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REGIONAL DEMOGRAPHIC TRENDS IN ACCORDANCE WITH THE NEW MODEL OF TERRITORIAL DIVISION IN LATVIA AND FUTURE DYNAMICS IN STATISTICAL REGIONS OF THE BALTIC STATES

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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.

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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

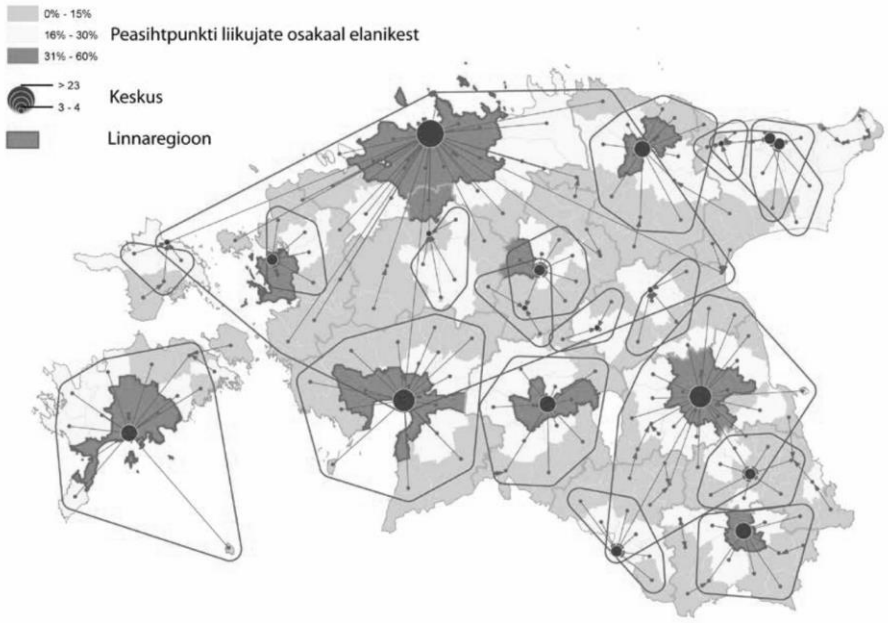
Despite the inherent differences, all three Baltic States face similar challenges in regional demographic development. Among them the most prominent are core-periphery divide, population ageing and high out-migration rates of economically active population (Pociute-Sereikiene G., 2019;

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).



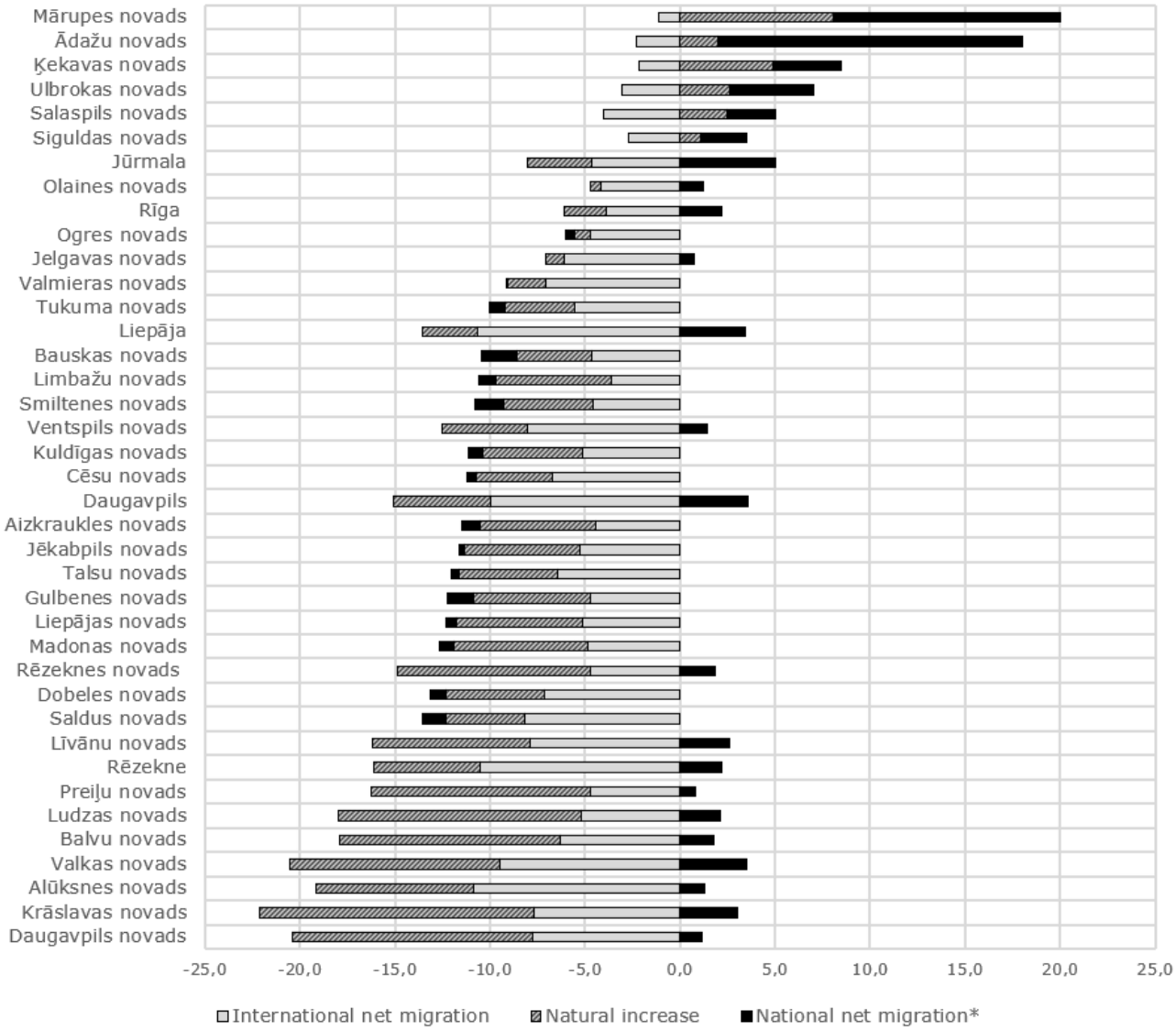
Source: Ahas R. et al., 2010

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.

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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.