

## UNEMPLOYMENT IN THE REGIONAL CONTEXT IN LATVIA

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**Abstract.** This paper sets out a methodological framework for identifying and mitigating unemployment problems in different regions. The study is based on the 2020 and 2023 Latvian Unemployment Surveys. The study includes a comprehensive review of the relevant scientific literature, policy and regulatory frameworks, the development of a multilevel research methodology and tools, an analysis of the research results, in-depth discussions of the identified problems in the context of existing scientific knowledge, and a set of key conclusions and proposed measures to address these problems. By structuring the paper in this way, it offers a holistic and systematic approach to understanding and addressing regional unemployment problems. The study contributes to the ongoing dialogue on regional economic disparities and highlights opportunities for more inclusive, sustainable and equitable labour markets.

**Keywords:** unemployment, COVID-19, regional differences in unemployment.

**JEL Classification:** J6, J64, R1, R12, P2.

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### 1. Introduction

The region began to be studied as a separate unit after the Second World War, when spatial planning issues became topical. Geographers, economists, spatial planners and sociologists all study the region in their own disciplines, so the understanding and interpretation of the region is linked to the discipline and the purpose of the study. In all disciplines, the basic definition of a region is that it refers to a specific part of a territory that shares common characteristics. In practice, a region refers to a large part of the earth's surface that differs from surrounding areas in terms of its physical and geographical characteristics and the nature of human activity. A region has internal homogeneity in cultural, economic and political processes, and culture is understood as the social organisation practices, norms and language of the inhabitants of the region (Zobena & Bite, 2014).

Paasi develops the definition of region in his studies and summarises that regions are themselves historically contingent social processes that become institutionalised as part of a broader regional transformation and that may eventually deinstitutionalise, practically merge with other regional spaces or dissolve into smaller units. Regions are thus specific to time and space in the sense that they begin

and end in perpetual regional transformation. The institutionalisation of each "particular" space in a region is the expression of many institutional practices and discourses related to governance, politics, culture and economics that underlie and are shaped by the institutionalisation of the region – a dialectical process (Paasi, 2011).

It is very difficult to define a region. It is, of course, a territorial space, so we can exclude virtual spaces from our considerations, but it can have different territorial configurations. There is a traditional but still useful distinction between subnational regions, traditionally studied by geographers, planners, sociologists, political scientists and historians, and supranational regions, studied by other geographers as well as international relations and strategic studies. Economists can use both (Keating, 2011).

Regional economics is a branch of economics that incorporates a dimensional space into the analysis of market activity. It does so by incorporating space into the logical frameworks, laws and models that govern and interpret price formation, demand, productive capacity, levels of production and development, growth rates and income distribution under conditions of unequal regional resource endowments. Handbooks on regional economics often draw a distinction, even a dichotomy, between convergence and divergence theories, i.e. between theories that

explore the reasons for the narrowing of the gap between rich and lagging regions and those that, on the contrary, explain the persistence of this gap (Capello, 2016).

Regional development is not a static or deterministic phenomenon, but is taking shape in a dynamic field of forces in which new perspectives and multiple actors and stakeholders are emerging. Regional development policy seeks to offer support mechanisms to less developed or less favoured regions that need an above-average external stimulus to growth. In recent decades, most regional development efforts have focused on supporting infrastructures that would contribute to the region's economic base, without excluding certain industrial sectors. Consequently, the focus has been mainly on hard infrastructure (e.g. roads, ports, airports, railways, communication infrastructure, resource infrastructure, etc.) that would improve the competitiveness of the region by improving the quality of indirect productive inputs, so that the overall efficiency or productivity of the relevant regional system could be significantly improved. The "New European Regional Development Policy" has evolved towards a greater emphasis on knowledge, innovation and social capital, particularly in an urban or metropolitan context. These are effective components of smart regional specialisation (Nijkamp, 2016).

This paper introduces a methodological approach to identify and address regional unemployment problems. The first section of this paper provides a description of the scientific literature and policy reports on the problem at hand. In the second section, the author introduces several levels of research methods and instruments that have been developed to effectively achieve the research objectives. The third chapter is devoted to the analysis of the results of the research, offering insights and conclusions. Chapter 4 provides a detailed discussion of the issues identified during the research, with reference to the relevant scientific literature. In the final chapter, the author summarises the main conclusions drawn from the study and makes recommendations for action to address the issues identified.

## 2. Literature review

38 In OECD countries, regions are divided into two territorial levels, reflecting the administrative organisation of the countries concerned. The first tier consists of the 433 OECD large (TL2) regions, which are made up of regional governments, such as the province of Ontario in Canada. Then there are 2414 OECD small (TL3) regions, where each TL3 region is part of a TL2 region (except the USA). For example, the TL2 region of Aragon in Spain includes three TL3 regions: Huesca, Teruel and Zaragoza. These TL3 regions correspond to administrative regions other than Australia, Canada, Germany and the United States. It should be noted that all regions are delimited within national borders. This classification, which is closely aligned with the Eurostat NUTS 2021 classification for European countries, facilitates the comparability of geographical units at the same territorial level. Indeed, these two lev-

els, which are officially defined and relatively stable in all Member States, serve as the basis for the implementation of regional policy in most countries.

However, where people live, work and socialise may have little formal connection with the surrounding municipalities. For example, a person may live in one city or region, work in another, and relax in a third. Regional interactions are influenced by many linkages, such as labour mobility, production systems and business cooperation. These interactions often transcend local administrative boundaries (OECD, 2022).

It is therefore very important to identify the concept of "functional urban area" (FUA) when analysing cross-national statistics. A functional urban area is made up of the "city" itself and the surrounding, less densely populated local units that form part of the urban labour market (called "catchment areas"). The definition of functional urban areas takes place in several stages. Initially, the population network helps to identify "urban centres", irrespective of administrative or statistical boundaries. An urban centre is a pure network concept, denoting a cluster of high-density contiguous cells with more than 50 000 inhabitants. This approach allows the identification of an urban centre within a large local unit or a centre dispersed over several local units, which is difficult to achieve using definitions based only on data from local units. The functional urban area includes both the urban area and its peri-urban surroundings (Dijkstra et al., 2019).

In the analysis of regional differences, the Teil's entropy index is the central indicator, defined as follows:

$$Theil = \sum_i^N = 1 \frac{y_i}{\bar{y}} \ln \left( \frac{y_i}{\bar{y}} \right),$$

here  $N$  denotes the number of OECD regions,  $y_i$  is the variable of interest in the  $i^{\text{th}}$  region, and  $\bar{y}$  is the average value of the variable across all regions.

The Teil index can be easily decomposed into two components:

- Differences in subgroups of regions, where a subgroup is identified with the set of regions of a country.
- Differences between sub-groups of regions, e.g. differences between countries.

The sum of these two components is equal to the Teil index. In decomposition, assuming a group of  $m$  regions (countries), it takes the following form:

$$Theil = \sum_j^M = 1 \sum_i^N = 1 s_j \ln \left( \frac{y_j}{\bar{y}} \right),$$

where the first term in the formula is the inner part of the distribution, equal to the weighted average of the Theil inequality indices for each country. The weights  $s_j$  are calculated as the ratio between the national average of the variable of interest and the OECD average of the same variable. The second term is the inter-Teil component of the index and reflects the share of regional disparities that depends on differences between countries.

The Teil index ranges from zero to  $\infty$ , where zero means an equal distribution and higher values mean greater inequality. It is important to note that the index gives equal weight to each region regardless of its size. Hence, differences in index values between countries can be partly explained by differences in the average size of regions within each country (OECD, 2022).

## 2.1. Latvian regional classification

In accordance with the basic principles laid down in Regulation (EC) No 1059/2003 of the European Parliament (European Parliament & Council of the European Union, 2003) and of the Council of 26 May 2003 establishing a common classification of territorial units for statistics, Latvia has introduced a hierarchical three-level regional classification. This classification is designed to facilitate a consistent breakdown of territorial units for EU regional statistics. The annexes to the Regulation provide a comprehensive list of territories and their corresponding codes at each level of the classification of statistical territorial units. The main criterion for this NUTS (Nomenclature of Territorial Units for Statistics) breakdown is the population of the territory concerned, structured as follows:

- NUTS 1: Territories with 3–7 million inhabitants (covers the whole of Latvia).
- NUTS 2: Territories with a population between 800 000 and 3 million (covering the whole of Latvia).
- NUTS 3: Territories with a population between 150 000 and 800 000 (covering the six statistical regions of Latvia).

The statistical regions of Latvia (NUTS 3) were created in accordance with the provisions of the Regulation on the definition of regions at different NUTS levels. These regions were developed in cooperation with Eurostat, the statistical office of the European Union, and officially approved on 28 April 2004 by Cabinet Order No 271 “On Statistical Regions of the Republic of Latvia and the Administrative Units Containing Them” (Cabinet of Ministers, 2004). This development was facilitated by the accession of the Czech Republic, Estonia, Cyprus, Latvia, Lithuania, Hungary, Malta, Poland, Slovenia and Slovakia to the European Union, as laid down in Regulation (EC) No 1888/2005.

From 1 July 2021, a new Law on Administrative Territories and Settlements entered into force in Latvia, resulting in the Cabinet of Ministers’ Order No 911 of 7 December 2021, which clearly defines the administrative units that, after the administrative-territorial reform, constitute the statistical regions of the Republic of Latvia (Central Statistical Office, 2021).

The Latvian State Employment Agency (SEA) has defined the following regional designations for structuring its statistics:

- Riga City
- Riga statistical region
- Kurzeme statistical region
- Latgale statistical region
- Vidzeme statistical region

- Zemgale statistical region
- Foreign address (State Employment Agency, 2023).

The “Foreign address” section includes unemployed people whose declared address of residence is outside Latvia, but who are actively looking for work in Latvia. This category also includes Ukrainian refugees who, due to their status, may not have an officially declared place of residence in Latvia, but are actively seeking employment opportunities in the country.

## 2.2. Labour market challenges and regional disparities in Latvia

In 2018, the Ministry of Economics of the Republic of Latvia forecast that, while employment opportunities are expected to increase over the next decade, demographic changes and regional disparities in the labour market will exacerbate labour shortages. The Ministry’s report highlighted the role of regional disparities in hindering the matching of labour supply and demand. This regional imbalance was increasingly pronounced, with most new employment opportunities arising in economically strong regions and major cities, while jobseekers were concentrated in less developed regions. Notably, Latgale continued to struggle with the highest unemployment rate, almost four times higher than in the Riga region, which accounted for more than four-fifths of all available vacancies.

The Ministry’s forecast also highlights the importance of regional labour mobility – the ability of workers to move quickly between jobs in one region and their place of residence in another – in ensuring balanced labour market development. As a potential solution to this multifaceted problem, the Ministry of Economy proposed a programme aimed at promoting the construction of rental housing in the regions. The main objectives of this initiative were to improve the availability of labour in areas experiencing employment growth, to expand housing choices for middle-income earners and to encourage the return of Latvians living abroad. The proposed programme aimed to provide financial support to municipalities outside Riga and those located close to the capital (Ministry of Economics Republic of Latvia, 2018).

This comprehensive approach seeks to tackle regional labour market disparities by promoting spatially balanced development and stimulating labour mobility, while improving access to housing, which ultimately contributes to a more harmonious and dynamic labour market landscape.

## 2.3. Challenges and opportunities in the Latvian labour market

The Organisation for Economic Co-operation and Development (OECD) has acknowledged that, despite a decline in unemployment, Latvia still faces significant challenges. Key among these challenges are the country’s ageing population and persistent emigration trends, which have contributed to a sharp decline in Latvia’s overall population. These demographic changes have led to skills shortages

and mismatches in the labour market. In addition, regional disparities in per capita income and unemployment rates persist, as do high levels of poverty. In addition, the spread of the informal economy hampers productivity and limits workers' access to training opportunities.

In response to these multifaceted challenges, the OECD stresses that policies aimed at promoting digital transformation are crucial. However, the OECD report sounds a note of caution, stressing that digital transformation efforts may exacerbate existing inequalities, in particular between high- and low-skilled workers, large and small businesses, and urban and rural areas. Inadequate information and communication technology (ICT) skills, in particular in modern management practices, limit the ability of Latvian enterprises to make full use of available digital technologies. It should be noted that more than half of the population, as well as a significant 67% of the unemployed, lack basic digital skills.

An additional concern mentioned in the OECD report is Latvia's relatively low share of ICT professionals employed in the EU. This has fallen from 30% in 2008 to just 14% in 2018, highlighting the gender gap in this area. The OECD also highlights Latvia's modest spending on targeted training initiatives for people who are unemployed, inactive or at risk of losing their jobs. Latvia's investment in this area was 0.15% of GDP in 2016, compared to 0.21% for Estonia, 0.24% for Lithuania and 0.36% for the OECD average.

While recognising recent improvements in training systems and policies to motivate the unemployed, the OECD report notes that there are marked regional disparities in per capita income and unemployment rates. These differences in turn give rise to significant differences in per capita tax revenues at municipal level.

Given these challenges and disparities, digitalisation is becoming a potential catalyst to bridge the urban-rural divide. It offers the opportunity to pool digital resources and e-services across multiple municipalities, thereby improving the efficiency of local public service delivery. By using digital solutions, Latvia can reduce existing inequalities, boost economic growth and create a more inclusive labour market (OECD, 2021).

To foster economic development, the EU is pursuing regional and urban development (European Commission, n.d.) and to achieve this, social inclusion is being implemented, which includes social inclusion in rural areas, providing employment and improving skills and qualifications (European Commission, 2020).

### 3. Methods and materials

The aim of this study is to investigate the impact of regional factors on unemployment in Latvia.

The data for the study are drawn from two surveys of the unemployed conducted by SKDS, a private and independent research company specialising in market, marketing and various opinion polls. SKDS has been a member of ESOMAR (European Society for Opinion and Market Research) since 2000 and adheres to the ethical

and methodological standards set by this organisation for public opinion and market research institutes. Since 2014, SKDS has joined the WIN network of research companies (SKDS Pētījumu Centrs, 2023).

Just over 200 participants aged 18–63 who were unemployed in Latvia took part in each survey. The first survey of the unemployed was conducted during the first wave of the COVID-19 pandemic in autumn 2020, while the second survey was conducted in autumn 2023.

The survey started with an introductory question in which respondents could indicate their region of residence. Participants were offered a choice of six regions in Latvia: Riga, Near Riga, Vidzeme, Kurzeme, Zemgale and Latgale.

To investigate correlations related to regional differences, responses to the question on region of residence were compared with respondents' gender, age, education level and additional questions such as "Are you registered as unemployed?", "How long have you been unemployed?" and "Do you plan to join the State Employment Agency?".

The correlation was calculated using the Kendall formula. Kendall's tau is a non-parametric measure of correlation often used in statistical analysis to assess the strength and direction of relationships between variables.

Significant correlations relating to regional aspects were further tested using cross-tabulation analysis.

Both surveys were conducted as web-based surveys (CAWI) and respondents were selected from the SKDS WEB panel. Each survey had around 20 000 respondents, but the datasets only included the responses of the unemployed as indicated in the introductory questions. The 2020 dataset includes the responses of 216 participants, while the 2023 survey data were analysed for 204 unemployed respondents.

### 4. Results

The correlation analysis of both the 2020 and 2023 surveys revealed a number of interrelated issues (Table 1). However, given the topic of this study, only those questions that showed a significant correlation with regional factors are analysed.

In 2020, a large-scale study of the Latvian unemployed was carried out to investigate the relationship between several key variables, including gender, age, education, region of residence, registration as unemployed, duration of unemployment and intention to cooperate with the PES to secure a job. Correlations between these variables were calculated using Kendall's tau, a non-parametric measure of association.

The results revealed the following significant correlations and their strength between these variables:

Gender and region: There is a statistically significant, albeit weak, negative correlation between an individual's gender and region of residence ( $\tau = -0.141^*$ ,  $p < 0.05$ , bivariate). This suggests a weak association between gender and regional prevalence.

**Table 1.** Responses to the 2020 Latvian unemployment survey

Variable	Your gender	Age	Education	Region	Are you registered unemployed?	How long have you been unemployed?	Do you plan to work with the NEA to find a job?
Your gender	1	-.134*	.148*	-.141*	0.024	0.003	-0.052
Age	-.134*	1	0.072	0.081	-.163**	0.061	-0.039
Education	.148*	0.072	1	-.143*	-0.061	-0.039	0.089
Region	-.141*	0.081	-.143*	1	-.127*	0.095	-0.016
Are you registered unemployed?	0.024	-.163**	-0.061	-.127*	1	.374**	.298**
How long have you been unemployed?	0.003	0.061	-0.039	0.095	.374**	1	.143**
Do you plan to work with the NEA to find a job?	-0.052	-0.039	0.089	-0.016	.298**	.143**	1

Note: Values in the table represent Kendall's tau correlation coefficients.  $N = 216$  for all variables.

Education and region: education level has a statistically significant but weak negative correlation with regional affiliation ( $\tau = -0.143^*$ ,  $p < 0.05$ , bivariate). This means that educational attainment may have a small impact on an individual's choice of region.

Unemployment registration and duration of unemployment: There is a strong positive correlation between unemployment registration and duration of unemployment ( $\tau = 0.374^{**}$ ,  $p < 0.01$ , bivariate). This suggests that registered unemployed tend to be unemployed longer.

Intention to cooperate with the NEA and region: the relationship between intention to cooperate with the NEA and region is statistically significant but weak ( $\tau = -0.016$ , not significant at  $p < 0.05$ ). This indicates that region may have only a small influence on an individual's intention to cooperate with the NEA.

These findings provide valuable insights into the complex dynamics of regional aspects in the context of 2020 Latvian unemployment. The correlations shed light on the interaction of different demographic and behavioural factors and their impact on regional distribution and job search strategies.

In the 2023 survey, the author further explored the complex relationships between different variables, with a

particular focus on the regional dimension. Kendall's tau correlation coefficients were used to assess the relationship between gender, age, education, regional distribution, registration as unemployed, duration of unemployment and intention to cooperate with the PES to secure a job (Table 2).

The 2023 results revealed a number of noteworthy correlations with regional belonging:

Age and region: there was a significant positive correlation between a person's age and their region of residence ( $\tau = 0.130^*$ ,  $p < 0.05$ , bivariate). This finding suggests that older individuals tend to be associated with specific regions, indicating a link between age and regional distribution.

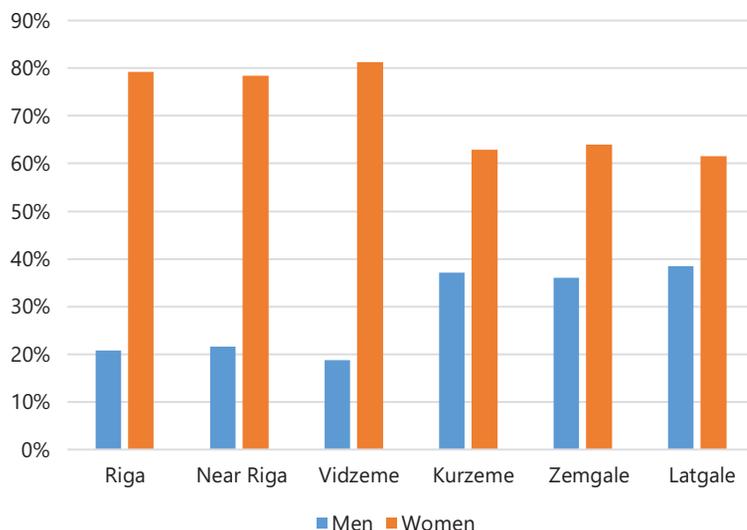
Education and region: education level showed a negative correlation with regionality, although not statistically significant ( $\tau = -0.108$ , not significant,  $p < 0.05$ ). Although this correlation is weak, it implies that education level may have a small influence on an individual's choice of region of residence.

Registered unemployed and region: There was a statistically significant negative correlation between being registered as unemployed and the region of residence ( $\tau = -0.071$ , not significant at  $p < 0.05$ ). This suggests a small

**Table 2.** Responses to the 2023 Latvian unemployment survey

Variable	Your gender	Age	Education	Region	Are you registered unemployed?	How long have you been unemployed?	Do you plan to work with the NEA to find a job?
Your gender	1	-0.083	0.109	-0.004	0.044	0.107	.148*
Age	-0.083	1	-0.072	.130*	0.028	.215**	0.075
Education	0.109	-0.072	1	-0.108	-0.127	-0.024	-0.027
Region	-0.004	.130*	-0.108	1	-0.071	.113*	-0.018
Are you registered unemployed?	0.044	0.028	-0.127	-0.071	1	.335**	.349**
How long have you been unemployed?	0.107	.215**	-0.024	.113*	.335**	1	.329**
Do you plan to work with the NEA to find a job?	.148*	0.075	-0.027	-0.018	.349**	.329**	1

Note: Values in the table represent Kendall's tau correlation coefficients.  $N = 204$  for all variables.



**Figure 1.** Responses to the questions “Your gender” and “Your region of residence” in the 2020 survey

association between registration status and regional factors, implying that region may play a role in unemployment registration.

Cooperation with the PES and the region: Intention to cooperate with the PES to find a job and regional affiliation showed a weak but statistically insignificant negative correlation ( $\tau = -0.018$ , not significant at  $p < 0.05$ ). This suggests only a weak relationship between regional factors and the intention to cooperate with the NEA.

These correlations highlight the dynamic interaction between demographic characteristics, regional distribution and respondents’ job search strategies in 2023. While some correlations are statistically significant, overall they are weak, indicating that regionality is a subtle but salient factor in understanding the broader context of unemployment and job search behaviour.

To improve the analysis of the correlation results, the author used a traditional cross-tabulation analysis so that the answers to the questions that showed a statistically significant correlation with regional factors could be examined in more detail.

Given that the 2020 survey results show a statistically significant negative correlation between an individual’s gender and region of residence, the author carried out a cross-tabulation to investigate this interaction in more detail. The results of the cross-tabulation reflect the gender distribution among unemployed respondents living in different regions (Figure 1). According to the survey results, there are significantly more unemployed women than unemployed men in all regions of Latvia. In Riga and the Pierīga region the situation is identical, with 21% of unemployed men and 79% of unemployed women living in these regions. In Vidzeme, the prevalence of unemployed women is even higher (81%) and the prevalence of unemployed men in this region is 19%. Kurzeme region has a comparatively higher proportion of unemployed men – 37%, while 63% are women. In Zemgale 36.00% of the unemployed are men and 64%

are women. The highest share of unemployed men is observed in Latgale (39%), while 62% of unemployed women are in this region.

In all regions, unemployed men account for 27% of the total unemployed, while unemployed women account for 73% of the total.

The following description presents the gender breakdown of the respondents – the unemployed in Latvia – in the different regions, allowing an understanding of the gender composition in each geographical region for this particular group.

The cross-tabulation analysis in Figure 2 gives an insight into the distribution of educational attainment of the unemployed in different regions. The data are broken down into three main groups: persons with primary education, persons with secondary or vocational education and persons with tertiary education. The results show the distribution of educational attainment in the different regions. In Riga, 5% of the unemployed have primary education, 42% have secondary or vocational education and the majority – 53% – have higher education. 8% of the unemployed living in the Pierīga region have primary education, 32% have secondary or vocational education and 59.5% have higher education. In Vidzeme, a significant share of the unemployed has primary education – 31%, secondary or vocational education – 44% and higher education – 25%. In Kurzeme, 11% of the unemployed have primary education, a significant 69% have secondary or vocational education and 20% have higher education. In Zemgale, 4% of the population have primary education, 52% have secondary or vocational education and 44% have higher education.

In Latgale, a very low percentage, specifically 0%, have primary education, while 69% have secondary or vocational education and 31% have higher education.

These results provide valuable insights into the educational landscape of each region, revealing differences in educational attainment in the categories identified. It is

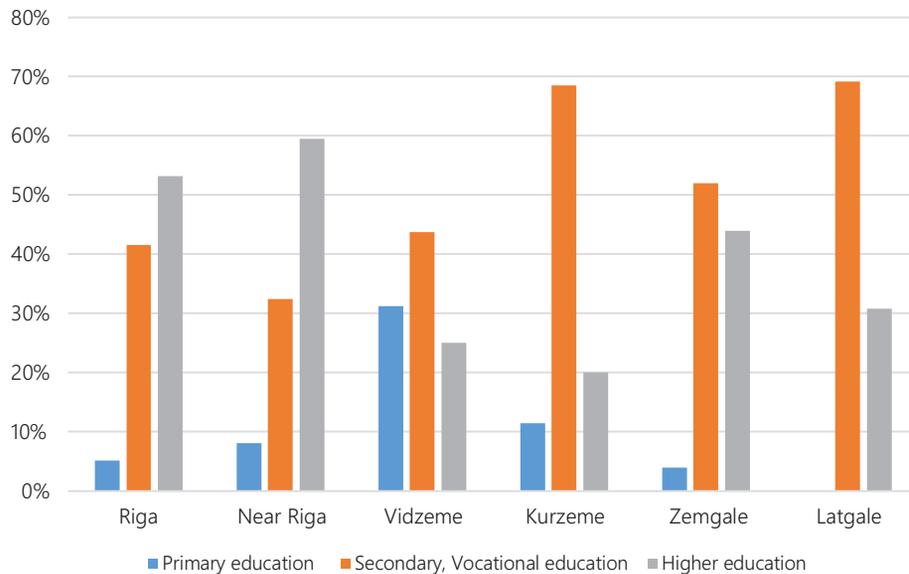
notable that in all regions the share of unemployed with tertiary education significantly exceeds the share of unemployed with primary education. In addition, there is a significant share of unemployed with secondary and vocational education. These findings are particularly noteworthy in the light of the prevailing shortage of middle-level workers in Latvia.

The crosstabulation results in Figure 3 illustrate the relationship between region and unemployment registration. The data reveal the distribution of the percentage of persons in each region who are registered as unemployed (marked “yes”) and those who are not registered as unemployed (marked “no”). In the Riga region, 38% of persons are registered as unemployed, while the majority, 62%, are not registered. In the Pierīga region, 35% of respondents are registered as unemployed, while 65% are not registered. In Vidzeme 44% of persons are registered as un-

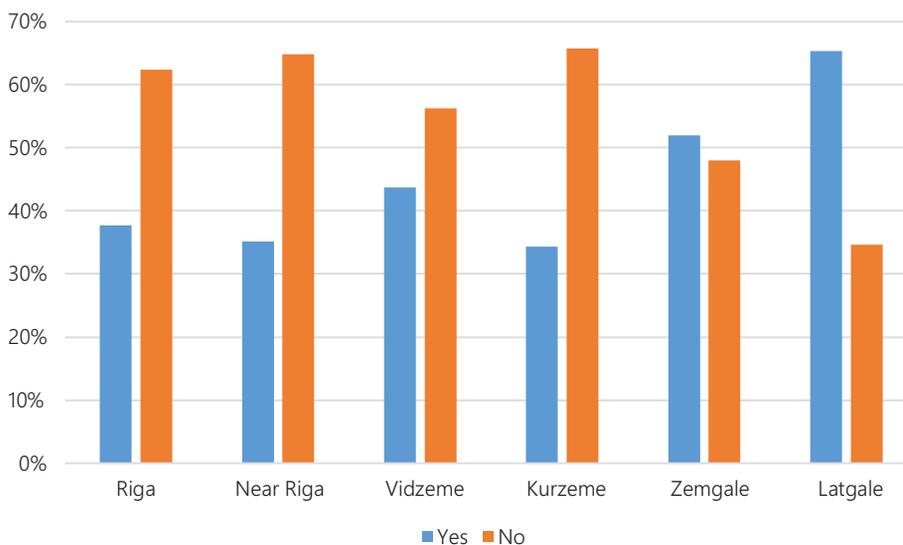
employed, while 56% are not registered. In Kurzeme, 34% of respondents are registered and 66% are not registered. In Zemgale region the number of registered unemployed (52%) and unregistered unemployed (48%) is very similar. Latgale is the only region where the share of registered unemployed (65%) is much higher than the share of unregistered unemployed (35%).

These cross-tabulations illustrate the distribution of age groups in different regions (Figure 4).

In the Riga region, the age distribution of the unemployed is as follows: 12% are aged 18–24, 16% are aged 25–34, 30% are aged 35–44, 19% are aged 45–54 and 22% are aged 55–64. In the Baltic Sea Region, the age distribution of the unemployed is very similar: 7% are aged 18–24, 17% are aged 25–34, 31% are aged 35–44, 21% are aged 45–54 and 24% are aged 55–64. Vidzeme has the lowest number of unemployed young people



**Figure 2.** Responses to the questions “Your level of education” and “Your region of residence” in the 2020 survey



**Figure 3.** Responses to the questions “Are you registered unemployed” and “Your region of residence” in the 2020 survey

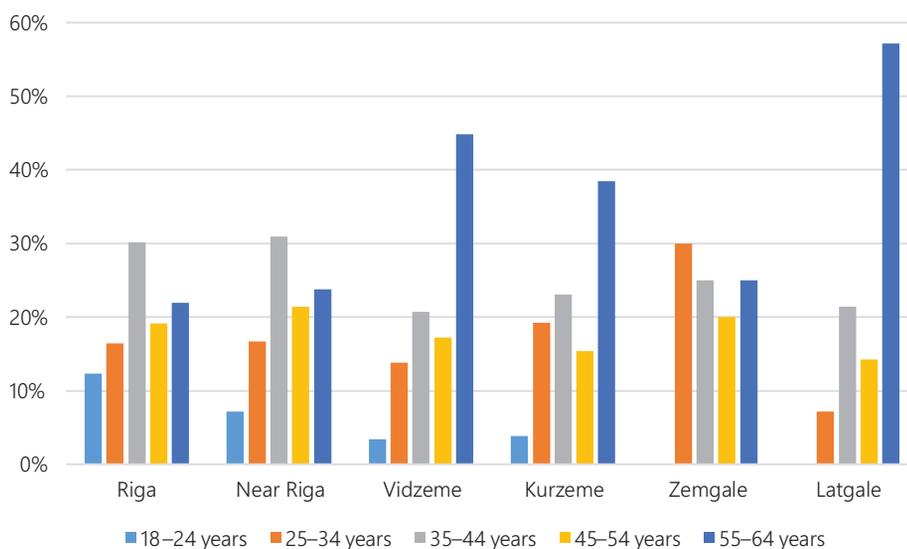
(3% 18–24), 14% are aged 25–34, 21% are aged 35–44, 17% are aged 45–54 and 45% are aged 55–64. Kurzeme also has a fairly low proportion of unemployed young people (4% 18–24 years), 19% are aged 25–34, 23% are aged 35–44, 15% are aged 45–54 and 39% are aged 55–64. In the Zemgale region, a significant share, 30%, is in the 25–34 age group, while the remaining 25% are in the 35–44 and 55–64 age groups. There are no persons aged 18–24 in this region. The age distribution of the population in Latgale is as follows: 7% are aged 25–34, 21% are aged 35–44, 14% are aged 45–54 and the majority, 57%, are aged 55–64.

The results of the cross-tabulations in Figure 5 give an insight into the duration of unemployment among individuals in different regions. These results reveal the percentage distribution of respondents in each region based on the length of their unemployment spells, broken down into different time intervals.

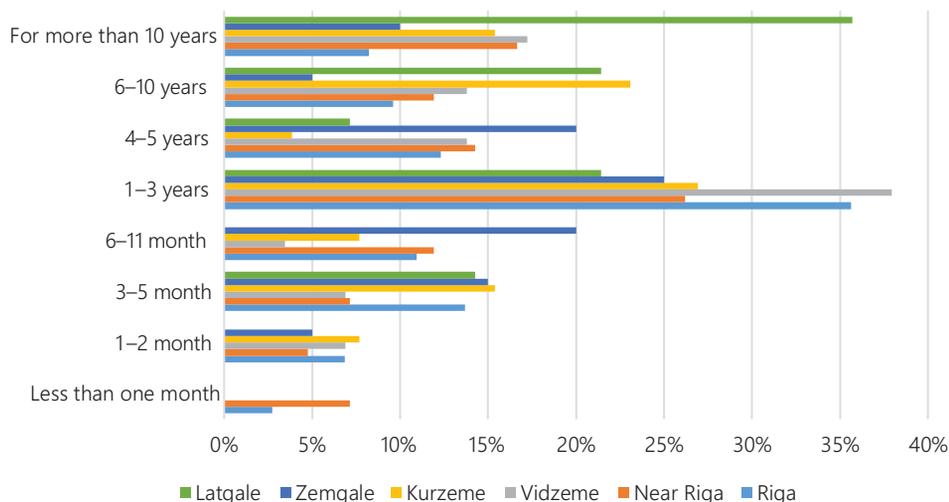
The majority of the unemployed in the Riga region (36%) have been unemployed for a relatively long period of time,

namely between 1 and 3 years. In addition, a significant proportion have been unemployed for 3 to 5 months (14%) and 6 to 11 months (11%). Smaller percentages reflect different durations of unemployment, ranging from less than one month (3%) to more than 10 years (8%). In the Riga area (Near Riga) a significant proportion of unemployed (26%) have been unemployed for 1 to 3 years. Other significant durations are 4 to 5 years (14%), 6 to 10 years (12%) and more than 10 years (17%). Between 6 and 11 months of unemployment is the case for 12% of the periphery's unemployed, while shorter unemployment spells have the lowest percentages (3–5 months 7%; 1–2 months 5%; less than one month 7%). The Vidzeme region stands out with a significant share of respondents (38%) unemployed for 1–3 years. In this region, other significant periods are 6 to 10 years (17%) and 4 to 5 years (17%). Persons unemployed for less than one month are not represented.

In Kurzeme, the largest share (27%) are unemployed for 1 to 3 years. There are also significant figures for in-



**Figure 4.** Responses to the questions “Your age” and “Your region of residence” in the 2023 survey



**Figure 5.** Responses to the questions “How long have you been unemployed” and “Your region of residence” in the 2023 survey

dividuals who have been unemployed for 6 to 10 years (23%) and for those 15% who report a duration of unemployment of 3 to 5 months. Individuals who have been unemployed for less than one month are not represented. In the Zemgale region, 25% of respondents have been unemployed for 1 to 3 years, which is the most common duration. The duration from 6 to 10 years also stands out with 20%. Unlike in other regions, no respondent reported being unemployed for less than one month. In Latgale, respondents are mainly categorised into 1 to 3 years (21%) and more than 10 years (36%) of unemployment. Smaller proportions are 4 to 5 years (7%) and 6 to 10 years (21%).

These results provide a comprehensive overview of the duration of unemployment in different regions, showing that the duration of unemployment periods varies considerably across regions. Understanding these differences is crucial for designing targeted policies and interventions to meet the specific needs of the unemployed in each region.

## 5. Discussion and interpretation of results obtained

The academic literature suggests three main reasons for analysing unemployment at regional level. The first is that regional differences in unemployment reflect the functioning of regional labour markets and indicate regional problems. It is therefore essential that governments wishing to tackle regional disparities take a more serious look at regional labour markets. The second reason is that the factors used to describe unemployment differences between countries are not applicable to describe regional unemployment differences. Social security, differences in retirement and tax systems are cited as reasons for national differences in unemployment. While these reasons are recognised to describe differences between countries, they are not recognised to describe differences between regions, as there are no significant differences between regions within a country on these issues. Therefore, other reasons have to be sought to describe differences in unemployment between regions. The third reason is that regional differences in unemployment can potentially create inefficiencies. It is possible that reducing regional differences in unemployment can lead to significant social gains, higher national output and reduced inflationary pressures (Güçlü, 2017).

The analysis of data from the 2020 survey provides insights into the gender composition of the unemployed population in different regions of Latvia, highlighting gender differences in unemployment. These findings are valuable for understanding and addressing gender-related unemployment issues in specific geographical areas. Overall, the results reveal a consistent pattern of gender distribution among the unemployed in different regions of Latvia, with a higher prevalence of female unemployment. This underlines the importance of addressing and analysing gender aspects of unemployment in order to implement targeted policies and initiatives.

However, gender is not the only factor that should be taken into account when analysing unemployment-related issues. The crosstabulation analysis of the 2020 survey demonstrates that the educational level of the unemployed is also one of the determinants to be analysed when studying unemployment.

The 2020 survey data show significant differences in the educational attainment of the unemployed in different regions of Latvia.

Higher education is predominant in Riga and the Baltic Sea Region: in the Riga region, a significant 53% of the unemployed have higher education, and this trend is also observed in the Baltic Sea Region, where 59.5% of the unemployed have higher education. This suggests that the capital and the neighbouring region have more educated unemployed. Vidzeme stands out with a significant share of unemployed (31%) who have only primary education. The region also has a significant share of unemployed with secondary or vocational education (44%), reflecting the diversity of education among the unemployed. In Kurzeme, the emphasis is on secondary and vocational education: there is a high concentration of people with secondary or vocational education (69%) among the unemployed in Kurzeme, but a smaller share with higher education (20%). It is likely that the region has a workforce oriented towards intermediate skills. In Zemgale, the distribution of educational attainment among the unemployed is relatively balanced, with 52% of the unemployed having secondary or vocational education and 44% having higher education. The share of people with primary education is relatively low (4%). The Latgale region has the highest share of unemployed with primary education (31%). However, the majority of the unemployed in Latgale still have secondary or vocational education (69%). It is noteworthy that no respondent in Latgale indicated that they had only primary education.

These findings have implications for regional labour markets and education policy. The high prevalence of higher education, especially in Riga and the Baltic Sea Region, suggests that the capital region has a highly educated pool of unemployed, while the strong emphasis on secondary and vocational education in Kurzeme points to different labour market dynamics. The concentration of people with secondary or vocational education and the shortage of middle-level workers in Latvia should be addressed through appropriate policies and initiatives to better align educational qualifications with labour market requirements.

Overall, the results of the crosstabulation analysis provide insights into the educational structure of the unemployed in different regions, highlighting the diversity of educational backgrounds and underlining the importance of addressing the education and labour force needs of each region accordingly.

The correlation results of the 2020 study highlighted another important aspect to pay attention to in the context of regional unemployment, which is whether the unemployed have registered and received official unem-

ployment status, or whether the unemployed have not registered and therefore have no intention to cooperate with the PES.

The results of the crosstabulation analysis allow us to draw a number of conclusions about the relationship between region and unemployment registration. The data show significant regional differences in the registration of the unemployed. The percentage of registered unemployed varies across regions of Latvia, suggesting that the incidence of unemployment varies across regions.

The share of registered unemployed is comparatively higher in Riga and Vidzeme regions – 38% and 44% respectively. The share of registered unemployed in the Pierīga and Kurzeme regions is average – 35% and 34% respectively. The Zemgale region stands out with an almost equal distribution of registered and unregistered unemployed – 52% registered and 48% unregistered. This suggests that Zemgale might have a balanced share of both formally registered and informally registered unemployed. Latgale is unique among regions with a significantly higher share of registered unemployed (65%). This could indicate a higher dependence on formal registration of the unemployed in Latgale compared to other regions.

These findings have implications for regional labour market policies and strategies. Regions with higher formal registration of the unemployed may need targeted job finding and workforce development programmes, while regions with lower registration may need initiatives to encourage the formal registration of the unemployed so that they can access support services.

Differences in registration rates can also be influenced by various social and economic factors, such as the availability of jobs, awareness of registration procedures and cultural norms related to the registration of the unemployed.

It is important to take into account the quality and accuracy of unemployment registration data, as differences in registration rates may be influenced by data collection and reporting practices in each region.

In summary, the need for tailored approaches to tackling unemployment in different regions of Latvia, taking into account differences in formal registration and the unique characteristics of each region, should be emphasised.

The results of the 2023 study highlight significant differences in the distribution of age groups across Latvia's regions. The age composition varies from region to region. Urban regions, such as Riga and its surroundings, tend to have a more even age distribution, with a relatively balanced representation of different age groups. In contrast, rural regions such as Zemgale and Latgale have a higher concentration of older people, especially in the 55–64 age group.

In several regions, including Zemgale and Kurzeme, the 25–34 age group is particularly dominant. This may indicate that these regions are attractive to young people, possibly because of job opportunities or educational institutions.

Some regions, especially Zemgale and Latgale, have a higher proportion of people aged 55–64. This suggests that these regions may be experiencing demographic age-

ing, which may affect labour force dynamics and health needs.

Both Zemgale and Latgale do not show an 18–24 age group, indicating a possible outflow of young people from these regions or lower birth rates.

These regional age differences can inform policy decisions related to education, healthcare and social services. In regions where younger people are concentrated, the provision of education and employment opportunities can be crucial. Conversely, regions with ageing populations may require health and social support infrastructure to meet the needs of older people.

The age distribution can also affect labour market dynamics, as regions with a higher concentration of younger people may have a more dynamic and competitive workforce, while regions with an older population may face problems related to labour shortages and skills shortages.

These findings underline the importance of taking age demographics into account when designing regional policies and strategies, as different age groups have different needs and can have a significant impact on regional development and social dynamics.

The results of the 2023 study revealed another factor that needs to be given more attention when assessing the negative impact of unemployment. The results of the crosstabulation analysis provide valuable insights into the duration of unemployment among people in different regions.

There are significant regional differences in the duration of unemployment, with some regions having a higher prevalence of long-term unemployed.

Long-term unemployment, defined as unemployment for 1 to 3 years or more than 10 years, is particularly prevalent in Latgale. In this region, 35.7% of respondents have been unemployed for more than ten years. The Zemgale region also has a high share of respondents who have been unemployed for 1 to 3 years (25.0%) and for 6 to 10 years (20.0%).

In the Riga and Pierīga regions, the share of respondents who have been unemployed for 1 to 3 years is significant (35.6% and 26.2%, respectively).

Vidzeme stands out with a significant share of the population unemployed for 1 to 3 years (37.9%). Kurzeme has a diverse range of unemployment duration, with the highest percentage between 1 and 3 years (26.9%). In particular, Vidzeme and Kurzeme are not represented by persons who have been unemployed for less than one month.

In all regions except Riga and Pieria, there are no persons reporting unemployment for less than one month, suggesting that the persons surveyed have generally experienced longer unemployment.

These findings underline the importance of understanding regional differences in the duration of unemployment. Policy makers and employment agencies need to take these differences into account when designing and implementing strategies to tackle unemployment and support those seeking re-employment. In addition, regions with a high incidence of long-term unemployment may require specific interventions to help people back into the labour market.

## 6. Conclusions

This study draws a number of conclusions about the problem of regional unemployment in Latvia.

In all regions of Latvia, there is a consistent tendency for female unemployment to be higher than male unemployment.

Policy makers and employment agencies should address gender-related unemployment issues and develop targeted initiatives to support unemployed women, especially in regions with a high incidence of female unemployment.

There are significant regional disparities in the education of the unemployed. Riga and the Baltic Sea Region have a higher share of unemployed with higher education, which reflects a highly educated pool of jobseekers. Other regions, such as Vidzeme and Kurzeme, show different trends, with an emphasis on secondary and vocational education or primary education.

Policies should align educational qualifications with the specific labour market requirements of each region.

Policy makers should also pay attention to the differences in the number of registered and unregistered unemployed in Latvia's regions. These differences can be the basis for developing a specific strategy to tackle unemployment by providing support to both registered and unregistered jobseekers.

Different regions of Latvia have different age demographics – urban regions have a more balanced age distribution, while rural regions have a higher concentration of older people.

Understanding these age differences is essential for developing regional policies on education, health and social services.

In some regions, such as Latgale, long-term unemployment is prevalent, especially unemployment lasting 1–3 years or more than 10 years. The duration of unemployment varies from region to region, suggesting that regional strategies should take into account the unique challenges faced by the long-term unemployed in different regions.

The conclusions underline the need for tailor-made approaches to tackling unemployment in different regions of Latvia. Such tailored approaches should take into account gender, education, differences in formal registration, age demographics and duration of unemployment. Specific regional policies and interventions may be needed to meet the different needs of different regions.

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