

DEMOGRAPHIC PROFILE OF STATISTICAL REGIONS AND NEW TERRITORIAL UNITS OF LATVIA IN 2020-2021

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Abstract. Ongoing shifts in administrative-territorial boundaries, effects of the COVID-19 pandemic, as well as continuous social and economic challenges facilitate a hasty change of Latvia's regional demographic profile. To keep up with the current demographic processes and challenges on the regional level and provide realistic policy-oriented proposals, researchers must constantly monitor the changing demographic landscape and listen closely to the opinion trends prevalent among the regional populations. In this paper authors aim to provide an updated demographic portrait of Latvia's statistical regions and new territorial units created after the territorial reform of 2021. Special attention is given to the discrepancies between rural and urban population dynamics on different territorial levels. This study relies on the most recent statistical information and presents several key findings of the survey carried out throughout the country within the framework of research project "DemoMig". Study results indicate a deepening rural-urban divide in terms of demographic development on both regional and local levels. Some noteworthy distinctions can be found between the statistical regions of Latvia in terms of demographic development challenges and populations' opinion about them. Survey results also provide important conclusions regarding the inhabitants' perceptions about impact factors of population change on various territorial levels.

Keywords: regional demography, administrative-territorial reform, survey data.

JEL code: J11, I38, R11

Introduction

Changes in administrative-territorial boundaries, social and economic challenges, regional policy initiatives and shifts in population mobility patterns add to the list of factors changing Latvia's regional demographic profile. These changes introduce serious challenges for effectively benchmarking and understanding the differences between demographic development of urban and rural areas. Insufficient information increases the risk of significant regional demographic processes being left unnoticed, particularly in the sensitive areas of demographic development such as reproduction or migration intentions. In order to keep up with the regional demographic processes and provide practical and acceptable policy-oriented proposals, researchers have to evaluate available data and listen to the opinion trends prevalent among the regional populations.

This study aims to provide a comprehensive demographic profile of Latvia's statistical regions and new municipalities created after the territorial reform of 2021, highlighting differences between rural and urban population dynamics. This is achieved by exploring the demographic trends most relevant to the new territorial units with higher share of the rural population and investigating differences of opinions expressed by residents of different regions, as well as rural and urban areas. The study relies on the most recent statistical information and presents several findings drawn from population survey carried out throughout the country within the framework of research project "DemoMig". Study methodology includes statistical analysis, cartographic data representations and survey data analysis.

Research results indicate a growing rural-urban divide in terms of demographic development on both regional and local levels. Current statistical indicators and survey results indicate a clear need for expanding the traditional "rural / urban" demographic classification of territories in Latvia by introducing the concept of "sub-urban" or "peri-urban" areas. Some noteworthy distinctions are found between the statistical

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regions of Latvia in terms of demographic development perspectives and populations' opinion about them. Survey results also provide important conclusions regarding the inhabitants' perceptions about impact factors of demographic change on various territorial levels, highlighting the growing divide between the available policy measures and population expectations.

Research results and discussion

This paper presents research results in three sections. First authors review recent demographic developments in statistical regions of Latvia and new municipalities, using the latest statistical data. After that authors address demographic characteristics of the rural-urban divide in Latvia by comparing demographic dynamics with urbanisation levels and population opinion survey results on various territorial levels. Final section of this paper discusses opinions and expectations of the population concerning local demographic developments.

1. Regional demographic outlook

Many recent publications have demonstrated the complexity and intricate dependencies of regional demographic and socio-economic development processes on various spatial levels (Nikodemus O. et al, 2018; Fossett M., 2005; EU, 2020; Eurostat, 2021). Regional demographic research addresses these processes by adding layers of spatial measurements, data and methodologies to the traditional demographic studies (EU/FAO/UN-Habitat/OECD/World Bank, 2021; Krisjane Z. et al, 2021).

During a period between the last two population censuses (2011-2021) in Latvia continued decrease in the numbers of population or depopulation due to a negative natural increase and net migration, which constituted -8.7 per cent. Depopulation was more pronounced for rural (-9.7%) than urban population (- 8.3%) (CSB, 2022). Factually, if we ignore criteria of urban-rural division by administrative-territorial boundaries between cities/towns and countryside, and apply criteria of rural areas used by experimental statistics, depopulation in upper mentioned period was higher and constituted 12.5% (Table 1).

Table 1

Population in urban territories (densely populated areas*) and rural areas (sparsely populated areas) in Latvia by regions, 2011 – 2021**

Administrative territory	Changes in the number of population (2021 / 2011, %)		Share of population in rural areas in 2021, %
	Urban territories	Rural areas	
LATVIA	-7.7	-12.5	19.8
Rigas region	-5.7	X	X
Pierigas region	+3.4	-5.8	19.8
Vidzemes region	-14.9	-13.0	44.0
Kurzemes region	-14.5	-10.1	28.3
Zemgales region	-10.1	-13.6	31.9
Latgales region	-17.0	-18.1	32.7

***Densely populated area – distinct population cluster independent from administrative division populated by at least 50 persons living or working in buildings that are located no more than 200 metres from each other.**

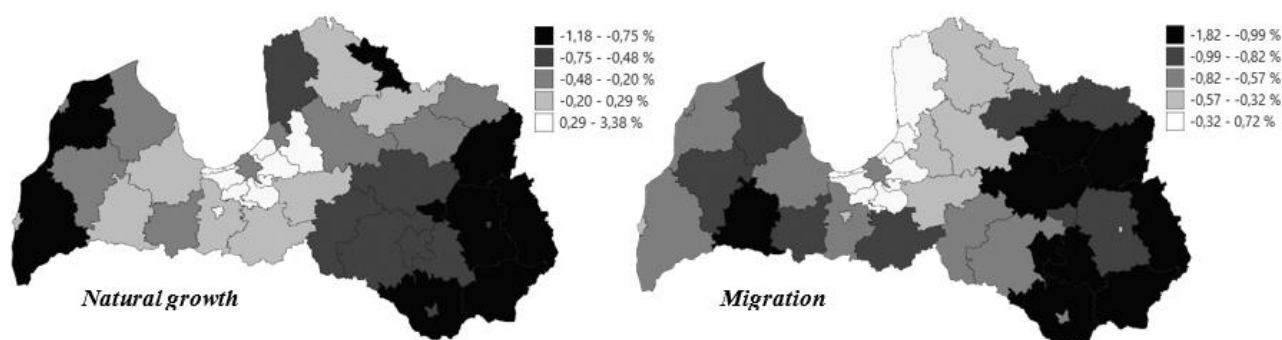
****Rural areas (sparsely populated areas) – territories outside cities, towns, and densely populated areas with at least 500 inhabitants**

Source: CSB database, Experimental statistics. Table RIG060

Noticeable shifts are observed on the level of statistical regions as well. Minimal decline of population in rural areas were in Pierīga region (-5.8%), which was the only region in the country with population increase (+3.4%), thereof demonstrating a process of suburbanization around the capital city Riga. A largest depopulation in rural areas were in Latgale (- 18.1%) and Zemgale (- 13.6%) regions, both of which are having share of almost 1/3 of population living in rural areas with depopulation rate in rural areas exceeding depopulation in urban areas.

Considering the legislative changes regarding administrative-territorial boundaries and effects of the COVID-19 pandemic, it is especially noteworthy that years 2020 and 2021 have been most unusual in terms of regional socio-economic and demographic developments in Latvia. 1st of July of 2021 is marked the initiation of the new administrative-territorial reform seeking to transform the previous 119 local administrative units into 43 new municipalities - Republic cities and "Novads" (Saeima, 2020). Some initial research into the demographic characteristics of these new territorial units has been already conducted in previous studies (Dahs A. et al, 2021). However, previously available statistical information was limited to the estimations of the Regional development information module (RDIM, 2022) and could not be compared with the official statistics. Latest information published by the Central Statistical Bureau of Latvia (CSB, 2021) has presented a new opportunity for measuring demographic processes in newly formed territorial units.

Figure 1 compares natural population growth and migration figures in the new administrative territorial units of Latvia in 2020-2021, using the latest CSB estimations.



Notes: 5 equal quantiles, upper boundaries included in the intervals

Source: authors' calculations based on CSB, 2022 (table IRS040)

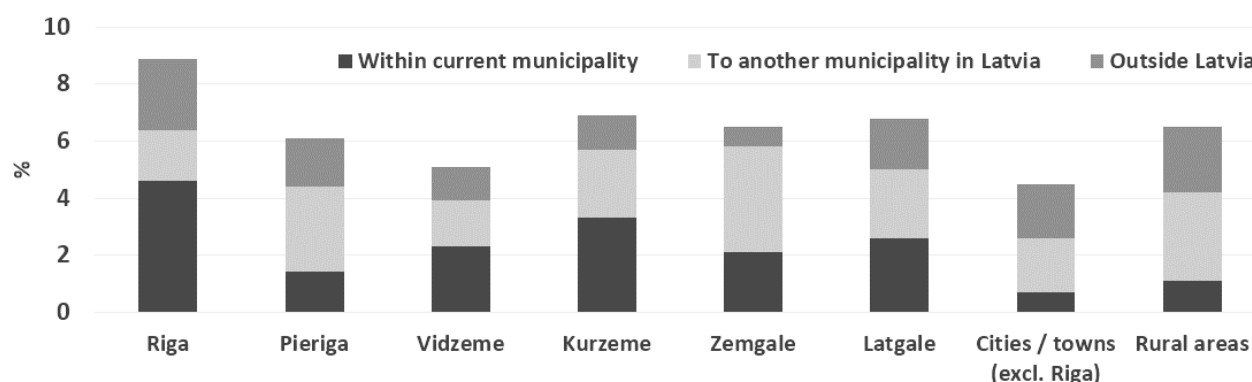
Fig. 1. Natural population growth and migration in the new administrative territorial units of Latvia in 2020-2021

Overall, both components presented on the maps show similar centre-periphery tendencies, with municipalities around the capital city Riga showing more positive dynamics, and peripheral territories lagging behind the country average. Some differences can be observed in the Kurzeme and Vidzeme regions, where municipalities are demonstrating relatively better migration figures, while actively losing population due to negative natural growth. Migration processes show greater impact on population growth than natural change, highlighting the existence of specific migration risks in the particular territorial units. To investigate possible reasons for such differences beyond the obvious influences of population age structure, later in this paper we try to account for spatial specifics of these territories, paying attention to the differences in rural and urban populations, as suggested by previous studies (Hospers G. J., and Reverda N., 2015).

Migration aspirations are important aspect to be considered in the international and inter-regional population dynamics (Carling J., 2014). Previous studies have shown that residents of Latvia, just as many

other EU member states, demonstrate a rather close link between migratory intentions and actual migration flows (Tjaden J. et al, 2019). Thanks to the data provided by the recent population survey carried out in 2021 throughout the country within the framework of research project "DemoMig", we have a unique opportunity to look at the current population migration intentions in various territorial cross-sections.

Figure 2 shows survey respondents' replies to the question regarding their plans to change place of residence within the next year, arranged by their current place of residence - statistical regions of Latvia, as well as cities / towns (excluding Riga city) and rural areas. The definition of rural areas used in the "DemoMig" survey will be further discussed in the next section of this paper.



Source: authors' calculations based on DemoMig Migration and Population Policy Survey – 2021

Fig. 2. Population intentions to change place of residence in the next year (% proportion of answers)

Residents of Riga city demonstrate the highest potential migration intentions within the city territory and the overall potential mobility. Pieriga and Zemgale residents have indicated the highest intentions to migrate within the country, while inhabitants of Vidzeme showed the least interest towards changing the place of residence. Figure 2 also highlights some stark differences between the migration intentions of rural and urban populations outside Riga with rural residents showing much higher interest in migrating to another municipality within Latvia or emigrating abroad.

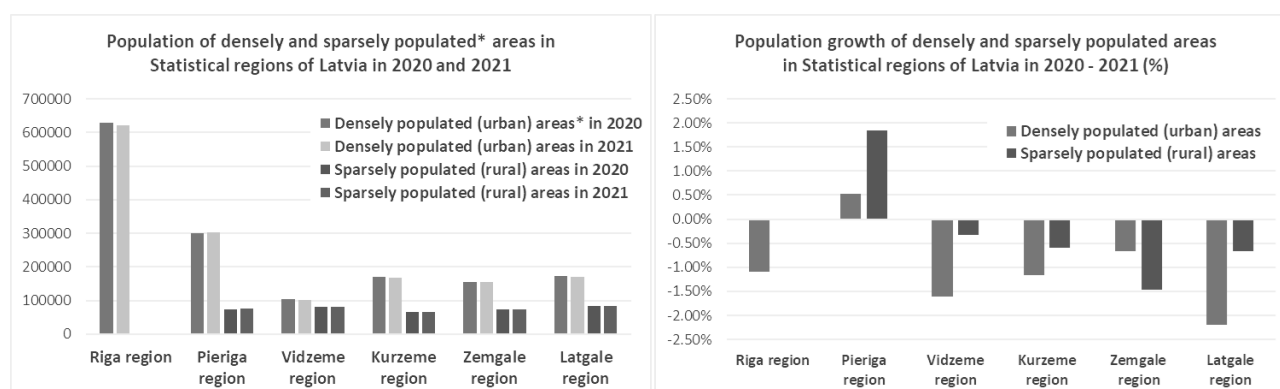
2. Urban - rural dichotomy

Observations presented in the previous section lead to conclusion about a presence of significant differences in demographic trends of rural and urban populations both within and between the statistical regions and new municipalities of Latvia. This reaffirms the importance of questions about spatial classification of residences and underlines the need to evaluate the rural-urban population dynamics in more detail (Ward N., and Brown D. L., 2009; Torgerson M. and Edwards M. E., 2013).

Space is rightfully considered one of the key factors in regional demography (Voss P. R., 2007). Many previous studies from different parts of the world have confirmed that place and form of residence can be an important factor in helping explain demographic behaviours (Hugo G. et al, 2003). Unfortunately, existing methodologies for the spatio-demographic categorisation of residence locations mostly remain quite crude (Katz B. and Lang R. E., 2004). Even the most traditional setting of urban / rural residences has some rather divergent interpretations across countries and regions, which also tend to change over time, making any direct comparisons or time-series studies quite unreliable. Several noteworthy studies also present serious arguments about the classical urban/rural dichotomy being out of date, and propose creating a more fluent continuum of urban, "sub-" or "peri-urban" and rural areas (Webster D. and Muller L., 2009; Guest M. and Brown S. K., 2006).

Considering the above, before proceeding further with the analysis, we must first briefly discuss the concepts of rural and urban populations currently employed in Latvia at the national and regional level. Official statistical sources in Latvia distinguish rural and urban residents based on the type of the administrative unit in which they reside. Inhabitants living in the Riga city, Republic cities or small towns are counted as urban residents. People residing in rural areas or "parishes" are considered rural residents. This classification became problematic with the introduction of 2021 administrative - territorial reform, as the new amalgamated units can include both towns and rural areas. For now, the pre-reform classification of territories is still valid and (with some exceptions) can be used to estimate rural and urban populations from the official statistical data. The same categorisation is also applied in the "DemoMig" survey quoted frequently in this paper.

A much newer experimental approach used by the Central Statistical Bureau of Latvia offers a different, empirical approach to estimating rural and urban inhabitant numbers, by introducing concepts of densely and sparsely populated areas. According to this methodology, densely populated area is a distinct population cluster independent from administrative and territorial division, and it is populated by at least 50 people living or working in buildings that are located no more than 200 metres from each other. All other territories are classified as sparsely populated or rural. While such classification is not comparable with the official statistics and relies on some experimental estimations, it offers a more practical view at the distribution of rural and urban population across the country. Experimental classification shows particularly interesting results when observed in dynamics, highlighting the critical differences between the statistical regions of Latvia in terms of rural and urban population change.



Source: authors' calculations based on CSB, 2022 (table RIG060)

Fig. 3. Population dynamics in densely and sparsely populated areas of the statistical regions of Latvia in 2020 - 2021 (using experimental statistics data)

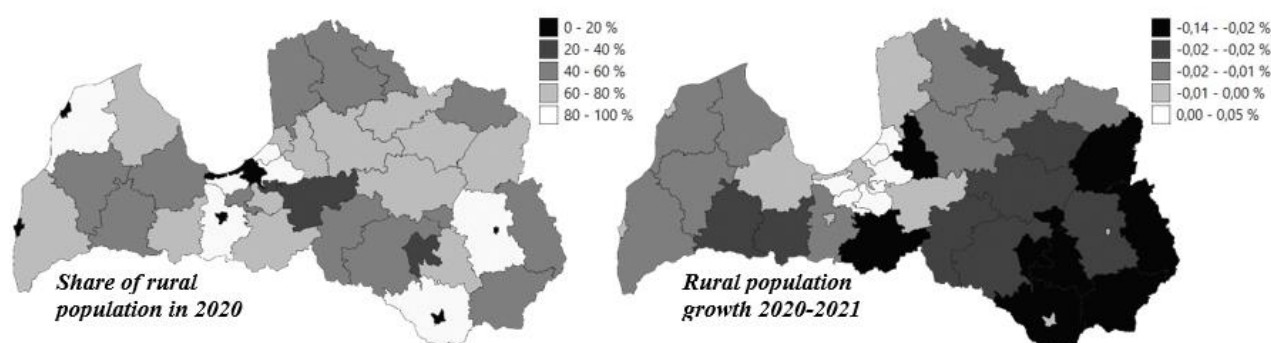
Figure 3 compares the population dynamics in densely and sparsely populated areas of the statistical regions of Latvia between 2020 and 2021. Overall, some indications of the de-urbanisation process (see Gonzales-Leonardo M. et al, 2019) can be observed in all statistical regions except Zemgale, with rural populations either dwindling or growing at a slower rate than rural population. Pieriga region immediately draws attention with its outlying growth pattern. Most importantly, this is the only region in Latvia with growing population numbers. Although Pieriga has the biggest share of population living in the densely populated (urban) areas (excluding Riga city), its rural population is growing at a much higher rate - exceeding urban growth by almost four times. This presents a further topic for debate, as most of the municipalities comprising the region can hardly be classified as "rural" in the objective terms. By looking at the profiles of the municipalities in question (Grube G. and Paiders J., 2020 or Zarins E. and Paiders J., 2020), it becomes clear that population growth in these sparsely populated areas is driven primarily by

gentrification or similar processes caused by active sub-urban housing and business developments and out-migration of Riga residents (Smith D., 2007; Pryor R. J., 1968).

This presents a clear argument for the re-evaluation of the status of these areas as "rural" in a traditional term, as these regions face completely different socio-economic and demographic conditions. According to the literature (Webster D. and Muller L., 2009) an even further distinction between "sub-urban" and "peri-urban" areas can be made among the Pieriga municipalities. In this classification, "sub-urban" municipalities would be those relying on private housing and daily commute with the capital for population growth (e.g. Saulkrasti municipality), while "peri-urban" areas are growing due to increase in business activity and more urbanised models of housing (e.g. Marupe municipality) (Lichter D. T. et al, 2021).

Some noticeable differences can also be seen among other statistical regions. Interesting case is presented by Zemgale which, unlike other regions, has lost more population from its sparsely populated areas than from the densely populated ones. Also, Vidzeme shows an unusual pattern of almost equal population division between densely and sparsely populated areas, while losing its urban population much faster than rural. If this trend continues, Vidzeme has a chance of becoming a predominantly rural region in the next decade.

To take a closer look at the smaller administrative units created after the 2021 administrative-territorial reform, we return to the available official statistics. Figure 4 shows the share of rural population in 2020 and rural population change in the new administrative territorial units of Latvia in 2020-2021 according to the official statistics.



Notes: 5 equal quantiles, upper boundaries included in the intervals.

In Bauska and Sigulda municipalities, in 2020 the boundaries were changed, adding a part of the territories of the rural parishes to the cities. Since 01.07.2021, Koknese and Iecava parishes have been divided into a parish and a city (preliminary population distribution between the parish and the city), which affects Aizkraukle and Bauska counties. 01.07.2022 it is planned to establish the cities of Adazi, Kekava and Marupe (in these maps they are still shown as rural parishes)

Source: authors' calculations based on CSB, 2022 (table IRS030)

Fig. 4. Share of rural population in 2020 and rural population growth in the new administrative territorial units of Latvia in 2020-2021

Comparing the data presented in Figures 1 and 4 leads to the conclusion that in many new municipalities located outside Riga and Pieriga regions there is a strong link between migration and change of rural population, confirming high susceptibility of rural populations to migration processes and bringing into focus migration intentions presented in Figure 2.

Again, most administrative units comprising Pieriga region stand out from the general pattern showing growth of rural areas by benefitting from both natural population growth and positive migration rate.

3. Regional differences in public expectations

In this section, authors investigate territorial and regional differences of the public opinion on possible policy measures and responsibilities of various actors. First, we compare responses provided by residents of Riga, other urban locations (cities /towns) and rural areas.

Table 2

Main policy actions to promote a demographic development in Latvia (urban vs. rural areas, % proportion of answers)

	Riga	Other cities/towns	Rural areas	All population
Promote Rise of fertility	60.7**	45.5**	53.7	52.8
Reduce a social inequality	44.4*	52.4	53.7	50.1
Strengthen health status and rise an active life span	46.3	40.3	43.0	43.1
Reduce an emigration	39.5**	33.3	26.7**	33.5
Improving the education and training	29.3	26.2	27.5	27.6
Encourage return migration of citizens	31.7**	22.5	21.9	25.3
Encourage limited immigration from other countries	7.3	7.3	4.5	6.6

Notes: *n=1246, up to three answers are provided by each respondent.*

Significance codes: 0 ' *** ' 0.001 ' ** ' 0.01 ' * ' 0.05.

Source: *DemoMig Migration and Population Policy Survey – 2021*

Looking at the respondents' answers regarding the main policy actions to promote a demographic development in Latvia, the first significant observation can be found in the stark difference of opinion between residents of Riga city and other urban entities concerning the rise of fertility. Over 60% of residents of Riga consider this aspect important, while only 45.5% of other urban locations think the same, giving first priority to the issues of social inequality. Another significant difference in responses concerns the emigration problem, which is seen as important by almost 40% of respondents in Riga and merely 26.7% in rural areas, which are in fact suffering the biggest population loss due to out-migration. Promoting return migration was also most frequently mentioned by the residents of Riga (31.7%).

Table 3

Major contributors to solving forthcoming demographic problems in Latvia (urban vs. rural areas % proportion of answers)

	Riga	Other cities/towns	Rural area	All population
Government	70.2	70.7	69.7	70.2
Self comes first	47.9	45.1	57.0**	49.4
Family / Household	52.3***	38.0*	41.9	43.8
Parliament (Saeima)	37.4*	32.8	24.7**	32.1
Municipality	24.7**	34.1	33.7	30.9
Political parties	10.3	6.7	11.0	9.1
Employers	9.3	8.7	7.6	8.6
NGOs	5.1**	2.3	1.4	2.9

Notes: *n=1246, up to three answers are provided by each respondent.*

Significance codes: 0 ' * ' 0.001 ' ** ' 0.01 ' * ' 0.05.**

Source: Migration and Population Policy Survey – 2021

When asked about the possible actors facilitating demographic change, both rural and urban residents throughout the country unanimously pointed at the government as the main responsible entity. Rural areas keep the tradition of self-reliance, showing 57% support for the "Self comes first" sentiment. Major differences across the rural / urban lines were observed when evaluating the role of parliament (Saeima), with residents of Riga having above average expectations about its role, while rural residents give it much lower priority. Role of household and family is also seen quite differently by residents of Riga (52.3%) and other cities / towns (38%).

Table 4

Main policy actions to promote a demographic development in Latvia (statistical regions, % proportion of answers)

	Region						All population
	Riga	Pieriga	Vidzeme	Kurzeme	Zemgale	Latgale	
Rise fertility	60.7**	52.7	63.9*	53.6	39.7**	36.0***	52.8
Reduce a social inequality	44.4*	51.8	47.9	64.7***	63.5***	36.6***	50.1
Strengthen health status and rise an active life span	46.3	34.7**	52.9*	41.8	41.7	43.3	43.1
Reduce an emigration	39.5**	27.3*	32.8	34.6	23.1**	36.6	33.5
Improving the education and training	29.3	35.9**	27.7	19.0*	28.8	18.3**	27.6
Encourage return migration of citizens	31.7**	21.2	17.6	26.1	22.4	22.6	25.3
Encourage limited immigration from other countries	7.3	8.2	1.7*	7.8	8.3	2.4*	6.6

Notes: n=1246, up to three answers are provided by each respondent.

Significance codes: 0 ' * ' 0.001 ' ** ' 0.01 ' * ' 0.05.**

Source: Migration and Population Policy Survey – 2021

Regional variation of the responses on necessary demographic policy actions mostly correlates with the proportions of urban and rural population in the particular regions. Once again, Pieriga region stands out of this trend, showing the above-average emphasis on the education and training, while demonstrating the below-average interest in activities aimed at promoting health and active life span. Some contrasts can also be seen between the residents of Kurzeme, Zemgale and Latgale regions. Most notable, residents of Latgale are more sceptical about the reduction of social inequality, education and training, as well as possibilities of limited migration from other countries. These population sentiments clearly contradict the previous empirical findings and solutions proposed by the literature (Leinsalu M. et al, 2020).

When looking at the responses about main actors of demographic change, Pieriga region stands out with the above-average expectations for the role of Parliament and employers. Residents of Latgale in general show lowest expectations for the national and local government bodies, instead indicating greater trust in self-reliance. Kurzeme and Zemgale regions show comparatively greater trust in the national and local governments.

Literature suggests that such regional diversity of opinions emphasises the need to create locally tailored policies that support diversely ageing regions, address the distrust of institutions and create local opportunities for specific social groups (Brzozowska Z. et al, 2021).

Table 5

**Major contributors to solving forthcoming demographic problems in Latvia
 (statistical regions, % proportion of answers)**

	Region						All population
	Riga	Pieriga	Vidzeme	Kurzeme	Zemgale	Latgale	
Government	70.2	70.6	70.6	80.4**	71.2	59.8**	70.2
Self comes first	47.9	48.6	35.3**	41.2*	67.9***	54.9	49.4
Family / Household	52.3***	49.0	39.5	39.2	19.9***	45.1	43.8
Parliament (Saeima)	37.4*	44.1***	42.0*	28.1	10.3***	17.7***	32.1
Municipality	24.7**	25.7	26.1	45.1***	57.1***	20.1**	30.9
Political parties	10.3	9.8	7.6	12.4	3.2*	8.5	9.1
Employers	9.3	13.5**	2.5*	11.8	5.1	4.3*	8.6
NGOs	5.1**	2.4	0.8	1.3	1.9	2.4	2.9

Notes: *n=1246, up to three answers are provided by each respondent.*

Significance codes: 0 ' *** ' 0.001 ' ** ' 0.01 ' * ' 0.05.

Source: *Migration and Population Policy Survey – 2021*

Conclusions

- 1) At the regional level, migration processes show greater impact on population growth than natural change, highlighting high population mobility and the existence of specific migration risks in the particular territorial units.
- 2) Survey results show that residents of Riga city demonstrate the highest potential migration intentions within the city limits and the overall potential mobility. Pieriga and Zemgale residents indicate the highest intentions to migrate within the country, while inhabitants of Vidzeme show the least interest towards changing the place of residence.
- 3) Vidzeme shows an unusual pattern of almost equal population division between densely and sparsely populated areas, while losing its urban population much faster than rural. If this trend continues, Vidzeme has a chance of becoming a predominantly rural region in the next decade.
- 4) Current statistical trends and survey results indicate a clear need for expanding the traditional "rural / urban" demographic classification of territories in Latvia by introducing the concept of "sub-urban" and "peri-urban" areas in relation to Pieriga municipalities.
- 5) Population views expressed by the residents of predominantly rural areas and particularly Latgale region often contradict logical and empirical solutions presented in the literature, highlighting the growing divide between the available policy measures and population expectations.

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