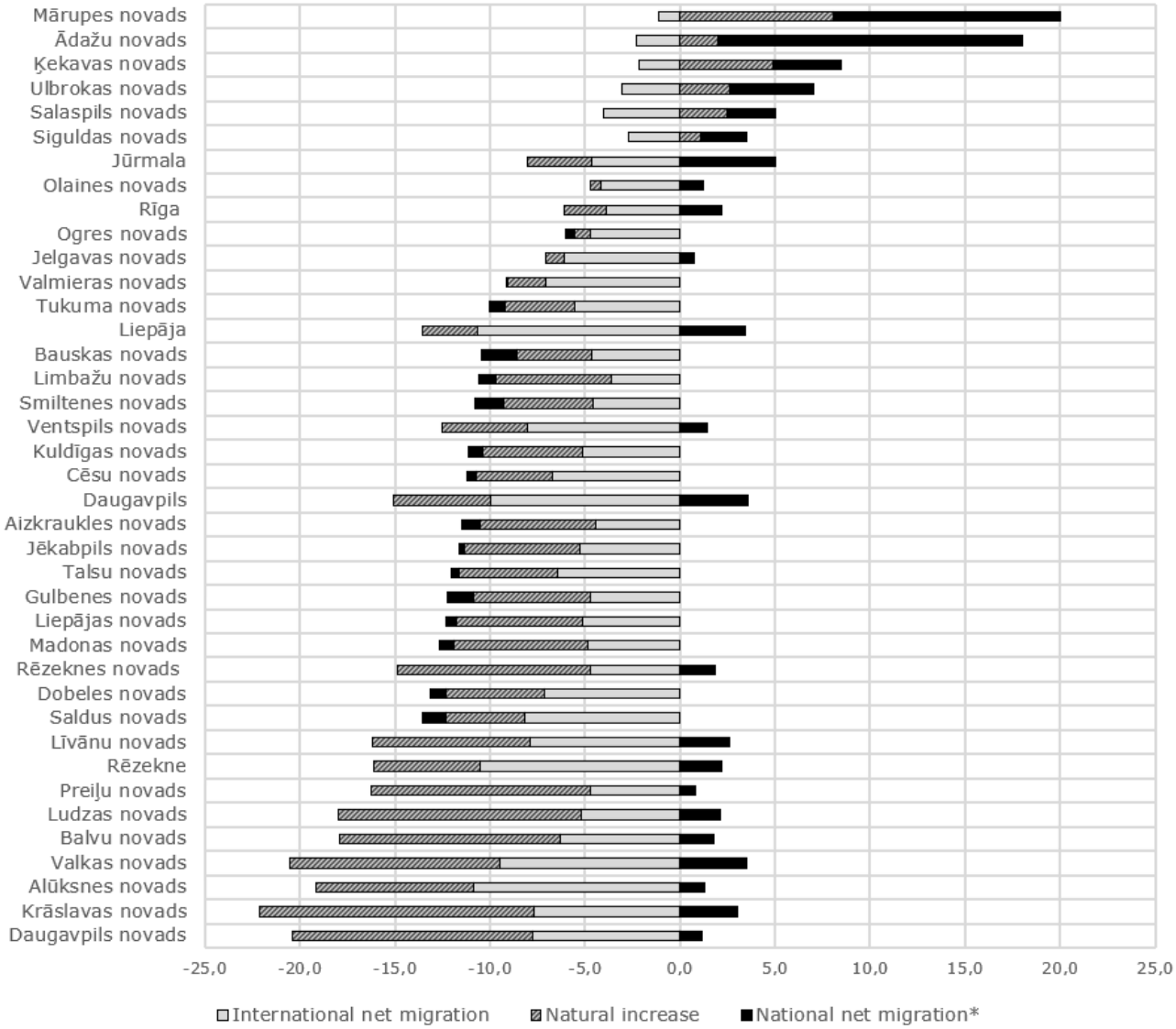
Source: Ahas R. et al., 2010

Fig. 1. **Centres, urban areas and centres' hinterlands identified based on the place of residence and the anchor points of working time**

According to the aforementioned planning document, Estonia's low-density urbanised space breaks down into daily activity spaces, where the working-age population is constantly moving along the route of residence – workplace – daily services. These areas are needed to be considered in the preparation of county and comprehensive plans, the planning of public transport system and the promotion of the cooperation between local governments (Eesti Siseministeerium, 2013; Ahas R. et al., 2010).

3. Demographic trends of the proposed municipalities in Latvia

In order to develop a demographic portrait of the proposed 39 municipalities, authors use available statistical and geospatial data for the smallest territorial units in Latvia – parishes and cities (Level 2 local administrative units - LAU2 in accordance with the classification used by the European Commission). Available data are limited to the period since the last Population census of 2011 but provide enough ground for elaboration of principal demographic characteristics - both static and dynamic.



**** including adjustment***
Source: authors' calculation based on the data of the Central Statistics Bureau of Latvia (2020)

Fig. 2. **Population change (%) in proposed 39 municipalities of Latvia based on recalculation of regional demographic data, 2011-2019 (municipalities are arranged by the total population change)**

Results of recalculations demonstrate more straight-forward representation of the core-periphery divide, emphasizing the two-speed demographic development model of municipalities in the country. As seen from Figure 2 above, only five municipalities would maintain a dominant net positive population growth, all of which are adjacent territories to the capital Riga, falling within the Pieriga statistical region. Therefore, a new territorial model would still face the pre-existing condition of high rate of suburbanization that poses fiscal challenges for Riga metropolitan region, linked to the established national taxation system, whereby suburban municipalities receive high levels of tax income from its registered residents, who actually live, gain income and use public infrastructure of the country's capital.

Another curious observation shows higher than average positive national migration in the peripheral regions, suffering most from the overall depopulation due to natural population decline and international out-migration. This might be explained by the fact that these proposed new municipalities include former local development centres (cities and towns), attracting population from the least socially and economically developed areas. However, population density and overall activity

level in these municipalities is still insufficient to produce the attraction and suburbanisation effect observed around the capital. Recent study indicates that working age Latvians continue to migrate from rural regions to cities, particularly to Riga and Riga region, where they can expect higher salaries and greater professional opportunities. Only a much higher rate of nationwide GDP growth (around 5%) is projected to slow the rate of internal migration in Latvia (Auers, D. and Gubins, S., 2017).

Judging from the policy directions of the neighbouring Baltic States, several further courses of action in response to the observed situation are possible and are not necessarily mutually exclusive. After the envisaged territorial reform, with the new, more demographically distinct municipalities in place, Latvia should continue the effort to alleviate social and economic challenges posed by the extreme suburbanization of Pieriga and peripherality of rural areas.

By looking at the case of Lithuania, it would be beneficial to consider introduction of a coordinated service accessibility standards throughout the country, based on the new territorial model. With the substantially reduced number of municipalities after the reform, this task would be more feasible and create less administrative burden upon the state institutions. Furthermore, the transfer of those public services to social business entities and other private parties could be considered. With ongoing availability of national and EU funding, this could result in the fruitful environment for a sustainable rural development under the virtually unavoidable conditions of depopulation.

The Estonian approach of facilitating the accessible daily activity spaces should be considered as well in order to reduce the risks of peripherality in the municipalities distant from the capital. This would imply improving the mobility between core and periphery territories by accelerating the development of efficient and sustainable transport infrastructure, allowing for affordable daily mobility.

In any event, all future efforts of regional and rural development should consider the forecasted dynamics of population change in the regions (Krisjane Z. and Krumins J., 2019). This would imply studying the projected regional population change from different perspectives, including number of residents, age structure, economic activity trends and any other dimensions. The best course of action can then be decided for each region and its municipalities based on current and forecasted demographic trends.

4. Factual and projected demographic changes in statistical regions of Latvia and Estonia

Population changes during 2010-2020 support the conclusions that most European metropolitan regions, which include capital cities, are developing more favourably than other regions (Lutz, W. et al., 2019). As such, metropolitan region of Northern Estonia is the only region showing growing population number as compared to the depopulation in the rest of country's territory. Riga metropolitan region, consisting of capital city Riga and Pieriga statistical region, also demonstrates slower rate of depopulation (shrinking population) in comparison with other four regions (Table 1).

Younger age composition influences higher fertility and lower death rates in metropolitan regions as compared to other parts of the countries and counteracts with positive net migration, leading to more favourable population changes over the coming decennials, particularly in the working ages.

Table 1

Projected demographic indicators in statistical regions of Estonia and Latvia, 2010-2040

	Population number as of 1 Jan. 2010, thou.	Population number as of 1 Jan. 2020, thou.	Population change 2020-2040, %				Share of population over age 65 (%), 2040
			Total	by age group (years)			
				0-14	15-64	65+	
ESTONIA - Total	**1401**	**1324**	**-2.1**	**-15.4**	**-7.2**	**25.0**	**25.6**
Statistical region:							
Northern Estonia	536	604	14.4	1.6	12.9	32.4	20.4
Southern Estonia	365	316	-9.8	-22.5	-16.3	20.1	27.5
Western Estonia	168	148	-13.3	-30.3	-22.6	24.3	32.0
Central Estonia	148	122	-20.9	-41.8	-30.3	21.1	33.6
North-eastern Estonia	184	134	-28.4	-49.9	-41.8	15.7	40.6
LATVIA - Total	**2120**	**1901**	**-15.2**	**-23.9**	**-20.2**	**7.1**	**26.0**
Statistical region:							
Pieriga region	374	366	-2.8	-11.8	-6.4	18.6	22.5
Riga region	673	636	-7.1	-20.0	-8.7	7.8	23.8
Zemgale region	262	227	-21.0	-28.3	-28.2	7.4	27.4
Kurzeme region	279	235	-24.6	-30.1	-31.6	-0.1	28.6
Vidzeme region	218	182	-27.6	-35.7	-35.7	1.7	30.6
Latgale region	314	255	-30.6	-37.7	-40.4	1.7	32.9

Source: Authors' calculations, based on the data of the Central Statistics Bureau of Latvia (2020) and Statistics Estonia (2020)

In 2040, share of population over the age of 65 in metropolitan areas of Estonia and Latvia is expected to be the lowest among respective statistical regions (Table 1). Current population trends and projected changes in Latvia will lead to the increase of weight of central metropolitan area in total population of the country. If in 2000 percentage of Riga's and Pieriga's regions in the total population was 47 %, in 2019 it already reached 52 %, and this percentage is expected to increase further, thus advocating for two-speed demographic development and growing divide between central part of country and periphery.

Conclusions

1) Methodologically diverse empirical studies of regional population development are merged into interdisciplinary area of "Regional demography". Such approach is useful to address interactions between regional (or rural) socio-economic and demographic development policies.
2) Assessment of regional policy initiatives in Lithuania and Estonia gives a perception that from demographic perspective, proposed administrative-territorial structure in Latvia may prove to be more robust and manageable, linking rural municipalities and their respective regional development centres under "one roof", thus allowing for easier control and implementation of the corrective policy measures and investment.
3) Recalculations indicate that despite structural changes proposed by new municipalities, suggested territorial division will maintain explicit core-periphery divide in demographic development of Latvia with more favourable demographic situation in the central metropolitan region, including Riga and Pieriga regions, as compared to other regions.
4) Regional population projections in Latvia and Estonia until 2040 testify that metropolitan regions with capital cities included will continue to exhibit more favourable demographic development due

to greater share of younger population, higher rate of natural increase and positive net migration rates.

Acknowledgements

This study was supported by National Research Programme "Latvian heritage and future challenges for the country's sustainability" Project No. VPP-IZM-2018/1-0015 "Towards sustainable development and inclusive society in Latvia: response to demographic and migration challenges" (DemoMig).

Bibliography

1. Ahas, R., Silm, S., Leetmaa, K., Tammaru, T., Saluveer, E., Jarv, O., Aasa, A., Tiru, M. (2010). *Regionaalne pendelrandeuuring* (*Regional Commuting Study*). Estonia Ministry of Interior report. Retrieved: https://mobilitylab.ut.ee/wp-content/uploads/2013/04/Regionaalne-pendelr%C3%A4ndeuuring_TU_2010.pdf. Access: 15.01.2020.
2. Auers, D., Gubins, S. (2017). A Demographic Portrait of Latvia Today and Tomorrow. *Certus Policy Brief #3*. Retrieved: http://certusdomnica.lv/wp-content/uploads/2017/05/web_Certus_LatvijasDemografiskaisPortrets _2017_EN-1.pdf. Accessed: 05.03.2020.
3. Bogue, D. J., 1957. *Micro-demography*. In D. J. Bogue (ed.) Applications of Demography: The Population Situation in the U.S. in 1975. Oxford, OH: The Scripps Foundation, pp. 46–52.
4. Central Statistics Bureau of Latvia [CSB] (2020). Main database. Retrieved: http://www.csb.gov.lv/dati. Access: 20.01.2020.
5. Dahs, A. (2017). *Role of the Socioeconomic Factors and Regional Policy in the Demographic Development of Latvia*. Doctoral Thesis. Retrieved: https://dspace.lu.lv/dspace/handle/7/34988. Access: 29.01.2020.
6. Eesti Riigkogu (Estonian Parliament) (2018). Rahvastikupoliitika pohialused 2035 (Population Development Policy 2035) Retrieved: https://www.riigikogu.ee/wpcms/wp-content/uploads/2018/03/Rahvastikupoliitika-pohialused-2035-PDF-680-kB.pdf. Access: 05.02.2020.
7. Eesti Siseministeerium (Estonian Ministry of Interior) (2013). National Spatial Plan Estonia 2030+. Retrieved: https://eesti2030.files.wordpress.com/2014/02/estonia-2030.pdf. Access: 03.02.2020.
8. Eurostat (2020). *Statistics Explained: Territorial Typologies Manual – Metropolitan Region*. Online publication. Retrieved: https://ec.europa.eu/eurostat/statistics-explained/index.php?title=Territorial_typologies_manual_-_metropolitan_regions. Access: 08.03.2020.
9. Krisjane, Z., Krumins, J. (eds.), 2019. *Tautas ataudze Latvija un sabiedribas atjaunosanas izaicinajumi (Population Reproduction and Challenges for Renewal of Society in Latvia)*. Riga: LU Akademiskais apgads. 300 p.
10. Lithuanian National Regional Development Council (2017). Lithuanian Regional Policy for Harmonious and Sustainable Development 2017–2030. Official report. Retrieved: https://vrm.lrv.lt/uploads/vrm/documents/files/ENG_versija/Lithuanian%20Regional%20Policy%20(White%20Paper).pdf. Access: 06.02.2020.
11. Lutz, W. (Ed.), Amran, G., Belanger, A., Conte, A., Gailey, N., Ghio, D., Grapsa, E., Jensen, K., Loichinger, E., Marois, G., Muttarak, R., Potancokova, M., Sabourin, P., Stonawski, M., (2019). *Demographic Scenarios for the EU – Migration, Population and Education.* European Commission Report. Retrieved: https://ec.europa.eu/jrc/en/ facts4eufuture/eu-demographic-scenarios. Access: 01.03.2020.
12. Pociute-Sereikiene, G. (2019). Peripheral Regions in Lithuania: the Results of Uneven Development. *Regional Studies, Regional Science*. Vol. 6, 2019, Issue 1. pp. 70-77.
13. Statistics Estonia (2020). Table PO022: Population Projection Until 2080 by county and age group. Retrieved: http://andmebaas.stat.ee/Index.aspx?lang=en#. Access: 23.02.2020.
14. Ubareviciene, R., & Van Ham, M. (2017). Population Decline in Lithuania: Who Lives in Declining Regions and Who Leaves? *Regional Studies, Regional Science*, Vol. 4, Issue 1, pp. 57-79.
15. Voss, P. R., White, K. C., Hammer, R. B. (2006). *Explorations in Spatial Demography*. In Kandel W. A. and Brown D. L. (eds.) Population Change and Rural Society. Netherlands: Springer. pp. 407-429.
16. Zvidrins, P. (ed.) (2009). *Demografiska attistiba Latvijas regionos (Demographic Development in the Regions of Latvia)*. Riga: LU Akademiskais apgads. 43 pp.

Proceedings of the 2020 International Conference "ECONOMIC SCIENCE FOR RURAL DEVELOPMENT" No 54
Jelgava, LLU ESAF, 12-15 May 2020, pp. 239-246
DOI: 10.22616/ESRD.2020.54.029

FUNDRAISING FOR UNIVERSITIES BY ALUMNI EFFORTS: A LITERATURE REVIEW

Laila Kundzina[1], Mg. hist., **Baiba Rivza**[2], Prof. Dr. oec.

Abstract. Higher education is co-financed by the state, municipalities, as well as various local and international funds, but the support of individuals and businesses, known as patronage, is playing an increasingly important part. Here, the contributions of alumni are of a great consequence, ranging from cash donations, in-kind donations, volunteering and pro bono contributions. To receive these diverse donations, universities must work diligently on their communications strategy with alumni, current and potential patrons. This strategy should be diversified on the basis of age, gender and wealth. Successful fundraising campaigns are based on a well-thought-out and ad hoc approach, where each participant clearly understands the goals and objectives of his or her activities.

Keywords: philanthropy, university, fundraising, donations, alumni.
JEL code: A10, A20, B10

Introduction

Many governments are decreasing the funding for university research projects. However, with reduced public funding, universities are still expected to deliver excellent research results. Although tuition fees are increased step by step, this cannot be justified with the quality of university performance (Deloitte, 2016). Universities need to move forward in order to be fully competitive. Consequently, it is important to increase involvement of private sector in university development and it is a task of philanthropy (Cutlip, 1990), – to increase the amount and number of private and corporate donations for various university projects. At the same time, it is important to discuss the factors influencing the behaviour of patrons (Brittingham, 1990), the successful philanthropy strategy (Johnstone, 2016), and the institutional development of universities (Kozobarich, 2000).

College and university graduates have an increasingly important part in supporting higher education (Weerts, Cabrera, Sanford, 2010). In 2007, US colleges and universities attracted and received 29 billion in donations, 28 % of which were donated by alumni (Council for Aid to Education, 2008). As government funding continues to decline, leveraging donations from other resources is becoming progressively critical, therefore data collection and researching careers of alumni after graduation is vital (Burke, 1988; Caboni and Proper, 2008).

The objective of the current study is to examine the literature available on fundraising from alumni and models of alumni collaboration with universities. The main task of research is to provide tactics of fundraising from alumni based on Foundation of the University of Latvia case study.

Research hypotheses are: (1) Motivated university alumni are good partners of any university in successful fundraising and attracting prospective students; (2) Universities should develop well-considered models of cooperation with alumni, offering them a variety of collaboration opportunities; (3) Universities should take into account the gender, marital status, income and social status of alumni, when establishing partnership and launching fundraising campaigns; (4) Universities should focus their fundraising activities not only on alumni, but also on university staff and representatives of public who are loyal to university.

The study has been carried out using qualitative research methods such as logical constructive method, analysis and synthesis method and monographic method. The study is based on scientific papers and theoretical literature.

Research results and discussion

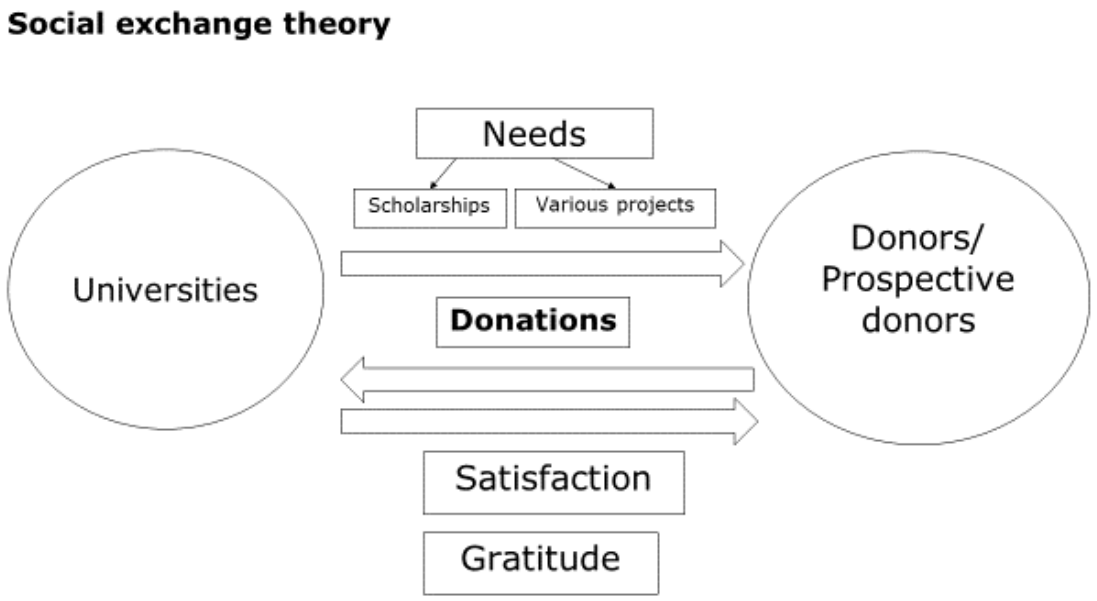
The administrative and academic leaders of colleges and universities must invest efforts in fundraising. Since state support is inadequate, it can be frequently observed that many families

cannot afford to secure tertiary education for their children. Informing the current students in timely manner about the importance of alumni donations is crucial. Those students who themselves have received donor support through scholarships and funding of research projects, subsequently become more aware of the decisive character and necessity of their personal donation. Alumni have various opportunities to support their alma mater. They can become ambassadors lobbying for the needs of higher education institutions at national and/or local government level. They can become volunteers who devote their free time to one of the university's events by organizing it or contributing the so-called in-kind donations. For example, by supplying food to participants or providing the musical entertainment for the event. It is a common in-kind donation practice of graduates to purchase books for the university's library. Alumni can also contribute to their university their volunteer work, serving as guides to pupils and their parents on excursions, encouraging them to learn about university's history and achievements, encouraging pupils to consider this university as their next place of studies (Weerts, Cabrera, Sanford, 2010).

Beyond donating funds, alumni can become lobbyists for their university. This tendency assumes an increasingly assertive and widespread character (Potter, 2003). Through various advisory committees, university graduates help their universities and their management to formulate and fulfil their strategic goals (Weerts, 1998). There is also the practice of senior alumni becoming mentors to junior graduates, thus helping them to integrate into the labour market and also providing advice on how to better support their university. This collaboration is definitely more effective than posting job advertisements (Fogg, 2008). The diversity of graduate assistance to their universities is assuming an increasingly notable position with an increase of competition among universities (Cabrera et al., 2005). Building collaborative models and relationships with alumni becomes crucial, hence universities are investing more and more in building these relationships. For example, in 2003, universities in the United States invested 8.7 million USD in activities aimed at collaborating with alumni – the equivalent to the costs of 81 full-time employees (Alumni Relations Task Force, 2004).

Graduates as volunteers are a very generous resource. Volunteering was usually associated with religiosity until faith-based organizations introduced various formal mechanisms to organize volunteering (Penner, 2002). Students should be offered opportunities for volunteering that are geared to the needs of the faculty and/or the university. Students who have volunteered 6 hours or more per week have been shown to be happy to continue this contribution after graduation (Astin et al., 1999). Behavioural patterns of collaboration with one's university are formed before a person commences to attend university. They are based on family values, experiences at primary and secondary school, various youth activities and the values of the community. The importance of social exchange theory in understanding the potential contribution of alumni in supporting their own universities must be appreciated (Weerts and Ronca, 2008).

Firstly, social exchange theory requires relationships to be shaped according to "give and take" principle and sometimes these relationships strike an uneven balance between partners.



Source: Chadwick-Jones, 1976

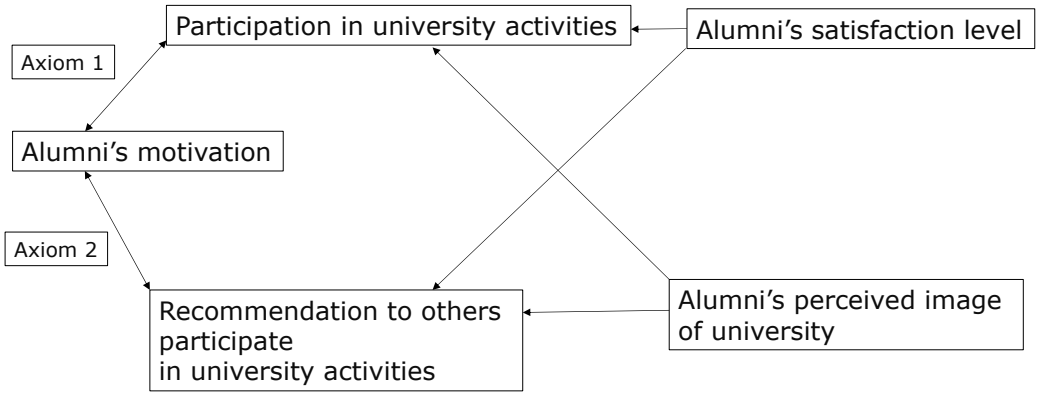
Fig. 1. **Social exchange theory**

This theory emphasizes that the basis is the economic factor, it is the costs that will determine the extent of the benefits and how this relationship between universities and alumni could evolve in the future (Chadwick-Jones, 1976). An important factor in this theory is the quality of service provided by university to students: quality of education, student support in their studies, career opportunities, socialization opportunities, and university prestige. This is of the utmost importance when universities are addressing the alumni seeking their support. This particular factor will determine the amount and type of donations in the short and long term (Lesly and Ramey, 1988). At the same time, researchers believe that the tendency of graduates to be more open to recompensing their universities is most closely linked to the previous civic participation experiences (Weerts, Cabrera, Sanford, 2010).

In turn, the conceptual model puts forward two axioms: (1) motivated graduates are willing to participate in university activities; (2) motivated alumni are willing to recommend others to participate in university activities.

The other part of this model that affects the motivation of alumni is the level of graduate satisfaction and the quality of the university in the eyes of the alumni. This model puts forward the following hypotheses for testing: (1) the degree of satisfaction of the alumni corresponds to the desire to participate in university's activities; (2) the degree of satisfaction of the alumni corresponds to the wish to recommend others to participate in the university activities; (3) the level of university image quality as perceived by alumni corresponds to their desire to participate in university activities; (4) the level of university image quality as perceived by alumni corresponds to the wish to recommend others to participate in university activities. The results of the study show that those alumni whose level of satisfaction with the perceived level of university image quality and themselves as alumni are the factors that promote recommending others to participate in the university activities, as well. To achieve this, collaboration between academic and administrative staff is required.

Conceptual model



Source: Pedro & Andraz, 2019

Fig. 2. **Conceptual model**

It is also imperative to consider the following aspect of work with alumni: the forms of cooperation with alumni need to be diversified. Different and corresponding approaches to communication should be established with alumni representing different age groups. Those, who have graduated from university two years ago, would have an entirely different attitude towards their alma mater than the ones who completed their studies eight years ago (Pedro, Pereira, Carrasqueira, 2018).

When asked whether the generosity depends on gender, a study conducted at a small art college over 31 years brought a conclusion that women are more generous donors than men. Gender, age, nationality and income level were used as criteria. Researchers found that women were not only more generous, but they also donated more frequently than men. This indicates that women are more likely to enter into long-term relationships – in this case, donating small amounts, but more often. Men, on the other hand, in their wish for more recognition and attention, donate seldom, but much greater amounts. Not only do women donate smaller amounts, but they also donate to multiple purposes, to several charities. Fundraising organizations should take these factors into account when developing their fundraising strategies. For example, these results indicate that annual donations for a specific purpose are better suited to encourage women to donate, whereas men should be invited to donate to a "special campaign" to make their donation more unique and significant (Dvorak and Toubman, 2013).

In a study of alumni who have become executives, researchers conclude that senior executives with higher position and income are more likely to give donations. For them, it is a decisive factor that their family and friends find out about their donation. University success stories are also a notable criterion. It makes a difference for high-level professionals to donate to a successful university that has clear development goals and ambitions for even more significant achievements. This criterion indicates that the patron wants to be a part of something significant and successful. Research shows that the wealthier regions receive higher donations, as opposed to the regions with lower economic performance. Researchers also point out that the donating alumni have lower ambitions regarding receiving the university's recognition than the donors who have not graduated from the supported university. In the United States, the accomplishments of university sports teams

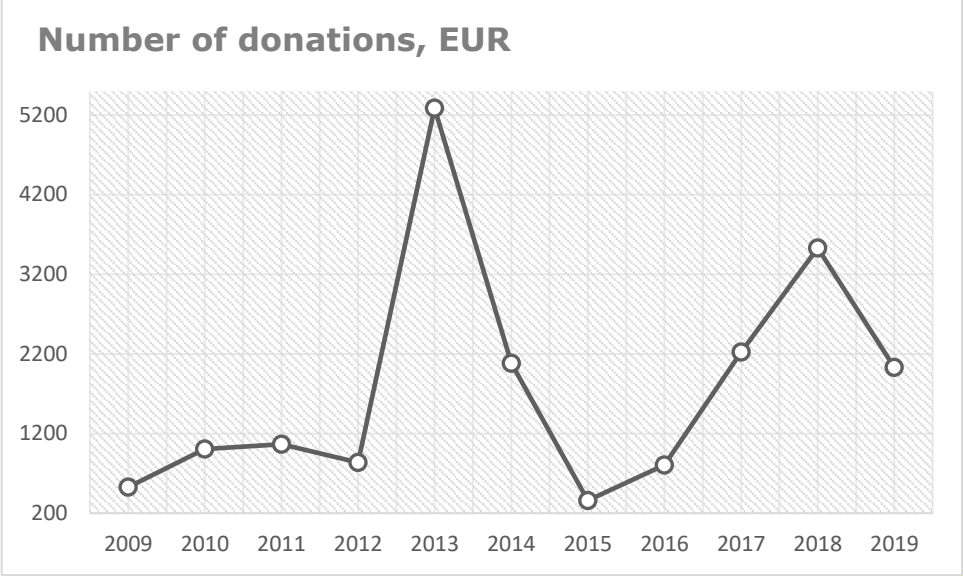
carry weight with alumni. However, researchers point out that universities should note that only an equal balance between academic goals and sports is the right tactic for fundraising. This would enable universities to reach out to a larger number of existing and potential donors (Wunnava, Okunade, 2013).

Universities should encourage not only alumni but also their staff to donate. Researchers have studied the willingness to donate among the following target groups: administrative staff consisting of alumni, administrative staff whose members have not graduated from the respective university, academic staff consisting of alumni, and academic staff whose members have not graduated from the respective university. The status of alumni among both administrative and academic staff is not an important consideration. This does not affect the amount of the donated sum, while impacts the frequency of donations. This undermines the assumption that during the study years, which are largely the years of personality development, the time spent with fellow students and university lecturers, as well as administrative staff, creates strong links that are remembered for lifetime. From amongst the employees, it is the higher-income academic staff who donate to the university, whether or not they have graduated from it. It is perhaps this close connection which makes the alumni donors, who are employees, the weaker contributors. Possibly, a sense of identity characterised by belonging to university has taken too long to form and thus diminishes the motivation to donate. The study indicates that calling for donations from an alumnus, an alumnus – employee, who is one and the same person, is a mistake. Sufficiently detailed databases must be maintained to enable fundraisers to apply only one identity to a particular person to minimize confusion when receiving, for example, two or three calls for donations at a time. Donors usually choose a convenient, recognizable donation goal, most often donating to the needs of their faculty (Borden, Shaker, Kienker, 2014).

By visualizing the relationship between the alumni and their alma mater, the researchers find that the following factors work in this relationship: "the image of education", "the image of communications", and satisfaction with the social and academic environment. This set of factors answers the researchers' question: "Which factors are important and which are decisive in a successful relationship?" Relationships can be considered successful if the response of alumnus to the question "If it were possible, would you choose the same university and study programme once again?" is affirmative. A sense of belonging comes from the pride of one's university and shared values. The desire to recompense your alma mater is reinforced by a verbal or written statement by alumni, calling to donate permanently and as required by the university. Strong alumni-centric communication from the university administration and lecturers is needed to achieve such statement from the alumni community or individuals. In communication with alumni, the university must be like a "loving mother" and alumni – as "beloved children." Universities must harness the potential of alumni to attract future students. They could be guides of university tours, participate as speakers in introductory seminars, and share information on studying in their alma mater with family members and among friends. The alumni should be seen by the university as equal partners in university development (Pedro, Pereira & Carrasqueira, 2018).

The donation activity of alumni is dependent on the university's invitations to give to one of the fundraising campaigns. One of the goals of the University of Latvia Foundation is to work with the those who have received the scholarships of the University of Latvia Foundation's patrons and have already become alumni. Figure 3 below clearly shows that between 2012 and 2014, there is a significant donor activity among alumni. This can be explained with two large-scale donation

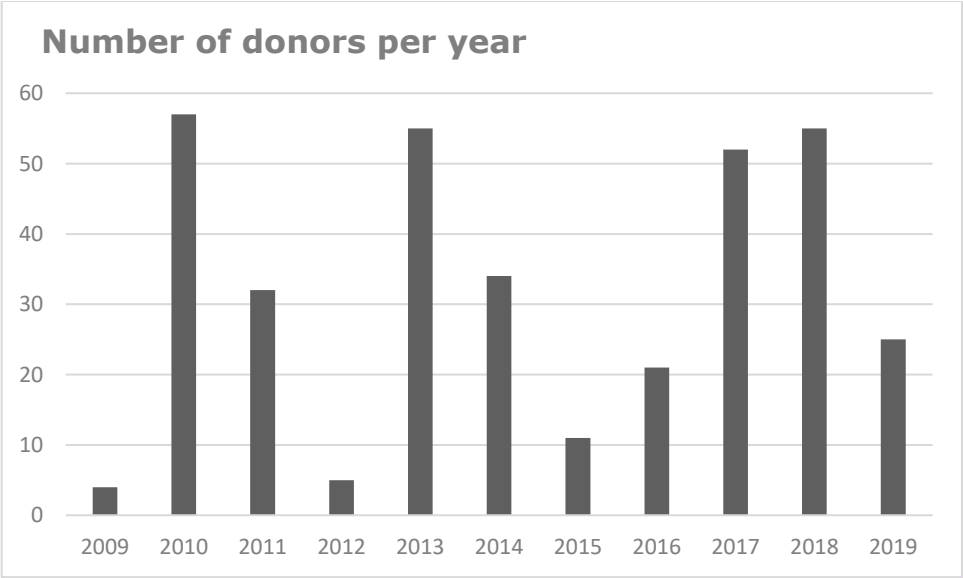
campaigns that have been launched in 2012: "The University of Latvia Organ Restoration Campaign" and "Business Incubator Business Idea Foundation".



Source: Foundation of the University of Latvia data, prepared by authors

Fig. 3. **Number of donations, EUR**

The fundraising principles of the UL Foundation require that after large-scale fundraising campaigns there must be an intermission to avoid tiring donors. That is why the amount of donations is lower in 2015 and 2016.



Source: Foundation of the University of Latvia data, prepared by authors

Fig. 4. **Number of donors**

Of the 1980 scholarship recipients supported by the patrons of the UL Foundation, 243 scholars who are now alumni have donated at least once. Figure 4 above shows that the first major inflow of donors has taken place in 2010, which is substantiated by the fact that the 90th anniversary of the University of Latvia was celebrated in the academic year of 2009/2010, and alumni – the former scholarship recipients – readily responded to the invitation to donate to the 90th anniversary of the University of Latvia. In 2013, the aforementioned fundraising campaigns were held, whereas donors' activity in 2017 and 2018 was brought about by changes in the UL Foundation's fundraising strategy. From then onward it stipulates that every former UL Foundation's patron scholarship recipient who is an alumnus and has donated at least once, should be addressed once a year to donate to a topical

project of the University of Latvia. This would most certainly be called a "vote of loyalty". The fundraising strategy of the University of Latvia Foundation sets down a principle: every donation is important, regardless of its size. The exception was 2019, when due to the questioning of the election of the University of Latvia rector at the Republic of Latvia Cabinet of Ministers, the former scholarship holders – alumni were not addressed.

Data collected by the UL Foundation prove that fundraising campaigns are an effective fundraising tactic. The introduction of a "loyalty vote" in the fundraising strategy of the UL Foundation is a long-term fundraising tactic, habituating the current donors to repeat their donation every year.

Conclusion, proposals, recommendations

1) The results of the study confirm all four hypotheses advanced at the outset. Motivated university alumni are good partners of any university in successful fundraising and attracting prospective students. Universities need to be prepared for equal, peer-to-peer communication, including listening to criticism and proposals for change.
2) Universities should develop well-considered collaborative models with alumni by offering them varied opportunities for collaboration, including donations of money, contributions in-kind, pro bono, and giving their time as volunteers.
3) Universities should consider the gender, marital status, income level and public status of alumni, when establishing a cooperation or planning fundraising campaigns. Fundraising campaign strategies must have a diverse offer of collaboration adjusted to the different gender, age and wealth level groups.
4) Beyond the alumni, the universities should focus their fundraising activities also on those who are not their graduates but are, instead, university staff and members of public loyal to the university. Sometimes those who are not alumni, but passionately support a certain direction undertaken by the university, will be the ones who will make significant donations to develop that direction.

Acknowledgments

The preparation of the current paper was supported by the National Research Programme 5.2. project "INTERFRAME-LV".

Bibliography

1. Alumni Relations Task Force (2004). University of Virginia. Available at https://bov.virginia.edu/system/files/public/meetings/%2704%20FEB%20EXT%20AFFRS%20COMM%20MINS.pdf, accessed on 10.03.2020.
2. Astin, A. W., Sax, L. J. and Avalos, J. (1999). Long-term Effects of Volunteerism During the Undergraduate Years. *The Review of Higher Education*, 22(2), pp. 187–202.
3. Borden, V. M. H., Shaker, G. G., Kienker, B. L. The Impact of Alumni Status on Institutional Giving by Faculty and Staff. *Research in Higher Education*, Vol. 55, No. 2, pp. 196–217.
4. Brittingham, B., Pezzullo, T. (1990). The Campus Green: Fund Raising in Higher Education; ASHE-ERIC Higher Education Report 1; ASHE-ERIC Higher Education Reports; The George Washington University: Washington DC, USA.
5. Burke, K. E. (1988). *Institutional Image and Alumni Giving*. Unpublished doctoral dissertation, University of Maryland, College Park, MD.
6. Caboni, T. C. and Proper, E. (2008). *Dissertations Related to Fundraising and Their Implications for Higher Education Research*. Paper presented at the Annual Meeting of the Association for the Study of Higher Education, November 10, 2007.
7. Cabrera, A. F., Weerts, D. J., and Zulick, B. J. (2005). Making an Impact with Alumni Surveys. In: D. J. Weerts and J. Vidal (eds.), *Enhancing alumni research: European and American perspectives*. New Directions for Institutional Research, No. 126. San Francisco: Jossey-Bass. pp. 5 – 17.
8. Council for Aid to Education. (2008) Contributions to Colleges and Universities up by 6.3 Percent to $29.75 Billion. Available at http://philanthropynewsdigest.org/news/contributions-to-colleges-universities-up-6.3-percent-in-2007-survey-finds, accessed on 10.03.2020.

9. Chadwick-Jones, J. K. (1976). *Social Exchange Theory: Its Structure and Influence in Social Psychology*. London: Academic Press, pp. 431.
10. Cutlip, S. M. (1990). *Fundraising in the United States, Its Role in America's Philanthropy*. Transaction Publishers: New Brunswick, NJ, USA.
11. Deloitte (2011). Making the Grade 2011: A Study of the Top 10 Issues Facing Higher Education Institutions.
12. Dvorak, T., Toubman, S. R. Are Women More Generous than Men? Evidence from Alumni Donations. *Eastern Economic Journal*, Vol. 39, No. 1, pp. 121–131.
13. Johnstone, D. B. University Revenue Diversification Through Philanthropy: International Perspectives. Available at http://www.intconfhighered.org/BruceJohnstone.pdf, accessed on 10.03.2020.
14. Fogg, P. (2008). How Colleges Use Alumni to Recruit Students. *Chronicle of Higher Education*, 54(34), B13.
15. Kozobarich, J. (2000). Institutional Advancement. *New Directions for Higher Education*, pp. 111, 25–34.
16. Leslie, L. L. and Ramey, G. (1988). Donor Behavior and Voluntary Support for Higher Education Institutions. *The Journal of Higher Education*, 59(2), pp. 115–132.
17. Potter, W. (2003). Citizen Lobbyists: In Tight Budget Times, Colleges Recruit and Train Alumni, Parents, and Even Students as Advocates. *Chronicle of Higher Education*, 49(33), A24.
18. Pedro, I. M., Pereira, L. N., Carrasqueira, H. B. (2018). Determinants for the Commitment Relationship Maintenance Between The Alumni and The Alma Mater. *Journal of Marketing for Higher Education*, Vol. 28, No. 1, pp. 128–152.
19. Penner, L. A. (2002). Dispositional and Organizational Influences on Sustained Volunteerism: An Interactionist Perspective. *Journal of Social Issues*, 58(3), pp. 447–467.
20. Weerts, D. J., Cabrera, A. F. and Sanford, T. (2010). Beyond Giving: Political Advocacy and Volunteer Roles of College Alumni. *Research in Higher Education*, pp. 346–365.
21. Weerts, D. J. (1998). Back on track: Seven Strategies to Get Your Alumni Board Moving Again. *CASE Currents*, pp. 24, 35–37.
22. Weerts, D. J. and Ronca, J. M. (2008). Characteristics of Alumni Donors Who Volunteer at Their Alma Mater. *Research in Higher Education*, 49(3), pp. 274–292.
23. Wunnava, P. V., Okunade, A. A. (2013). Do Business Executives Give More to Their Alma Mater? Longitudinal Evidence from a Large University. *The American Journal of Economics and Sociology*, Vol. 72, pp. 761–778.

Proceedings of the 2020 International Conference "ECONOMIC SCIENCE FOR RURAL DEVELOPMENT" No 54
Jelgava, LLU ESAF, 12-15 May 2020, pp. 247-255
DOI: 10.22616/ESRD.2020.54.030

ANALYSIS OF DIGITALIZATION REFERRED TO IN STRATEGIC POLICY DOCUMENTS IN THE LIFELONG EDUCATION CONTEXT

Modrite Pelse[1],Dr.oec / professor; **Maira Lescevica**[2],Dr.oec / professor
[1]Latvia University of Life Sciences and Technologies; [2]Vidzeme University of Applied Sciences

Abstract. Previous research studies on digitalization as an important driver of development has been largely discussed in the context of entrepreneurship, determining its effects on economic growth. Over the past decade, the role of digitalization in public administration – in providing quality and user-friendly services – has been stressed, with less emphasis being placed on its importance in strategic planning. The driving force of change is digital transformation, which requires digital skills and knowledge. The digital literacy of European Union residents has improved, yet in seven EU Member States it was rated as low or very low. Lifelong education helps to deal with this problem, and it has become a necessity for the entire society. The aim of the present research is to determine the role of digitalization in strategic policy documents in the context of lifelong education. The paper analysed the National Development Plan of Latvia 2021-2027 (final version), the Digital Agenda 2020 for Estonia and the Progress Strategy "Lithuania 2030". The mentioned strategic documents have set a number of goals and objectives directly relating to the implementation of digitalization in order to facilitate the work of society, enterprises and public administration. The policy documents refer to digitalization in lifelong education as mostly a communication and information tool requiring adequate digital skills to be provided by educational institutions. The research employed the monographic, content analysis and descriptive methods. The strategic policy documents of Latvia have been compared with the corresponding documents of the other Baltic States, as the historical and economic development of the countries has followed a relatively similar scenario, and all the Baltic States are EU Member States.

Key words: digitalization, lifelong education, strategic policy documents.
JEL code: I28

Introduction

Research studies stress the fact that digitalization results in radical changes in the economic patterns of regions and even countries. Competition grows among industries in the domestic market, thereby improving the competitiveness of certain industries in some countries. Consequently, it contributes to national economic growth (Tarasov I., 2018).

Research on digitalization mainly focuses on the digitalization of processes and industries, yet less attention is paid to its role in public institution performance, public policy making and territorial development. Fundamental research studies on change processes in public institutions, which could be the result of applying digital transformation approaches, mostly use the terms related to digitalization, such as e-government, digital government or transformative government. Digitalization involves new knowledge and skills, which, in turn, are acquired through education.

Education should be accessible throughout life, as it is part of our daily lives, an informed choice and a necessity. The overall goal of education policy is a high-quality and inclusive education for personal development, human wellbeing and sustainable national growth as prescribed by the Education Development Guidelines for 2014-2020 (Par izglitibas attistibas …, 2014).

The research aim is to determine the role of digitalization in strategic policy documents in the context of lifelong education. To achieve the aim, the following specific research tasks have been set: 1) to theoretically discuss the importance of digitalization and lifelong education and to outline the interrelationships; 2) to perform an assessment of the digital skills of individuals; 3) to analyse the new National Development Plan of Latvia and compare it with the corresponding policy documents of the other Baltic States in the context of digitalization and lifelong education.

[1] Modrite Pelse; e-mail:modrite.pelse@llu.lv
[2] Maira Lescevica; e-mail: maira.lescevica@va.lv

Educating the public throughout life has been on the agenda of the main institutions of the EU for several years. Strategic national-level policy documents best project the expected progress in digitalization deployment over the next 7 to 10 years.

The paper analysed the National Development Plan of Latvia 2021-2027 (final version), the Digital Agenda 2020 for Estonia and the Progress Strategy "Lithuania 2030". The research employed the monographic, content analysis and descriptive methods and compared the strategic policy documents of Latvia with the corresponding documents of the other Baltic States, as the historical and economic development of the countries has followed a relatively similar scenario, and all the Baltic States are EU Member States.

Research results and discussion

Theoretical discussion on lifelong education and digitalization

The driving force of change is social, industrial or technological advancement (Matt, O. et.al., 2020). The mechanization, electrification and computerization observed in the first decade of the 21st century was followed by "digital transformation" that emerged as the Fourth Industrial Revolution or Industry 4.0 (Berghaus S., 2018). The new technologies driving the Fourth Industrial Revolution build on the knowledge and systems of previous technological revolutions, and particularly on digital possibilities. Digital technologies affect education, training and learning by creating more flexible learning environments tailored to the needs of a highly mobile society (Par pamatkompetencem muzizglitiba, 2018). The Fourth Industrial Revolution is characterized by the following technological fields and features: autonomous robots and robotics; neurotechnology; biotechnology; simulation; horizontal and vertical system integration; the Internet of Things – IoT; cyber security; cloud computing; production of software updates; virtual and augmented reality; autonomous vehicles; 3D printing or spatial printing, big data and related analytics, and ideas and possibilities we do not yet know (Schwab K., 2017). Digital competence, however, involves confident, critical and responsible use of digital technologies and use of these technologies for learning and work purposes as well as for participation in social life. It covers fields such as information and data literacy, communication and cooperation, media literacy, digital content creation (including programming), security (including cybersecurity), intellectual property matters, problem solving and critical thinking.

In a 2018 recommendation on key competences for lifelong learning, the Council of Europe defined digital competence as one of the eight key competences, along with literacy, multilingual, mathematical and technological competences in science, technology and engineering (Par pamatkompetencem muzizglitiba, 2018). Today, target-oriented and meaningful training of human capital's digital skills is important for any country regardless of its national economy specialization (Grinberga-Zalite G., Hernik J., 2019).

Even though it might seem that digital changes occur only in the private sector, government intervention is insignificant (Dosi, G., 2013), and new technological inventions become a means of managing time and space to create an advanced infrastructure and shape a sustainable economic era (Rose G., 2016). Change is the process of replacing a current situation with another, most often unknown, new situation. The goal of national strategic planning is to orientate public administration towards more efficient use of financial, material and human resources by setting specific objectives and targets. The potential for change and the result it could bring have to be seen, and a plan for how to achieve the goal has to be drawn up. Action has to be taken, and this change should not be abandoned if facing some difficulty. Change success is teamwork, where everyone is responsible for making a difference. Measuring the degree of readiness for change is a way of understanding the

potential, depending on the social and psychological costs incurred (Burke W., 2011). The more organizations are involved in helping to plan and implement changes, the more they support rather than resist the changes. Unfortunately, resistance is understandable – it is a fear of changes or new challenges –, and new skills have to be acquired (Armstrong P., 2017). Changes are often driven by the dissatisfaction of leaders with one or more aspects of the current state (Damodaran L., Olphert W., 2006), yet today the main driver of changes is the use of technological possibilities (Armstrong P., 2017) and a focus on the overall system rather than the technology itself (Schwab K., 2017).

The public, businesses and politicians experience technological change in their environments, lives and work and also expect public administration institutions to adapt accordingly and provide similar technological potential in the delivery of public services. It follows that digitalization in public administration is mainly driven by external rather than internal requirements arising from changes in environmental technologies and demands from private sector organizations and society at large to change the public administration. Digitalization changes the relationship between public administration institutions and the public as users of digital public services, as well as the relationships within organizations themselves (Mergel I., Edelmann N., 2019).

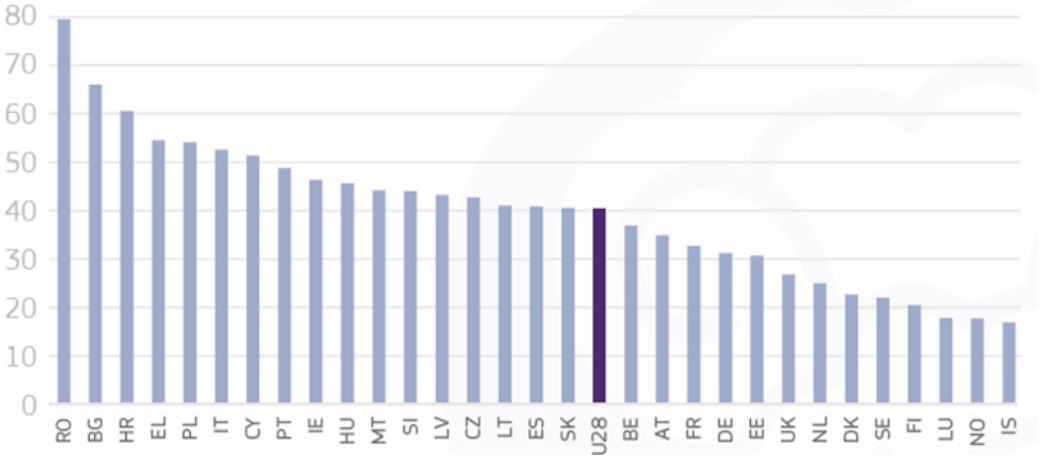
The term e-government is mostly used with regard to the provision of public sector services. The focus is placed not on creating new business models but rather on efforts to make service delivery more efficient and accessible to the public, with a shift from offline to online. The key goal of e-government is to increase the efficiency of service delivery, while research on digitalization involves analyses of the internal and external environments (Mergel I., Edelmann N., 2019), which goes beyond the delivery of a service. The external environment of digitalization relates to the ability of public institutions to develop an effective regulatory framework and supportive financial assistance policies, while technology and knowledge are the key factor of the internal environment affecting competitiveness (Binde J., 2019).

Knowledge gives us opportunities and helps to shape the future; it is a force that enhances our competitiveness. Knowledge needs to be further built up, and lifelong education has become a necessity for all individuals. We need to build up skills and competences throughout life, not only for our personal growth and our ability to actively cooperate with the community we live in but also to succeed in a constantly changing world (Figel J., s.a.). Lifelong education is a learning process throughout life, which is prompted by the changing needs to acquire knowledge, skills and experience in order to professionally develop or retrain in line with interests, needs and labour market requirements (Kas ir muzizglitiba, s.a.). It should be noted that in Latvia, those who are now forty years old or older have not acquired digital skills at school; they have acquired the skills only owing to lifelong education or autonomous learning.

Digital skills of the population

At the beginning of 2020, nearly 60 percent of the world's population were online. Of the 7.75 billion people, over 4.5 billion used the Internet, while the number of social media users surpassed the 3.8 billion level. In 2015, some 20 billion devices worldwide were connected to the Internet, while 2.8 billion people worldwide used the Internet (Kemp, 2020); by 2030, this number could reach half a trillion. New payment methods (mobile or contactless), the Internet of Things, smart homes (e.g. automated lighting), smart mobility (automated traffic management based on air quality), e-health (e.g. digital patient files) (Pfaffinger, K.F. et.al., 2020) – it is a modern reality that demands new digital skills for its creators and users.

The figure below shows the digital skills of the population in EU Member States – slightly more than half of the EU population, on average, had good or very good digital skills and 40% had poor or very poor digital skills.



Source: Eurostat data, 2018.

Fig. 1. **Percentage of the population with no or poor digital skills in 2018**

In several EU Member States – Romania, Bulgaria, Croatia, Spain, Poland, Italy and Cyprus –, the digital literacy of more than 50% of the population was poor. However, as noted by a group of scientists from LLU, during the last five years, all digital performance indicators in the European Union indicated a positive trend. However, despite the EU Member States' good will to jointly build a digital single market, the digitalization performance gap between the wealthier Member States and less wealthy ones still remained large. Overall, the research results revealed that North European Member States – Finland, Sweden, Denmark, Estonia and Ireland and the Netherlands – reached the highest digital performance results in 2018 (Grinberga-Zalite G. et al., 2019).

Fast digitalization growth is also observed in Germany, whose government has introduced a strategic development plan Industry 4.0 for the manufacturing industry since 2011. The plan has drawn a lot of attention from both investors and economists. This topic and future challenges were also discussed at LLU Academic Conference 2019 held by Latvia University of Life Sciences and Technologies (LLU). According to professors B.Rivza and P.Rivza, Industry 4.0 best indicates technology convergence and the disappearance of boundaries between physical and digital (Rivza B., Rivza P., 2019). The Smart Specialization Strategy of Latvia also refers to information and communication technologies as a priority area for national development (Pelse M., Lescevica M., 2017).

According to Central Statistical Bureau (CSB) data, the digital skills of the population of Latvia are considered to be mediocre, requiring building up additional skills and knowledge. Analysing the involvement of the population in lifelong education and identifying the reasons that prevented them from doing it, 48.4 % of the respondents said it was too expensive, while 42.2 % said they had no access to computers and/or the Internet to use distance learning programmes (CSB, 2018).

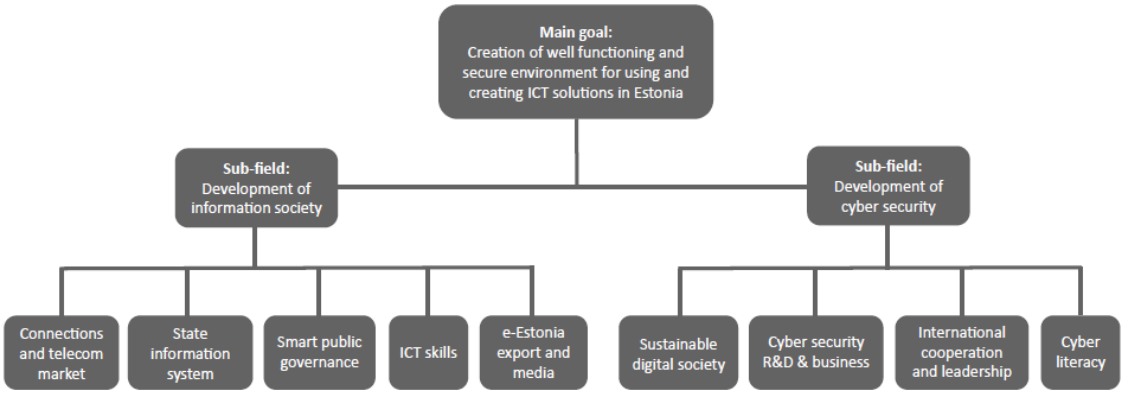
There are quite few systematic empirical research studies on how public administration bodies deal with digital transformation in their daily practice, how they approach digital transformation projects and what the expected results have been achieved (Mergel I. et al., 2019). What effects will this have on territorial development, and is digitalization and lifelong education an important component of strategic documents?

Review of digitalization in strategic and policy documents

Next, the present research analyses the development plans and strategies of the Baltic States that refer to digitalization with regard to the population, education and skills.

Estonia

The only policy document available in Estonia is the Digital Agenda 2020 for Estonia.



Source: Digital Agenda 2020 for Estonia, 2018.

Fig. 2. **General objective, sub-fields and sub-objectives of the Digital Agenda 2020 for Estonia**

The goal set what can be find in the only planning document is as follows: "Estonia is a sustainable digital society with strong technological resilience and readiness for coping with a crisis" (Digital Agenda 2020 for Estonia, 2018).

Although the document has other aspects, the primary task is to ensure the resilience of vital functions to cyber threats. Continued in the sub-objective mainly focuses, on resolving the current problems that have the greatest impact, and on ensuring flexible readiness for coping with future threats and risks. The main approach is to possess a state-wide strategic scope, interoperability, a well-functioning community and inclusive planning and development.

Latvia

One of the priorities of the National Development Plan of Latvia for 2021-2027 is "Knowledge and skills for personality and national growth", aiming to achieve a "knowledgeable, inclusive and creative society in an efficient, innovative and productive economy". It allows concluding that in the global economy, the role of knowledge, entrepreneurial ability, creativity, **digital skills** and technological competences has become critical, and a lack of them poses a risk of backwardness.

Under the same priority, the activity "High-quality, accessible and inclusive education", the objective of which is provide high-quality education for every resident of the country to acquire knowledge and skills for business and life, also aims to achieve the sub-objective of providing high-quality education and effective management of the education system through high-quality implementation of new curricula and learning approaches in general education and dissemination of good practices in teaching, placing a special emphasis on business education and digital skills, education for sustainable development and the development of future skills (creativity, flexibility, adaptability) as well as STEM/STEAM skills (including in interest-related education), improvements in the learning environment, including through **digital solutions**, personalized learning and talent development initiatives and high-quality and comprehensive activities of interest-related education (including in the school environment), effective career education as well as on strengthening school cooperation with parents and other relevant cooperation partners.

For higher education institutions (HEIs), the following objective has been set: "Implementing modern and efficient governance of higher education institutions through involving business organizations in strategic decision-making, contributing to specialization and excellence, **digitalizing learning**, introducing a quality monitoring system for students, developing and enhancing student-focused education skills for university teaching personnel, especially in the STEM/STEAM fields, as well as through raising the salaries of teaching personnel and increasing the proportion of highly-qualified foreign teaching personnel.

In addition, the objective of ensuring a comprehensive higher education quality assessment process to assure the quality of higher education and contribute to an internal quality culture of universities, including reviewing the opportunity of introducing cyclic accreditation of universities in 2024, optimizing the number of high-quality study programmes, eliminating the fragmentation and duplication of study programmes, allowing for a flexible simulation of the supply of student-focused education services for acquiring a qualification and retraining, establishing doctoral studies meeting international standards, introducing a tenure system for academic personnel, **contributing to introducing new technologies as well as building up digital skills** and STEM/STEAM competences, with a special focus on digitalizing the learning process, has been set for academic personnel.

A sub-activity of the above-mentioned activity – "Education for economic growth" – refers to a finding pertaining to lifelong education in particular that "nowadays, **digital skills play an important role in everyday life, in the labour market and in entrepreneurship**; therefore, building up the skills is necessary regardless of age and has to be introduced and reinforced at all levels and in all forms of education, as well as **educational institutions and employers need to be educated on and engaged in it** through setting a specific objective of developing digital and new technological skills by designing specific programmes to improve digital skills and promote corporate participation in funding the programmes.

A sub-activity "Adult education" includes a particular objective in the field of lifelong education – implementation of adult education for acquisition of skills necessary for economic development, incl. in higher education (development of a flexible supply of education services, including modular education, **e-learning and work-based learning**, lifelong learning competences; personal profiling; recognition of competences acquired outside formal education).

The indicative budget for implementing the measures of the activity is set at EUR 812.03 million (final version of the NDP 2021-2027).

Lithuania

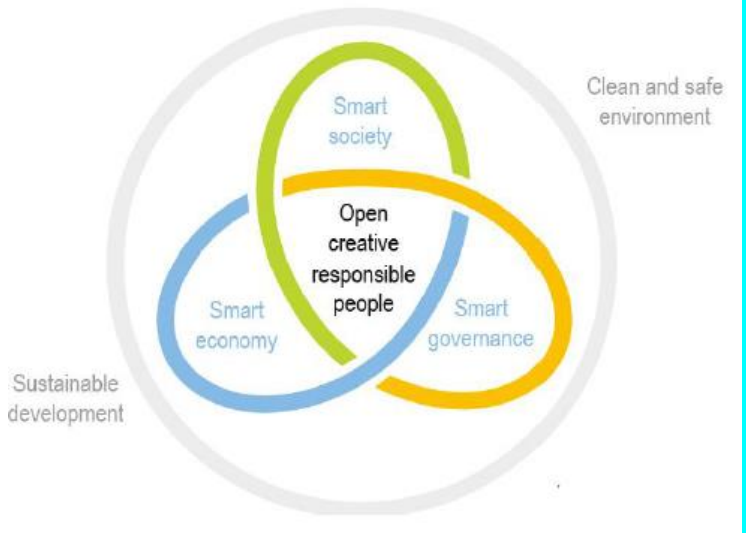
The Progress Strategy "Lithuania 2030" reflects a national vision and priorities for development as well as guidelines for their implementation by 2030. This is like a roadmap to be followed for governing in decision making and in drawing up national plans and/ or programmes.

The implementation of the elaborated vision will be based on progress-relevant values such as:

"Openness to a different view, to positive initiatives, to a dialogue, cooperation and innovations;

Creativity in generation and implementation of new ideas, treating challenges as new possibilities of building success;

Responsibility for actions taken, morality, active concern not only about themselves but also about the environment, community and the country at large" (Lithuania 2030, 2016).



Source: "Lithuania 2030", 2016.

Fig. 3. **Concept of the progress strategy "Lithuania 2030"**

This strategy envisages gradual changes at national level on areas like smart society, smart economy and smart governance.

The objective of achieving a **Smart society** involves achieving a "learning society: modern and dynamic, ready for future challenges and able to perform in an ever-changing world" (Lithuania 2030, 2016). This means that the society is open to global changes, the people are well educated, deeply interested in science and innovations, familiar with the latest advances in technologies, good at foreign languages, and **eager to pursue lifelong-learning.**

One of the key initiatives for achieving a learning society is "To promote Lithuania's development domestically and internationally, focussing on **digitalization of the cultural heritage and contemporary cultural content**" (Lithuania 2030, 2016).

There is also available a specialized home page www.digitalgov.com, with news and documents from all around the World about digitalization policy, development and performance.

Conclusions, proposals, recommendations

1) Digital transformation forms the basis for the fourth industrial revolution. It is an important component not only for entrepreneurship development, public administration and society at large, but it is also referred to in strategic policy documents as an important future need, emphasizing the importance of lifelong learning.
2) Digital competence involves confident, critical and responsible use of digital technologies as well as covers fields such as information and data literacy, communication and cooperation, media literacy, digital content creation, security, intellectual property matters, problem solving and critical thinking. This requires advanced digital skills and knowledge, which are gradually built up by the residents of the European Union. However, on average, 40 % of the EU residents had poor or very poor digital skills; among the Baltic States, a better situation was reported in Estonia, where the skills of only 30 % residents could be rated as insufficient.
3) Residents, businesses and politicians experience technological change in their lives and work, expecting public administration institutions to adapt and provide similar technological potential in the delivery of public services. Most of the goals and objectives set in the strategic policy documents analysed referred to facilitating particularly the implementation of digitalization in society, enterprises and public administration.

4) The policy document of Estonia, although it has reached the end of its programming period, is nevertheless significantly different from those of the other Baltic States. The policy document of Estonia refers only to the introduction of digitalization, whereas the strategic development plans of Latvia and Lithuania refer to the entire economy, the environment and society in relation to digitalization.
5) Digitalization in lifelong education is mainly referred to as a communication and information tool. The policy document of Latvia focuses mostly on digital skills, and the secondary and higher education systems as well as lifelong education providers have to be involved in building up the skills. The policy documents of Lithuania and Estonia focus particularly on public involvement as well as on making life easier through digital solutions and positioning the society as a smart society.

ACKNOWLEDGEMENTS

The paper was supported by the NATIONAL RESEARCH PROGRAMME "LATVIAN HERITAGE AND FUTURE CHALLENGES FOR THE SUSTAINABILITY OF THE STATE", project "CHALLENGES FOR THE LATVIAN STATE AND SOCIETY AND THE SOLUTIONS IN INTERNATIONAL CONTEXT (INTERFRAME-LV)".

Bibliography

1. Armstrong, P. (2017). Disruptive Technologies: Understand, Evaluate, Respond. London: Kogan Page; 1 edition, p. 216.
2. Berghaus, S. (2018) *The Fuzzy Front End of Digital Transformation: Activities and Approaches for Initiating Organizational Change Strategies*. Retrieved: https://www1.unisg.ch/www/edis.nsf/SysLkpByIdentifier/4704/$FILE/dis4704.pdf Access: 01.03.2020.
3. Binde, J. (2019). Produktivitates un digitalizacijas attistibas tendencies Latvija (Productivity and Digitalization Trends in Latvia). pp. 147-158. Retrieved: https://www.apgads.lu.lv/fileadmin/user_upload/lu_portal/apgads/PDF/Monografijas/Produktivitates_celsana/Produktivitate_4_Binde.pdf.
4. Burke, W.W. (2011). Organization Change: Theory and Practice. *SAGE Publications, Inc. Third edition 2011*, p. 384.
5. Damodaran, L., Olphert, W. (2006). Informing Digital Futures. *Strategies for Citizen Engagement. Springer 2006*, p. 226.
6. Digital Agenda 2020 for Estonia (2019). Retrieved: https://www.mkm.ee/sites/default/files/digital_agenda_2020_web_eng_04.06.19.pdf. Access: 25.03.2020.
7. Dosi, G., Galambos, L., (2013) The Third Industrial Revolution in Global Business. *Cambridge University Press*, 2013, p. 358
8. Figel, J. (2006). *Education for Everyone.Worlwide. Lifelong*. Journal AED – Adult Education and Development. Retrieved: https://www.dvv-international.de/en/adult-education-and-development/editions/aed-672006/dvv-12th-german-adult-education-conference/lifelong-learning-adult-education-and-achieving-the-lisbon-goals/ Access: 09.03.2020.
9. Grinberga-Zalite, G., Hernik, J. (2019). Digital Performance Indicators in the EU. In: Research for Rural Development 2019: annual 25th International scientific conference proceedings, Jelgava, Latvia, 15-17 May 2019 / Latvia University of Life Sciences and Technologies. Jelgava. Vol.2, pp.183-188.
10. Grinberga-Zalite, G., Rivza, B., Zvirbule, A., Tihankova, T. (2019). Promoting Digital Skills in Higher Education to Strengthen the Competitiveness of the EU Human Capital. *19th International multidisciplinary scientific GeoConference SGEM 2019: conference proceedings*, Albena, Bulgaria / Bulgarian Academy of Sciences Sofia. Vol. 19, pp. 259-266.
11. Kas ir muzizglitiba (What is Lifelong Education) (s.a.). Retrieved: http://www.muzizglitiba.lv/pieauguso-izglitiba/15. Access: 10.02.2020.
12. Kemp, S. (2020) Digital 2020: Global Digital Overview. Digital trends 2020: Every single stat you need to know about the internet. Retrieved: https://thenextweb.com/growth-quarters/2020/01/30/digital-trends-2020-every-single-stat-you-need-to-know-about-the-internet/ Access: 16.03.2020.
13. Lithuania's Progress Strategy "Lithuania 2030" (2016). Retrieved: https://www.lietuva2030.lt/en/about Access: 25.03.2020.
14. Matt, T., Orzes, G., Rauch, E., Dallasegaa, P. (2020) Urban Production – A Socially Sustainable Factory Concept to Overcome Shortcomings of Qualified Workers in Smart SMEs. *Computers & Industrial Engineering*, Volume 139.
15. Mergel, I., Edelmann, N., Haug, N. (2019). Defining Digital Transformation: Results from Expert Interviews. *Government Information Quarterly* June 2019., pp. 1-16.

16. National Development Plan of Latvia 2021-2027 (2020). Final version. Retrieved: https://www.pkc.gov.lv/sites/default/files/inline-files/NAP2027galaredakcija.pdf. Access: 26.03.2020.
17. Par Izglitibas attistibas pamatnostadnu 2014.-2020.gadam apstiprinasana. Saeimas pazinojums (Approval of the Education Development Guidelines for 2014-2020. Saeima announcement) (2014). Retrieved: https://likumi.lv/doc.php?id=266406. Access: 21.10.2019.
18. Par pamatkompetencem muzizglitiba (Basic Competences in Lifelong Education) (2018). EU Council Recommendations. Retrieved: https://eur-lex.europa.eu/legal-content/LV/TXT/PDF/?uri=CELEX:32018H0604(01)&from=EN. Access: 20.03.2020.
19. Pelse, M., Lescevica, M. (2016). Smart Specialisation Assessment in Latvia. *Economics Science for Rural Development: Proceedings of the International Scientific Conference*, Nr. 42. Jelgava: LLU, pp. 126-131.
20. Pfaffinger, K.F., Reif, J.A.M., Spieβ, E., Berger, R. (2020) *Anxiety in a Digitalised Work Environment*. Retrieved: https://ezproxy.llu.lv:2134/content/pdf/10.1007/s11612-020-00502-4.pdf Access: 25.01.2020.
21. Rivza, B., Rivza, P. (2019). 4.industriala revolucija: digitala ekonomika un LLU studiju procesa izaicinajumi (4th Industrial Revolution: the Digital Economy and Challenges for the Learning Process at LLU). LLU Academic Conference. 17 p. Retrieved: https://www.llu.lv/sites/default/files/2019-01/AK_2019_B_P_Rivza.pdf. Access: 15.03.2020.
22. Rose, G. (2016). The Fourth Industrial Revolution: A Davos Reader. *Council on Foreign Relations. Foreign Affairs. Special Collection*. P. 234.
23. Schwab, K. (2017) The Fourth Industrial Revolution. *Kindle Edition* 2017; p. 192.
24. Тарасов, И. (2018). Индустрия 4.0: понятие, концепции, тенденции развития *Стратегии бизнеса*. (Russian) No. 6. (Industry 4.0: the Concept, Conceptions, Development Trends. Business Strategy), pp. 57-64.

Proceedings of the 2020 International Conference "ECONOMIC SCIENCE FOR RURAL DEVELOPMENT" No 54
Jelgava, LLU ESAF, 12-15 May 2020, pp. 256-263
DOI: 10.22616/ESRD.2020.54.031

WORKING CONDITIONS OF ACADEMIC PERSONNEL OF HIGHER EDUCATION INSTITUTIONS IN LATVIA

Dita Stefenhagena[1], Dr.sc.admin.; **Inga Vanaga**[2], Mg.sc.soc.; **Anda Grinfelde**[3], Dr.oec.
[1,2,3]Latvian Trade Union of Education and Science Employees (LIZDA)

Abstract. Academic society is exposed to continuous growing demands and requirements – innovative pedagogical work, international recognition in research, cooperation with industry - these are just part of requirements which have to be ensured by academic staff at each higher education institution (HEI) in Latvia. The question arises – do working conditions of academic staff, taking into consideration described demands, duties and requirements, correspond with decent work practice, such as competitive pay and working stability? **The aim of the research** paper is to investigate if the factors influencing work of academic staff are following decent work practice. In order to reach the aim of the research paper, the authors have used the results of the Latvian Trade Union of Education and Science Employees (LIZDA) survey conducted at public higher education institutions in Latvia. The time period of survey was April – September, 2019. The target group of the survey were representatives of academic staff. The major conclusions of the research are the following: (1.) salary of academic staff isn't competitive with other public professions and positions in Latvia; (2.) working stability of academic staff is low because of insecure and precarious contracts; (3.) working conditions of academic personnel regarding competitive salary and work stability don't correspond with the decent work practice.

Key words: academic staff, working conditions, precarious contracts, uncompetitive salary, decent work.
JEL code: I23

Introduction

The paper shows part of the research "For decent work of academic personnel in higher education institutions in Latvia", which was carried in 2019. The topicality of the research can be characterized as the following: academic staff is exposed to numerous duties and requirements which are regulated by the Higher Education Institutions' Law and the Law on Scientific Activities, as well by other normative regulations at national and institutional level. At the same time working conditions of the academic personnel may not correspond with decent work practice because of uncompetitive salary and precarious, unstable contracts. The prestige of academic positions is getting lower, and in many cases young people aren't interested in academic career.

The aim of the research is to investigate if the factors influencing work of academic staff are following decent work practice. The basic factors of decent work defined by international practice are the following:

- labour rights, working stability, competitive remuneration;
- social protection and environment – status, prestige, equality;
- possibilities for professional improvement and learning, self – assurance and career development;
- safe and health friendly working conditions and environment (*International Labour Organization, 2019*).

The United Nations Economic and Social Council has defined the "decent work" concept: decent work is employment that respects the fundamental rights of the human person as well as the rights of workers in terms of conditions of work safety and remuneration. ... respect for the physical and mental integrity of the worker in the exercise of his/her employment (*United Nations, 2017*). Thus, respect for decent work conditions include remuneration, safety and security. The following description of decent work aspects on the part of International Labour Organization also emphasizes fair income, security, personal

[1] Dita Stefenhagena, LIZDA
[2] Inga Vanaga, LIZDA
[3] Anda Grinfelde, LIZDA

development. Decent work is applied to both the formal and informal sector. It must address all kind of jobs and people. Decent work is a multidimensional concept because it touches the humane grounds. According to the International Labour Organization, decent work involves opportunities for work that are productive and deliver a fair income, security in the workplace, better prospects for personal development and social integration, freedom for people to express their concerns, organize and participate in the decisions that affect their lives (ILO, 2017).

In order to reach the aim, **the following tasks were set:** (1.) research theoretical aspects of decent work criteria and practice using sources of normative regulations and reports of international labour organizations; (2.) use empirical results, concerning academic staff's opinion about their income, workload and contracts, from the research conducted by LIZDA in 2019; (3.) summarize the theoretical and empirical findings, organize a discussion and make conclusions.

Considering the limitations of the paper, the aspects of remuneration, contracts and workload of academic staff are those factors which have been analysed in the paper. This paper includes results and discussion about one thematic block – "Stability and security of academic staff's contracts, components of workload, remuneration." In total, there were five thematic blocks analysed in the research: (1.) higher education's policy impact on work of academic staff; (2.) stability and security of academic personnel's contracts, components of workload, remuneration; (3.) availability of professional improvement and career development; (4.) safe and study process friendly working environment;(5.) future challenges in working with students.

Research object: working conditions of academic personnel of public HEIs. **Research subject:** conformity of remuneration, workload and contracts with decent work practice. Authors used normative regulations and reports of international labour organizations as a theoretical basis, and the results of a survey for academic staff in public HEIs conducted in 2019, as an empirical basis. **Research question**: do working conditions of academic staff, taking into consideration described demands, duties and requirements, correspond with decent work practice, i.e., competitive pay and working stability? Research based arguments help LIZDA to more efficiently represent interests of academic staff in social dialogue with education policy makers and HEIs' administration, and to achieve improved working conditions and environment for academic staff.

Research results and discussion

1. Research methodology

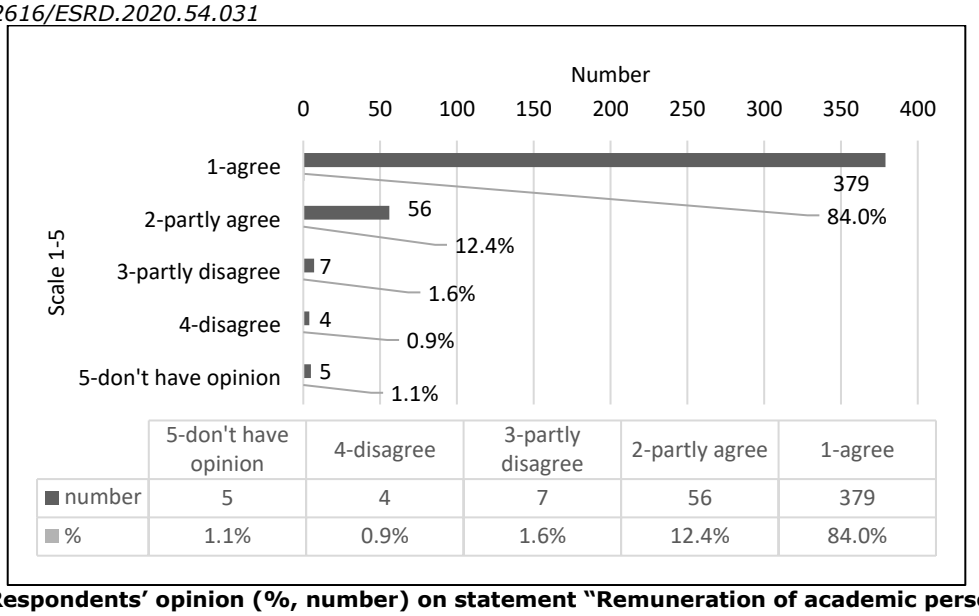
There are 28 public higher education institutions (including colleges) in Latvia (*Higher Education Institutions in Latvia, IZM, 2019).* The target group of the survey – academic staff in public higher education institutions. The total number of respondents (sample) – 451, which compile 4,5 % of the general set of the academic staff (N), and that is valid for the representation of the sample. The total number of elected and non-elected teachers of higher education institutions is approximately 10 000 (5109 are elected and the rest – non-elected) (*Ministry of Education and Science, 2019).*

There are 105 questions (structured as statements) and 14 questions of respondents' demographic data included in the survey. There are 2 types of rating scales: (1.) Likert scale: 1 to 5, where 1-agree, 2-partly agree, 3-partly disagree, 4-disagree, 5-don't have opinion; (2.) rating scale from 1 to 3, where 1- yes, 2-no, 3- don't have opinion. Sample description indicates: from the total number of respondents - 451, 74 % are females, and 26 % are males; 56 % respondents work in more than one workplace; 36 % respondents work in another education institution, incl. another HEI, and 64 % are working in different institutions which aren't educational entities. The majority of respondents (74 %) are elected academic staff members, 32 % work in professor or associated

professor's positions, 58 % - in docent, lecturer, assistant positions; 58 % of respondents have obtained doctor's degree (PhD). Majority of respondents (64 %) in academic position work part time; 40 % respondents have 20 years of academic experience, and only 13 % of respondents have academic experience less than 5 years. The majority of respondents (52 %) represent social, human and art sciences (52 %), the rest – natural sciences, engineering, technologies, medicine, health, agriculture, are represented less; 47 % respondents obtain researcher's position along with the academic position; 75 % of respondents are representatives from universities, 18 % - representatives from other HEIs incl. academies, 7 % - representatives from colleges. All regions of Latvia (Riga, Zemgale, Kurzeme, Latgale, Vidzeme) were represented, but there wasn't equal number representation from the regions. That is connected with the fact that the majority of public HEIs are located in Riga; 59 % from respondents are not LIZDA members, 14 % from this percentage are members of other trade unions.

2. Remuneration as one of the most important aspects in decent work practice

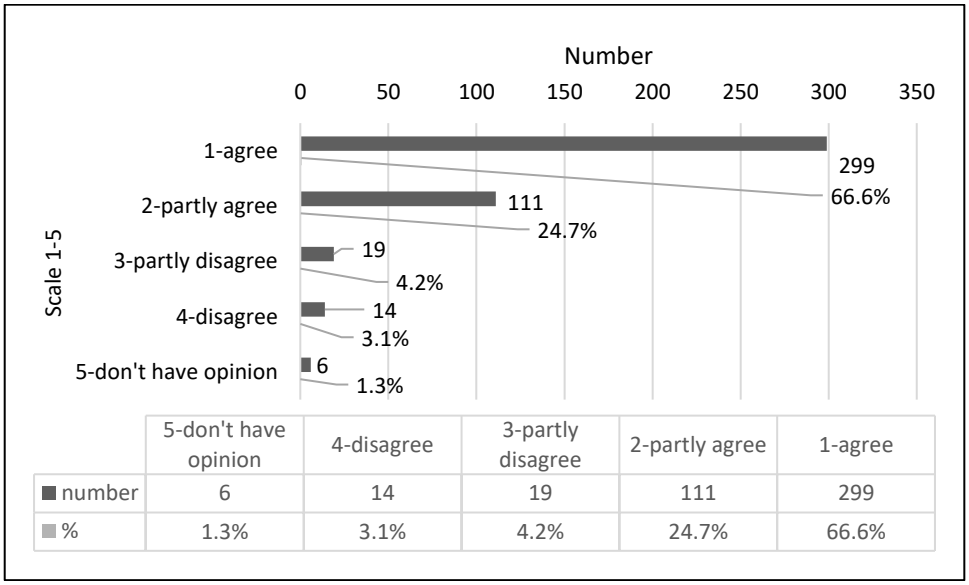
The minimal rate for academic positions (assistant, lecturer, docent, assoc. professor, professor) is regulated by the Cabinet of Ministers regulations (*MK regulations Nr.445, Pedagogu darba samaksas noteikumi.05.07.2016)*. On 15 January 2018 the government approved the salary increase schedule not only for teachers of general education but also for teaching personnel at the HEIs. The schedule indicated that each year for each academic position there should be 10 % salary increase based on minimal rate of 2016. Three years in a row (2017, 2018, 2019) the salary increase was ensured and supported financially by the government, but in 2020 the state budget didn't find financial resources to support academic staff. Of course, some of HEIs are able to financially support their staff on a regular basis because of their own revenues, e.g. Riga Stradins University – because of large number of costly study programs and international students. Considering the fact that there are only some public HEIs which are able to support their academic staff using their own financial resources, there is large number of specialists representing academic positions whose salary isn't competitive. That can be proved by the fact that according to the Central Statistics Bureau information, the average public sector salary for a full workload was 1076 euro (pre-tax remuneration) in 2019 (*CSB, 2018*) but the minimal rate for the assistant professor's (docent) position – only 980 euro (pre-tax remuneration) (*MK regulations Nr. 445, Pedagogu darba samaksas noteikumi.05.07.2016).* Situation is reflected by the opinion represented by 96% respondents (answers 1-agree, 2-partly agree) who agree/partly agree with the statement that remuneration of academic personnel is generally low, and it doesn't correspond with decent work practice (Fig. 1).



	5-don't have opinion	4-disagree	3-partly disagree	2-partly agree	1-agree
number	5	4	7	56	379
%	1.1%	0.9%	1.6%	12.4%	84.0%

Fig. **Respondents' opinion (%, number) on statement "Remuneration of academic personnel of HEIs in Latvia is generally low, and it doesn't correspond with decent work conditions", n =451**

Decreasing prestige of academic positions in the society follows the uncompetitive salary of academic personnel. Education sector in Latvia is in high demand for general education teachers, and there are positions available for lower level academic positions, e.g. assistants, lecturers, especially concerning STEM (science, technology, engineering, mathematics) programs. The survey indicated that 90 % of respondents (answers: 1- agree, 2- partly agree) agree/partly agree with the statement that uncompetitive remuneration of academic personnel is one of the factors of decreasing prestige of academic positions in the society (Fig. 2).



	5-don't have opinion	4-disagree	3-partly disagree	2-partly agree	1-agree
number	6	14	19	111	299
%	1.3%	3.1%	4.2%	24.7%	66.6%

Fig. 2. **Respondents' opinion (%, number) on statement "Uncompetitive remuneration of academic personnel of HEIs is one of the major reasons of decreasing prestige of academic positions in the society", n =451**

This situation may lead to decreasing prestige not only of academic positions, but also of academic education and science of Latvia in general. Higher education area is united in all EU, and Latvian HEIs are interested to increase their study and science quality and positive public image not only locally but internationally, too.

3. Different components of workload influence remuneration of academic staff and creates inequality

The next aspect which was analysed is the workload of academic staff. The sample description indicated that 56 % of respondents work in more than one workplace, and 64 % of respondents work part time. 56 % of respondents were of opinion that different work duties are included and paid for the same academic position and workload at HEI (Fig. 3).

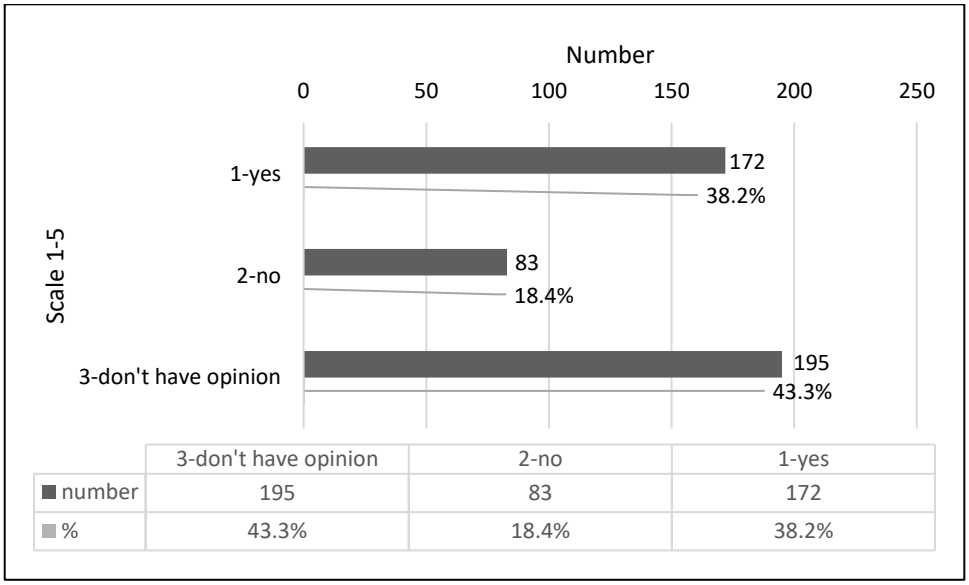


Fig. 3. **Respondents' opinion (%, number) on statement "Different work duties are included and paid for the same academic position and workload", n =451**

That may raise an assumption that calculation of workload duties and salary isn't transparent. That is ensured by the fact that large percentage (43 %), almost half of respondents didn't have opinion on this issue – they were not informed/didn't have information on how the workload is calculated, what are those components which are included and paid in the workload. Also, if the same position with the same workload has different salary, that may lead to an assumption of work inequality issue.

Starting from 2017, LIZDA repeatedly insisted that the Ministry of Education and Science (IZM) has to establish working group to assess the best practice of academic staff's workload calculations. This issue raised an interest also on the part of HEIs in Latvia (University of Latvia, Riga Stradins University, Riga Technical University, Latvia University of Life Sciences and Technologies and some others have expressed an interest) (*LIZDA internal documentation, 2019*).

The following table indicates respondents' opinion – what are those components which are included/aren't included in the workload calculations most frequently.

Table 1

Components of academic staff's workload

No	Components	Included in workload and paid	Isn't included and paid in workload
1.	Scientific activities – publications, participation at conferences etc.	(23%)	(65%)
2.	Organizational duties at HEI	(24%)	(64%)
3.	Review of scientific papers	(6%)	(66%)
4.	Participation at quality assurance procedures at program, structural unit and HEI level	(10%)	(63%)
5.	Consultations for students	(70%)	(25%)
6.	Review of students' papers (essays, tests, reports etc.)	(63%)	(31%)
7.	Renewal of study courses' content	(27%)	(65%)
8.	Development of e-study courses in Moodle or other electronic platforms	(17%)	(67%)
9.	Lecturing in e-studies	(14%)	(57%)
10.	Leading bachelor and master theses	(80%)	(11%)
11.	Methodological work – development of lectures, practical seminars, etc.	(30%)	(63%)
12.	Lectures for international students	(33%)	(33%)

Source: Authors' research "For decent work of higher education institutions academic personnel in Latvia", 2019

The following components are frequently not included and paid in workload: scientific activities (65 %), including review of other authors'' scientific papers, organizational duties at HEI (64 %), renewal of study courses content (65%), development of e-study courses in Moodle or other electronic platforms (67%), lecturing in e-studies (57 %). Quite a large percentage (33 %) of respondents point out that their work with international students isn't included and paid at the workload. Positively, that consultations for students (70 %), review of students' papers (63 %), supervising of bachelor and master theses (80 %) are usually included in the workload of academic staff. The survey results show that there are numerous duties to be represented by the academic staff, concerning work with students, scientific and organizational work etc. At the same time, there is a risk, that part of these duties may not be included and paid in the workload of any academic position. The situation is complicated also by the fact the majority of academic staff is working part time workload, and it may not be clear how many of the responsibilities corresponding the respective workload have to be implemented by academic staff.

4. Academic staff's contracts – correspondence with decent work practice

As mentioned before, it is characteristic that academic staff in Latvia works part time. Eurydice has shown that countries like Latvia (80 %), Lithuania (60 %) and Estonia (40 %) are those with the highest specific rate of academic personnel who works part time in academic positions. At the same time, e.g. only 5 % of academic personnel works part time in Poland (*Eurydice, 2017*). If a person in an academic position works in two or more institutions, that may cause "burn out" syndrome on the one hand, and on the other hand, there is a risk that academic quality may decrease. The data of the LIZDA survey indicates that frequent performance assessment of academic staff on the part of students, employers, external accreditors etc. creates additional tension, and the majority of academic personnel (82 %) point out that because of intensive workload they have experienced "burnout syndrome".

Not only part time work, but also employment contract stability may influence work security of academic personnel. There are definite (fixed term) and indefinite contracts of academic personnel in Europe. Possibility to have indefinite contract exists in the majority of EU countries. Eurydice has stated that only in such countries as Slovakia and Latvia there doesn't exist indefinite contracts for academic staff *(Eurydice, 2017*). Academic personnel in all positions is elected for the time period of six years, and after this period new elections (public announcement for the position) are organized. That means that any academic position, e.g. professor or assistant professor (docent) may lose the job after the election period. An appeal for inconsistency with the Republic of Latvia Constitution was submitted in 2019 at the Republic of Latvia Constitutional Court. According to the appeal, the court's decision was that the situation doesn't correspond with the constitutional right for each person to freely choose employment in accordance with one's skills and qualification (*Republic of Latvia, Decision of Constitutional Court, 2019*.). Amendments in the Law on Higher Education Institutions are prepared. Changes will include possibilities for indefinite contracts for associate professors and professors to have indefinite contracts if elected two times in a row and if their academic and scientific assessment is positive. If the contract is fixed for the election period, that still may include changes in workload and remuneration. The majority of respondents (55%) indicate that while they are elected in academic position for the period of six years, they experience workload and remuneration amendments during the contract period (Fig.4). In majority of cases it is connected with decrease of number of students in HEIS.

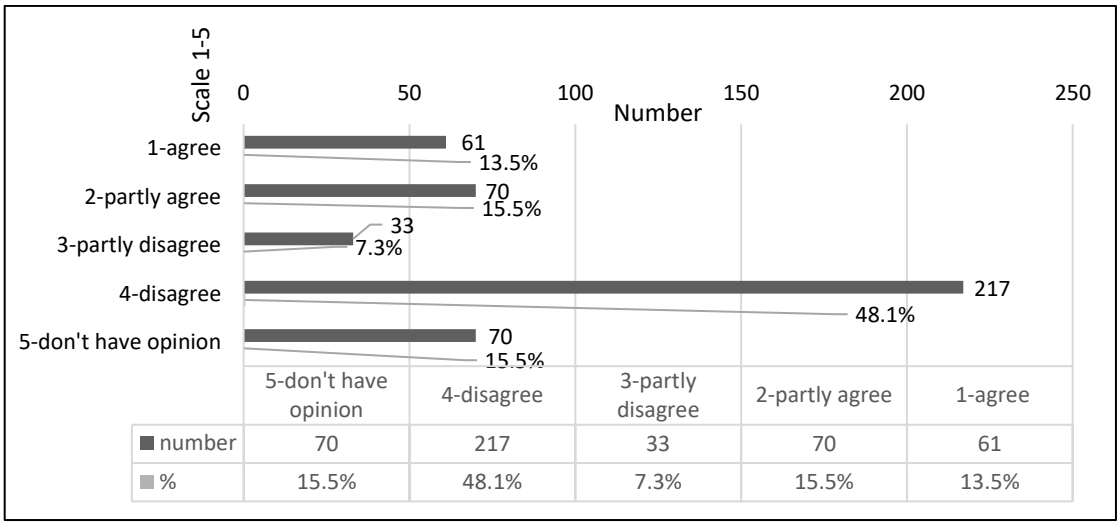


Fig. 4. **Respondents' opinion (%, number) on statement "Employment agreement is signed for six years, and workload and remuneration amendments aren't performed", n=451**

Even worse situation is with that staff which isn't elected (and not included into the statistics of academic personnel) and works on a semester of study year basis. 50 % of respondents (disagree, partly disagree) indicate that when the employment contract is concluded for one year, workload and remuneration are subjects for amendments during the contract period. Although there isn't seen a clearly expressed tendency, 46 % of respondents indicate that they aren't informed about their study year contracts, including workload and remuneration, on a timely basis (at least one month before the beginning of the study year).

Conclusions and recommendations

1) In comparison with other public sector professions, remuneration of academic personnel isn't competitive. Contracts of academic staff are insecure and precarious. At the same time both at everyday work and during the re-election process, academic staff is exposed to high, diversified requirements, including scientific and organizational work.
2) There aren't indefinite contracts for the academic staff. All contracts are fixed, concluded for a semester, one year, or six years. There should be a possibility for indefinite contracts in case an academic staff member is re-elected at the academic position several times in a row. Contract stability and security would be ensured at the level of each HEI management in case there is a sufficient state financing for higher education and science provided on the part of state budget.
3) Increased higher education and science state funding has to be provided in accordance with the normative regulations which are stipulated by the Higher Education Institutions' Law and the Law on Scientific Activities. Increased public funding would partly solve the problem of uncompetitive remuneration of academic staff.

Bibliography

1. Central Statistical Bureau (CSB). Available at: https://www.csb.gov.lv/lv/statistika/statistikas-temas/socialie-procesi/darba-samaksa/meklet-tema. Reviewed: 01.03.2020.
2. Factors of decent work. International Labour Organization. Reviewed: 02.02.2020. Available at: https://www.ilo.org/global/research/lang--en/index.htm
3. Higher Education Institutions in Latvia in 2019. Ministry of Education and Science (IZM). Reviewed: 02.02.2020. Available at: https://www.izm.gov.lv/lv/izglitiba/augstaka-izglitiba/augstakas-izglitibas-iestades
4. LIZDA internal documentation (2019). Reviewed: 10.03.2020. Available at: https://www.lizda.lv/aktualitates/jaunumi/
5. MK regulations Nr.445, Pedagogu darba samaksas noteikumi.05.07.2016. Reviewed: 02.02. 2010. Available at: https://likumi.lv/ta/id/283667-pedagogu-darba-samaksas-noteikumi
6. Modernization of Higher Education in Europe: Academic Staff (2017). Eurydice publication. Reviewed: 10.03.2020. Available at: https://eacea.ec.europa.eu/national-policies/eurydice/content/modernisation-higher-education-europe-academic-staff-%E2%80%93-2017_en
7. "Par augstakas izglitibas iestazu macibspeku darba apstakliem" rezultati un prezentacijas. Reviewed: 02.02.2020. Available at: https://www.lizda.lv/projects_and_studies/aptaujas-par-augstakas-izglitibas-iestazu-macibspeku-darba-apstakliem-rezultati/
8. Republic of Latvia, Decision of Constitutional Court, 2019. (LR Satversmes tiesas spriedums). „ParAugstskolulikuma27.pantapiektasdalasun30.pantaceturtasdalasatbilstibuLatvijasRepublikasSatversmes106.pantapirmajamteikumam" . Reviewed: 01.02. 2020. Available at: https://www.satv.tiesa.gov.lv/web/viewer.html?file=/wp-content/uploads/2018/08/2018-15-01_Spriedums.pdf#search=beztermi%C5%86a
9. United Nations Economic and Social Council: Promoting the MDGs: The Role of Employment and Decent Work (2017). United nations chronicle. Reviewed: 03.03.2020. Available at: https://www.un.org/en/chronicle/article/promoting-mdgs-role-employment-and-decent-work

Proceedings of the 2020 International Conference "ECONOMIC SCIENCE FOR RURAL DEVELOPMENT" No 54
Jelgava, LLU ESAF, 12-15 May 2020, pp. 264-270
DOI: 10.22616/ESRD.2020.54.032

HUMAN DEVELOPMENT INDEX IN GEORGIA AND CHALLENGES OF SUSTAINABLE DEVELOPMENT

Natela Tsiklashvili[1], Professor, Doctor of Economics; **Tamila Turmanidze**[2], Assist. Professor, Doctor of Economics and **Tamar Beridze**[3], Assist. Professor, Doctor of Business Administration
[1,2,3]Batumi Shota Rustaveli State University

Abstract. The Human Development Index is an indicator comprising three components – life expectancy, education and per capita income. In general, the human development index tends to grow worldwide. However, it does not always perfectly reflect reality. The aim of the research is to study the dynamics of the Human Development Index (HDI) in Georgia and a critical analysis of its components in relation to sustainable development challenges.HDI index in Georgia is growing dynamically. But a number of problems have emerged during the research, both with regard to the components of HDI and with the reality in Georgia. We have the country's favourable position in terms of ratings - in a group of high-growth countries, though the nominal indices of HDI components do not reflect actual content. Data on education and life expectancy in Georgia are good, but in reality, access to education is less problematic than the quality of education. The component variables do not measure the quality of the system. However, exactly HDI is the one of the determinatives of three main directions of sustainable development challenges: economic development, social inclusion and environmental sustainability. Although HDI is an important tool, it has drawbacks both in defining and calculating the components of variables and in the quality of the database. The index complexly determines human development, but uses very little data to calculate the significance of each component. It is advisable to improve the methodology of human development index calculation and to load it with more contextual analysis.

Key words: Human Development Index, Sustainable Development, Education.
JEL code: A13, I-25

Introduction

In the era of modern globalization, the most important factor in development of the country and improving the living standards is the development of human resources and the effective use of existing labour potential. The Human Development Index, together with other indices and empirical data, is included in the report of UNDP Human Development to assess progress in these directions. According to the current sustainable development goals, human development is particularly actual in the contemporary conditions, which is an important focus for the study and assessment of the ability of people to make worthy choices in terms of health, education and standard of living. The aim of the research is to study the dynamics of the Human Development Index (HDI) in Georgia and a critical analysis of its components in relation to sustainable development challenges. Therefore, we aimed to study the HDI in Georgia, comparing the nominal and real rates of its determinants. Depending on the purpose, the following objectives revealed: 1. to study the HDI statistics of the world and Georgia; 2. To compare and analyse nominal and real indicators of the identified components of human development. During the research process we used exploratory research (since 2012, no similar study has been conducted in Georgia in this way) and secondary research based on statistical resources;

The novelty of the research is that it critically analyses the components of human developments index and points to strengthening the qualitative content of the index. The object of the research is the components of Human Development Index/ quality and level of education system in Georgia.

[1] Natela Tsiklashvili e-mail: natia.tsiklashvili@gmail.com
[2] Tamila Turmanidze e-mail: tamilaturmanidze@yahoo.com
[3] Tamar Beridze e-mail: beridze.tamar@bsu.edu.ge

Research findings and discussion

International indexes and ratings are one of the ways to measure the progress of a particular country in different directions - but it should be noted that they do not accurately reflect the situation in the country, even in the fields where they are assessment tools. The quality of the databases used during their calculation process, also reduces the accuracy of indexes and ratings. The ability to compare data between countries is a major problem due to imperfect methodology and databases for developing countries.

However, comparisons across countries and regions can still be made by ratings for the given period of time.

The Human Development Index is an indicator developed on the basis of the UN Human Development Theory, which comprises three components - life expectancy, education and per capita income.

"The main goal of development is to increase people's choice, not just their income." (Bendeliani N., 2012).

The Human Development Index (HDI) was designed to demonstrate that the ultimate criterion of the assessing a country's development is not only economic growth but also the people themselves and their capabilities. The HDI critically evaluates national policy decisions by comparing two countries that have the same GDP (per capita) but different human development rates.

The Human Development Index was developed in 1980 by the Pakistani economist Mahbub Ul Haq and Sir Richard Jolie. Since then, the UNDP has been using this index in its annual "Human Development Report". The Human Development Index is not a measure of the well-being or economic development of a country. It measures the rights and choices available to people necessary to develop their capabilities.

The Human Development Index sets out the criteria and shows the level of the different countries according to these criteria. All this is represented by a pointer from 0 to 1. According to the Development Index, countries are divided into 4 categories: highest - (0.8-1.0), high- (0.7-0.79), average - (0.55-.70), low - 0.55 and less.

From 1990 to 2011, the methodology of the Human Development Index changed significantly several times. The changes did not affect the three main constituents of the index. However, the rules for counting and the constituent variables were changing from time to time. These include long and healthy lives, education and a normal standard of living. HDI is the geometric means of the normalized values of these three parameters.

In general, the human development index tends to increase. Even in countries where the human development index is low, many people's living conditions have improved significantly. However, there is still inequality (e.g. gender) and discrimination, as evidenced by the statistics for 2018 on human development.

"Around the world, the average human development index for women (0.705) is 5.9 percent lower than for men (0.749). The gap between the sexes is the largest in the least developed countries, where the average human development index for women is 13.8 percent lower than for men." (Neidlein H., 2018)

If we look at the data of the last 30 years, significant progress is often noticeable. For example, the Human Development Index (HDI) in 2017 was 0.728, which is about 21.7 percent higher than in 1990 (0.598). As for the average life expectancy, it is 7 years longer than in -1990, and more than 130 countries have made the basic general education accessible.

The fastest growth in the Human Development Index in the period 1990-2017 was fixed 45.3 percent in South East Asia, followed by the East Asian and Pacific Ocean regions with 41.8 percent and Africa in the south of Saharan with 34.9 percent.

In sum, countries with a low index of human development have improved the index by 46.6 percent since 1990. At the same time, the HDI growth rate of the countries with high-development economies was only 14%.

"These trends hope that inequality between regions will be reduced in human development." (Human Development Report…, 2019).

However, the achieved progress since 1990 has not been constant. Conflicting countries particularly lagged behind. In 2012, the Syrian Arab Republic ranked 128th according to the Human Development Index (HDI), placing it among the average human development group.

Furthermore, due to the ongoing conflict that has been going on for years, the country returned to its 155th position in 2017, was placed in a low human development group, mainly because of the low life expectancy.

There are huge disparities in health filed across countries with different levels of development. Despite the fact that one of the 10th goals of sustainable development is to overcome inequality, it has remainsed as a problem. In countries where the human development index is very high, life expectancy is on average 79.5 years, but in countries where the human development index is low, life expectancy is only 60.8 years.

Inequality between countries also exists in education field. Adolescents from countries with a high index of human development tend to attend school more than 6-7 years on average, compared to adolescents from the countries with a low index of human development.

As it is well known, in the modern conditions, society faces the challenges of sustainable development, which connects three directions: economic development, social inclusion and environmental sustainability. Sustainable Development Goals are a set of 17 goals and 169 indicators that all UN member countries agree on achieving the better and more sustainable future. They are about the contemporary global challenges we face: poverty, inequality, prosperity, peace and justice, as well as climate and environmental challenges.

The Human Development Index as an indicator is closely linked to most of the goals listed above and its upward dynamics have a positive impact on the achievement of the goals. But the feedback is also noticeable. While talking about the Sustainable Development and Human Development Index, the problems of developing and poorly developed countries are particularly important.

Georgia belongs to the category of developing countries and in order to assess the development of the country in various fields, it is important to keep recorded the results of the ongoing reforms and to analyse the prospects for future development. In the world, this practice is based not only on the growth rates of the economies of the countries but also on other important factors of development.

The Human Development Index in Georgia has been calculated since 1998, therefore the first statistics are also dated this year. HDI-0,762 is a high level of human development group(Human Development Report…, 1998).

HDI had been steadily increasing until 2010, particularly high in 2007. It should be noted that this year is marked by the highest macroeconomic performance in recent Georgian history, with the exception that all three components of HDI are upward, which may be considered as a positive consequence of the economic policies of the government which led the country after they started the

processes of the Rose Revolution. Education reform, economic growth of 12.6 % (which is the highest rate in the period from 2005 to 2019 years) haves also reflected on the growth of income.

In general, the income index according to the years is significantly behind the education and health components and reduces the index average score.

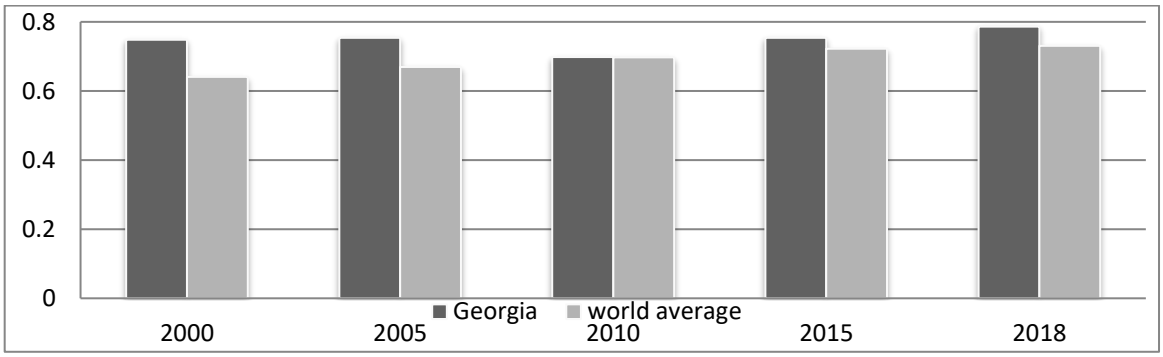
Source: Diagram built by author's, based on Human Development Reports 1998-2019

Fig. 1. **Human Development Index dimensions**

In 2010, due to changes in the human development index calculation methodology, the indicator decreased to 0.698, which led to the country's transition to the medium development group.

However, according to the 2011 Human Development Index data, Georgia is already classified as a country with a high level of human development, with a total score of 0.733 and a ranking of 75 out of 187 among countries in the world.

According to a report submitted by UNDP (2019), the average Human Development Index in the world is - 0,731, and in Georgia - 0,786, which is higher than the world average index.



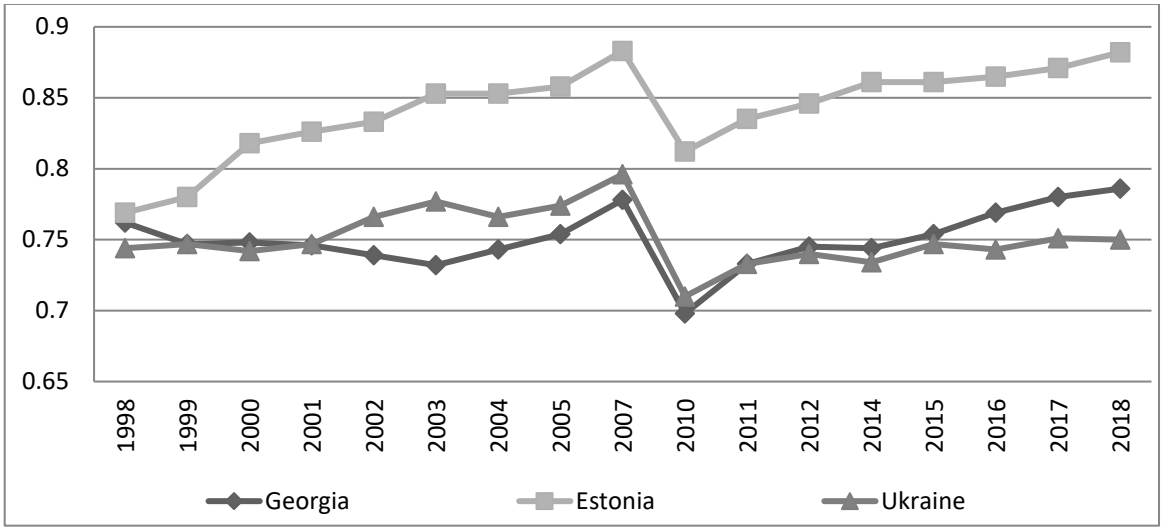
Source: Diagram built by author's, based on Human Development Reports 1998-2019

Fig. 2. **Human Development Index in Georgia and world average**

Comparison of the nominal and real content of the Human Development Index is particularly important for the former Soviet / Socialist countries.

For example, if compare the existing data of Ukraine and Estonia - countries were selected as the ex-Soviet Union republics, one with a successful developed economy - Estonia, and the other with a similar development to Georgia (Ukraine). In the comparison, can see that HDI is steadily increasing for Estonia, unless we consider the drop in methodology due to 2010. Since 2000, Estonia remains convincingly in the very high development group with a score of 0,818-0,882, which is not the case with Ukraine. Although it is in the high development group of 0.744-0.751, the dynamics

are quite unstable and the growth rate is low, but in many cases it is better than the corresponding figure in Georgia.



Source: Diagram built by author's, based on Human Development Reports 1998-2019

Fig. 3. **Human Development Index in Georgia, Estonia and Ukraine**

From the presented data, we can conclude that - the data do not reveal the high quality of education and health systems in Georgia - the variables that constitute these components do not measure the quality of the system.

Education is measured by accessibility (average duration of studying in the first, second and third stages and expected duration of studying) and health – by the average life expectancy. Consequently, these indicators are only basic measures of education and health. They do not generally reflect the quality of education or health systems in Georgia. Access to education in Georgia is less problematic than the quality of education.

In Georgia, the problem is not the access to education and level of literacy, but the contextual side that is deplorable.

According to the results of the international study (PIRLS - Progress in International Reading Literacy Study), the level of literacy of adolescents in Georgia is below average. According to the understanding of the content of reading in elementary classes, our country is in 37th place out of 45 countries. No better result in other age groups, where we share the last positions with African countries. According to studies, Georgia is in one of the last places in the world in terms of school education. This tendency applies to future teachers as well.

International Student Assessment Program PISA assesses students (15 years) competences in the natural sciences, reading and mathematics.

According to the results of the 2015 cycle, the average rate of student achievement in Georgia (out of 70 countries) is significantly below the OECD average. According to the natural sciences, (taking into account the result mismatch) it is in the range of 58-61 places, in reading - in the range of 59-64 places, in Math - in the range of 56-59 places (National Centre… 2016).

Math, literacy and natural sciences index is deteriorated – based on the official results of the PISA 2018 International Student Assessment Program.

In the 2018 cycle, it is in the 69th place out of 77 countries according the average of all three components. Math - 66th place, Natural Science - 73rd, reading - 70th place. According to PISA, Estonia is in the top five in 2018 (Scheiler A., 2018).

This is the result of the Estonian government's consistent education policy: Estonia expects a high standard from all children (from the pupils regardless from the village or town). Every resource is given to them for success. Lunch, books and transportation are free for all students. In order to attract qualified candidates, the teacher's salary is high. Teachers have complete independence / freedom. Estonia was one of the first countries to introduce digital technology in its curriculum. The goal of Estonia in 2020 is for all children to use digital technology in their learning processes.

As the above mentioned data shows, Estonia has a growing HDI, which is fully in line with the content side, Estonian adolescents increasing their level of knowledge as well. We cannot say the same about Georgia, the steadily growing HDI, unfortunately, does not lead to a higher level of education for Georgian adolescents.

Generally, indexes are conditional. The number of countries in the UN Human Reports was constantly changing, so the ratings for different years are not comparable. Accordingly, improving a country's rating does not mean a drastic improvement of the current situation in the country, but a change of position with respect to other countries, so it is even more difficult to determine the dynamics of human development according to ratings.

Conclusions and recommendations

1) When it comes to the Human Development Index, especially in developing countries, it is desirable to pay more attention to qualitative indicators, since quantitative, nominal indicators do not fully represent human development.
2) Although the Human Development Index is an important tool while assessing progress as an alternative to the growth indicators of a progress of the country, it has flaws in both the definition and calculation of constituent variables and the quality of the database. The index complexly determines human development, but uses very little data while calculating the significance of each component.
3) According to the overall scores of Human Development Index and analysis of ratings, the methodological flaws in the index directly affect the indicators in Georgia. The score of Georgia in the same year vary according to the different sources, that makes it impossible to compare the data by years. As a result, the Human Development Index changes, thus for example, in 2005, it can be defined as 0.707, 0.732 or 0.771.
4) At the same time, the reality behind HDI in Georgia - stable nominal growth at a glance, we consider as a problem, namely:at first glance, it is possible to conclude that in this period (2000-2019) Georgia has gone through the entire development stage and has made an important progress in human life expectancy, education and a worthy life assurance. However, monitoring the dynamics of the Human Development Index data and considering the changes in index methodology demonstrates the progress, but not on such a scale.
5) As we noted, the human index comprises three components - life expectancy, education and per capita income. Increasing each of them will have an impact on reducing inequality and poverty, increasing prosperity, reducing climate and environmental problems. If we consider the fact that the aims of sustainable development promote a long-term approach to solve the global challenges, it may not be typical for some countries but may be a problem for most countries and thus requires joint efforts.
6) In this direction, it will become even more apparent to improve the methodology of Human Development Index calculation and to load it with more contextual analysis.

Bibliography

1. Bendelliani, N., (2012). Beyond the Human Development Index: Assessing Human-Oriented Development in Georgia. Education and Development Program. Tbilisi Pp. 11-15
2. BERICHT ÜBER DIE MENSCHLICHE ENTWICKLUNG (2019), Berlin, Retrieved: https://dgvn.de/fileadmin/publications/PDFs/UN_Berichte/HDR/HDR-2019.pdf 04.12.2019 access
3. Ghislandi, S., Sanderson, W., Scherbov, S. (2019). A Simple Measure of Human Development: The Human Life Indicator. Retrieved: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6472489/ 15.01.2020
4. Human Development Reports (1990). Concept and Measurement of Human Development. United Nations Development Programme (UNDP) New York Oxford, Oxford University Press. Retrieved: http://hdr.undp.org/en/global-reports 09.01.2020
5. Human Development Reports (1995). Gender and Human Development. United Nations Development Programme (UNDP) New York Oxford, Oxford University Press. Retrieved: http://hdr.undp.org/en/global-reports 09.01.2020
6. Human Development Reports (2005). International Cooperation at a Crossroads: Aid, Trade and Security in an Unequal World. United Nations Development Programme (UNDP) New York Oxford, Oxford University Press. Retrieved: http://hdr.undp.org/en/global-reports 17.01.2020
7. Human Development Reports (2010). The Real Wealth of Nations: Pathways to Human Development. United Nations Development Programme (UNDP) New York Oxford, Oxford University Press Retrieved: http://hdr.undp.org/en/global-reports 17.01.2020
8. Human Development Reports (2015). Work for Human Development. United Nations Development Programme (UNDP) New York Oxford, Oxford University Press. Retrieved: http://hdr.undp.org/en/global-reports 20.01.2020
9. Human Development Reports (2019).Beyond Income, Beyond Averages, Beyond Today: Inequalities in Human Development in the 21st Century. United Nations Development Programme (UNDP) New York Oxford, Oxford University Press. Retrieved: http://hdr.undp.org/en/global-reports 20.01.2020
10. National Centre of Education Statistics, First Look at the Progress in International Reading Literacy Study (PIRLS) and ePIRLS (2016). Washington, DC 20202 Retrieved: https://nces.ed.gov/pubs2018/2018017.pdf 31.01.2020
11. Neidlein, H. (2018). Menschliche Entwicklung: Zahlen und Fakten 2018, Deutsche Gesellschaft fur die Vereinten Nationen e. V. United Nations Association of Germany, Retrieved: https://dgvn.de/fileadmin/user_upload/menschl_entwicklung/Dokumente_News/Infoblatt_Web.pdf 15.02.2020
12. Scheiler,T. (2018). PISA 2018: Insights and Interpretations. Germany. Retrieved: https://www.oecd.org/pisa/PISA%202018%20Insights%20and%20Interpretations%20FINAL%20PDF.pdf 02.02.2020
13. Smits, J., Permanyer, I. (2019). The Subnational Human Development Database. Sci. Data. 6:190038 https://doi.org/10.1038/sdata.2019.38
14. UNDP.(2019). 17 Goals to Transform Our World. Retrieved: https://www.un.org/sustainabledevelopment/ 01.02.2020

Proceedings of the 2020 International Conference "ECONOMIC SCIENCE FOR RURAL DEVELOPMENT" No 54
Jelgava, LLU ESAF, 12-15 May 2020, pp. 271-279
DOI: 10.22616/ESRD.2020.54.033

CASE STUDY ON SUSTAINABLE ATTITUDE FOR ENVIRONMENT IN ADULT EDUCATION

Anna Vintere[1], Mg.Math
[1]Latvia University of Life Sciences and Technologies

Abstract. UNESCO document states that education has a crucial role to play in climate change, building capacities and attitudes for climate change mitigation as well as stimulating and reinforcing understanding and attentiveness of climate change. A particular attention should be paid to adult education. People are living longer in an increasingly global world, jobs are evolving and the impact of climate change is growing. To cope with these changes, there is need for adult education that promotes change by improving social, economic and environmental opportunities and also by improving learners' sustainable attitudes towards the environment. Adult educators are key drivers for achieving this change in the world. Educators have the ability to guide the positive energy of learners to make change possible. It is adult educators who can stimulate adult curiosity and provide learners with the tools and resources to explore, understand, engage and understand the importance of sustainability. Despite it, adult educators identify lack of systemic approach for SDGs implementation working in non-formal adult education field, systemic implementation guidance and daily working manuals for adult educators are missing. For that reason, adult educators from six countries have started Erasmus+ Strategic partnership project "Sustainable Attitude for Environment in Adult Education". Project is aimed to prepare manual for adult educators. For that reason, in the framework of this project a survey of adult educators as the experts in this field was carried out to analyse adult educators needs and competencies on sustainability topics and to identify measures taken daily to reduce the impact of CO_2. The article analyses the survey results in Latvia.

Key words: adult education, CO2 impact, ecological intelligence, environment, sustainable development goals.
JEL code: I21, I29, Q01

Introduction

On 1 January 2016, the world officially launched the transformative plan of action "The 2030 Sustainable Development Agenda", announcing 17 Sustainable Development Goals (SDG) with 169 associated targets, to address urgent global challenges over the next 15 years (UN, 2015). The United Nations emphasizes the role of education in transforming lives, recognizing the important role of education as a key driver of development and in achieving the other proposed SDGs. According to UNESCO (2015), "Education can, and must, contribute to a new vision of sustainable global development". Thus, the biggest challenge for educational institutions today is the integration of SDGs into the educational process, as well as the promotion of sustainable development ideas throughout the learning/ teaching process.

Sustainable Development Goal 4 emphasizes the role of education in creating a more sustainable world and calls for "inclusive and equitable educational education and the promotion of lifelong learning opportunities for all" (UN, 2016). Target 4.7 specifies the role of education in development and global citizenship: "By 2030, ensure that all learners acquire the knowledge and skills needed to promote sustainable development, including, among others, through education for sustainable development and sustainable lifestyles, human rights, gender equality, promotion of a culture of peace and non-violence, global citizenship and appreciation of cultural diversity and of culture's contribution to sustainable development" (UN, 2016).

A particular attention should be paid to adult education. People are living longer in an increasingly global world, jobs are evolving and the impact of climate change is growing. To cope with these changes, there is need for adult education that promotes change by improving social, economic and environmental opportunities and also by improving learners' sustainable attitudes towards the

[1] Anna.Vintere Tel.: +371 29419351, e-mail: Anna.Vintere@llu.lv

environment. Within the "Europe 2020 Strategy for smart, sustainable and inclusive growth" (EC, 2010), the Commission called for a renewed European Agenda for Adult Learning where quality education and training, equity, and social cohesion become a widespread reality.

Adult education contributes to the individual as well as societies development in many ways (Adult Education and ..., 2018): provides knowledge, skills and competences that can be used both in professional and private life as well as promotes transversal and generic skills, i.e. social skills, communication skills, analytical skills etc., sometimes also called "life skills". It should be noted that more recent concepts of adult civic education are based on the idea of education as a tool for empowerment.

Several studies show that there is a strong link between adult education and sustainable development goals (UN, 2015), as adult education promotes learning and training to acquire and update skills, knowledge and competences, while SDGs is a global framework for addressing common challenges and for the development. Therefore, adult education and lifelong learning are seen as transversal goal and method to achieving the SDGs (European Association for ..., 2018).

As adult educators are key drivers of change in the world, adult educators are who have to direct learners' positive energy to make changes. When learners are empowered with knowledge, critical reflection tools and media literacy, they are better prepared to act and make changes for themselves and others around the world. It is adult educators who can stimulate adult curiosity and provide them with the tools and resources to explore, understand, engage and understand the importance of sustainability. (Manitoba Council for ..., 2018). Therefore, ways need to be found for adult educators to reshape the curriculum to address the threats that human daily activities pose to environment.

Despite the above, the sector is languishing all over the world. Adult educators identify lack of systemic approach for SDGs implementation working in non-formal adult education field. There are policy mechanisms and different declarative documents but systemic implementation guidance and daily working manuals to reach local, national, European and worldwide context for adult educators are missing. For that reason, it is necessary to perform research on SDGs implementation into adult education at European and national level, in order to disseminate the outcomes among the adult education institutions.

In view of the above considerations, adult educators from six countries: Slovakia, Latvia, Sweden, Lithuania, Estonia and the Netherlands have started Erasmus+ Strategic partnership project "Sustainable Attitude for Environment in Adult Education". Project is aimed at developing and extending competencies for adult educators and staff who support adults in sustainability in a broad sense of challenges of environment and climate changes with a focus on less consumption, zero waste movement, healthy lifestyle, influence of physical activity on the physical and mental health and quality of life, active citizenship. One of specific objective of this project is to prepare manual for adult educators. For that reason, in the framework of this project a survey of adult educators as the experts in this field was carried out to analyse adult educators needs and competencies on sustainability topics.

The questionnaire includes several components that characterize sustainable environmental behaviour: ecological intelligence Goleman D., 2009), sustainable consumption (Valko L., 2003), environmentally friendly transport, energy efficiency (definition is based on Environmental and Energy Study Institute), sustainable lifestyle (Ainoa J. et al., 2009) as well as sustainable living (Winter M., 2007) etc.

139 adult educators from different adult education institutions in Latvia participated in the survey, but only 43 questionnaires were completed, which is also taken as a basis for this study. Therefore, it should be noted that this was a case study and it only reflects the views of those who participated in the survey. The study mainly used the self-assessment method, so the results were based on the opinion of the respondents and therefore the results cannot be generalized, but can be used to identify problems and identify future actions or research directions. The questionnaire (in Latvian) is available at: http://www.iipc.lv/surv/index.php/394491/lang-lv.

Research results and discussion

The survey results show that about one quarter of respondents are very familiar with sustainable development goals, while half do not (Fig. 1). 5 % of respondents have never heard of SDGs. Adult educators were asked also to you name three SDGs. Quality education and access to it, renewable energy, good health, well-being, protection of the planet, gender equality are the most frequently mentioned SDGs. Various actions that promote sustainable development are also mentioned as sustainable development goals: sorting waste and choosing environmentally friendly packaging; a healthy lifestyle; reducing household chemicals and everything that causes CO_2 emissions; eradicate poverty, hunger; use cloth bags and cardboard disposable tableware etc. It should be noted that nine respondents were unable to name any SGD.

Despite the lack of knowledge about the SDGs, more than half of the respondents claim that they possess ecological intelligence (Fig. 2). Ecological intelligence here is understood as ability that lets us apply what we learn about how human activity impinges on ecosystems so as to do less harm and once again to live sustainably in our niche - these days the entire planet (Goleman D., 2009).

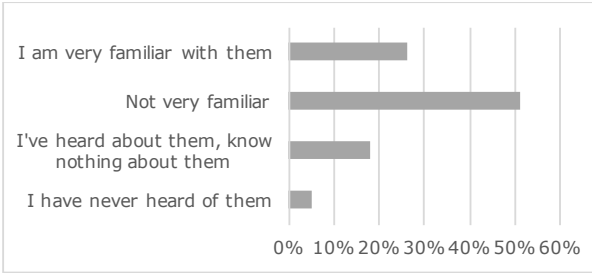


Fig. 1. **Awareness of the sustainable development goals**

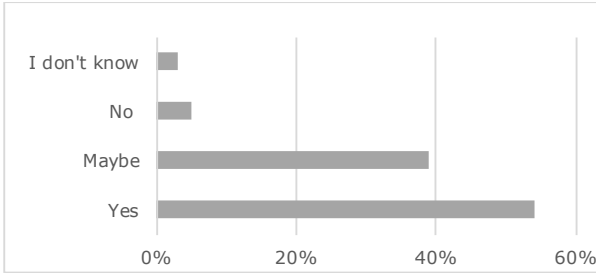


Fig. 2. **Self-assessment of ecological intelligence**

To the question "Are you applying following sustainability ideas: sustainable living, lifestyle?" 35 % of respondents answered *yes*, but 60 % - *sometimes*. 80 % of those who always and 23 % who sometimes applying sustainable living and lifestyle encourage also others to live in a sustainable way. Sustainable living here is understood as a lifestyle that attempts to reduce an individual's or society's use of the Earth's natural resources and personal resources (Ainoa J. et al., 2009) According to Winter M. (2007), practitioners of sustainable living often attempt to reduce their carbon footprint by altering methods of transportation, energy consumption, and diet.

42 % of respondents applying the sustainable ideas all their life, 19 % - just started, but 7 % - plan to start. 65 % of respondents inspire themselves to live in a sustainable way. Internet and community is the second influencing factor (for 30 % of respondents). Family members (28 %) and colleagues (23 %) also have an impact on adult educators' lifestyle. They are least affected by books (only 9 %) and TV (16 %). It should be noted that the non-governmental sector (NGO) also has a significant influence on living in a sustainable way - for 21 % of respondents. Some adult educators have argued that it is this survey that makes them think about these issues.

Respondents were asked define their sustainable life elements. The most frequently mentioned answers were: nature friendly and healthy lifestyle; regularly monitoring of health parameters; non-polluting nature, waste sorting; usage of public transport and bicycle instead of cars; not using plastic bags; turn off electricity when no one is at home; saving energy; economy of water resources; recycling, reuse of materials; less consumption, transfer good belongings to others for further use; to teach children not to pollute; buying food directly from farmers, etc.

The survey results show that the fifth of adult educators surveyed believe that they lack the competences to teach adults the topic of sustainability. Only 35 % of respondents feel that they have competencies to guide adults on sustainability topics, 40 % - are unsure of themselves. Despite the fact that only a quarter of respondents have a strong knowledge of how SDGs are being implemented and about a quarter - lack such knowledge. 42 % of respondents say that they follow education for sustainable development (Fig. 3).

According to Coss R. (2013), there are several strategies for developing effective learning communities, structured conversations for exploring and questioning these themes; collaborative lesson design for educators to think interdisciplinary, as well as across grade levels; and teaching rounds for reflecting and improving pedagogy. However, based on the results of the survey, only 19 % of respondents answered that their educational institution has an action plan for integrating SDGs and environmental issues into the non-formal education programs offered by their institution. To the question "How SDG and environmental education is implemented in your adult education institution?" 12 % of respondents answered that SDGs and environmental themes integrated into all specific subject, programs and courses, 16 % - provided specific subject programs and courses, but 23 % - nothing is done in this direction. The following actions integrating SDGs and environmental issues also are mentioned: applying for the projects to insulate buildings with energy efficient results; including sustainable development topics in the learning process; increase professional capacity, implement the principle of inclusive education and reduce the risk of social exclusion; energy efficient light in the educational institution; schools involved in eco-school project; several projects about ecology and SDGs etc.

Adult educators were asked to evaluate on a 5-poit scale (*1- do not agree at all, 5 – totally agree*) which competencies they think adult educators needs to develop about sustainable life. As seen in the Fig. 4, the greatest need for knowledge about a healthy life style. Knowledge about active citizenship and sustainable consumption also very important. Sustainable consumption here is defined as "the term for the use of services and products in a way that corresponds to the basic needs, results in a better quality of life but, at the same time, it reduces the use of natural resources and toxic materials to the minimum, as well as the emission of waste and pollutants during the specific service or whole lifecycle of the specific product in order not to jeopardise the needs of future generations" (Valkó L., 2003). Eco-literacy, daily life skills are also very important for adult educators in Latvia.

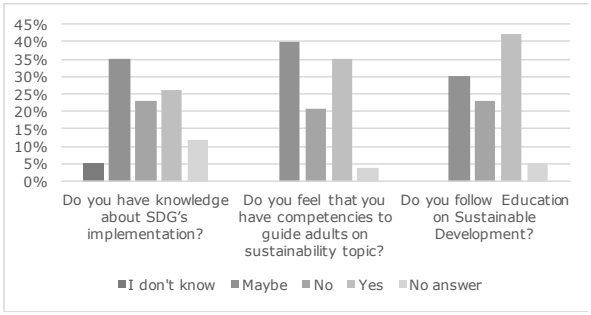


Fig. 3. **Competence to implement SDGs**

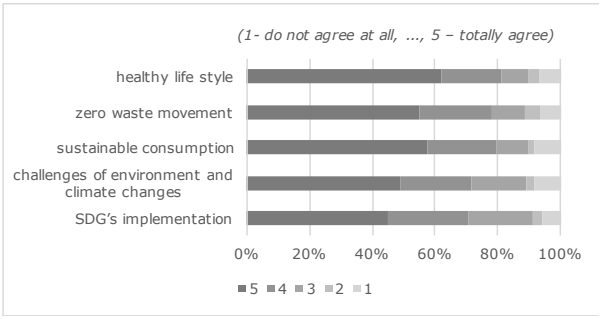


Fig. 4. **Competencies on sustainability**

Sustainable Development Goal No. 4 is one that adult educators most often help solve in their daily work. Then follow the decent work and economic growth (SDG 8), industry, innovations and infrastructure (SDG 9) and partnership to achieve SDGs (SDG 17) etc. (Fig. 5). Adult educators have mentioned sustainable development activities such as the promotion of youth mobility, exchange projects and dialogues to strengthen democracy, human rights etc.

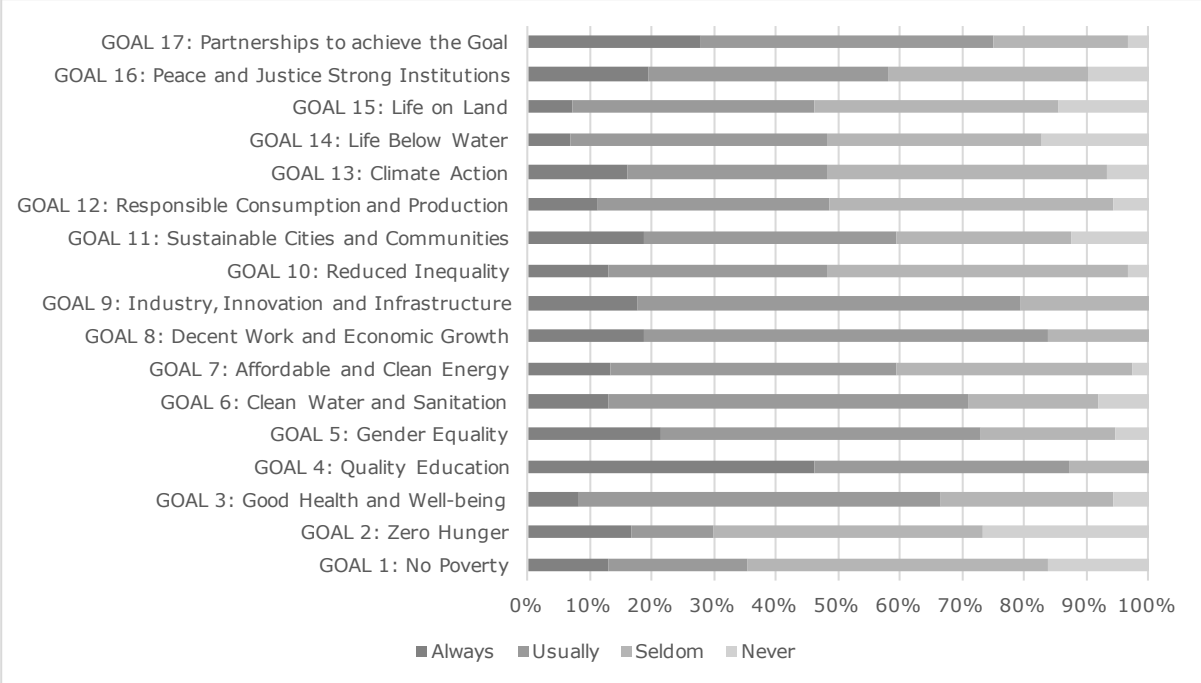


Fig. 5. **Implementation of SDGs into adult education**

Sustainable development goal 13 claims to take urgent action to combat climate change and its impacts. According to target 13.3, it is necessary to improve education, awareness-raising and human and institutional capacity on climate change mitigation, adaptation, impact reduction and early warning (UN, 2016). Education, awareness-raising and public information play an essential role in increasing the capacity of communities to counter climate change and adapt to its impacts (Action for Climate ..., 2016).

In terms of public awareness, reference should be made to a survey of more than 2,000 Latvian residents conducted by the NGO "Green House", which looked at people's views on global warming and climate change, as well as possible solutions and changes in daily habits to reduce the negative climate impact. 92% of Latvian respondents have noticed climate change but 91% of respondents admit that global warming and climate change seem to them to be topical issues.

According to several science-based studies, since the beginning of the industrial revolution, greenhouse gas emissions into the atmosphere have increased rapidly, mainly at the expense of CO_2 (carbon dioxide). Therefore, reducing the output of greenhouse gas emissions is one of the most

critical responses to climate change.90 % of Latvia's residents also understand this, pointing out that atmospheric pollution is very closely related or rather related to CO_2 emissions. Although Latvian citizens understand the harmful effects of CO_2 emissions on the atmosphere, only half of respondents approved of their personal contribution to reducing them. Therefore, in view of the above considerations, adult educators were asked what they personally do to reduce the impact of CO_2.

A more positive view of the situation is the fact that the majority of respondents (81 % a) are aware of energy efficiency, although only 48% of adult educators doing an energy audit of their home. The concept "energy efficiency" is based on Environmental and Energy Study Institute description: Energy efficiency simply means using less energy to perform the same task – that is, eliminating energy waste. Energy efficiency brings a variety of benefits: reducing greenhouse gas emissions, reducing demand for energy imports, and lowering our costs on a household and economy-wide level. To reduce CO_2, the majority of respondents reported that they almost always or usually switch lights off when you leave the room and unplug your electronic devices when they are not in use and also they change incandescent light bulbs (which waste 90 percent of their energy as heat) to light emitting diodes (LEDs) (Fig. 6).

According to the results of the survey, the habits of adult educators, such as bringing own reusable bag when they shop (always and usually in 85% of cases), reducing food waste by planning meals ahead of time, freezing the excess and reusing leftovers (always and usually in 83 % of cases), choosing organic and local foods that are in season (always and usually in 78 % of cases), are reducing the CO_2 impact.

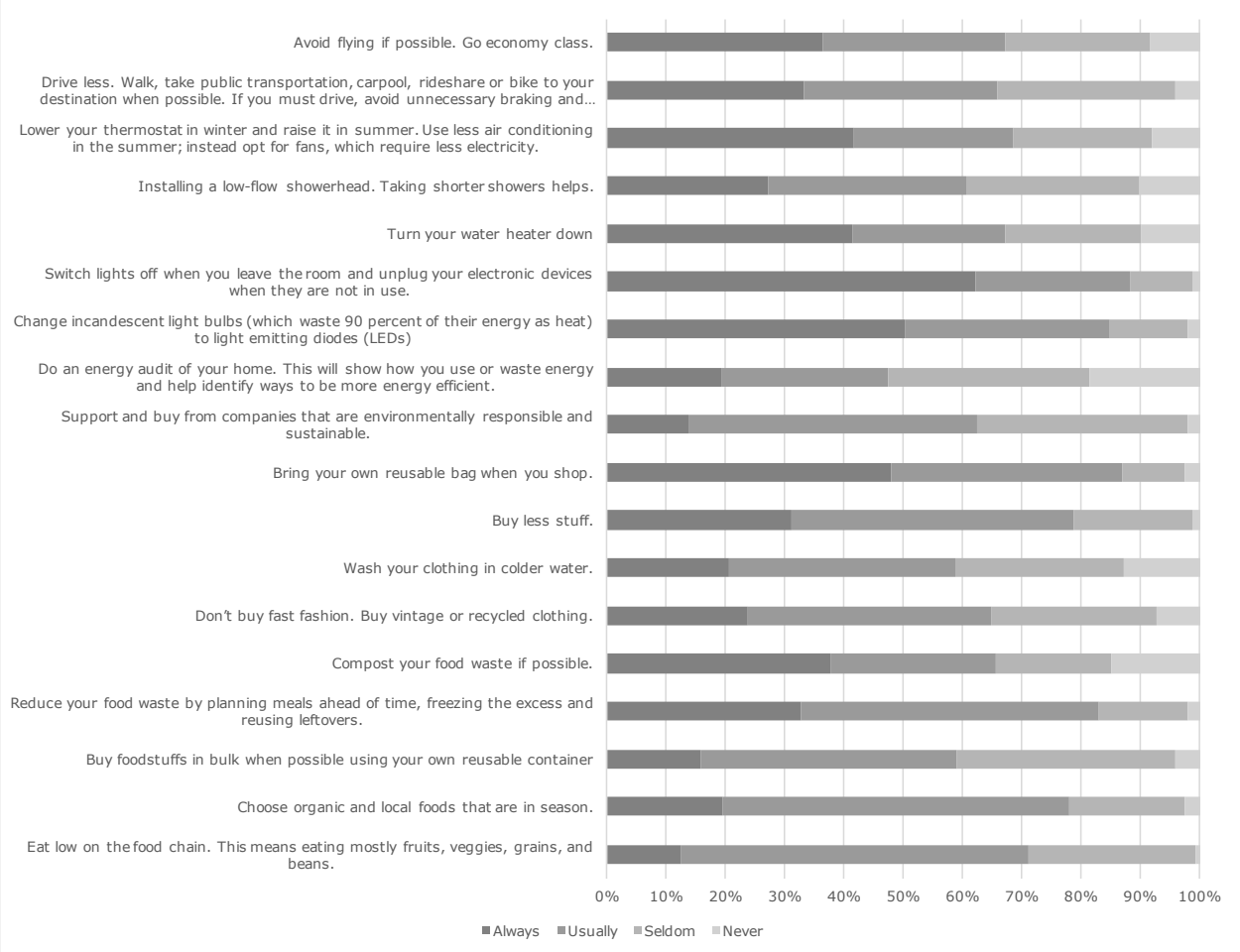


Fig. 6. **Daily measures to reduce the CO_2 impact**

The lowest rates are related to the use of warm water. Only 41 % of adult educators have habit to turn water heater down and wash their clothing in colder water, 58 % - installing a low-flow showerhead, taking shorter showers. Only 65 % of respondents drive less. Walk, take public transportation, carpool, rideshare or bike to your destination when possible. If you must drive, avoid unnecessary braking and acceleration. Only 65 % of respondents try to drive less. They walk, take public transportation, carpool, rideshare or bike to their destination when possible.

10 university teachers also took part in the survey. 3 of them are very familiar with SDGs, 6 - not very familiar, and 1 - I've heard about them, but know nothing about them. 4 university teachers always applying the sustainability ideas, but 6 - only sometimes. 2 teachers plan to start applying the sustainable ideas. To live sustainably university teachers are most inspired by colleagues and the community, 7 feel that thy have competencies to guide adults on sustainability topic, but only 3 have knowledge about SDG's implementation. More than half of the university teachers surveyed say that they knowledge about sustainable consumption, zero waste, influence of physical activity on the physical and mental health and quality of life are not enough.

University teachers also were asked how SDG and environmental education is implemented in their university. In 2 cases SDG and environmental themes integrated into all specific subject, programs and courses, in 3 - provided specific subject programs and courses, but 2 teachers claim that nothing is done in this direction. According to the survey results, only 2 from 10 universities have specific activities for educators related to implementing sustainability goals.

When it comes to the competencies that educators need to develop in the field of sustainable living, it should be noted that almost all the competencies mentioned in the questionnaire are equally important for university teachers. Practical examples related to the relevant curriculum, the educational environment - waste sorting, various sustainable development challenges, the responsibility of university management for the implementation of SDGs are the three most frequently mentioned measures in universities to support responsibility for the future. In order to integrate the Sustainable Development Goals into the program(s), the methodological, didactic needs of university teachers include practical examples from different specialties as well as interactive visual materials on SDGs and sustainable development in general.

Conclusions, proposals, recommendations

1) Awareness and motivation for sustainability is high in Latvia. However, more specific knowledge and skills are missing, especially about practical tips to reduce the CO_2 impact.
2) Although the survey results show that adult educators in Latvia lack knowledge about the UN's Sustainable Development Goals, they still have an understanding of the dimensions of sustainable development in society.
3) Most adult education institutions in Latvia do not have a specific action plan to implement SDGs. Only 19 % of the adult educators surveyed say their adult education institution has an action plan for integrating SDGs and environmental issues into their non-formal education programs. It is regrettable that there are still educational institutions where nothing is done in this direction.
4) According to the survey results, the most often mentioned non-formal and informal ways/methods that are focused to support communities to think and live with responsibility for future are:

- Eco projects, awareness projects about SDGs, equality projects;
- Public debates on climate change and environment;
- Public seminars on healthy eating and agricultural sustainability;
- Workshops on sustainable housing/ cooking/ consumption;

- Practical examples of relevant curriculum;
- Seminars, information in the media, in shops - description on goods;
- Place appropriate waste bins in institutions and on the streets, include more information on the consequences in the mass media, and plastic bags would not be available in stores, as there are currently very few methods that promote the public's environmental concerns etc.;

5) Results show, that in order to mainstream sustainable development objectives into non-formal education programs, adult educators in Latvia need the following support:

- Methodical, didactic materials/ A short and clear handbook on SDGs, healthy life style, daily life skills related environment and sustainable development, active citizenship, sustainable consumption, zero waste, eco-literacy;
- Good practices in SDGs incorporation, good example of explain SDGs;
- More high quality handbooks on sustainability and circular economy based on the last scientific data;
- More professional knowledge how to encourage and explain for adults about sustainability;
- Appropriate methods, tools and activities that would enable adult educators to reach approach those topics;
- An interactive web-page with examples;
- Information about SDGs, seminars, workshops, tools how to include the information into non-formal education programs;
- Real examples, worksheets, tests, games etc.

6) Almost all the competencies that educators need to develop in the field of sustainable living mentioned in the questionnaire are equally important for university teachers.

Bibliography

1. *Action for Climate Empowerment*. Guidelines for Accelerating Solutions through Education, Training and Public Awareness. UNESCO and UNFCCC, 2016. Retrieved: https://unesdoc.unesco.org/ark:/48223/pf0000246435. Access: 24.03.2020.
2. *Adult Education and Sustainability*. EAEA Background Paper, September 2018., European Association for the Education of Adults (EAEA), Mundo-J, Rue de l'Industrie 10, B-1000 Brussels. Retrieved: https://eaea.org/wp-content/uploads/2018/12/AE-and-sustainability_paper_final_9_2018_financers.pdf. Access: 15.03.2020.
3. Ainoa, J., Kaskela, A., Lahti, L., Saarikoski, N., Sivunen, A. Storgards, J., & Zhang, H. (2009) Future of Living. In Neuvo, Y., & Ylönen, S. (eds.), *Bit bang rays to the future*. Helsinki University of Technology (TKK), MIDE, Helsinki Univesity Print, Helsinki, Finland, pp. 174-204.
4. Coss, R. 2013. Review of Ecoliterate: How Educators are Cultivating Emotional, Social, and Ecological Intelligence. *Journal of Sustainability Education,* Vol. 5, May 2013. Retrieved: http://www.jsedimensions.org/wordpress/wp-content/uploads/2013/05/Roger-Coss-finalproofMay2013.pdf. Access: 08.03.2020.
5. EC (2010) *Europe 2020 Strategy for smart, sustainable and inclusive growth*. Retrieved: https://ec.europa.eu/eu2020/pdf/COMPLET EN BARROSO 007 - Europe 2020 - EN version.pdf. Access: 10.03.2020.
6. *Energy Efficiency*. Description. Environmental and Energy Study Institute (EESI). Retrieved: https://www.eesi.org/topics/energy-efficiency/description. Access: 10.02.2020.
7. Goleman, D. (2009) *Ecological Intelligence: How Knowing the Hidden Impacts of What We Buy Can Change Everything*. First edition. Broadway books, New York, 288 p.
8. *Iedzivotaju aptauja atklaj neizmantotas iespejas klimata izmainu mazinasana (A population survey reveals untapped opportunities for mitigating climate change)*. Biedriba "Zalas majas", 2008. Retrieved: https://zalasmajas.lv/2008/10/23/iedzivotaju-aptauja-atklaj-neizmantotas-iespejas-klimata-izmainu-mazinasana/. Access: 18.03.2020.
9. *Sustainable Foundations: A Guide for Teaching the Sustainable Development Goals*. Manitoba Council for International Cooperation, 2018. Retrieved: http://mcic.ca/pdf/SDG_Primer_FINAL.pdf. Access: 10.03.2020.
10. *The Sustainable Development Goals Report 2016*. United Nations, New York, 2016. Retrieved: https://www.un.org.lb/Library/Assets/The-Sustainable-Development-Goals-Report-2016-Global.pdf. Access: 15.03.2020.

11. *Transforming our World: the 2030 Agenda for Sustainable Development*. Resolution adopted by the General Assembly on 25 September 2015. A/RES/70/1. Retrieved: https://sustainabledevelopment.un.org/post2015/transformingourworld. Access: 19.02.2020..
12. UNESCO (2015) *Rethinking education: towards a global common good?* Retrieved: https://unesdoc.unesco.org/ark:/48223/pf0000232555. Access: 03.03.2020.
13. Valko, L. (2003) Sustainable/Environmentally Friendly Consumption (*Handbook for Teachers*). Hungary, Budapest: National Institution of Vocational Training.
14. *Winter, M. (2007) Sustainable Living: For Home, Neighborhood and Community. First edition. Westsong Publishing*, 164 p.