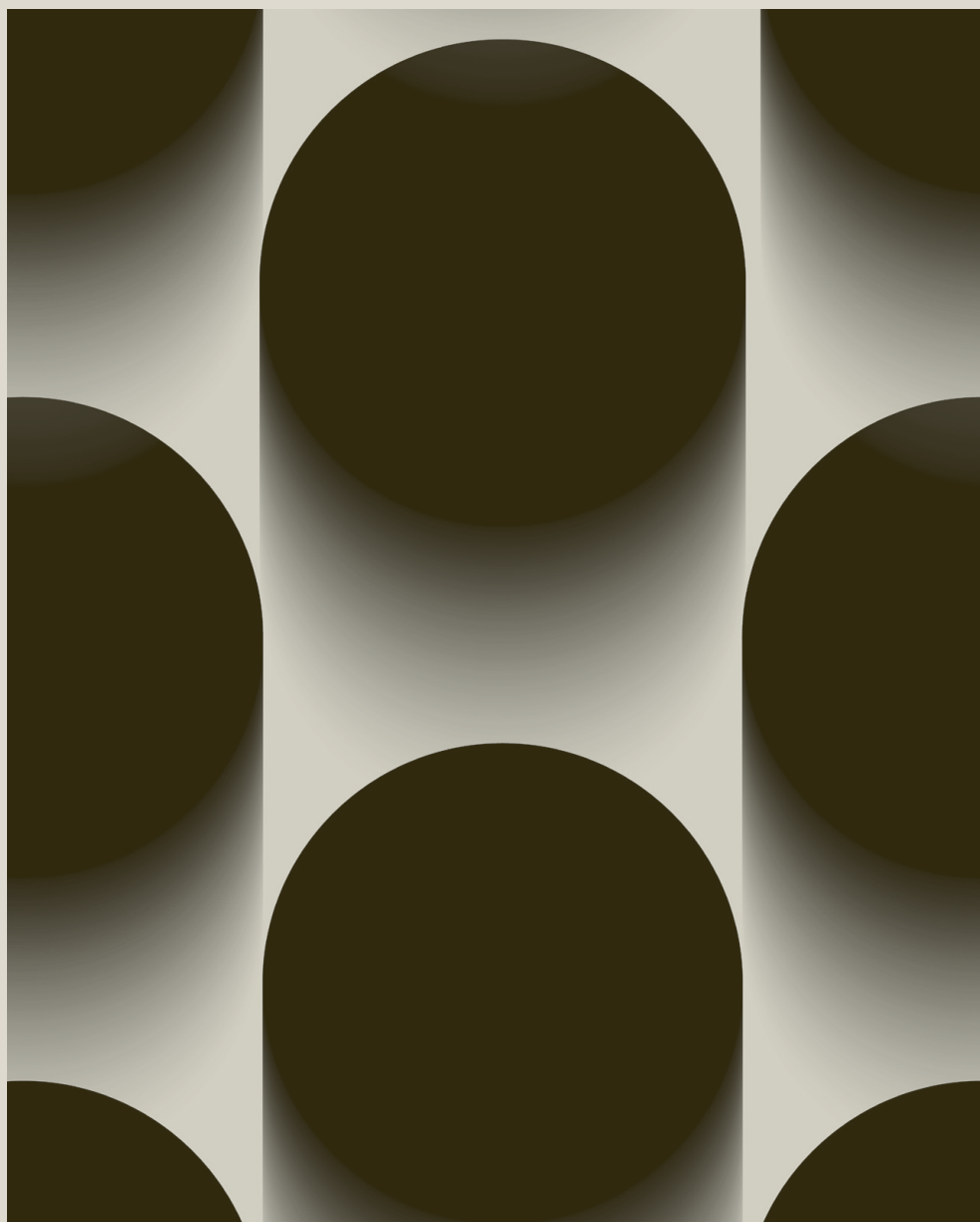


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Guest editor's introduction: Demographic Challenges and Economic Development

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The thematic section “Demographic Challenges and Economic Development” comprises a review of factors that shape economic growth and development viewed through the lens of human development. Economic and demographic factors are key elements for understanding and shaping the sustainable development in modern society. The interconnectedness of these factors is clearly reflected through economic indicators such as GDP per capital, which directly depends on the demographic characteristics of the population, such as its structure and dynamics. The population of a country is simultaneously a producer and consumer of goods and services, thus directly influencing economic activities and living conditions. Changes in the population, including aging, migration and changes in the composition of the workforce, have a significant impact on the economic performance, public spending and social systems. Demographic changes affect demand, the labor market, health care and pension systems, making them important research topics in the context of economic development.

In recent years, this complex topic has been somewhat neglected due to the emergence of new topics such as digitization, artificial intelligence, geostrategic fragmentation, green economy and sustainability, energy economy, but also topics that are a direct consequence of economic and war crises, as well as the medical crisis of COVID 19. The frequency of these crises is greater than before, and the task of social sciences and institutions is to monitor the changes. The trends of depopulation, increasing inequality, impoverishment of the working class, or frequent migrations, bring us back to this topic in the form of basic economic issues such as those related to retirement, as well as those of local and corporate responsibility for safety at work, comparisons of European countries on the issue of aging, European legislation and the inclusion of vulnerable groups at work. The goal of this thematic block was to bring together researchers presenting the latest research, which should indicate the adaptation of the population to the labor market in terms of education, work skills, structural adaptation, internal and international migration.

In the research paper “Retiree Dynamics in Slovenia and the Adequacy of Minimum Pensions in Relation to GDP” by Andrej Raspor and Bojan Macuh, retirement in Slovenia is empirically shown as one of the forms of providing social security with the help of institutions.

The main finding of this paper is that in the period from 1991 to 2024, Slovenia had a small increase in population, while the number of pension beneficiaries increased. Using the method of regression analysis, correlation and t-tests, the results were obtained, which clearly state that the reduced adequacy of pensions appeared as a characteristic. The conclusion is that reforms of the pension system are necessary, so that minimum pensions do not remain below the threshold of adequacy. The article "Demographic Shift and Future Expectations of Slovak Young Adults" by David Cole, Maria Murray Svidroňová, Jolana Gubalova and Petra Strnadova, indicates that the demographic changes in post-socialist Slovakia show the tendencies of population aging and a decline in the number of the working-age population, and that this process will be irreversible until at least 2050. The main findings indicate a decline in the population of the observed age – those between 20-40 years of age – which is expressed in urban cores of Slovakia. "A Longitudinal Analysis of Functional Transformation and Demographic Change in Small Towns in Serbia" by Vlasta Kokotović Kanazir, Marija Drobnjaković and Milena Panić, analyzes the role of small towns and the demographic changes in them. The main contribution of this research is that it indicates that, with deindustrialization, small towns entered the phase of depopulation and as such were a neglected segment of the settlement network. This was also contributed by a weak functional transformation, which is expressed by the tenor diagram, indicating divergent paths of development. Research paper "The Integration's Dos and Don'ts in the Settlement of Migrants: A Comparative Perspective of Ukrainian Refugees in Poland and Moroccan in the Netherlands" by Isański et al. aims to analyze Ukrainian refugees from 2022 (2.9 million), to the present. The key contribution of this research is the finding that ghettoization and social stigmatization of the newcomers have been avoided. The conclusion is that there is no animosity towards Ukrainian newcomers in Poland. The article "Whose Crisis, Whose Gain? The Socio-economic Consequences of Care Migration from Serbia to Germany" by Dragana Stöckel and Marina Pantelić investigates the socio-economic consequences of migration that occurs in the context of the internationalization of work, and refers to the migration of care from Serbia to Germany. The case studies of Serbia and Germany indicate different ways of solving this problem. Namely, Serbia, as a country with higher middle income, relies on informal care and family systems predominantly, due to the lack of labor force. Germany, as a country with high incomes and an institutionalized system of care for the elderly, is expanding services of this type and recruiting migrant workers. Examples of other European countries point to solving this problem with the help of labor mobility. In the article "Social Inclusion of Roma through Active Labor Market Policies in Serbia" by Lara Lebedinski, Mihajlo Đukić and Dejana Pavlović, the population of Roma is observed, and it can be concluded that this community has a high unemployment rate in Serbia, and that the level of education is significantly lower than that of the majority population. A certain marginalization in the labor market was noticed, as well as discrimination, participation in informal work, gray economy, precarious forms of work, and seasonal work. All this leads to unstable income. The article "Local Governments as Missing Actors in Occupational Safety Governance" by Kaan Koçali provides an insight into how occupational safety and health are treated at the local and regional levels. The main finding of the study is that national supervision can contribute to the strengthening of local institutions and the capacities that can improve the prevention of occupational safety management. Local authorities

should coordinate preventive initiatives and provide support to businesses, especially entrepreneurial ones, i.e. small and medium-sized businesses. This assistance indicates the joint responsibility of the local community and the companies. Research paper “Corporate Social Responsibility and Health-Vulnerable Workers: Legal Concepts and Future Directions” by Sanja Zlatanović, Ranko Sovilj and Ivana Stjelja, examines corporate social responsibility related to the integration of sustainability principles, as well as social and ethnic principles. The main contribution of this research is that it represents another attempt to improve the resilience and fairness (promotion of health-prone workers in the workforce) of the labor market. From the foregoing, it can be concluded that the research papers of this thematic block only triggered an “avalanche of questions” related to economic and demographic factors of economic development, which require urgent action by public policies, While research in this vein should continue to be in focus.

The thematic edition also contains a review of the book *Visions of Inequality: From the French Revolution to the End of the Cold War*. This scientific study traces inequality through the ages, over a period of 200 years. The book uses a historical approach to income distribution, and empirical data that track inequality from the point of view of the economic population. Inequality is observed through the works of F. Kenne, A. Smith, D. Ricard, K. Marks, V. Pareto and S. Kuznets. The publication represents an authentic contribution to the study of inequality, and as such is significant for economic science and social science. The collection of papers entitled *The Geo-economic Landscape: A Market and Social Approach* is also presented, its aim being to monitor the changes in the geo-economics, conditioned by the development of China, which threatens to overshadow the dominance of the USA. It is closely followed by the changes brought about by digitalization and artificial intelligence, which affect the competitiveness of companies and the economy of countries. The structure of this collection involves two units, the economic and the social, exploring the new ways of using resources, which are intended to positively contribute to the international market. The original research papers and their findings presented therein, can be useful to researchers, doctoral students and public policy makers.

As a guest editor of the thematic block, I would like to thank the authors and reviewers who contributed with their efforts to prepare these articles into a scientific contribution worthy of attention. I would like to thank the Editor-in-Chief and the entire editorial staff for their cooperation and patience during the production process of the feature. I am extremely grateful to them for understanding the importance of this topic and its conceptual return to the focus of research in science. The last, but not least, I would like to thank my colleagues who helped me in my editorial work with their valuable suggestions.

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Retiree Dynamics in Slovenia and the Adequacy of Minimum Pensions in Relation to GDP

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Demographic ageing and the associated increase in the old-age dependency ratio pose significant challenges to the long-term sustainability of pay-as-you-go (PAYG) pension systems across Europe. Slovenia, as a post-transition economy, faces additional pressures in balancing fiscal sustainability with adequate income protection for retirees. This paper aims to assess the evolution of pension adequacy and sustainability in Slovenia between 1991 and 2025, with particular emphasis on testing five research hypotheses (H1–H5) related to replacement rates, minimum pensions, pension expenditure, and the support ratio. The study applies a longitudinal quantitative analysis based on data from the Statistical Office of the Republic of Slovenia (SURS) and the Pension and Disability Insurance Institute of Slovenia (ZPIZ). Key indicators include the net replacement rate, minimum pension as a share of average wage, pension expenditure as a percentage of gross domestic product (GDP), and the support ratio. Comparative analysis with EU-27 benchmarks is complemented by a regression analysis, correlation analysis, and one-sample t-tests to evaluate the proposed hypotheses. The findings indicate a clear divergence between adequacy and sustainability. Hypotheses H1, H2, and H3 are confirmed: minimum pensions have declined relative to wages, have not kept pace with GDP per capita, and remain significantly below the 40% adequacy threshold. In contrast, H4 and H5 are rejected: pension expenditure as a share of GDP has not increased relative to the EU average, and the support ratio, although declining, remains above the critical threshold of 1.5. These results suggest that fiscal sustainability has been maintained, while adequacy has weakened. The Slovenian pension system demonstrates a structural trade-off between sustainability and adequacy. While fiscal discipline has been preserved, this has occurred at the expense of minimum income protection. Policy implications indicate that there is room for targeted reforms to improve pension adequacy without undermining long-term fiscal stability.

Keywords: pension systems, support ratio, PAYG, Slovenia, minimum pension

1 Introduction

Pension systems represent one of the fundamental institutional forms of ensuring social security in modern societies. In the context of demographic ageing, fiscal constraints, and evolving labour markets, the questions of pension adequacy and financial sustainability are becoming increasingly urgent (Barr, 2006; European Commission [EC], 2021). Slovenia, as a member of the European Union (EU), is no exception: it faces a high pension coverage rate, a declining ratio of contributors to beneficiaries, and a rising share of pension expenditure in GDP (Zavod za pokojninsko in invalidsko zavarovanje Slovenije [ZPIZ], 2025; Statistical Office of the Republic of Slovenia [SURSI], 2025).

The theoretical framework of this analysis builds on two core concepts: replacement rate and fiscal sustainability of pension systems. Replacement rate measures the ratio between pension benefits and pre-retirement income or average wages and is commonly used as a key indicator of pension adequacy by the Organisation for Economic Co-operation and Development (OECD, 2025). Fiscal sustainability, on the other hand, reflects a country's ability to finance pensions over the long term, without imposing an unsustainable burden on future generations, or jeopardizing public finances (Holzmann & Hinz, 2005).

Slovenia's pension system is formally structured as a mandatory pay-as-you-go (PAYG) scheme, in which current workers fund the pensions of present day's retirees. However, this model is under increasing pressure due to population ageing, a shrinking base of active contributors, and relatively low contribution rates compared to the growing pension burden (Vlada Republike Slovenije, 2025).

Pension policy analysis often distinguishes between adequacy—whether pensions provide a decent standard of living—and sustainability—whether the system is economically viable. These two dimensions are not mutually exclusive but require a balanced approach that considers both the right to social security and macroeconomic constraints. International comparisons (Eurostat, 2025b; OECD, 2025) show that, while Slovenia maintains a relatively high replacement rate in some areas, it also carries a significant fiscal burden in terms of pension expenditure as a share of gross domestic product (GDP) and faces long-term sustainability risks (EC, 2021).

This paper focuses on an empirical analysis of the key indicators of Slovenia's pension system between 1991 and 2025, and compares them with selected EU and Western Balkan countries (2014 and 2023). The analysis includes pension expenditure as a share of GDP, average pension per beneficiary, pension-to-wage ratio, and pension entitlements expressed as a share of GDP. The goal is to assess whether Slovenia's pension system is evolving toward economic and social balance.

For the purposes of the research, the following research question was formulated: How have the adequacy and sustainability of old-age pensions in Slovenia evolved compared to EU countries, with respect to pension expenditure as a share of GDP, average pension per beneficiary, and the pension-to-wage ratio?

2 Method

2.1 EU and Western Balkans

The EU-27 is employed as the main comparator due to the fact that Slovenia is a member of the EU, and its pension system is heavily influenced by the policies of the Union regarding fiscal and social coordination. Western Balkan nations have some institutional commonalities; however, comparable data concerning their pension adequacy measures are not readily available. The data (Table 1) clearly show that pension outcomes across Europe differ substantially, both in nominal terms and when adjusted for purchasing power. While the EU-27 average annual pension amounts to 17,321 EUR and replaces around 63% of average net replacement rate, many countries fall well below this benchmark, particularly in Central and Eastern Europe. Adjusting pensions for purchasing power reduces cross-country disparities, but it does not eliminate them, indicating that differences in living standards in old age remain significant.

Table 1. Comparison of pension levels, replacement rates, and pension expenditure across European countries (2023)

	Country	Average annual pension (€)	Average annual pension (PPS)	Pension expenditure (% of GDP)	Net replacement rate (%)
1	EU-27	17,321	17,321	12.3%	63.16%
2	Iceland	38,031	22,618	10.5%	109.61%
	Denmark	30,543	21,169	11.5%	105.18%
	Luxembourg	34,413	22,817	10.2%	95.37%
	Italy	21,085	21,424	15.5%	85.04%
	Belgium	24,248	20,265	12.8%	81.33%
	Finland	22,813	17,814	13.7%	79.05%
	Spain	19,844	21,786	13.2%	77.30%
	Norway	28,176	21,723	9.8%	76.65%
	Ireland	24,057	17,049	4.2%	75.65%
	Sweden	22,674	18,558	10.7%	75.49%
	Austria	25,486	21,932	14.4%	72.91%
	France	19,756	18,113	14.6%	70.66%
	Netherlands	25,417	20,988	11.1%	65.49%
	Portugal	11,535	13,628	12.5%	64.73%
	Greece	12,854	15,508	14.0%	62.10%
	Switzerland	28,559	15,549	11.2%	60.79%
	Germany	19,138	17,554	11.5%	55.07%
Cyprus	12,751	13,415	7.6%	51.08%	
Malta	10,995	11,919	5.2%	47.71%	
3	Czechia	10,113	12,016	9.2%	54.52%
	Slovenia	9,439	10,503	9.5%	49.85%

	Country	Average annual pension (€)	Average annual pension (PPS)	Pension expenditure (% of GDP)	Net replacement rate (%)
	Estonia	8,388	8,641	8.1%	47.11%
	Latvia	6,477	8,392	8.6%	39.53%
	Poland	8,386	12,841	10.8%	38.32%
	Slovakia	5,688	7,079	8.7%	36.91%
	Hungary	6,129	9,978	7.1%	35.02%
	Lithuania	5,979	7,676	6.9%	33.08%
	Croatia	5,570	7,825	8.8%	32.89%
	Romania	5,790	10,531	8.3%	32.65%
	Bulgaria	4,479	8,026	9.5%	26.75%
4	Montenegro	4,855	8,090	7.8%	39.80%
	Serbia	4,239	7,146	8.6%	37.85%
	Bosnia and Herzegovina	3,659	6,658	9.6%	37.34%
5	Türkiye	3,377	8,756	5.2%	32.16%

Source: (Yanatma, 2025; Eurostat, 2025a; Eurostat, 2025b; Eurostat, 2025c; OECD, 2025; Agency for Statistics of Bosnia and Herzegovina, 2025; Statistical Office of the Republic of Serbia, 2025; Statistical Office of Montenegro [MONSTAT], 2025; Rakic, 2024)

Note: Replacement rate data for non-EU countries (Western Balkans) are not fully comparable with EU/OECD indicators due to differences in methodology and data availability.

The following nations listed in Table 1 and Table 2 can be categorized into five types analytically based on: (1) EU-27 average, which is the benchmark for the European Union in general; (2) high income Western/Northern Europe; (3) Central and Eastern Europe (CEE), comprising mainly former transition economies that have distinctive structures; (4) Western Balkans, which includes non-EU countries in Southeast Europe with relatively new economic structures and pension system reforms; and (5) Türkiye.

Table 2. Pension expenditure as a share of GDP in the EU-27 and Euro area (2012–2023)

	Country / TIME	2012	2015	2020	2023	Min	Max	Average (2012–2023)
1	EU-27	12.91	12.97	13.53	12.30	12.21	13.53	12.81
	Euro area (20)	13.20	13.29	14.02	12.70	12.66	14.02	13.18
	Euro area (19)	13.22	13.31	14.04	12.72	12.67	14.04	13.20
2	Belgium	11.88	12.52	13.53	12.81	11.88	13.53	12.55
	Denmark	12.75	13.51	12.85	11.50	10.96	13.98	12.62
	Germany	11.66	11.64	12.57	11.48	11.48	12.57	11.74
	Ireland	8.13	5.57	4.92	4.24	3.90	8.13	5.63
	Greece	18.17	17.84	17.47	14.01	14.01	18.17	16.53
	Spain	11.83	12.54	14.39	13.16	11.83	14.39	12.83

	Country / TIME	2012	2015	2020	2023	Min	Max	Average (2012–2023)
	France	14.88	15.15	16.05	14.61	14.61	16.05	15.11
	Italy	15.93	16.35	17.53	15.49	15.48	17.53	16.08
	Cyprus	8.14	10.06	9.30	7.58	7.58	10.06	8.96
	Luxembourg	9.13	9.23	10.16	10.18	9.13	10.18	9.52
	Malta	8.82	7.04	6.44	5.17	5.17	8.82	6.73
	Netherlands	11.78	11.96	12.07	11.13	10.56	12.07	11.57
	Austria	14.50	14.66	15.38	14.44	14.01	15.38	14.54
	Portugal	14.52	14.97	14.94	12.54	12.54	15.64	14.34
	Finland	12.49	13.32	13.95	13.73	12.49	13.95	13.33
	Sweden	11.65	11.32	11.24	10.73	10.73	12.03	11.20
	Iceland	8.07	8.37	12.00	10.45	8.07	12.00	9.61
	Norway	8.57	10.25	11.83	9.79	8.04	11.83	9.95
	Switzerland	11.26	11.61	12.27	11.18	11.00	12.27	11.54
United Kingdom	11.48	11.25	12.50	11.50	10.65	12.50	11.31	
3	Bulgaria	8.02	8.53	8.06	9.48	7.52	9.48	8.27
	Czechia	9.20	8.54	9.10	9.17	7.97	9.20	8.64
	Estonia	7.53	7.90	8.54	8.06	7.37	8.54	7.72
	Croatia	10.36	10.49	10.99	8.83	8.83	10.99	10.05
	Latvia	8.55	7.92	8.43	8.58	7.70	8.58	8.13
	Lithuania	7.60	6.83	7.38	6.86	6.70	7.60	7.01
	Hungary	9.29	8.54	7.47	7.07	6.68	9.38	7.96
	Poland	11.57	11.55	11.27	10.81	10.09	12.00	11.16
	Romania	8.30	8.10	8.95	8.30	7.80	8.95	8.28
	Slovenia	11.38	10.97	10.61	9.46	9.46	11.62	10.48
Slovakia	8.14	8.45	8.73	8.65	8.04	8.73	8.41	
4	Bosnia and Herzegovina	9.40	9.70	9.88	9.60	8.46	9.97	9.39
	Montenegro	10.50	9.90	10.08	7.80	7.80	10.50	9.29
	North Macedonia	8.50	8.01	8.40	8.20	7.97	8.50	8.24
	Albania	5.80	6.10	6.80	6.20	5.80	6.80	6.24
	Serbia	12.02	10.98	9.90	8.58	8.36	12.02	10.21
5	Türkiye	7.22	7.04	7.20	5.16	4.65	7.61	6.72

(Eurostat, 2025c; OECD, 2025)

Slovenia ranks between the middle and lower tiers among European states in terms of pension performance. The value of pensions in nominal terms is considerably lower than the European Union average, and even after taking into account the purchasing power,

Slovenia is still behind many states from Western and Northern Europe. Moreover, the fact that Slovenian pensions replace less than 50% of prior income implies low income security among retirees.

Nevertheless, the expenditure on pensions in Slovenia amounts to about 9.5% of its GDP; thus, it appears to be lower than the EU-27 average value. Therefore, the example of Slovenia shows lower public expenditure – a tendency observed across the continent. In general, according to the data presented in [Table 1](#), the pension system in Slovenia represents a relatively restrained fiscal approach, though it provides relatively modest replacement of incomes during retirement.

[Table 2](#) shows that with respect to each group of countries, there are unique features connected with pension expenditure's to GDP ratio. Thus, the pension expenditure ratio to GDP of the EU-27 (1) and the Euro area countries has been relatively stable and made 12.21–13.53%. As for Western/Northern Europe (2), it is necessary to highlight that the pension expenditure to GDP ratio is the highest compared to other groups of countries, namely 15–17%. The reason lies in the high development of welfare state in this group of countries and old population. The only exception to this trend is Ireland, where the pension expenditure to GDP ratio is substantially lower. Concerning CEE (3), pension expenditure to GDP ratio is quite low as it equals 7–11% of the GDP and decreases with time. However, it is also worth mentioning that in the Western Balkans (4) pension expenditure to GDP ratio is low enough (comparable with that in the CEE countries), but is slightly higher (equals 5–12%). At the same time, it is the lowest in Albania in this group of countries.

Finally, pension expenditure to GDP ratio in Türkiye (5) equals 5–7%.

The level of expenditure on pensions in Slovenia decreased from 11.6% in 2013 to 9.5% in 2023, making it lower than the European average. Slovenia is one of the countries of the Central and Eastern European (CEE) region that spends relatively more money on pensions; the average expenditure in Slovenia equals 10.48%, which is close to the share spent on Western European pensions. Generally speaking, within the considered timeframe, expenditure tended to decline, from 11.3–11.6% initially, down to 9.46% in 2023, reflecting the effects of pension reforms and other economic adjustments. As compared to the rest of the countries in the CEE region, Slovenia has a better-developed pension system, but also makes attempts to enhance its sustainability through controlling expenditure.

As can be seen, there is significant variation across countries in Europe in terms of their fiscal obligations to provide pensions for citizens.

2.2 Slovenia

[Table 3](#) shows significant long-term demographic and fiscal changes in the Slovenian pension system. The most important trend is gradual deterioration of the ratio between insured persons and pensioners (see 5 in [Table 3](#)), which declined from 2.08 in 1991 to approximately 1.53 in 2025. This means that today there are considerably fewer active contributors per pensioner, which directly increases pressure on the sustainability of the system. At the same time, the share of pensioners in the total population (6) increased (from around 20% to over 30%), further confirming the process of population ageing.

Table 3. Demographic and financial trends of the Slovenian pension system (1991–2025)

1	2	3	4	5= 3:4	6= 2:4	7	8	9	10	11	12= 11:10	13= 7:8	14= 9/11	15= 7/4
1991	2,002	0,817	0,393	2.08	0.20	0.15	1,46	5,131	70	34	0.49	0.10	151	32
1992	1,996	0,765	0,420	1.82	0.21	0.51	4,25	4,854	213	39	0.18	0.12	125	101
1993	1,991	0,783	0,430	1.82	0.22	0.74	5,99	5,450	315	47	0.15	0.12	116	143
1994	1,989	0,773	0,433	1.78	0.22	0.99	7,73	6,115	395	60	0.15	0.13	101	190
1995	1,988	0,769	0,437	1.76	0.22	1.20	10,57	8,317	467	68	0.15	0.11	123	229
1996	1,991	0,766	0,442	1.73	0.22	1.36	12,13	8,616	539	79	0.15	0.11	109	256
1997	1,987	0,783	0,449	1.75	0.23	1.54	13,81	9,237	602	85	0.14	0.11	109	286
1998	1,983	0,784	0,455	1.72	0.23	1.71	15,29	9,924	660	90	0.14	0.11	110	314
1999	1,986	0,800	0,460	1.74	0.23	1.84	17,15	10,700	723	102	0.14	0.11	105	333
2000	1,990	0,839	0,467	1.80	0.23	2.05	18,73	11,005	800	110	0.14	0.11	100	365
2001	1,992	0,841	0,475	1.77	0.24	2.26	20,94	11,598	895	125	0.14	0.11	93	397
2002	1,996	0,837	0,484	1.73	0.24	2.51	23,27	12,357	982	130	0.13	0.11	95	432
2003	1,997	0,834	0,492	1.70	0.25	2.67	25,38	13,035	1,057	140	0.13	0.11	93	453
2004	1,997	0,837	0,498	1.68	0.25	2.83	27,42	13,774	1,117	145	0.13	0.10	95	473
2005	2,001	0,843	0,505	1.67	0.25	2.98	28,91	14,447	1,157	153	0.13	0.10	95	491
2006	2,009	0,855	0,511	1.67	0.25	3.16	31,29	15,589	1,213	158	0.13	0.10	99	515
2007	2,019	0,879	0,519	1.69	0.26	3.35	34,94	17,305	1,285	167	0.13	0.10	104	539
2008	2,023	0,904	0,528	1.71	0.26	3.68	37,74	18,666	1,391	181	0.13	0.10	103	581
2009	2,042	0,895	0,538	1.66	0.26	3.86	35,83	17,550	1,439	187	0.13	0.11	94	597
2010	2,049	0,882	0,553	1.60	0.27	4.00	36,05	17,596	1,495	191	0.13	0.11	92	604
2011	2,052	0,870	0,570	1.53	0.28	4.14	36,78	17,918	1,525	193	0.13	0.11	93	605
2012	2,056	0,856	0,585	1.46	0.28	4.15	35,93	17,471	1,525	193	0.13	0.12	91	590
2013	2,059	0,833	0,602	1.38	0.29	4.25	36,04	17,500	1,523	197	0.13	0.12	89	589
2014	2,062	0,844	0,609	1.39	0.30	4.29	37,27	18,077	1,540	198	0.13	0.12	91	587
2015	2,063	0,875	0,612	1.43	0.30	4.20	38,49	18,656	1,556	200	0.13	0.11	93	572
2016	2,064	0,891	0,614	1.45	0.30	4.25	40,01	19,380	1,585	202	0.13	0.11	96	577
2017	2,066	0,914	0,616	1.49	0.30	4.31	42,63	20,634	1,627	207	0.13	0.10	100	584
2018	2,070	0,939	0,617	1.52	0.30	4.47	45,46	21,942	1,682	218	0.13	0.10	101	604
2019	2,089	0,961	0,620	1.55	0.30	4.64	48,16	23,052	1,754	227	0.13	0.10	102	623
2020	2,100	0,958	0,625	1.53	0.30	4.93	46,74	22,227	1,856	246	0.13	0.11	90	658
2021	2,107	0,965	0,625	1.54	0.30	5.20	52,03	24,686	1,970	280	0.14	0.10	88	693
2022	2,109	0,989	0,628	1.57	0.30	5.64	56,88	26,966	2,024	295	0.15	0.10	91	748
2023	2,121	0,999	0,635	1.57	0.30	6.03	64,05	30,205	2,221	310	0.14	0.09	97	791
2024	2,131	0,999	0,643	1.55	0.30	6.69	67,42	31,698	2,395	337	0.14	0.10	94	866
2025	2,134	0,997	0,653	1.53	0.31	7.16	73,00	34,000	2,536	353	0.14	0.10	96	914

(ZPIZ, 2025; SURS, 2025)

Indicator Definitions and Calculations:

1 → Year

2 → Total population in the Republic of Slovenia (million)

3 → Insured persons (million)

4 → Pension beneficiaries – mandatory insurance (million) $5=3:4$ → Number of insured persons per pension beneficiary $6=2:4$ → Share of pension beneficiaries in the total population of the Republic of Slovenia

7 → Pension expenditure (€ billion)

8 → GDP (€ billion)

9 → GDP per capita (€)

10 → Average gross wage (€)

11 → Minimum pension (€)

 $12=11:10$ → Minimum pension as a share of the average gross wage $13=7:8$ → Pension expenditure (% of GDP) $14=9/11$ → Number of Minimum pension (€) in GDP per capita (€) $15=7/4$ → Average pension (€)

From a financial perspective, pension expenditure (7) has increased significantly in nominal terms (from €0.15 billion to approximately €7.16 billion), while its share of GDP (8) has remained relatively stable (13) or slightly declined (from around 10–15% in the 1990s to approximately 9–10% in recent years). This suggests that economic growth has partially offset the increase in expenditure. Nevertheless, the growth of the average pension (15) (from about €32 to €914) has lagged behind the wage growth and GDP per capita (14), indicating a gradual decline in the relative generosity of the system.

In addition, the minimum pension as a share of the average wage (12) remains relatively low, at around 13–15%, implying limited income protection for the lowest pension recipients. At the same time, the ratio between GDP per capita and the minimum pension indicates that economic growth has not been fully transmitted to the pension system.

Overall, the table confirms that the Slovenian pension system faces a dual challenge: demographic pressure and the need for fiscal sustainability. Although reforms and economic growth have helped mitigate these effects, long-term trends remain unfavourable.

2.3 Research hypotheses and theoretical grounding

This study builds on the established pension system theory and institutional indicators to formulate testable hypotheses about the adequacy and sustainability of old-age pensions in Slovenia. The theoretical grounding draws primarily on the adequacy indicators developed by the Organisation for Economic Co-operation and Development (OECD, 2025), sustainability analyses by the European Commission (EC, 2021), and the social protection principles defined by the International Labour Organization (ILO, 2021).

Falling net replacement rate points to erosion of the pension system's adequacy

Replacement rate is a central measure of pension adequacy (OECD, 2025; Eurostat, 2025b). A declining trend implies that the pension system fails to maintain retirees' living standards relative to their pre-retirement income. The replacement rate is a key indicator of pension system performance, as its decline signals a reduced capacity to maintain retirees' living standards after retirement. Numerous empirical studies confirm this trend across

different countries. [Jgerenaia and Ghaniashvili \(2024\)](#) identify adverse changes in pension system adequacy indicators in most European countries over the period 2010–2023. Similarly, [Gorlin et al. \(2020\)](#) point out that replacement rates for higher-income groups in Russia lag behind the levels observed in most European Union countries. [Urbano et al. \(2021\)](#) warn of a projected further decline in replacement rates, which is expected to disproportionately affect younger generations. In addition, [Chen et al. \(2021\)](#) find that pension systems in North-western China fail to provide sufficient income to cover the basic living needs of the elderly population. Taken together, these findings indicate that many pension systems face serious challenges in preserving pre-retirement income levels.

H1: The net replacement rate (average pension as a share of average wage) in Slovenia declined between 1991 and 2025, suggesting a decrease in pension adequacy.

Pension growth does not keep pace with economic growth

Based on the life-cycle income hypothesis ([Modigliani, 1986](#)), retirees expect to maintain consumption in retirement proportional to the national income growth. A gap between pension growth and GDP per capita may signal a weakening redistributive function. Multiple studies point to significant challenges to the original life-cycle theory. [Jappelli \(2005\)](#) documents increasing empirical evidence that contradicts its core assumptions, notably the continued accumulation of savings after retirement and the persistence of intergenerational wealth transfers. Similarly, [Le Garrec \(2012\)](#) emphasizes that most pension systems primarily redistribute income from workers to retirees, without necessarily leading to a reduction in the overall income inequality.

More recent research provides concrete evidence of uneven consumption outcomes around retirement. [Kolsrud et al. \(2024\)](#) show that individuals who retire earlier experience substantially larger declines in consumption, indicating imperfect consumption smoothing. [Riekhoff and Järnefelt \(2018\)](#) further demonstrate that pension systems may reinforce the existing inequalities, as heterogeneous retirement paths are associated with markedly different pension entitlements. Taken together, these findings suggest that the relationship between pension growth and national income is considerably more complex than the simple proportional maintenance of the consumption implied by the traditional life-cycle framework.

H2: Minimum pensions in Slovenia have not grown in line with GDP per capita, indicating that retirees' relative income has not kept up with the overall economic development.

Minimum pensions remain below adequacy thresholds

The ILO and European Pillar of Social Rights recommend that minimum pensions ensure income above the poverty line. A benchmark of 40% of the average wage is often used to assess the minimum income protection ([ILO, 2021](#); [EU, 2024](#)). The empirical evidence supporting this recommendation is nuanced and context dependent. [Ortiz et al. \(2018\)](#) emphasize the ILO's principles, which state that social protection benefits should be set at least at the national poverty line in order to ensure basic income security. In contrast, [Figari et al. \(2013\)](#) demonstrate

substantial cross-country variation in the effectiveness of minimum income schemes, showing that in several cases beneficiaries remain below the poverty threshold even after receiving transfers. [Penne et al. \(2020\)](#) further argue that adequate minimum income protection cannot be assessed solely in terms of benefit levels, but must also encompass effective labour market inclusion and access to high-quality public services. Although a 40% benchmark is frequently cited in policy discussions, the reviewed literature suggests that such a threshold should not be interpreted as a universal standard. Rather, it represents a complex guideline whose adequacy depends on national economic conditions, institutional frameworks, and social policy design.

H3: The minimum pension in Slovenia has remained below 40% of the average gross wage, failing to meet the adequacy thresholds recommended by international standards.

Pension expenditure in GDP is increasing faster than the EU average

This relates to the sustainability pillar of pension systems. An increasing share of GDP devoted to pensions, especially in aging societies, creates structural fiscal stress and reflects lower intergenerational equity ([EC, 2023](#); [International Monetary Fund \[IMF\], 2019](#)). Pension systems face profound sustainability challenges as population ageing intensifies fiscal pressures and undermines intergenerational equity. A broad body of research confirms the systemic nature of this risk. [Bongaarts \(2004\)](#) highlights that population ageing has raised substantial concerns regarding the long-term viability of public pension systems, noting that the median age in developed countries is projected to increase from approximately 29 to 45 years by 2050. Similarly, [Zaidi \(2012\)](#) emphasizes that gains in life expectancy combined with persistently low fertility rates are expanding elderly cohorts while simultaneously shrinking the working-age population that finances pension systems. The literature provides particularly strong evidence of the growing fiscal strain. [Hüttl et al. \(2015\)](#) show that government expenditure has increasingly shifted toward pensioners, often at the expense of younger generations, thereby exacerbating intergenerational imbalances. From a broader welfare-state perspective, [Esping-Andersen and Myles \(2006\)](#) argue that ensuring long-term sustainability requires more than adjusting the balance between employment and retirement. Instead, it also demands a fair distribution of the additional financial burden that population ageing inevitably generates across generations.

H4: Pension expenditure as a percentage of GDP in Slovenia increased more rapidly than the EU average, signalling rising fiscal pressure.

The support ratio is in long-term decline

In PAYG systems, current workers fund current pensions. As the support ratio declines due to aging and labour market shifts, the system's solvency becomes increasingly challenged ([Barr, 2006](#); [Holzmann & Hinz, 2005](#)). PAYG pension systems face mounting solvency challenges as demographic transitions reduce support ratios and intensify financial pressure. A substantial body of literature highlights these systemic strains. [Bongaarts \(2004\)](#) argues that population ageing has become a central concern for public pension sustainability, as rising old-age de-

pendency ratios place increasing burdens on working-age populations. Similarly, [Corbo \(2004\)](#) demonstrate that growing population dependency ratios translate directly into expanding deficits within PAYG pension schemes. [Uthoff \(2002\)](#) further emphasizes that the long-term decline in the number of active contributors relative to beneficiaries is a key factor undermining PAYG system's solvency. Importantly, this evidence is robust across different regional and institutional contexts, consistently indicating that demographic change poses a fundamental challenge to the financial stability of the traditional PAYG model. At the same time, [Barr \(2006\)](#) cautions against framing these developments as an inevitable crisis, suggesting instead that PAYG systems retain scope for adaptive reforms capable of restoring long-term sustainability.

H5: The ratio of active contributors to pension beneficiaries in Slovenia dropped below 1.5 in the observed period, raising concerns about the system's solvency.

3 Results

H1: The net replacement rate (average pension as a share of average wage) in Slovenia declined between 1991 and 2025, suggesting a decrease in pension adequacy.

The results obtained from regression analysis (Table 4) show that there is a significant decrease in the share of minimum pensions over time with respect to average gross wage rates in Slovenia ($\beta = -0.466$, $p = 0.005$). Thus, it can be concluded that the level of adequacy of minimum pensions is deteriorating. The evidence presented in this section provides only partial support to hypothesis H1 since it refers to the decrease in the adequacy of minimum pensions rather than the net replacement ratio based on average pensions. Nevertheless, the obtained result confirms hypothesis H1. The result is consistent with previous international findings ([Jgerenaia & Ghaniashvili, 2024](#); [Urbano et al., 2021](#)), underscoring concerns that the pension system increasingly fails to protect minimum income levels in old age.

Table 4. Linear regression of the minimum pension as a share of the average gross wage

Metric	Value
R	0.466
R Square	0.218
Adjusted R Square	0.194
Standardized Beta (Year)	-0.466
Unstandardized B (Year)	-0.000
t-value (Year)	-3.029
p-value (Year)	0.005
F-value	9.173
p-value (F-test)	0.005

H2: Minimum pensions in Slovenia have not grown in line with GDP per capita, indicating that the retirees' relative income has not kept up with the overall economic development.

The correlation analysis shown in Table 5 reveals an extremely strong and statistically significant positive correlation between GDP per capita (Indicator 9) and minimum pensions

(Indicator 11) ($r = 0.994$; $p < 0.01$). These results indicate that the minimum pensions increase along with the economic growth in absolute numbers. Nevertheless, the main problem posed in H2 is related to relative economic growth, and hence, Indicator 12 (minimum pension as a share of the average gross wage) should be used. Based on our data we conclude that: there is a negative correlation between Indicator 12 and GDP (Indicator 8) ($r = -0.358$; $p < 0.05$), there is a negative correlation between Indicator 12 and the average gross wages (Indicator 10) ($r = -0.402$; $p < 0.05$). These negative correlations reveal the fact that even though minimum pensions (Indicator 11) increase, they do not follow the pace of the economic growth and wage change. In addition, a negative, but statistically insignificant ($p = 0.060$) relationship between GDP per capita (Indicator 9) and Indicator 12 can be seen ($r = -0.321$), which still supports the same trend.

Table 5. *Pearson Correlation*

		9	10	11	12	13	14	15
8	Pearson Correlation	,998**	,993**	,996**	-,358*	-,544**	-,631**	,979**
	Sig. (2-tailed)	,000	,000	,000	,035	,001	,000	,000
	N	35	35	35	35	35	35	35
9	Pearson Correlation	1	,985**	,994**	-,321	-,565**	-,589**	,967**
	Sig. (2-tailed)		,000	,000	,060	,000	,000	,000
	N		35	35	35	35	35	35
10	Pearson Correlation		1	,993**	-,402*	-,483**	-,695**	,990**
	Sig. (2-tailed)			,000	,017	,003	,000	,000
	N			35	35	35	35	35
11	Pearson Correlation			1	-,343*	-,512**	-,650**	,977**
	Sig. (2-tailed)				,044	,002	,000	,000
	N				35	35	35	35
12	Pearson Correlation				1	-,105	,770**	-,462**
	Sig. (2-tailed)					,547	,000	,005
	N					35	35	35
13	Pearson Correlation					1	,018	-,481**
	Sig. (2-tailed)						,918	,003
	N						35	35
14	Pearson Correlation						1	-,745**
	Sig. (2-tailed)							,000
	N							35

** Correlation is significant at the 0.01 level (2-tailed). * Correlation is significant at the 0.05 level (2-tailed).

The result (Table 6) supports Hypothesis H2 and confirms the weakening redistributive function of the pension system in the post-transition era. This trend aligns with international findings by Kolsrud et al. (2024) and Riekhoff and Järnefelt (2018), who also documented widening disparities in pension adequacy relative to national income benchmarks. While nominal pension levels track economic growth, relative indicators consistently point to a deterioration in the income position of minimum pension recipients, highlighting a weakening redistributive role of the pension system.

Table 6. *T test Minimum pension as a share of the average gross wage*

One-Sample Statistics						
	N	Mean	Std. Deviation	Std. Error Mean		
12	35	,1471	,0606	,0102		
One-Sample Test						
Test Value = 0.40						
	t	df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference	
					Lower	Upper
12	-24,700	34	,000	-,2529	-,2737	-,2321

H3: The minimum pension in Slovenia has remained below 40% of the average gross wage, failing to meet the adequacy thresholds recommended by international standards.

From the one-sample t-test (Table 7), the mean value of Indicator 12, which represents the proportion between the minimum pension and the average gross wage, is equal to 0.147, considerably lower than the expected value (reference value) of 0.40. The difference is significant ($t = -24.700$, $p < 0.001$) and the mean difference equals -0.253 . In addition, from the 95% confidence interval $[-0.274, -0.232]$, it can be seen that the real value is far from the reference point.

Table 7. *Linear Regression Results for Pension Expenditure as a Percentage of GDP (Slovenia vs EU-27, 2012–2023)*

Metric	Slovenia	EU-27
R	0.879	0.534
R Square	0.773	0.285
Adjusted R Square	0.750	0.214
Standardized Beta (Year)	-0.879	-0.534
Unstandardized B (Year)	-0,173	-0,055
t-value (Year)	-5.836	-1.999
p-value (Year)	0.000	0.074
F-value	34.058	3.995
p-value (F-test)	0.000	0.074

Thus, it can be concluded that in Slovenia, minimum pensions are considerably lower than 40% of the average wage. Therefore, low pension adequacy may be observed. The above conclusion proves the validity of hypothesis H3, according to which minimum pensions in Slovenia are considerably lower than 40% of the average gross wage. These findings align with [ILO \(2021\)](#) and [EU \(2024\)](#) principles, which suggest that benefits below 40% of the average income are insufficient to ensure basic economic security in old age.

H4: Pension expenditure as a percentage of GDP in Slovenia increased more rapidly than the EU average, signalling rising fiscal pressure.

As per the regression analysis (see Table 7), there are different trends in the case of pension expenditure as a percentage of GDP in Slovenia versus the EU-27 during the period from 2012 to 2023. Specifically, there is a statistically significant trend towards a reduction in the indicator of pension expenditure (Indicator 13) in the case of Slovenia. The average rate of decrease is 0.173 percentage points per year ($B = -0.173$, $p < 0.001$). The explanatory power of the model is rather high ($R^2 = 0.773$).

As for the EU-27, there is a negative trend which, however, is statistically insignificant ($B = -0.055$, $p = 0.074$). Moreover, the explanatory power of the model in this case is much lower than in the previous one ($R^2 = 0.285$). This indicates that there is a slight trend towards decline; however, there is no statistical basis for asserting so.

It should be emphasized that even though the analysis reveals certain differences, it cannot be used to verify statistically that the trends in Slovenia and the EU are statistically significant. Thus, the empirical study does not confirm Hypothesis H4, and contrary to the expectations, the pension expenditure has been declining steadily in Slovenia compared to the EU.

H5: The ratio of active contributors to pension beneficiaries in Slovenia dropped below 1.5 in the observed period, raising concerns about the system's solvency.

In the one-sample t-test (Table 8), it is seen that the mean support ratio in Slovenia is equal to 1.639, thus exceeding the critical ratio by 1.5 units. Such a difference is statistically significant at $t = 5.550$, $p < 0.001$, with the mean difference of 0.139. In addition, the 95% Confidence Interval (0.088, 0.190) demonstrates that the population mean is significantly more than 1.5.

Table 8. One-sample t-test of the support ratio in Slovenia (benchmark = 1.5)

One-Sample Statistics						
	N	Mean	Std. Deviation	Std. Error Mean		
5	35	1,639	,1483	,0251		
One-Sample Test						
Test Value = 1.5						
	t	df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference	
					Lower	Upper
5	5,550	34	,000	,1391	,0882	,1901

The findings show that the average support ratio in Slovenia remains significantly above the critical threshold of 1.5, indicating that the system has not yet reached the level associated with increased fiscal pressure. Accordingly, Hypothesis H5 is rejected ($t = 5.550$, $p < 0.001$).

4 Discussion

The findings of this study provide a consistent empirical validation of key theoretical frameworks in pension economics, particularly the tension between adequacy and sustainability in PAYG systems. By explicitly testing the hypotheses derived from established theory, the results offer a structured interpretation of the pension system dynamics in Slovenia.

First, the results related to H1 confirm a statistically significant decline in the relative level of minimum pensions over time, indicating a deterioration in pension adequacy. This finding is consistent with [OECD \(2025\)](#) and [Eurostat \(2025b\)](#) frameworks, which identify the replacement rate as a central indicator of adequacy. The observed downward trend supports previous empirical studies ([Jgerenaia & Ghaniashvili, 2024](#); [Urbano et al., 2021](#)), suggesting that pension systems increasingly struggle to maintain pre-retirement living standards, particularly for lower-income groups.

Second, the results of H2 further reinforce this conclusion by showing that minimum pensions have not kept pace with GDP per capita and wage growth in relative terms. While strong positive correlations confirm that pensions increase in absolute terms, negative correlations with relative indicators demonstrate a weakening redistributive function. This directly challenges the life-cycle income hypothesis ([Modigliani, 1986](#)), which assumes proportional consumption smoothing over the life course. The Slovenian evidence instead aligns with more recent findings ([Kolsrud et al., 2024](#); [Riekhoff & Järnefelt, 2018](#)), indicating that retirement often entails unequal and declining consumption outcomes.

Third, the confirmation of H3 provides additional evidence of inadequate minimum income protection. The one-sample t-test shows that minimum pensions remain significantly below the commonly referenced threshold of 40% of the average wage, consistent with international social protection standards ([ILO, 2021](#); [EU, 2024](#)). This finding highlights a structural weakness in the pension system's ability to prevent old-age poverty.

In contrast, the results related to sustainability provide a more nuanced picture. Hypothesis H4 is rejected, as pension expenditure in Slovenia has declined relative to GDP and has not increased more rapidly than the EU average. This contradicts standard expectations derived from demographic theory, which predict a rising fiscal pressure due to population ageing ([Barr, 2006](#); [Holzmann & Hinz, 2005](#)). The Slovenian case therefore supports the argument that institutional design and policy reforms can offset demographic pressures, at least in the medium term ([EC, 2021](#)).

Similarly, Hypothesis H5 is rejected, as the support ratio, although declining, remains statistically above the critical threshold of 1.5. This suggests that the system has not yet entered a phase of acute financial instability. However, the long-term downward trend remains consistent with theoretical expectations regarding PAYG systems under demographic ageing ([Bongaarts, 2004](#); [Uthoff, 2002](#)).

Taken together, the results clearly demonstrate a structural trade-off between adequacy and sustainability. While Slovenia has successfully maintained fiscal stability—through declining pension expenditure relative to GDP and a still-sufficient support ratio—this has been achieved at the cost of declining pension adequacy, particularly among minimum pension recipients. This confirms that pension systems are not neutral redistributive mechanisms, but reflect policy choices that balance efficiency and equity ([Barr, 2006](#)).

From the policy perspective, the findings suggest that the current model prioritizes fiscal discipline over social adequacy. While this approach has prevented short-term fiscal imbalances, it raises concerns about long-term social sustainability and the risk of increasing old-age inequality. A more balanced reform approach would therefore be required to align the Slovenian pension system with both theoretical principles and international policy standards.

5 Conclusion

In the presented research, the authors have made an attempt to conduct a thorough assessment of dynamics of the pension system in Slovenia. In particular, the researchers have considered the connection between demographic changes, economic growth, and institutions that govern the process of pension payments.

The results confirm that in terms of fiscal sustainability, Slovenia can be regarded as one of the countries in which it is achieved due to the reduction of pension expenses in comparison to GDP and the support ratio remaining at acceptable levels.

However, despite the positive tendency to sustain fiscal sustainability, pension adequacy experiences deterioration, as it appears that pensions do not increase proportionally to the growth of wages and GDP per capita. The mentioned finding supports the idea that the tendency towards decreased pension adequacy becomes widespread on the global scale, as indicated by international sources (OECD, 2025; Urbano et al., 2021), since a decline in the replacement rate is observed in many pension systems.

Thus, the research disproves the life-cycle income hypothesis put forward by Modigliani (1986), as it does not allow concluding that the process of proportional consumption smoothing occurs in real life.

Implications of the findings are notable. Since there is an observed decrease in the share of pensions in GDP, there may be fiscal space to enhance minimum pension adequacy without jeopardizing its sustainability. Following the advice of international institutions (EC, 2021; ILO, 2021), further changes should concentrate on improving minimum income security, working longer, and developing additional pension pillars.

To conclude, the case of Slovenia highlights that pension system sustainability should not be estimated exclusively by financial factors. It should also maintain a delicate balance between ensuring fiscal solvency and adequate income security in response to demographic changes and other developments within the labour market.

Data availability statement

The data used in this study are available from the authors upon reasonable request.

Coauthor contributions

Andrej Raspor: Conceptualization of the study, Development of the theoretical framework, Formulation of the research hypotheses, Methodology development, Statistical analysis, Interpretation of results, Drafting of the original manuscript, Revisions during the peer-review process, Final approval of the submitted version

Bojan Macuh: Research design, Data acquisition, Database preparation, Contribution to empirical validation, Descriptive analysis, Review and substantive comments on the manuscript

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Demographic Shifts and the Residential Preferences of Young Adults in a Post-Socialist Context: The Case of Slovakia

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Slovakia is experiencing population ageing, declining fertility, and structural changes in the spatial distribution of young adults. This study examines demographic shifts among individuals aged 20–40 between 2011 and 2022 and evaluates how these trends align with the stated residential preferences of young adults. Using administrative data from the Slovak Social Insurance Company covering more than three million employed individuals, the study involved analyzing changes in population size, gender composition, employment, and housing type across urban cores, commuter zones, micropolitan centers, and rural municipalities. The research concentrates on the age group of 20–40-year-olds, as it is pivotal in terms of economic activity and child-rearing. The results were compared with long-term qualitative research on housing, family, and work preferences derived from the student essays collected since 2011. The findings reveal a substantial decline of the 20–40-year-old population, particularly in urban centers and socialist-era housing estates, alongside a relative demographic stability in commuter zones and selected rural areas. Gender imbalances persist, with the female-dominated urban regions and male-dominated rural areas influencing local fertility patterns. Overall, the findings show a persistent preference for suburban, low-density housing – characterized by detached housing and access to private outdoor spaces. These preferences remain stable across analyzed generations Y and Z) and are in contrast with the prevailing planning agendas that prioritize compact cities and inner-city densification. The main contribution of this research is its empirical challenge to the widely held assumption, common in urban economics and spatial planning, that demographic change among young adults necessarily reinforces urban concentration. The study concludes that housing and spatial policies should better reflect demographic realities and residential aspirations in an ageing post-socialist society.

Keywords: demographic shift, living preferences, aging of population, Slovakia, gender imbalance and fertility

1 Introduction

Classical demographic transition theory conceptualizes population ageing and fertility decline as structural outcomes of modernization processes, linking mortality decline, fertility reduction, and long-term population ageing into a coherent evolutionary sequence (Notestein, 1945). Demographic trends in Europe are currently being shaped by an ageing population, falling fertility rates and diverse migration flows (England and Azzopardi-Muscat, 2017). Over the past three decades, demographic transformations in Central and Eastern Europe (CEE) have been characterized by a trend towards reduced and delayed fertility, smaller family sizes, increased life expectancy and diminished mortality rates, along with significant outmigration to more affluent regions of Europe (Sobotka and Fürnkranz-Prskawetz, 2020; Marinković, 2022). Ageing represents a global phenomenon impacting countries worldwide (Johnson Jr & Parnell, 2017; Balsalobre-Lorente et al., 2021; Gu et al., 2021; Zvezdanović Lobanova et al., 2025), inclusive of post-socialist nations. In the Czech Republic, a substantial shift in fertility patterns, family formation, and living arrangements commenced post-1990, culminating in an ageing populace (Sobotka et al., 2003). Similarly, in Slovakia, the process of population ageing is projected to be irreversible over the forthcoming decades, extending at least until 2050 (Pilková and Mikuš, 2020).

Most research concerning ageing and demographic transitions primarily examines economic aspects such as economic dependency and pension schemes (Pekarek, 2018; Cooley et al., 2019; Šebo et al., 2020), as well as variations in demand for education and healthcare (Zrinščak and Lawrence, 2014; Fong et al., 2016; Spitzer and Reiter, 2024; King et al., 2021). Projections available up until the year 2050 suggest a decline in the working-age population, followed by a consequent reduction in the (native) workforce, alongside an increase in the number of retirees (Muenz, 2007). Various determinants drive demographic change across the examined regions and countries, including family policies, economic conditions, the impact of educational differences, and attitudes towards marriage (Willekens, 2015). This paper offers a distinct perspective by integrating two research strands: 1) demographic shifts in Slovakia in terms of age and employment based on statistical data, and 2) future expectations of young adults regarding residential preferences pertaining to housing and family, grounded in survey data. As young adults, categorized as individuals aged 20–40 or those in early post-education adulthood, they establish patterns in terms of family, employment, and place of residence. The paper seeks to explain the discrepancies between the stated expectations of young adults and the actual demographic changes related to the population of municipalities and commuter zones, including issues of gender imbalance.

A further element of this investigation is the evolving perspective of family formation in relation to housing types, transitioning from the socialist era to contemporary expectations that are more closely associated with a suburban lifestyle. In low-fertility societies, housing regimes interact with demographic behavior, with constrained access to family-suitable housing reinforcing delayed fertility and long-term sub-replacement reproduction patterns (Mulder and Billari, 2010). Over 60% of the existing housing stock in Slovakia consists of either concrete panel apartments erected between the 1960s and late 1980s, or brick apartments built from the late 1940s throughout the 1960s. Housing from the socialist era garners limited

admiration, and even the former president of Czechoslovakia, [Havel \(1978\)](#), described these apartment blocks as “rabbit hutches for people”. Nevertheless, the prospect of their removal and replacement is unlikely. Through retrofitting, the lifespan of these apartments may be prolonged to 80–100 years, or beyond ([Malazdrewicz et al., 2022](#)).

The residential units from socialism were administered by housing cooperatives and employers, prioritizing families with children ([Remeta et al., 2015](#)). During the 1970s, the government implemented favorable policies for newlywed couples, which included extended maternity leave and state-provided loans. This period, characterized by a significant increase in birth rates, is colloquially referred to as the era of Husák’s children ([Maňák, 2009](#)), referring to G. Husák, the communist leader of that period. Regarding family life, the Husák generation generally accepted the living conditions of the socialist era. Concerning family planning, there arises a debate on whether this era should be viewed as an anomaly that is unlikely to reoccur, suggesting that high-density housing may serve as a demographic impediment and an erroneous solution to address the fertility crisis.

The aim of this research is to analyze the demographic changes within the crucial working-age cohort (individuals aged 20–40 years), i.e., those in the early stages of post-education adulthood. These demographic changes are influenced by the Second Demographic Transition (SDT) in fertility and marital life (family structures), migration and employment preferences, and residential choices. This paper highlights the differences between the revealed preferences of young adults concerning housing arrangements and the actual demographic shifts pertaining to the populations of municipalities and commuter zones, with particular attention to gender imbalance. To fulfill this aim, four research questions (RQ) were set:

RQ1: How have the selected municipalities evolved in terms of population within the 20–40-year-olds age demographic? This encompasses both the urban core and the surrounding commuter zone.

RQ2: What transformations have occurred in the housing composition, specifically concerning neighborhoods with older socialist apartments and standalone housing, for the 20–40-year-olds age group?

RQ3: What are the patterns of gender disparity and birth rates in the selected municipalities within both rural and urban contexts? (For clarification, the euphemisms ‘man camp’ and ‘female camp’ will be employed to indicate an imbalance exceeding 10%).

RQ4: How are the expressed preferences of students concerning urban–rural living opportunities being met by the data-based reality?

2 Literature review

Europe, along with Asia, is anticipated to experience a distinctive demographic shift characterized by population decline, or depopulation ([Nikitović et al., 2024](#)). This depopulation trajectory is expected to continue throughout the remainder of the 21st century, influencing European demographics. By 2100, Europe’s population is projected to decrease by approximately 120 million inhabitants, equating to a reduction of 15% ([Newsham and Rowe, 2023](#)). Over the past three decades, European population growth has decelerated, evidenced by a consistently diminishing surplus of births over deaths. In response to reductions in pop-

ulation size and aging demographic structures, numerous eastern European countries are implementing family-friendly policies with the aim of increasing fertility, a strategy that, if successful, holds the greatest relevance for addressing the long-term age dependency.

Gender imbalance is a consideration that needs addressing when discussing demographics. [Ravenstein \(1885\)](#), an early contributor to demographic studies, articulated his migration law and identified that females exhibited higher migratory tendencies than males, particularly over short distances, thereby affecting sex ratios at regional level. As early as the 1960s, [Bourdieu \(1962\)](#) observed that a significant number of men in rural France remained single, attributable to the migration which involved more women than men. [Gulczyński \(2023\)](#) noted that within Europe, regions with lower population densities experienced a larger deficit of young women. This pattern is the most prominent in Germany, where former East Germany exhibits the most pronounced gender imbalance in Europe. [Schacht and Kramer \(2016\)](#) determined that in contexts where women were scarce, men were more inclined to marry, engage in family life, and maintain sexual exclusivity with a single partner. Their findings do not corroborate assertions that male-skewed sex ratios result in adverse family outcomes due to an excess of unmarried men.

Population ageing is an inevitable outcome of the demographic transition. Primarily, because of the declines in fertility and, secondarily, mortality declines, the age structure of a population becomes older, with a growing number and proportion of elderly people ([United Nations, Department of Economic and Social Affairs, Population Division \[UNDESA\], 2023](#)). [Josipovič \(2024\)](#) introduces the tentative concept of deep aging referring to a situation when the overall ageing effects of the SDT are enhanced due to fertility below replacement level, as well as with the excessive emigration of the fertile population.

Building on the classical transition theory, [Van de Kaa \(2001\)](#) conceptualized the SDT as a qualitatively distinct phase characterized not merely by declining fertility, but by value-driven transformations in family formation, partnership patterns, and individual life-course strategies. The SDT predicts a directed transformation towards significantly reduced fertility rates, coupled with a diversification in union types and family structures. The fundamental driving force behind these transformations is a profound, unavoidable, and irreversible shift in societal attitudes and norms aimed at promoting enhanced individual autonomy and self-realization ([Zaidi and Morgan, 2017](#)). These transformations are accompanied by a restructuring of the transition to adulthood, characterized by prolonged education, delayed family formation, and increasingly individualized life-course trajectories ([Billari and Liefbroer, 2010](#)).

The SDT is marked by fertility rates consistently below-the replacement level, a variety of living arrangements that extend beyond traditional marriage, the separation of marriage from procreation, and a non-stationary population ([Lesthaeghe, 2014](#)). CEE post-socialist cities embody a hybrid form of urban development, which remains largely regarded as a unique case and is infrequently addressed in the ongoing European city discourse. Post-socialist cities exhibit hybrid spatial structures in which socialist-era housing forms, market-driven suburbanization, and selective re-urbanization coexist, producing complex demographic redistribution patterns ([Gentile et al., 2012](#)). A significant challenge facing future urban development lies in addressing the effects of demographic shifts. Aging populations, evolving fertility behavior patterns, and increasingly diverse household compositions in accordance with the SDT will

exert profound effects on urban configurations and housing markets within post-socialist nations, reflecting the recognized trends in Western Europe (Steinführer and Haase, 2007; Josipovič, 2024). Since the 1990s, inner-city residential zones in CEE post-socialist cities have undergone notable physical and social transformations: a progressive refurbishment of inner-city housing and the replacement of lower-status groups with individuals of middle and higher social status (Kährlik et al., 2015; Slavíková and Šprocha, 2023), as exemplified by the displacement of the Romany population from urban centers to smaller rural communities.

At the macro level, the SDT provides an analytical perspective on the evolution of societies over time, highlighting the significance of ideational change in promoting a range of demographic and familial behaviors, e.g. the 'Marriage Equality Referendum' in Ireland in 2015 stimulated a broader, continent-wide trend towards lower fertility, less marriage, and more diverse families and living arrangements (Sobotka and Berghammer, 2021). At the micro level, the SDT framework suggests that individuals' value orientations are the primary determinants of personal fertility decisions and family behavior. Although individual choice is considered crucial, the challenge of societal sustainability emerges with phenomena such as the 'death cross', where mortality rates surpass birth rates, and a 'half-life crisis,' where a nation's future population could be reduced by a half due to demographic momentum (Lutz et al., 2001). Becker's (1960) theory explains paradox in fertility behavior by separating the effects of rising income into a pure income effect that affords the acquisition of normal goods and a price effect reflecting increases in the opportunity cost of raising children. As the income rises, the opportunity cost of children rises faster than the cost of other goods and services, and the "demand" for children may fall if the price effect outweighs the income effect. Kährlik et al. (2015) delineate supply-side factors, such as the condition of the urban spatial fabric, and demand-side factors, which they classify as a combination of household socio-economic conditions, life course, and lifestyle factors. In their analysis, specific factors were examined, including residential preferences (in terms of location and housing type), aspects of family life (such as marital status and family size), and employment preferences of young adults when they are at a critical juncture for making significant life decisions.

All regions in Europe are experiencing aging of their population with some countries having the added burden of high rates of unemployment among the working age population (England and Azzopardi-Muscat, 2017). The availability of new work arrangements has significantly influenced preferences for working and living, markedly shifting towards rural areas (Cole et al., 2025a). Meyerding (2018) investigated the job preferences of 568 agricultural students in Germany, highlighting gender differences and identifying 'income' and 'future perspective' as the most crucial job characteristics influencing their career choices. Furthermore, these students exhibited a preference for improved 'work-life balance' and a 'less urban location' for their prospective employment. Moreover, many post-socialist countries are characterized by a very long transition period from school to the first suitable job (Kovač Orlandić, 2023).

In terms of employment preferences, Oliveira and Cordeiro (2025) identified through a quantitative survey conducted with 241 Brazilian individuals aged 18 to 29 that substantial differences in job preferences emerge when analyzed by gender, race, and educational attainment, although no such differences were observed for the generational group. Scholars

challenging this view advocate for the recognition of individual differences in this context. For instance, [Rauvola et al. \(2019\)](#) maintain that caution is warranted in generational research partly because it overlooks individual variances. Additional scholars concentrate on employees' benefit preferences beyond standard demographic categories, as seen in findings where family-supportive benefit preferences are influenced predominantly by factors such as marital status, number of dependents, and employment status ([Aguinis et al., 2005](#)). [Demel et al. \(2019\)](#) examined the preferences of students at five universities in Spain, the Czech Republic, and Germany, determining that the paramount job attribute, universally across countries and universities, was the prospect of a long-term career within the company.

[Brink and Zondag \(2021\)](#) investigate whether preferences for job attributes vary among three generational cohorts, specifically cohorts of undergraduate students at United States (US) universities from the years 1995, 2004, and 2013. Their findings indicate that salary/benefits, career progression, and flexible working arrangements have gained significance across all three generational cohorts, while gender/racial equality gained prominence only between 2004 and 2013. [Esser and Lindh \(2018\)](#) analyzed differences and similarities in job preferences across eight central value dimensions in nineteen countries from 1989 to 2015. Their research reveals that secure and stimulating employment is the most sought-after job quality, deemed universally significant by nearly all employees throughout the surveyed years. Furthermore, a substantial majority simultaneously values work autonomy, high income, advancement opportunities, and roles perceived as beneficial to society or others, suggesting that individuals generally exhibit both intrinsic and extrinsic orientations toward work, with some variations based on gender.

2.1 The Second Demographic Transition and job preferences - context of Slovakia

The Slovak Republic is administratively divided into eight regions. The Bratislava region, incorporating the national capital, uniquely serves as the only area that can legitimately be classified as a metropolitan area. This region comprises merely 4.7% of Slovakia's total land area. The remaining seven regions of the country can be broadly categorized into western, central, and eastern sections, which facilitate our delineation of the national territory. Slovakia, with a population of approximately 5.4 million inhabitants, includes only two cities with populations exceeding five figures: Bratislava (476,000) and Košice (229,000). Additionally, there are eight other cities with populations surpassing 50,000. Slovakia is also characterized by 62 micropolitan towns with populations ranging from 10,000 to 45,000, of which 42 are situated outside the commuter zones of larger cities. These smaller municipalities function as urban centers on a smaller scale.

After 1989, and especially following the independence in 1993, the Slovak Republic underwent substantial demographic transformations comparable to those observed in other post-socialist countries ([Mládek et al., 2009](#)). Although several former Eastern Bloc states had already seen their total fertility rates fall below the replacement level of two children per woman during the 1980s, Slovakia continued to record some of the highest fertility levels in Europe. The decline below two children per woman occurred only in 1992, and it had a

markedly rapid pace. Within a single decade, Slovakia became one of the countries with the lowest fertility rates worldwide, dropping below the threshold of so-called lowest-low fertility, defined as 1.3 children per woman, in 2000. Fertility remained under this level for the following eight years, reaching its lowest point in 2002, when the fertility rate fell to 1.18 children per woman (Bleha and Šprocha, 2020). In recent years, the annual number of births in Slovakia has fallen below 60,000, whereas during periods of peak fertility, specifically in the early 1950s and the late 1970s, the figure exceeded 100,000 births per year. The sustained decline in fertility, together with the resulting reduction in births, has led to pronounced population ageing in Slovakia. A key structural change in fertility patterns has been the postponement of childbirth to later stages of life (Johnson, 2024) or from 'a cornerstone to a capstone event'. In addition, there have also been changes in the character of fertility in terms of legitimacy. The close link between marital life and reproduction has relaxed, which has been reflected in a significantly increased proportion of children born outside of marriage, from less than 8% to about 40%. Moreover, the mean age at first marriage has risen to 32 years in men and to 29 years in women (Bleha and Šprocha, 2020).

A reduction in fertility and an increase in life expectancy significantly altered the demographic trajectory. The population policy is not just about pronatalist and family measures, but also about managing and influencing migration. In Slovakia there has also been a problem of the drain of skilled and less skilled labor, which has had both demographic and socio-economic consequences (Bleha, 2019). Slovakia has been losing young people, a skilled labor force. However, measures to prevent this undesirable situation have been scarce and inefficient. There is no comprehensive strategy that would offer more efficient solutions (Bleha and Šprocha, 2020; Malý et al., 2025)

Residential preferences of young individuals in Slovakia were investigated by Cole and Svidroňová (2021) and Murray Svidroňová et al. (2019). Their research shed light on the aspirations of approximately 700 students, encompassing their perceptions of work, home, and family. The findings revealed that students predominantly characterized their residential location as a small town situated on the outskirts of a city, thus contributing to the concept of suburban living. Among Generation Z (Gen Z), there has been a discernible increase in the proclivity to reside in hinterland towns, distant from any major urban centers. The preceding Millennial cohort frequently articulated the necessity of traveling abroad for brief periods; however, this trend has diminished as the current Gen Z cohort does not perceive the need to emigrate for employment prospects, possibly due to the decline in Slovakia's unemployment rate from 15% in early 2010 to 5.1% as of January 2025.

Following the collapse of socialism, there has resulted in immediate aversion to socialist-era housing, particularly the panel flats, however, prospect of their removal and replacement appears improbable. The panel flats were initially anticipated to serve as a provisional housing solution with a life expectancy of 50–60 years (Zarecor, 2011). Recent retrofits have extended the life span of these flats to 80–100 years, or possibly longer. Most of these flats have been subject to both external insulation and internal upgrades, rendering these older constructions viable alternatives to more recent buildings (Malazdrewicz et al., 2022). To assess the aversion to socialist-era housing, we examined housing estates in each regional city with a predominance of 1960–80s blocks of flats, focusing on the changes among the

20–40-year-old demographic cohorts (Table 1). The most substantial decline is observable in Petržalka, which represents the largest socialist-era housing estate in Slovakia, and even Czechoslovakia, with an area of 28.68 km². This decline can partly be ascribed to decreased housing occupancy as a result of children maturing and moving out, as well as an increase in the divorce rate, prompting individuals to seek their own accommodation.

Table 1. Changes in 20–40-year-olds cohort, between 2011–2022, in the selected municipalities in Slovak urban centers with a predominance of socialist era blocks of flats

City	Location	Neighborhood	2011 total	2022 total	% change
Bratislava	capital	Petržalka	53.9k	35k	-35.1%
Trnava	west	Prednádražie	14.7	10.8	-26.7%
Trenčín	west	Juh*	9.1k	6.75	-25.7
Nitra	west	Chrenová	24.8k	18.2k	-26.4%
Žilina	central	Vlčince	6.6k	4.1k	-38.2
B. Bystrica	central	Sásová	7.4k	5.7k	-22.2%
Prešov	east	Sekčov	14.6k	11.1k	-24.1%
Košice	east	Nad Jazerom	7.4k	5.1k	-32.0%

*10% more women in 2011

Source: authors relied on the data by the [Statistical Office of the Slovak Republic \(2025\)](#)

3 Method

The primary objective of this research is to examine the demographic changes within the crucial working-age cohort, specifically individuals aged 20–40, or those in the early stages of post-education adulthood. This demographic is poised to influence future trends in family structures, employment, and residential choices, thus constituting a significant focal point for this study.

A research sample of 21 representative micropolitan municipalities was selected for investigation (Table 2). Certain municipalities were combined to form a single micropolitan region, as they are in close proximity to each other and act as a unified economic system.

Table 2. Changes in 20–40-year-olds cohort, between 2011–2022, in the selected municipalities in Slovak urban centers with a predominance of socialist era blocks of flats

West	Central	East
Prievidza – Handlová – Bojnice	Ružomberok-Liptovský Mikuláš	Spišská Nová Ves – Levoča
Topoľčany – Bánovce nad Bebravou – Partizánske	Brezno	Humenné – Snina – Vranou nad Topľou
Levice	Lučenec – Fiľakovo	Bardejov
Nové Zámky		Rožňava
Komárno		Michalovce

Source: authors relied on the data by the [Statistical Office of the Slovak Republic \(2025\)](#)

The data were sourced from the Social Insurance Company and include all employed individuals in Slovakia from 2011 to 2022. The dataset contains variables such as birthdate, gender, ZIP code of residence, ZIP code of employment, and type of work contract. The year 2022 was specifically chosen to minimize data distortion attributable to the refugee influx prompted by the conflict in Ukraine. The term “work contract” refers to an individual engaged in a formal employment arrangement. From this dataset, individuals aged 20 to 40 years were extracted for the years 2011 and 2022. Using ZIP codes of residence, changes in the size and gender composition of this age group were identified within the area of each ZIP-code.

For the purpose of the comprehensive analysis, only data with the postal addresses that could be reliably geocoded were retained. Individuals residing outside of Slovakia were excluded, as were all the postal codes lacking a physical location within the country’s borders. This filtering process resulted in a reduction of individuals by 3.5% in 2011 and 4.6% in 2022. Considering the European Union’s (EU) open labor market, it can be inferred that a significant number of Slovaks reside abroad.

The data derived from the Slovak Insurance Company and the Statistical Office were subsequently compared with the preferences of students at the Faculty of Economics, Matej Bel University in Banská Bystrica, regional city in the center of Slovakia. These preferences-outcomes comparison allows the paper to address the question that neither data source could answer alone: To what extent do stated living preferences of young adults materialize as observable demographic and spatial outcomes? I.e. administrative data capture revealed demographic behavior of individuals aged 20–40, including residential location, employment status, and gender composition across municipalities. In contrast, the essay data document stated future expectations regarding housing, family formation, and work among university students who were at an earlier life stage. The two datasets are not linked at the individual level. Instead, they are connected conceptually and temporally. The essays represent *ex ante* aspirations articulated by cohorts prior to entering full adulthood, while the administrative data reflect *ex post* demographic outcomes of comparable cohorts, approximately 10–15 years later. This design allows for a structured comparison between intended life-course trajectories and their aggregate realization in space. Stated preferences and future intentions constitute analytically meaningful predictors of behavior, as individual aspirations shape decision-making pathways even when structural constraints limit their full realization (Ajzen, 1991).

The research team (who also teaches at this university) has been monitoring the preferences and expectations of a cohort currently consisting of approximately 750 students from Matej Bel University, spanning the period from 2011 to the present. This investigation is conducted by one of the authors of this study in the form of written essays, wherein students are prompted to articulate their envisioned preferences in terms of employment, residential conditions, and family life, 10–15 years in the future (method by Cole et al., 2025b). During the review of these essays, key terms indicative of future expectations and preferences are documented. Over 2011–2024 period, these key terms have demonstrated remarkable stability. Although this research is confined to a single faculty, the diversity of students originating from across Slovakia (Figure 1) affords insights into the prevalent aspiration towards residences featuring outdoor spaces and environments conducive to child-rearing. The essay participants were approximately one-third male / two-thirds female. The average age of this

cohort has been approximately 19 to 21. The majority originate from small towns (classified as micropolitan), with approximately 15% being from Banská Bystrica and its environs.



Figure 1. Origin of students in the essays research sample

Source: authors' own elaboration

Considering aspirations of the next generation, the focus of this research is on how these expectations have materialized among individuals aged 20–40. This demographic cohort aged 20–40 fulfills two essential criteria: firstly, participation in gainful employment, and secondly, being within the biological and social prime for reproduction. A natural de-

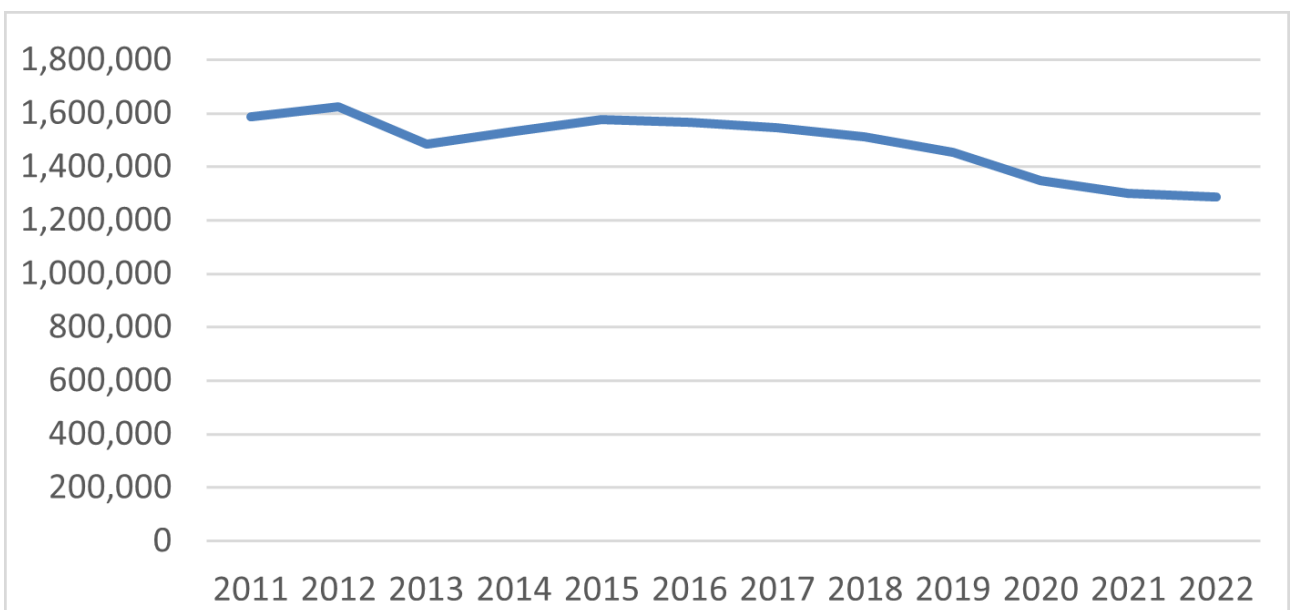


Figure 2. Trends in the population aged 20-40 in Slovakia

Source: authors relied on the data by the [Statistical Office of the Slovak Republic \(2025\)](https://stat.gov.sk/)

mographic shift towards an aging society has been observed, attributed to declining birth rates, with Slovakia having crossed a demographic threshold of more deaths than birth in 2023. Assuming no significant migration movements, the Slovak population is projected to experience a decline of approximately 18,000 to 20,000 individuals annually over the next two decades (Statistical Office of the Slovak Republic, 2025). Because of this ageing trend, there has been an overall natural reduction in the 20–40-year-olds population segment by 7.49%. Furthermore, the employed data set reveals an 18.9% reduction in work contract numbers, declining from 1.53 million in 2011 to 1.23 million in 2022 for this age group. The data accurately reflects the actual decrease in the number of employed individuals aged 20 to 40 across various regions and does not account for the societal aging factor (Figure 2).

4 Results and discussion

The examination of the population dynamics pertaining to the working age cohort of 20–40-year-olds will initially be illustrated through cartographic representations, providing a visual comprehension of the sectors experiencing decline. The analysis encompasses the capital, Bratislava; urban areas exceeding 50,000 inhabitants; commuter zones; micropolitan centers ranging from 10,000 to 40,000 inhabitants; and rural regions. Subsequently, other findings will include gender disparities, fertility rates, and life-style expectations.

4.1 Change in demographics

This research initially focuses on urban regional centers, with the concentration of the 20–40-year-olds sufficient to assess the demographic decline in this age cohort (Figure 3).

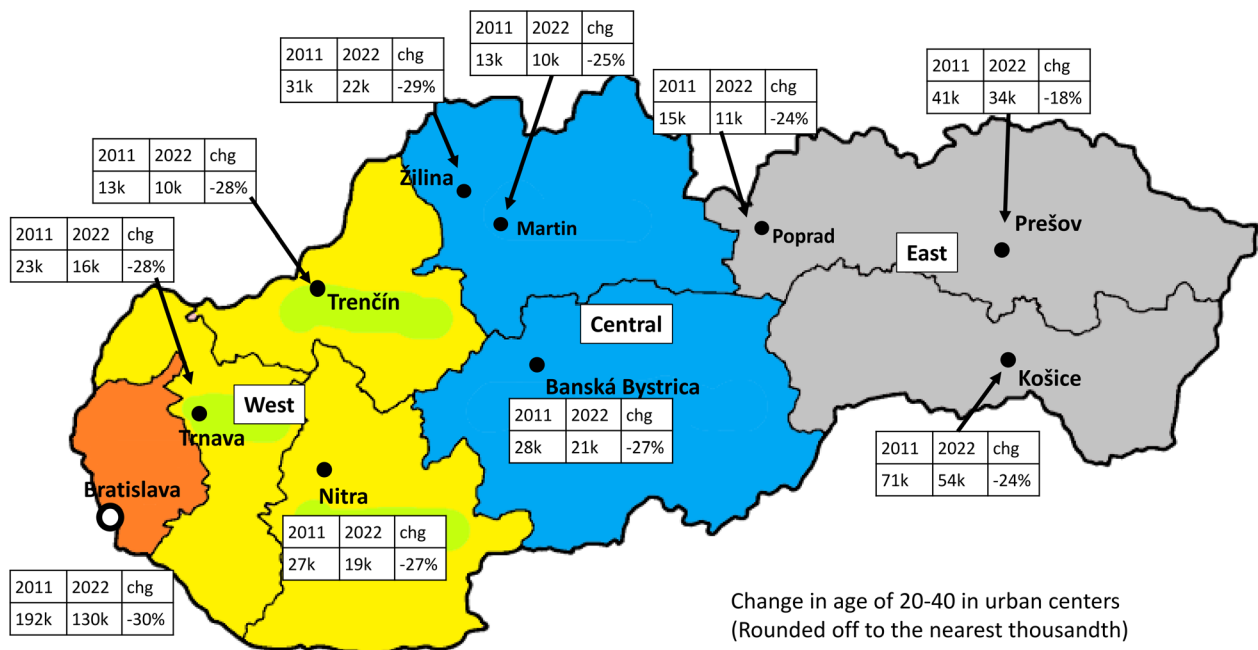


Figure 3. Changes in urban centers among the 20-40 cohort from 2011 to 2022.

Source: authors relied on the data by the Statistical Office of the Slovak Republic (2025)

Among the four regions analyzed, the western section of the country exhibits a more pronounced reduction in this age demographic, as seen below. The recorded decline, ranging from 18% to 32%, indicates a trend of out-migration from the inner-city core.

The next measurement was focused on demographic changes in commuter zones surrounding urban areas. The delineation of the commuter zone (Figure 4) was confined to a radius of 10 km from the city center, extending to 15 km in the municipalities linked to the urban core by a 4-lane highway. Although such a short referential distance from the urban nucleus might appear limiting for the research, it needs to be noted that Slovakia maintains a degree of compactness compared to Western Europe, with absence of suburban sprawl. Taking this into account, it was observed that the reduction in the population aged 20–40 there was less pronounced than within the urban core. Notably, in Poprad, the municipality nearest the High Tatras, Slovakia's most renowned tourist destination, there was no observed decline in the 20–40-year-old demographic. Again, a smaller decline is noted in the eastern regions. Bratislava experienced the most significant decline at 29%, likely attributable to the indistinctness of the inner suburbs from the urban areas within city boundaries, thus exhibiting a highly urbanized design.

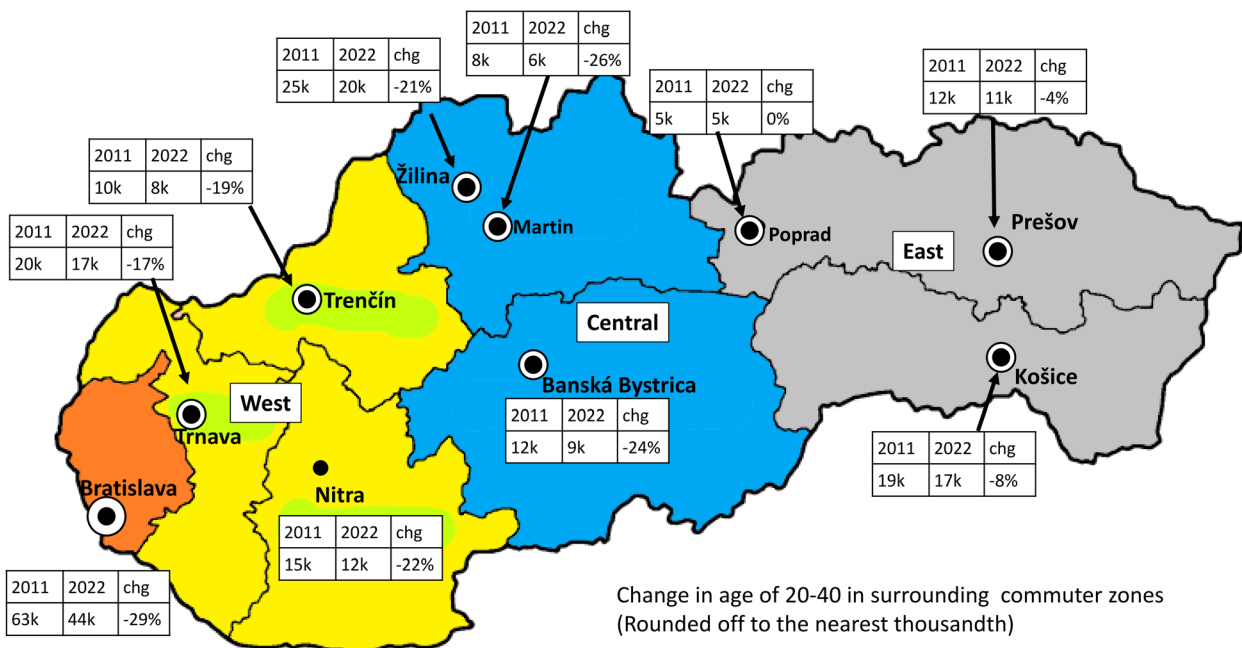


Figure 4. Changes in commuter zones among the 20-40 cohort from 2011 to 2022

Source: authors relied on the data by the *Statistical Office of the Slovak Republic (2025)*

The micropolitan centers (Figure 5) can be described as scaled-down variants of urban cities, each possessing distinct socialist-era municipalities. In these micropolitan centers, a significant decline is evident among the 20–40-year-old demographic cohorts. This trend is consistently observed throughout the country, with a majority experiencing a reduction of approximately 20%.

Finally, we conducted an analysis of towns and villages located in rural regions, with populations fewer than 10,000, situated beyond the commuter zones of regional centers

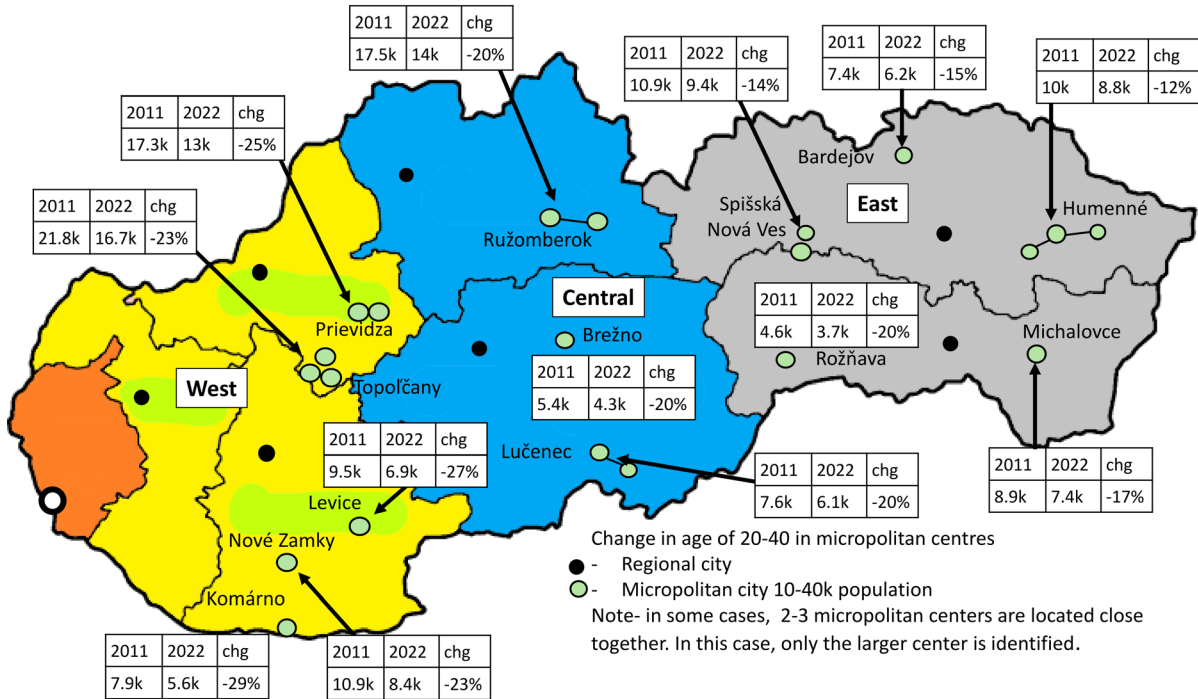


Figure 5. Changes in micropolitan centers (10-40k pop.) among the 20-40-year-old cohorts from 2011 to 2022

Source: authors relied on the data by the *Statistical Office of the Slovak Republic (2025)*

(Figure 6). Utilizing data from the Social Insurance Company, which included information on the zip codes of individuals' workplaces, we sought to ascertain whether the individuals residing in rural areas were employed in urban centers. Nationally, 57% of the individuals residing in rural areas are engaged in employment linked to urban centers. Notably, 13.76% of institutional headquarters, encompassing both governmental and corporate entities, are positioned in or around the capital city of Bratislava, reflecting a significant level of primacy.

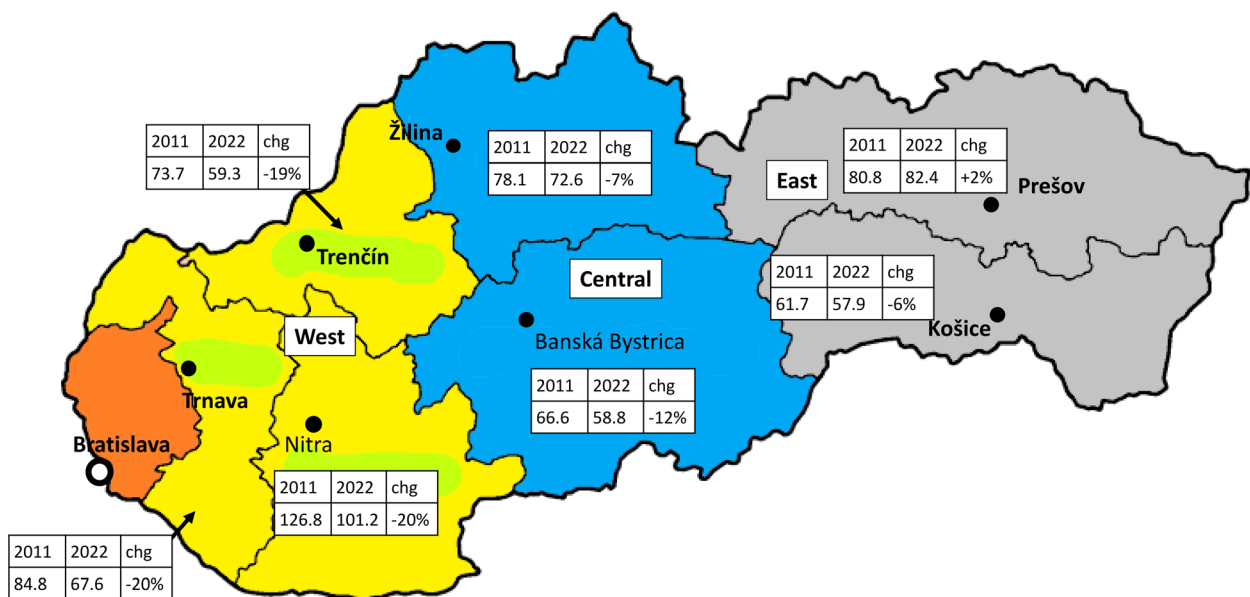


Figure 6. Changes in rural areas among the 20-40 cohorts from 2011 to 2022

Source: authors relied on the data by the *Statistical Office of the Slovak Republic (2025)*

This trend extends even to the two easternmost regions considerably distant from the capital, namely Prešov (11.10%) and Košice (12.10%). Our findings indicate a diminished rate of rural decline in the eastern part of Slovakia, with the Prešov region even exhibiting a modest increase. This outcome challenges the presupposed notion of rural decline. It is important to consider that Slovakia, being a small nation, benefits from an even distribution of cities and micropolitan centers, ensuring that individuals are seldom situated more than 30 minutes from an urban core, particularly when travelling by automobile.

Using Power Business Intelligence (PowerBI), we mapped the demographic shifts in rural regions by individual municipalities, or more precisely, by specific zip codes with the populations ranging from 200 to 10,000. This analysis resulted in a discordant map (Figure 7) where the decline in population was influenced by factors that extended beyond mere economic considerations. The most significant rural demographic decline is observed in western Slovakia, outside of Bratislava. Some of these rural regions comprise feeder municipalities for erstwhile industrial economies that have vanished (e.g., coal production, arms manufacturing, textile, etc.). Individuals aged 20–40 may have redirected their interests towards service-oriented industries located outside these areas. It can be postulated that these areas are experiencing aging at a more accelerated pace compared to other regions of the country, accompanied by a slow rate of housing transfer from older to younger demographics. Although these regions are not significantly removed from urban centers to justify such a sharp decline, such a phenomenon is evident. Thus, further research is warranted to investigate the underlying reasons for this situation. Conversely, population increases are predominantly observed in the eastern part of the country, characterized by a higher concentration of the Romany community, known for its higher birthrate. During socialism, there existed a policy aimed at assimilation and control of the Roma population through enforced resettlements,

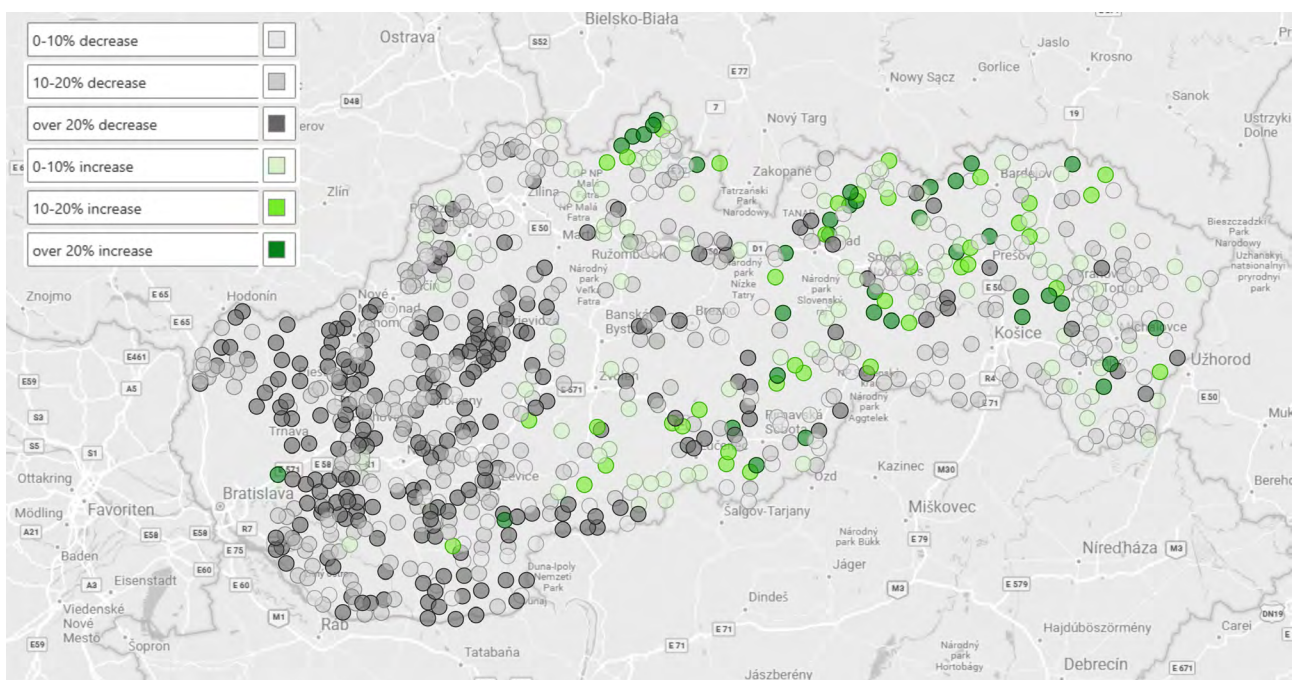


Figure 7. Change in rural zip-codes of the 20-40 cohorts in rural municipalities, pop. 200-10,000

Source: authors' own elaboration

predominantly in urban areas. In the post-socialist era, gentrification led to the reversal and re-establishment of Romany communities (Slovak term “osada”) in rural localities (Růžička, 2018). After 1989, many Romas were incrementally displaced to segregated rural settlements as a consequence of post-socialist housing privatization and urban gentrification, which reinforced spatial and social exclusion across eastern Slovakia (Szilvasi, 2016).

The data were aggregated to examine the demographic declines in the capital region as well as the western, central, and eastern regions of Slovakia (Table 3). The findings indicate an increasing tendency toward urban exodus. This phenomenon appears to be less influenced by the affordability of housing, as the prevalent concrete panel flats, remnants of the socialist era, are widely available in urban centers. These structures represent the most economical option for property acquisition when factoring in average income levels, mortgage commitments, and transportation facilities. The observed decline in the population aged 20–40 is notably less pronounced in the East, which is geographically remote from the more cosmopolitan environments of the West, the capital, and the industrial corridor of the Bratislava-Žilina-Nitra triangle. Furthermore, rural regions exhibit comparatively slower demographic decline, potentially attributable to the compactness of commuter zones. It is reasonable to infer that a degree of out-suburban and exurban commuting into urban centers occurs.

Table 3. Percentage changes among the 20–40 cohorts between 2011–2022

	Bratislava	West	Central	East	Total
Urban	-29.8%	-26.7%	-26.7%	-21.8%	-27.8
Commuter zone	- 28.67	-19.0%	-22.5%	-6.47%	-21.2
Micropolitan centers	-	-25.7%	-19.3%	-14.7	-21.1
Rural	-	-20.1%	-9.1%	-1.6%	-12.7
Total	29.31%	-22.1%	-17.3%	-10.9%	-20.0%

Source: authors' own elaboration

4.2 Gender imbalance and fertility

This analysis aims to identify negative externalities within a municipality, facilitating the measurement of gender imbalances by zip code. Municipalities exhibiting a gender imbalance exceeding 10% were designated as ‘man camp’ or ‘female camp’. Municipalities with a population under 200 were excluded from the study. These findings are illustrated in the subsequent figures 8 and 9.

Capital cities in post-socialist Europe display intensified socio-demographic selectivity, concentrating young, educated, and female populations while peripheral regions experience accelerated demographic depletion (Musterd et al., 2017). As anticipated, the Bratislava region exhibits the most significant gender disparity in favor of women, although this imbalance was reduced in 2022. “Female camps” are also located along the primary highway corridors between Bratislava and Žilina and Nitra. “Man camps” were predominantly situated in rural areas, particularly in the southern and eastern parts of Slovakia, where a markedly higher number of “man camps” was recorded, whereas western Slovakia featured a considerably

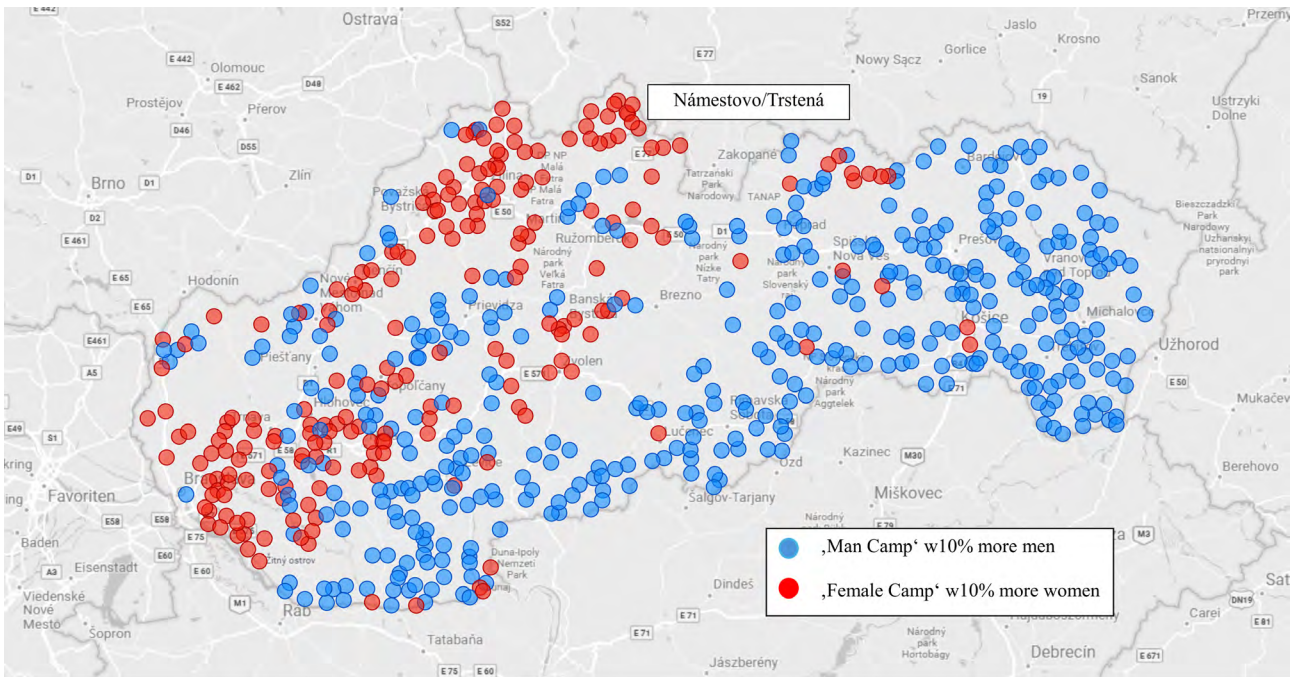


Figure 8. 2011 'man camps' and 'female camps' for 20-40-year-old age group

Source: authors' own elaboration

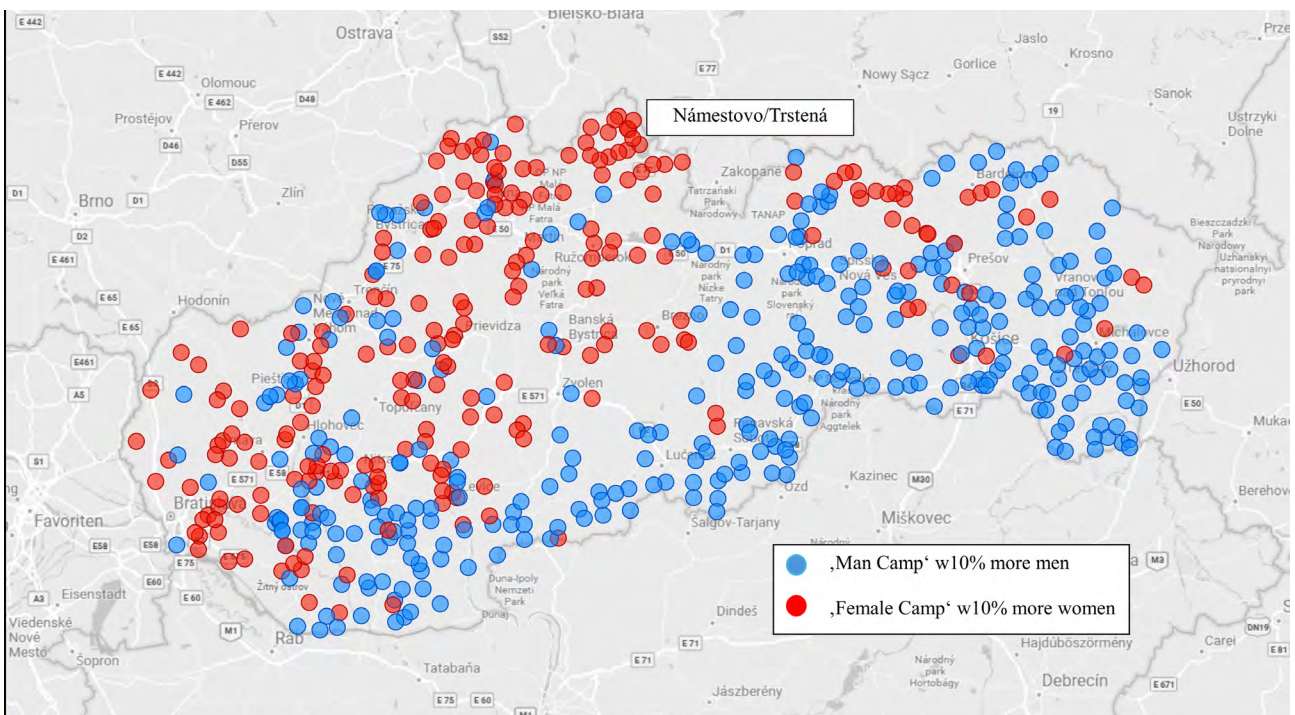


Figure 9. 2022 'man camps' and 'female camps' for the 20-40-year-old age group

Source: authors' own elaboration

greater presence of “female camps”. The quantity of “man camps” experienced a decline of 16.7% between the specified time periods, whereas the number of “female camps” witnessed an increase of 5.4%.

A concluding analysis examined the female reproductive rates in Slovakia, with the capability to be scrutinized at the district or county level. The Eastern region of Slovakia exhibits

a marginally higher birth rate, ranging from approximately 1.65 to 1.7 births per woman. This elevated level of fertility is attributed to a larger Romany population, which tends to have a higher average of 2.1 children per woman (Szabó et al., 2021). When excluding the eastern regions (Prešov, Košice), the birthrate in the western and central regions decreases to approximately 1.45 children per woman. In comparing 'female camps' to fertility rates, an anomaly was identified in three districts, demonstrating both high rates of 'female camps' and elevated birth rates (as indicated in figures 8–9). Námestovo (~1.9–2.0 births) and Tvrdošín (~1.7–1.8 births) are mountainous municipalities in northern Slovakia, characterized by strong cultural and religious family norms associated with the Orava region. It is generally presumed that when the female population significantly exceeds the male population, the fertility rate would decrease (Schacht and Kramer, 2016; Pettay et al, 2021). However, this minor anomaly contradicts this assumption, suggesting the influence of additional factors. Senec (approximately 1.7–1.9 births), an urbanized suburb of Bratislava, presents a distinctly different dynamic.

4.3 Expectations of young adults versus reality of demographic shifts

These findings are confirmed by the articulated preferences of students as described in the essay survey conducted from 2011 to 2024. Given the long-term nature of this essay survey, being conducted every year since 2011, it allows for the observation of contrasts between Generation Y (Gen Y) and Gen Z. Earlier iterations of the survey included inquiries regarding the aspiration to seek employment abroad. Gen Y students exhibited greater independence and were more inclined to venture beyond Slovakia to secure gainful employment, or to engage in short-term work, particularly in the United Kingdom. However, post-2014, questions concerning employment abroad were omitted from the survey as most students no longer perceived a necessity for working in other countries.

Male students exhibit traditional tendencies, envisioning themselves as the primary financial providers within familial settings, aspiring to occupy positions of substantial income, ideally falling within the upper quartile of earnings. While they anticipate managerial roles, there is a lack of specificity regarding the nature of managerial responsibilities. Notably, survey data reveal aversion to low-status occupations, despite higher remuneration associated with such roles. This preference leads to the selection of higher status jobs, albeit with lower financial rewards, thereby reflecting a discrepancy between aspirations and actual circumstances. Conversely, female students express the preference for mid-level positions, frequently in managerial capacities, or administrative domains such as accounting. Predominantly, women expect their spouses to fulfill the role of principal financial provider. Automobiles, predominantly associated with male interest, were deemed reasonable, but received less attention. Conversely, a single detached residence is characterized by an attractive garden and a swimming pool. This dwelling is to be situated outside a city in Slovakia, although not in the capital, Bratislava. In later years, newly constructed bungalows have been occurring in the description of residences, expressing a desire to have two children.

Female students, like their male counterparts, aspire to reside outside of a small city (excluding Bratislava) in a single detached residence with an appealing garden and a swimming pool. They aspire to acquiring a managerial or administrative position, notwithstanding

potentially low remuneration. Despite the notion of gender equality, they do not foresee themselves as primary financial providers. They express a preference for two children, with the firstborn being male. This is in line with the research by [Mariscal-de-Gante et al. \(2023\)](#), who pointed out that despite changing demographic dynamics, which brought a more feminized, aged, and educated working population, the occupational profile of women was still polarized relative to men.

In summary, both female and male students articulate a preference for what can be classified as the typical 'nuclear family'. They express a desire for low-density habitation in proximity to a small metropolitan area. Numerous students describe their professions as situated in a downtown context, while preferring residences in a smaller town (a suburb), thereby associated with the notion of car commuting, which is not perceived negatively. They aspire to possess their own land with a house on it. The exterior of the house is most frequently described using terms such as garden, swimming pool, and barbecues, among others. The term "garden" is the most common 'descriptive' word employed by both Millennials (born from 1981 to 1996) and Gen Z (born between 1997 and 2012). In terms of the second most prevalent term, Millennials favored "swimming pool," whereas Gen Z preferred "bungalow." The swimming pool, albeit impractical in Slovakia's relatively cold climate, reflects a desire for an outdoor focal point for children and visiting friends. It also represents an appealing play space for children. The bungalow is indicative of the aspiration to reside in a 'nuclear family' setup, consisting of husband, wife and two children. Additionally, it signifies the preference for easy maintenance and low upkeep, alongside energy efficiency. This sought-after housing style contrasts with the previous baby boomer generation, who were more inclined towards vast multi-generational residences in small towns, or panel flats in larger towns or cities. A minority of students (approximately 5%) indicated the preference for urban living, and when they did, it pertained to luxury apartments or penthouses. This aligns with the findings of [Cole and Svidroňová \(2021\)](#) and [Cole et al. \(2025b\)](#), who also identified the prospective ambition of young individuals to reside in more rural, small-town settings rather than urban environments.

The combined analysis of administrative data and the long-term essay-based evidence reveals both a strong alignment and notable mismatches between the young adults' stated life-course aspirations and the demographic outcomes observed across Slovak municipalities.

A clear point of alignment concerns residential location. The student essays collected between 2011 and 2024 consistently express a preference for low-density living in suburban or small-town settings, typically outside major urban cores and explicitly excluding the capital city of Bratislava. These preferences are strongly reflected in the administrative data, which show a more pronounced decline of the 20–40-year-old population in urban centers than in commuter zones, micropolitan towns, and selected rural areas. The demographic contraction of inner cities, alongside comparatively slower decline or stabilization in surrounding municipalities, suggests that suburbanization is not merely a residual outcome of housing constraints, but corresponds closely to long-articulated residential aspirations.

The second area of alignment is housing type. The essays repeatedly emphasize detached housing with private outdoor space (most frequently described through the term "garden"), while expressing limited enthusiasm for high-density apartment living. The ad-

ministrative data corroborates this pattern by revealing accelerated ageing and declining representation of young adults in socialist-era panel housing estates, where housing turnover remains low and intergenerational replacement is limited.

However, important mismatches also emerge. The housing aspirations expressed in the essays, usually involving detached homes with gardens, swimming pools, or newly built bungalows, often exceed what is realistically attainable given the income levels, mortgage conditions, land availability, and construction costs. While demographic redistribution toward commuter zones is evident, the scale and quality of housing achieved by the 20–40-year-old cohort fall short of the idealized visions articulated during the student years. This suggests that suburbanization reflects constrained adaptation, rather than full realization of one's preferences.

Further divergence is visible in employment expectations. The essays frequently describe vaguely defined, high-status, office-based occupations compatible with remote or hybrid work, whereas administrative data show a substantial decline in formal work contracts within the same age cohort. This discrepancy highlights structural labor-market constraints and signals potential over-optimism in early career expectations.

Overall, the comparison demonstrates that young adults' preferences provide a meaningful directional signal for demographic change, even if economic and institutional constraints moderate their full realization. The alignment between aspirations and spatial outcomes challenges assumptions of inevitable urban concentration, while the mismatches underscore the importance of housing affordability and labor-market conditions in shaping demographic trajectories.

5 Concluding remarks

During the socialist era in Czechoslovakia, the two nations were characterized by two dominant patterns: urban centers defined by high-rise panel apartments and older mid-rise brick apartments on one hand, and rural areas consisting of individual houses, many of which being large multi-generational residences on the other. As the post-transitional period progresses, newer housing solutions can be found, including both contemporary urban apartments and suburban bungalow-style homes designed for high efficiency and low maintenance.

This study has several limitations. First, the dataset sourced from the Social Insurance Company encompasses only formally employed individuals, thereby excluding informal employment, self-employed persons without contracts, and Slovak citizens working abroad. As a result, the findings primarily reflect the behavior of economically active residents and may underrepresent more mobile or economically precarious groups. Second, the qualitative component based on the essays collected from students at Matej Bel University, while being extensive and long-term, is a single institutional example and not fully representative of the national youth population.

This research draws on the expressed preferences of university students, who, based on a multi-year essay assignment, expressed the desire for a dwelling suitable for a nuclear family with two children. In an age of low fertility, examining demographic changes of the

20–40-year-old age group becomes particularly relevant. The Social Insurance Company data reveal a trend within this cohort that challenges the prevalent assumption of continual urbanization growth. At the same time, the student essays suggest a disagreement with urban planners and their ideas of residential aspiration of young adults.

The central contribution of this paper is its empirical challenge to the widely held assumption, common in urban economics and spatial planning, that demographic change among young adults necessarily reinforces urban concentration. The flawed assumption among geographical economists is that continued urban growth reflects individual residential preferences. Insights from the students' essays challenge this view, given the word 'garden' being the main descriptor every year. Coupled with the demographic changes between 2011 and 2022, these findings reveal a more pronounced decline in the 20–40-year-old population within urban cores compared to commuter zones, towns, and rural areas. This observation addresses RQ1 and indicates a redistribution of young adults away from urban centers. This finding suggests that observed urban growth in some contexts may reflect institutional, regulatory, or housing supply constraints, rather than real residential preference of young people.

Panel flats in urban areas are experiencing a decline in young residents, largely due to low housing turnover, as long term residents prefer to remain and age in one place. This finding responds to RQ2 regarding the changes in the housing mix for 20–40-year-olds. During the socialist period, alternatives to panel flats were in villages, where large multi-generational homes were common. From the 1980s, housing policies shifted away from centrally planned communities, permitting individual homeownership and construction (Faltan and Dodder, 1995), aligning with Slovak social norms emphasizing family cohesion and intergenerational support. Multi-generational housing facilitated shared responsibilities and economic efficiency (Cohn, 2010). By design, villages inherently promote greater intergenerational sharing and transition, potentially increasing the presence of young adults. Empirical evidence consistently shows that suburban and low-density residential environments are associated with higher fertility levels than dense urban cores, reflecting the interaction between residential context, family aspirations, and childbearing behavior (Kulu and Boyle, 2009).

RQ3 provides evidence of persistent gender imbalances ("man camps" and "female camps") across municipalities and shows how these imbalances intersect with fertility patterns. This adds to the SDT theory by demonstrating that local sex ratios can amplify or mitigate low fertility outcomes. Historically, urban centers have attracted female populations, exacerbating gender imbalances; our current findings corroborate this, albeit to a lesser extent in the eastern regions. Predictably, Bratislava and the tri-state area adjacent to the Czech/Polish/Slovak border host a substantial concentration of 'female camps', while 'man camps' predominate in agricultural regions. Fertility rates are notably influenced by the significant presence of the Romany community in Eastern and Central Slovakia. When focusing solely on western Slovakia, the suboptimal birth rate reveals an unfavorable demographic trend for the future. Overall, these patterns are consistent with findings by Josipovič (2024) on post-Yugoslav countries, where deep population ageing has become widespread, with Slovenia as a partial exception. Results also align with the SDT prediction (Aassve et al., 2024), suggesting an eventual convergence of fertility behavior across all European countries.

With respect to RQ4, the expressed preferences in the student essays indicate a shift from socialist era housing blocks. By integrating revealed demographic behavior with long-term qualitative evidence on the young adults' stated preferences, the paper shows a persistent aspiration for low-density, suburban living – characterized by detached housing and access to private outdoor spaces. These preferences remain stable across generations (Gen Y and Gen Z) and contrast with the dominant planning agendas that prioritize compact cities and inner-city densification. The declining presence of young adults in panel housing, combined with new suburban development suggests that housing policy should prioritize flexible zoning, faster issuance of construction permits and support for small scale residential development in commuter zones and micropolitan towns.

The novelty of this study lies in its integration of administrative microdata, capturing the revealed demographic behavior with qualitative evidence on the stated life-course aspirations, and finally allowing a rare comparison between the intended and realized spatial-demographic outcomes.

From the policy perspective, these findings highlight the need to align work locations and housing supply with residential preferences of young adults. Further research should examine the intersection of demographic behavior with housing affordability, access to mortgages and how future work will be performed. Comparative studies across CEE countries along with census data, migration statistics, and mobile phone data could improve understanding of population distribution.

Expanding qualitative research beyond a single institution would provide a more nuanced understanding of youth's aspirations and constraints.

Data availability statement

Data available at the corresponding author upon a reasonable request.

Ethics Approval

Research was approved by the Ethical Committee of Matej Bel University in Slovakia under no. 294/2025.

Coauthor contributions

David Cole: Conceptualization, Methodology, Formal Analysis, Writing – Original Draft

Maria Murray Svidroňová: Data Curation, Investigation, Methodology, Validation, Writing – Review & Editing

Jolana Gubalova: Methodology, Formal Analysis, Visualization, Writing – Original Draft

Petra Strnadova: Investigation, Writing – Review & Editing

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A Longitudinal Analysis of Functional Transformation and Demographic Change in Small Towns in Serbia

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This paper examines the interrelation between functional transformation and demographic change in small towns in Serbia, focusing on temporal and spatial disparities and uneven development trajectories. Small towns are identified according to Eurostat methodology and its adaptation for Serbia (Degree of urbanisation (DEGURBA) level 2). The analysis adopts a longitudinal perspective spanning four decades, based on the Census data for three selected years: 1981, the peak of industrial development; 2002, marking industrial collapse and transition; and 2022, which illustrates the current state. Functional transformation is explored through thenar diagrams, which capture employment shifts across the main economy's sectors, harmonized and categorized in line with the official Classification of Activities. Results revealed a significant correlation between functional shifts and demographic trends, as well as the fact that functional transformation does not lead to uniform demographic outcomes across the small towns, but rather produces divergent development trajectories. Negative functional shifts associated with severe demographic decline are common for the small towns with a strong orientation toward the industry sector. Also, some of the small towns that faced a significant shift to the service economy experienced a pronounced demographic decline. Conversely, some towns demonstrate positive adjustment by restructuring their economies towards specific service activities and redefining their roles in the local development and settlements network. The findings challenge the assumption that tertiarization represents a sustainable development path for small towns. By linking long-term demographic change with functional restructuring, the paper contributes to a deeper understanding of small-town development in post-socialist contexts.

Keywords: small towns, functional transformation, demographic change, working-age contingent, Serbia

1 Introduction

Small towns have undergone significant changes since the time of industrialization and the early phases of urbanization, inducing diversity in life quality and causing various challenges. They are placed between villages and large cities on the urbanization trajectory (Spasić, 1984; Spasić et al., 2005; Academy for Spatial Research and Planning [ARL], 2019; Steinführer, 2021; Bański & Mazurek, 2025), with a tendency to move into the category of medium-sized towns offering the high “quality” of living, or drop to the rural category due to incapability to overcome structural problems. Smaller urban centres are losing their functions, being incorporated into rural areas, and evolving into geospatial complexes with multifunctional characteristics and mosaic landscapes (Drobnjaković, 2019). On the other hand, certain small towns grow and develop into medium-sized towns, offering a certain quality of living conditions. Small towns are often presented as the counterpart to large cities, benefiting and losing from this association (ARL, 2019), which depends on the broader context and a range of complex factors. The development trajectory of small towns is preconditioned by various factors, determined by the historical and social context and globalization, and expressing different patterns of spatial, functional, and demographical transformation or even stigmatisation (Steinführer et al., 2016).

The issue of small towns defining and determining their role in the settlements network is an under-researched topic with little systematic research focusing on a “small urbanity” (Steinführer et al., 2016; Bell & Jayne, 2009). The determination and differentiation of urban settlement based on population size was one of the earliest attempts to deal with this issue in the world, until the first population census and the development of modern statistical services (Vresk, 1979; Drobnjaković, 2019). Due to the increasing attention that large cities attract, medium-sized cities and small towns are neglected in international and national contexts, professional or academic circles, and often viewed through the lens of urban research (Steinführer, 2021; Kokotović Kanazir, 2016). Therefore, it is not surprising that the criteria and thresholds for defining small towns vary between countries (Ljubenović et al., 2025). Small towns’ differentiation could be based on various approaches and factors, mostly of population size, historical town privileges, urban fabric, centrality functions, and economic or social structures (ARL, 2019). Recent attempts, however, require more detailed, in-depth and complex approaches and analyses.

Some experiences among European countries indicate the variety of definitions of small towns. Today, there is not one generally accepted definition of “small town”, and their determination is based on demographic, administrative, functional, or complex indicator sets. The population size of small towns varies. Recently, [European Observation Network for Territorial Development and Cohesion \[ESPON\] \(2024\)](#) established a small-town definition that considers small cities as settlements with the population exceeding 50,000 inhabitants and exposed to similar socioeconomic challenges. In Germany, the threshold for small towns is 5,000 inhabitants (Steinführer et al., 2016; ARL, 2019), just like in Russia, where the threshold for the small town category is up to 5,000 inhabitants (Spasić et al., 2007). In Central Europe, the definition of small towns relies on a comprehensive understanding, involving the micro-regional centres in rural areas that attracts the surrounding villages (Jousseau

& Talandier, 2016; Malý, 2016; Kokotović Kanazir, 2016). Small towns are usually associated with stereotypical representations as compact, comfortable, or cramped settlements or environments (ARL, 2019; Bañski & Mazurek, 2025). They often represent symbolic centres in regional contexts, and structural nodes in the settlement network due to the capacity to provide basic services, economic, social, cultural, etc., and to link rural with highly urbanized areas (Pirisi & Trócsányi, 2014; Steinführer et al., 2016; Bañski, 2021). This 'bridging' role was depicted dually by Malý (2016), using the concept of "borrowed size" and the "agglomeration shadow" effect. According to Marinović-Uzelac (1999), "a small town is an urban agglomeration that meets the minimum population requirements, in which the representation of the primary sector of activity within the urban corpus is reduced, and which has a minimal gravitational impact on its environment."

Despite limited studies on social life and the economy of small towns, their economic diversity and characteristic social structures have been confirmed (ARL, 2019). Diversity and heterogeneity are common for small towns in European countries, determined by the level of functional diversification of their surroundings and their proximity to metropolitan areas (Bañski, 2021). The specific functions in small towns have usually been reinforced in order to achieve independence and determine a role in regional development. They could be recognized as mining towns, spa or residential towns of rural-to-urban commuters, nodes of transmission or small administrative and cultural centres (Steinführer et al., 2016; Stoica et al., 2020).

The functional development of small towns has been examined insufficiently and attracts little attention among geographers, spatial planners, economists, and sociologists (Stafford, 1963; Rondinelli, 1983; Tacoli, 2017; ARL, 2019; Bañski, 2021). The focus has shifted from agriculture toward service activities, supported by the metropolization processes that affect their transformation and induce different development trajectories (ESPON, 2024). The functional development trajectories of small towns can be interpreted within the broader theoretical framework of sectoral transformation, grounded in Clark-Fisher's three-sector model (Fisher, 1939; Clark, 1940), which focuses on the need for economic sectoral transformation. The three-sector model proposed a way of understanding a rapidly modernizing and globalizing economic activity beyond agriculture, mining, and manufacturing, and conceptualizes economic development as a structural shift from the primary sector, with low productivity of labour, to the secondary and subsequently tertiary sector, with high labour productivity. The classical theory established the basic, remarkable, resilient division by which economic structure is still understood (Schafraan et al., 2018). This framework is widely used for examining structural transformation of national economies, illustrating changes in the sectoral composition of employment that reflect deeper socio-economic restructuring processes. It highlights the influence of the services sector beyond industrial or sectoral economics elaborated in studies of urban and regional development, and spatial inequalities (Hamnett, 1994; Taylor & Walker, 2001). The three-sectoral model provides an analytical basis for understanding the functional transformation of small towns, particularly in the post-socialist contexts marked by deindustrialization and the expansion of service activities.

There is no consensus on this issue in Serbia either (Kokotović Kanazir, 2016; Ljubenović et al., 2025). To this day, small towns in Serbia have most often been defined as small urban

settlements with up to 20,000 inhabitants (Spasić, 1984). Small towns are represented by a highly heterogeneous group of settlements in functional and morphological terms, and by the urbanization degree (Spasić & Petrić, 2006; Filipović et al., 2016; Kokotović Kanazir, 2016). In Serbia, small towns could be understood as an important bond between large cities and rural areas, and often represent administrative, economic, and cultural centres of municipalities (Spasić, 1984; Spasić, 1995), potential sub-regional centres, and individual mono-functional developed settlements like spas, industrial, and mining settlements (Kokotović Kanazir, 2016). The role of small towns in achieving balanced development is highly significant, as well. Although small towns have not been in the spotlight of scientific research in Serbia in previous decades, certain studies have been done, which shed light on the demographic potential of small towns (Kokotović Kanazir, 2016), their development potential (Spasić & Petrić, 2006; Filipović et al., 2016), or their shrinkage and identification of the driving factors and impacts that affected their transformation (Ljubenović et al., 2022; Ljubenović et al., 2025).

The most recent definition of small towns underpins this research. It is based on a novel understanding of small towns that emerged from the recently established differentiation of settlements conducted by the Statistical Office of the Republic of Serbia (SORS) (Drobnjaković & Kokotović Kanazir, 2025). Small towns are recognized as settlements within the urban type of area and represented by a category of towns and suburbs. The second level of classification involves the typology of small spatial units according to the population participation of more than 50% in the corresponding cluster (Eurostat, 2021), which gradually distinguishes urban settlements within this type of area. This classification involves adjustments of the Eurostat methodology to the specificities of the settlements' system in Serbia by creating a set of indicators that imply the degree of socio-economic transformation and current demographic trends, reflecting the relationships in the settlements network (Drobnjaković & Kokotović Kanazir, 2025).

Based on the assumption that there is a general lack of knowledge about this type of towns (ARL, 2019) and their role in the settlement system in Serbia, this research aims to highlight the necessity of evidence-based research on small towns. It hypothesizes that the direction and intensity of demographic change in small towns in Serbia during the period 1981–2022 were significantly associated with the type and degree of their functional transformation, resulting in differentiated development patterns. The authors wanted to examine the interconnection between functional restructuring and demographic change, in order to identify development trajectories of small towns and their spatial and temporal dimensions. In line with that, the research encompasses an analysis of the shifts in the sectoral employment structure across the selected Census years; examination of demographic dynamics through population change indices, age structure, and economic activity indicators; assessment of functional and demographic changes through the intersection of the tertiarization index and population change index; and recognition and interpretation of the development trajectories typical for the small towns in Serbia.

2 Methodology and data

The research focuses on small towns in Serbia identified based on the second level of the Degree of urbanisation (DEGURBA) methodology (Eurostat, 2021) and adapted to the Serbian perspective and settlements' network in order to capture the urban-rural continuum (Drobñjaković & Kokotović Kanazir, 2025). According to this typology, small towns are recognized within an urban cluster, in a type of town and semi-dense areas, which embed a series of transitional forms of settlements. This settlement type is characterized by moderate population density of at least 300 inhabitants per km² and population size of at least 5,000, with a distance of more than 2 km from a dense urban cluster or an urban centre (Eurostat, 2021). There are 78 small towns in Serbia identified, represented by a group of settlements heterogeneous in population size, functional orientation, and role in the local and regional settlement network.

The differentiation of small towns was made according to the economic composition of the active population by activity sector, which was used for determining the directions of their socio-economic transformation (Miletić & Drobñjaković, 2015). Following a pioneering research project on functional typology of cities (Nelson, 1955), this research identifies dominant economic functions in small towns based on the population's employment and activity structure. Functional transformation of the small towns has been assessed using Fehre's model of the ternary diagram, which has found wide application in spatial planning and geography of settlements (Grčić, 1999; Tošić, 1999; Veljković et al., 1995). The model is presented by an equilateral triangle as one of the graphical methods of the functional types' and their subtypes' allocation, interpreted through variations in the share of employed persons across primary, secondary and tertiary-quaternary sectors. Three relevant years have been chosen for the research time section: 1) 1981, when the most favourable parameters of the functional capacities of small towns were recorded and when they acquired the functional role that marked their development; 2) 2002, which was marked by a critical development phase caused by decline in industrial production and preparation for the transition phase; and 3) 2022, which represents the current functional role of small towns and the end point on the functional transformation trajectory. The research is limited in terms of non-comparability through time, due to definitional or statistical modifications and changing methodologies for data collection. In order to accurately group activities into sectors, the current Decree on the Classification of Activities (Uredba o klasifikaciji delatnosti, 2010) and its harmonization with the previous ones were used. The data from the Census of Population, Households and Apartments in 1981, 2002, and 2022 were used pertaining to the economic activity of the population by activity sector. Methodological adjustments between the Census years address the classification of economic activity in agriculture, which induces variation in the primary-sector employment. The individuals engaged in subsistence farming are considered economically inactive (Statistical Office of the Republic of Serbia [SORS], 2022). On the other hand, the Agriculture census under labour force in agriculture considers only the persons who performed farming and are over 15 years of age (SORS, 2023b). Different data sources affect employment in this sector. In this study, the authors capture the changes in functional development following the census data on population per activity sectors, avoiding different types of data to provide the comparability of the sectoral data across the Census years.

The shifts in the demographic basis of small towns in the 1981–2022 period were analysed using the population change index. A comparative analysis of the demographic and functional characteristics of small towns was performed through their distribution in the quadrants representing the category and level of small towns' transformation. The quadrants were determined by the intersection of the population change index and the tertiarization index, calculated based on changes in the active population engaged in tertiary and quaternary activities for a selected year.

One of the model's limitations is related to the aggregate observation of the tertiary and quaternary activities. The 'three-sector' model remains as the dominant paradigm despite the attempts of economists and geographers to introduce the quaternary sector in order to crystallise the Clark's messy tertiary category (Foote & Hatt, 1953). In this regard, the study relies on the analytical approach that aggregates tertiary and quaternary sectors of activities and allows data comparability and consistent longitudinal monitoring of functional transformation. The qualitative differences within the service sector of the settlements examined may exist; however, further sectoral disaggregation may reduce statistical reliability due to the absence of a commonly adopted conceptualization of a model based on the four-sector division (Schafran et al., 2018).

While this approach allows a consistent longitudinal perspective based on relevant Census years, it captures structural change exclusively through a relative redistribution of the active population.

Applied methodological framework does not account for qualitative dimensions of economic restructuring or the effects of tertiarization. The structural changes do not necessarily imply economic strengthening or decline. These limitations were taken into consideration during the interpretation of the results.

3 Results

3.1 The Role of Small Towns in the Urban-Rural Divide in Serbia

The largest number of small towns is located in the Vojvodina Region (30). Although the Region of Šumadija and Western Serbia and the Region of Southern and Eastern Serbia are characterized by a significant number of small towns (23 and 20, respectively), their share is negligible considering the large number of settlements identified in these regions. On the other hand, only five small towns were identified in the Belgrade Region, which is determined by the strong influence and dominance of the capital city.

The average population size of the small towns is 10,623, which is significantly lower than the average size of cities and medium-sized towns; however, these are still more populated than suburbs and rural settlements (Drobnjaković & Kokotović Kanazir, 2025). Observing the population density, it is evident that small towns are lagging behind all urban types of settlements (Figure 1a). The recorded population density is 236.8 inhabitants per km² on average, which is approximately 100 inhabitants/km² less than in the suburbs and medium-sized towns, as well as several times lower than in cities. Small towns are more populated than rural areas and above the republic's average, indicating a certain demographic

potential of these settlements. A similar pattern could be observed in the population change for the 1981–2022 period. Small towns experienced a slight population decline, similar to medium-sized towns; however, with favourable dynamics compared to rural areas and the republic's average (Figure 1b). In this regard, the demographic profile of small towns falls between the densely populated towns and suburbs marked by expansive development on one hand, and rural areas facing continuous shrinkage, on the other.

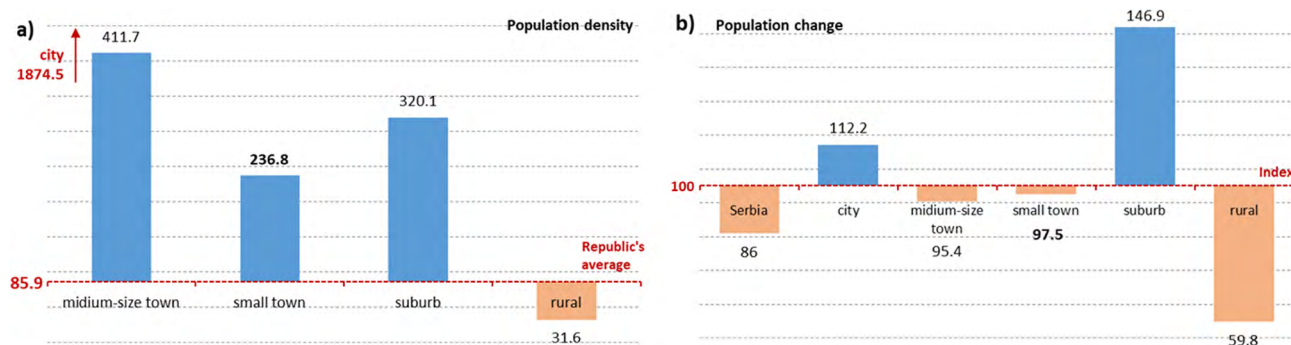


Figure 1. Positioning small towns in the settlements' network according to the selected demographic indicators: a) Average population size; b) Population density.

The economic indicators clearly pointed out to a gradual decline of small towns in economic terms, making them less attractive places for living, which affects the demographic trends. The employment rate in small towns drops below the republic's average and approaches the values for rural areas, which indicates deteriorating economic conditions and employment opportunities (Figure 2a). Lagging behind the cities and medium-sized towns triggers population outflows and induces a negative demographic dynamic. The economic dependency ratio expresses a favourable relation between the dependent and active population (Figure 2b). With a value of 134, small towns are close to the republic's average. However, the economic dependency ratio indicates a high dependency of the local population since almost a third of the population is dependent. Since an active person has to "support" him/herself and the average of 1.34 other dependents, the quality of life is not satisfactory. This imbalance mirrors the deteriorated population structure and scarce labour force in small towns.

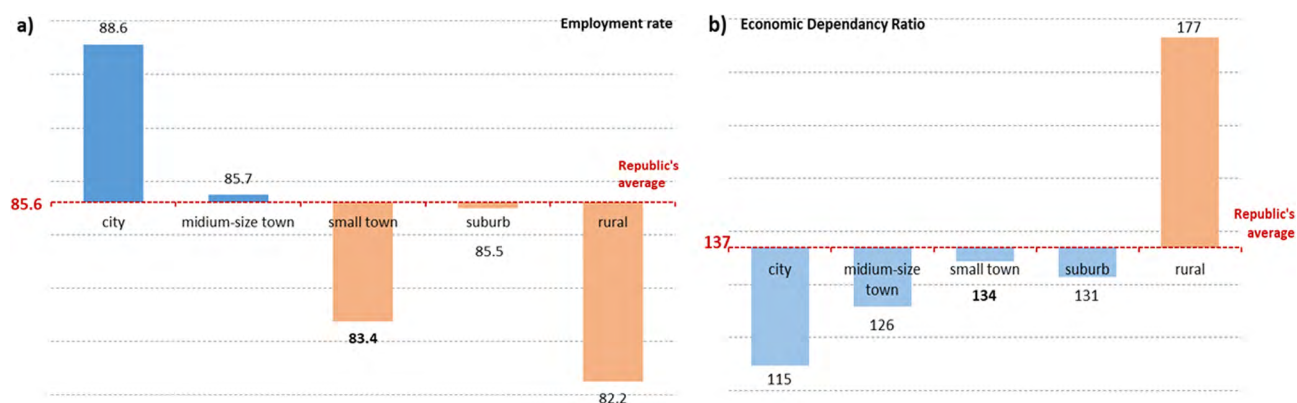


Figure 2. Positioning small towns in the settlements' network according to selected economic indicators: a) Employment rate; b) Economic dependency ratio.

Small towns recording the highest shares of the employed population are predominantly located in the Belgrade Region. In 16 small towns, the employment rate exceeds 90% (Figure 3a). The average share of employed persons across all small towns amounts to 83.2%. In contrast, the lowest employment levels are observed mainly in small towns situated in the Southern and Eastern Serbia Region, such as Bujanovac (67.8%), Vladičin Han (67.1%), Preševo (56.5%), Surdulica (50.7%) and Kuršumljija (41.3%). These findings indicate that certain small towns can be characterised as demographically vital (Bujanovac and Preševo), where a substantial underutilisation of the working-age population could be observed. Despite their relatively young age structure and favourable demographic potential, these municipalities exhibit low employment rates, pointing to structural weaknesses in the local labour market. Furthermore, Figure 3b shows this relationship, indicating that small towns with lower shares of employed population simultaneously record the highest proportions of unemployed residents.

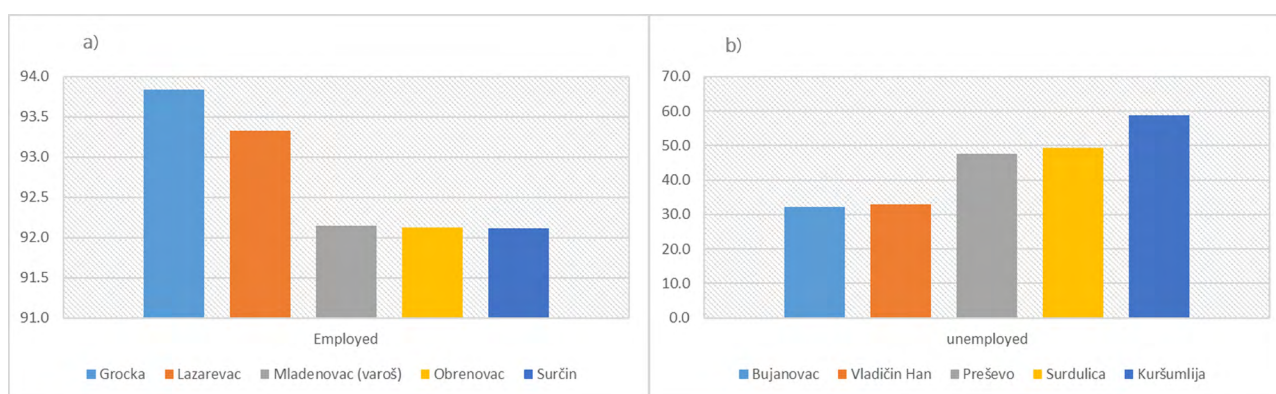


Figure 3. Top five small towns with the biggest employed (a) and unemployed (b) share, 2022.

3.2 Demographic development of small towns

Demographic changes in small towns reflect long-term structural processes shaped by socio-economic dynamics such as industrialization, migration flows, and subsequent functional transformation (Atkinson, 2019; Kokotović Kanazir, 2016). Analysing demographic trends in small towns over an extended period provides insight into the transformation of development phases, as well as into the key moments at which significant changes have occurred. In demographic terms, this refers to the transition from population growth to the phase of depopulation. In this paper, demographic indicators, including total population size, age structure, and measures of economic activity, are examined simultaneously as both outcomes and signals of broader social and economic restructuring. This approach provides a basis for understanding divergent development trajectories among small towns in Serbia.

The period from the 1960s to the 1980s is considered the most favourable in terms of demographic indicators in small towns. The average value of the population change index (Table 1) amounted to 126 in the period 1961–1971 and 121 in the period 1971–1981. Population growth was recorded in as many as 72 settlements, while in 13 small towns the population size doubled (e.g., Bajina Bašta, Ivanjica, Kladovo). Population decline was observed in only five settlements, predominantly in small towns located in the Vojvodina Region (Novi Kneževac, Senta, Srbobran).

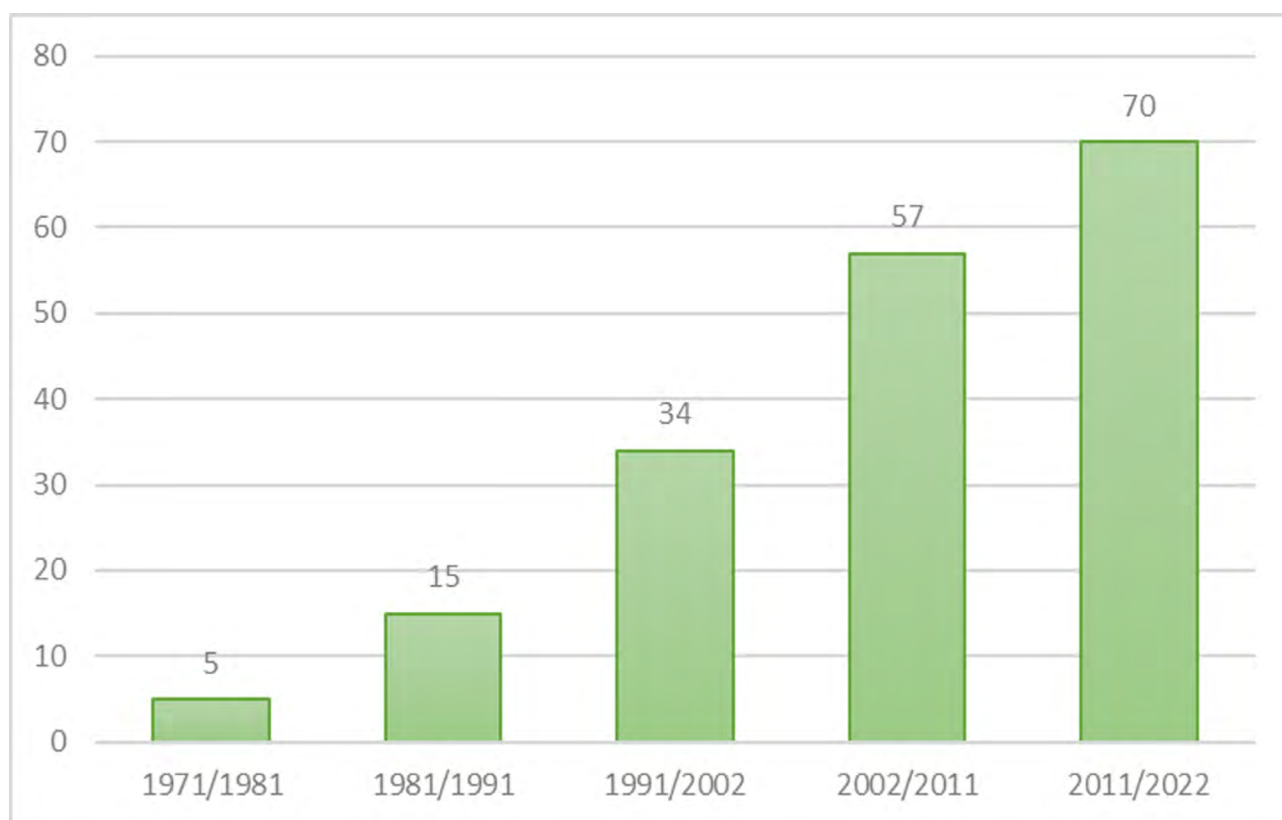
Table 1. Population change index in small towns, 1948–2022.

	1948/1953	1953/1961	1961/1971	1971/1981	1981/1991	1991/2002	2002/2011	2011/2022
Small towns	109.7	119.2	126	121.5	110.7	100.3	94.1	93.4

Source: Comparative overview of the number of population in 1948, 1953, 1961, 1971, 1981, 1991, 2002, 2011 and 2022, database, *SORS, 2023a*.

The 1980s marked a slowdown in demographic growth and, in certain small towns, predominantly in the Vojvodina Region, an actual decline in population size. In the intercensus period 1981–1991 (Table 1), the average population change index amounted to 110.7, while population decrease was recorded in 15 small towns (e.g., Bačka Topola, Kovin, Kanjiža). During this period, the most intensive population growth was observed in towns with predominantly Muslim and Albanian populations (such as Tutin and Bujanovac), in small towns located in the vicinity of Belgrade (Lazarevac), and small towns with merging tourism development potential (Zlatibor).

By the late 1990s and the early 2000s, small towns in Serbia experienced a more pronounced decline in population. According to the 2002 census, the average population change index amounted to 100.3 (Table 1), while the number of towns recording population decrease almost doubled compared to the 1981 census, reaching 34 settlements (Figure 4). In this period, several small towns lost 10% or more of their population, e.g., Majdanpek (85), Lapovo (85), Ada (88), etc. On the contrary, more significant population growth was recorded in Zlatibor (139), Čajetina (122), Sremski Karlovci (117), and Surčin (115.8).

**Figure 4.** Number of small towns with population decline 1981–2022.

The latest 2022 Census indicates unfavourable demographic trends in small towns in Serbia. The average population change index is 93.4, while population decline is recorded in 70 small towns. This represents almost 90% of the total number of small towns in Serbia. In 15 settlements, the population decreased by more than 15%. The lowest population change index was recorded in Palić (70%), Senta (77.3%), Ada (77.6%), and Mol (80%). On the other hand, the highest population change index is recorded in a couple of small towns in Serbia, such as Zlatibor (131), Surčin (113), Tutin (110), and Ub (108).

The analysis of the average share of age groups according to the size categories of small towns (Table 2) reveals pronounced differences in their demographic profiles and reflects their current demographic condition, indicating future demographic prospects. In the smallest population category (up to 2,000 inhabitants), a relatively high share of children aged 0–14 is observed compared to other categories, alongside a notable proportion of the population aged 65 and over (16.3%). In the size categories ranging from 2,001 to 5,000 and from 5,001 to 10,000 inhabitants, the process of population ageing is evident, with the share of the elderly reaching 29.8% and 28.5%, respectively. At the same time, the proportion of children and younger working-age population remains low, indicating a long-term unfavourable trend in natural population change. These categories also record slightly higher dependency ratio values, consistent with the observed age structure.

Table 2. *Average share of Age groups according to the population size of small towns, 2022.*

Population size	0–14	25–34	15–64	65	Total dependency ratio
< 2.000	21.7	15.7	61.9	16.3	0.6
2001–5.000	9.9	10.5	61.1	29.8	0.8
5.001–10.000	11.7	9.5	60.4	28.5	0.7
10.0001–15.000	10.5	10.7	60.3	29	0.7
15.001–20.000	11.7	9.8	57.2	31	0.8
>20.001	12.4	11.5	62.9	24.6	0.6

Source: *SORS, 2023b.*

The category of small towns with up to 20,000 inhabitants is characterized by pronounced unfavourable age-structure conditions, with the share of elderly of up to 31%. The dependency ratio of 0.8 indicates an exceptionally high burden on the working-age population, rendering this group of small towns particularly demographically vulnerable, especially in the context of future demographic development. By contrast, a small number of towns with more than 20,000 inhabitants stand out with a relatively more favourable age structure. In this group, the share of the working-age population is the highest (62.9%), while the proportion of the elderly is lower (24.6%). The higher share of the younger working-age population (11.5%) indicates greater economic development and a stronger position within the labour market.

3.3 Functional Transformation of the Small Towns

The functional features of the small towns are very heterogeneous, and their development is marked by different dynamics and patterns. Certain settlements in Serbia acquired the small town status based on the specific functions developed in the settlement. However, the development trajectories of the small towns indicate that this status was not supported continuously by financial and institutional capacities, and most of the small towns experienced demographic shrinkage and economic decline.

In order to determine the development trajectories of small towns, their functional orientation has been observed in the period 1981–2022. It has been noted that their development is shifting towards specialization, pronounced in the service sector, while production and industry, including agriculture, are gradually declining.

The functional orientation of small towns in Serbia was diverse during the 1980s (Figure 5a). The agriculture and primary sector play a marginal role in shaping their development. There was no small town with the dominant agrarian function, and several settlements express some of the functional variety with the presence of the primary sector. Agriculture, as a primary activity, has been identified mostly in small towns located in the Vojvodina Region, associated with the industry sector (Mol) or service activities (Srbobran, Rumenka, Kać). Secondary role supported by industry was recorded in a number of Vojvodina's small towns (Crvenka, Titel, Palić, Novi Bečej), while in Preševo and Tutin it represents a complementary activity to the service sector. In the 1980s, the dominant activity in small towns was industry, since the majority of these settlement types have been grouped in the industry section or variety (Figure 5a). Some of the small towns represent strong industrial centres (e.g., Sevojno, Trstenik, Kostolac, Priboj, Majdanpek, Aleksandrovac, etc.). Industry as a dominant activity complemented by services is represented in 24 small towns with dispersive spatial distribution (Temerin, Vrbas, Bačka Topola, Vladičin Han, Sjenica, Raška, Požega, Smederevska Palanka, Čajetina, etc.), while the secondary role in the corpus of service-industrial activities is evident in 17 small towns (Grocka, Kovin, Velika Plana, Svilajnac, Bujanovac, Stara Pazova, Sremski Karlovci, Lazarevac, Čuprija, Ivanjica, etc.). Orientation toward service has been recorded in small towns with specific functions, e.g., Zlatibor, Vrnjačka Banja, Sokobanja, Banja Koviljača, Surčin, etc.

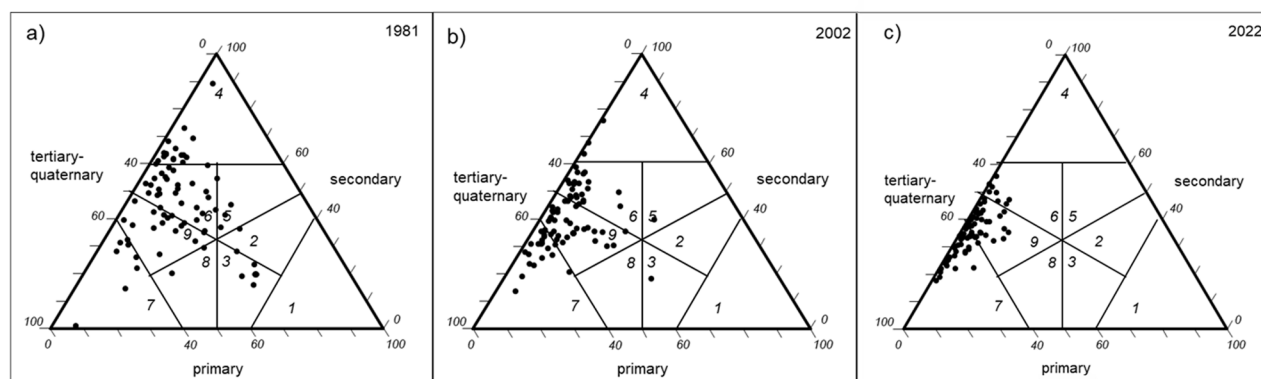


Figure 5. Functional orientation of the small towns, 1981 (a), 2002 (b), and 2022 (c).

Note: 1 – agrarian; 2 – agr.-industrial; 3 – agr.-service; 4 – industrial; 5 – ind.-agrarian; 6 – ind.-service; 7 – service; 8 – service-agrarian; 9 – service-industrial type

A subsequent functional shift has been observed in the 2000s, commonly a transfer from the agrarian and industrial sectors toward services and mixed functional types (Figure 5b). Agriculture and industry faced decline, reflected in the decreased number of small towns with functional orientation in this activity sector. Agriculture dominantly shaped the economy only in Srbobran, while in Mol, its influence is associated with industry. The economy of small towns was marked by the process of deindustrialization. The industry has remained the most important activity in Lazarevac, Majdanpek, and Kostolac, while other small towns faced a serious decline at the beginning of the 2000s, with the prevailing service sector. Industry associated with services kept the important role in the small towns' economy for 23 settlements (Sevojno, Ivanjica, Svrlijig, Crvenka, Vladičin Han, Knjaževac, Nova Varoš, Trstenik, Kuršumljija, Aleksandrovac, Apatin, Vrbas, etc.), and in 30 small towns it has been replaced by services and quaternary activities due to intensive decline and economy transformation (Priboj, Lapovo, Velika Plana, Grocka, Bačka Topola, Titel, Smederevska Palanka, Obrenovac, Mladenovac, Surdulica, Požega, Stara Pazova, Dimitrovgrad, etc.). A significant number of small towns have economies that rely dominantly on services and other non-productive activities. This group of small towns encompasses not strictly mentioned touristic settlements but also underdeveloped small towns (Bela Crkva, Petrovac, Tutin, Negotin, Šid, Preševo, Svilajnac, Raška, Ćuprija, Bujanovac, Ub, Aleksinac).

The recent period shows that the economy of small towns has shifted toward a specialization in the service sector and pronounced quarterly activities in underdeveloped municipalities. The functional orientation of small towns has been marked by three types, where services participated dominantly or complementarily (Figure 5c). Agriculture, as an activity that shapes the functional profile of small towns, has been absent, and the industry minimized. Deindustrialization is a continuing process which has resulted in a drop in industry production and its significance. Industry has persisted as a primary activity, associated with services and quarterly activities, in eight small towns (Kostolac, Majdanpek, Arilje, Lazarevac, etc.) and marginally supports the economy of 28 small towns next to the service sector (Srbobran, Bačka Topola, Vladičin Han, Svrlijig, Sevojno, Aleksinac, Trstenik, etc.). The remaining 42 small towns rely on services and dominantly quarterly activities due to shrinkage and a continuous negative economic trend.

4 Development trajectories of the small towns in Serbia

Small towns in Serbia have undergone a serious transformation and faced demographic shrinkage; however, they still have favourable living conditions (Zavodnik et al., 2008; Ljubenović et al., 2022). Their capacity represents a certain reservoir of demographic and developmental potential, facilitating better territorial cohesion, which could reduce negative demographic and migration flows in their surroundings (Pirisi & Trócsányi, 2014). These potentials offer a favorable living "quality" despite the restructuring of small towns' economy and mostly negative demographic trends (Bański & Mazurek, 2025).

The demographic development of small towns in Serbia during the second half of the 20th century, did not follow a linear trajectory but was significantly shaped by political, socio-economic, and functional changes. In the post-war period, small towns in Serbia expe-

rienced intensive demographic growth, largely driven by industrialisation and rural–urban migration (Kokotović Kanazir, 2016). Their average population size had an increasing trend, positioning them as local employment centres. The most pronounced population growth was recorded in towns with highly developed industrial or administrative functions, while slower demographic dynamics were present in more isolated, or functionally less developed towns (Miletić, 2008). Demographic growth combined with a favourable age structure further strengthened the role of small towns within the settlements network, making them key drivers of local development in this period.

Between 1981 and 2022, the majority of small towns experienced a decline in processing activity sectors and population shrinkage. From the late 1980s onwards, small towns faced an intensive population decline, due to out-migration towards larger urban centres (Lutz et al., 2001; Pirisi & Trócsányi, 2014). Previous studies indicate a direct relation between the mentioned demographic trends and changes in the functional structure of small towns, which were reflected through labour market contraction and reduced migration activity (Spasić, 1984; Filipović et al., 2016). Industrialization, development of services, and metropolization ensured that many of the functions typical of small towns were being taken on by large centres (Bañski, 2021), which caused their gradual shrinkage. Deagrarianization and deindustrialization marked the economy of these settlements. Agriculture was marginalized in the development of small towns, while industry remained important only for a few small towns in the industrial regions that successfully underwent the transition period. A continuous decline was pronounced in agriculture. This activity maintained employment levels at approximately the same level in 1981 and in 2002 for small towns in the Vojvodina Region, reflecting the advantage of the processing sector over the services. However, agriculture in these towns faced a rapid decline in the engaged active population, which reflects the prevailing services sector. On the other hand, the industry underwent a serious transformation. This activity faced a significant drop, expressed through a rapid decline in the share of the active population in this activity sector, where the number of active people in the majority of small towns has been halved. The most intensive decline has been recorded in mono-industrial small towns (e.g., Trstenik, Priboj, Prijepolje, Sevojno, Smederevska Palanka, Aleksandrovac, etc.) and small economies (Raška, Aleksinac, Futog, Mladenovac, Bela Crkva, Nova Varoš, Čajetina, etc.).

The turnover was identified during the transition period, when these small towns failed to reorganize and restructure their economy, which is typical for “loser” regions and declining economies (Gorzelać, 1998). By the late 1990s and the early 2000s, the majority of small towns entered the phase of depopulation, while they were simultaneously under the severe influence of deindustrialization, economic crisis, loss of former development functions, and subsequent privatisation processes. During this period, they were strongly affected by the collapse of industry, leading to a sharp reduction in employment opportunities. Only 17 small towns did not face shrinkage of the industrial sector in the observed period (Obrenovac, Grocka, Ivanjica, Beočin, Lazarevac, Lapovo, Rumenka, etc.). The serious drop in the agrarian sector and decline or stagnation in the secondary sector caused economy’s restructuring and pronounced tertiarization, illustrated by the “transformation of the economic system, transition from industrial production to development and diversification

of tertiary activities” (Miletić, 2008, p. 55). Consequently, migration flows were redirected towards larger urban centres (medium-sized and large cities), while small towns gradually lost their role as key drivers of local development.

The development trajectory of small towns in Serbia was dominantly determined by the increasing service sector. The tertiarization of small towns’ economy associated with population change has been expressed dually. Four types of small towns have been identified based on the intersection of the population change index and the tertiarization index (Figures 6 and 7).

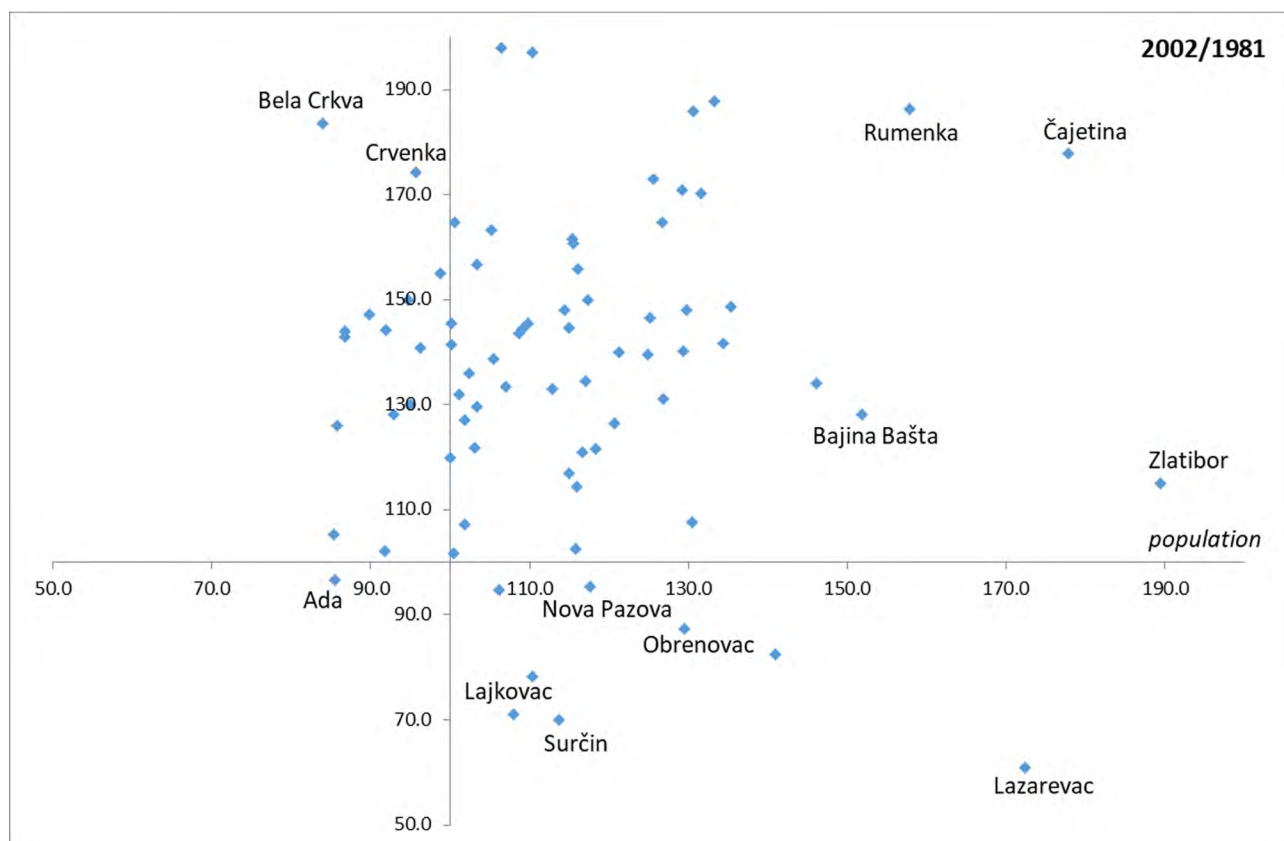


Figure 6. Development trajectory of the small towns based on population change index and tertiarization index, 2002/1981.

The growth of services between 1981 and 2002 has been identified in 69 small towns (Figure 6). In 1981, only 15 small towns recorded dominance of the processing sectors, while in 2002, 40 small towns’ development relied on services. Small towns have largely been characterised by an ageing population and a reduction of the working-age contingent, particularly among younger age groups that represent a crucial development potential (Drobnjaković et al., 2022; Marinković & Galjak, 2025). Introducing a demographic trend, a differentiation of this group of settlements could be observed. It has been confirmed that small towns can have various demographic structures, patterns, and trends (ARL, 2019), which induce differentiation in this settlement type. The negative population and service trend is identified only in Ada, whose economy has been shaped by the secondary sector, which recorded a slight growth, and the relative relation has affected service decline. Demographic shrinkage

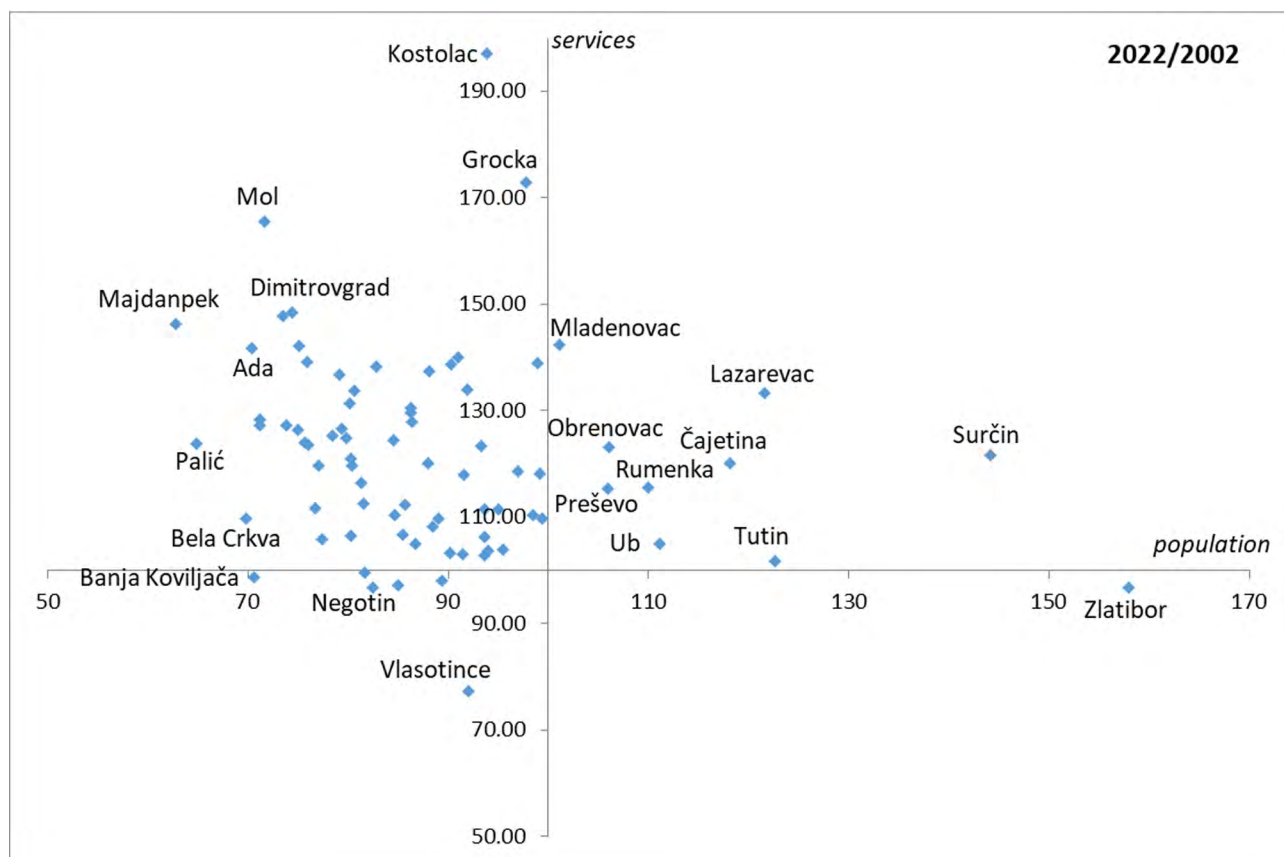


Figure 7. Development trajectory of the small towns based on population change index and services change index, 2022/2002.

dominantly marked small towns in the Vojvodina Region, and Ada is one of those that have faced the most intensive decline. Negative population change associated with the increased service sector marked 14 small towns. Bela Crkva is one of the small towns that have experienced the expansion of the service sector, since its functional orientation has been determined by tourism and complementary activities. On the other hand, the majority of small towns in the Vojvodina Region have faced the depopulation process, which shaped their development trajectory.

Eight small towns recorded a population increase accompanied by a decrease in service participation in their economy. Most of these small towns are located in the Belgrade Region, and have thus become absorbers of the population flows and growing industry concentrated in the capital city (Nova Pazova, Surčin) or with a strong orientation toward the secondary sector (Lazarevac, Obrenovac, Majdanpek). It underpins the similar development pattern which is recognized within the successful small cities in the vicinity of the regional centres in Poland (Bański & Mazurek, 2025). The fourth group of small towns has been experiencing population growth as a result of internal migration and population redistribution, with a simultaneous growth in the service sector (Figure 6). This group involves various settlements, from small towns oriented toward tourism (Zlatibor, Čajetina, Banja Koviljača, Sokobanja) to those that replaced processing activities with the quaternary sector, caused by certain underdevelopment and industry decline (Kovin, Surdulica, Vladičin Han, Raška, Aleksandrovac, Tutin, Preševo, etc.).

The period 2002–2022 brought significant changes (Figure 7). Today, the population in small towns in Serbia is in the final phase of demographic transition, characterized by low reproductive rates, i.e., low birth rates and high mortality rates, pronounced population ageing, and increasingly evident spatial disparities (Kokotović Kanazir, 2016). This period represents a turning point in which demographic trends began to follow a downward trajectory, migration inflows weakened, and consequently, the functional structure of small towns started to erode, signalling the onset of adverse trends in the years that followed. On the other hand, the process of tertiarization has been in continuous progress. The growth in the tertiary-quaternary sector has been identified in 71 small towns. The small towns are dominantly classified in the category marked by population decline and rapid tertiarization (62 small towns). This settlement group encompasses various types of small towns. It has included settlements with an economy oriented toward services (Bela Crkva, Palić, Sokobanja, Vrnjačka Banja, Sremski Karlovci), continuously shrinking industrial small towns (Majdanpek, Trstenik, Priboj, Smederevska Palanka, Aleksandrovac, Vladičin Han, Bačka Topola, Sevojno, etc.), and small towns with weak economy that rely on services and quaternary sector (Bečej, Bujanovac, Sjenica, Tutin, Bajina Bašta, Čuprija, Lebane, Odžaci, etc.). The most intensive population decline and rapid shift from secondary to the services sector has been identified in Majdanpek and Mol (Figure 7).

The Kostolac and Grocka recorded the emphasized service growth associated with a slight population decline. The second settlement group, marked with a negative population change index and service decline, includes six small towns. The extreme represents Vlasotince, a small town with the most intensive decline of the service sector, accompanied by a slight population decline. Functional orientation in this small town is driven by entrepreneurial activities in the secondary sector, which has undergone restructuring. The remaining five small towns have recorded a slight oscillation in the services sector associated with different intensities of demographic decline (Figure 7). Only one small town, that of Zlatibor, is placed in the group marked by population increase and service decline. This small town has recorded continuous population growth, while oscillation occurred in the tertiary-quaternary sector, caused by services stagnation after rapid growth in the previous period and a slight decline in quarterly activities.

Growth in both variables has been recorded in nine small towns (Figure 7). The fourth group functionally encompasses various settlements with different drivers of population increase. Small towns that have managed to redefine their economic structure through specialisation or by orienting towards services, tourism, or other activities have demonstrated greater demographic resilience. On the other hand, in towns that have remained without a clear functional profile, unfavourable demographic trends are expected to continue, manifested through further out-migration, loss of working-age population, and the deepening of population ageing (Drobnjaković et al., 2022; Kokotović Kanazir et al., 2024). Six of them are located in the vicinity of big cities, which attracts population influx. Migration represents one of the key phenomena that has a significant influence on the development and transformation of small towns (Bański & Mazurek, 2025). Traditionally, migration in small towns has followed two patterns: first, movement from the rural surroundings towards small towns, which has been an important channel for modernization and urbanization of the rural population, and

second, migration from small towns towards larger urban centres (Trócsányi et al., 2018). These two processes resulted in a positive migration balance and enabled population growth in a considerable number of small towns (Drobñjaković et al., 2023). However, these small towns differ in their functional orientation. Mladenovac and Lazarevac recorded the most pronounced service growth, however, with a different background. The economy of Lazarevac is dominantly shaped by industry. In the 2002–2022 period, the service sector recorded a slight increase, however processing sector was prevalent. On the other hand, Mladenovac underwent a serious transformation of the economy with its industrial activities halved. The activity shift involved increasing services and particularly quaternary activities. Population growth in Preševo and Tutin relies on ethnic composition, while service growth is based on quaternary activities due to the weak economy. Despite mostly unfavourable trajectories and population decline caused by deindustrialization and function losses, small towns in Serbia have remained valid nodes in the settlement network, which could be recognized in other post-socialist countries, as well (Novotný et al., 2016).

In many Serbian small towns, the observed tertiarization trend does not necessarily correspond to enhanced economic capacities in terms of productivity, income generation, or value-added creation. Schafran et al., (2018) raise questions regarding the role of the service sector in shaping urban development and rebuilding of cities, and how helpful this sector is under the current economic conditions. The observed restructuring often does not reflect economic upgrading, but an internal redistribution of employment. Although employment data indicate a growing share of tertiary-quaternary activities, available income statistics at the municipal level (SORS, 2004; referring to 2002 data) suggests that the secondary sector generated substantially higher income compared to the service sector, despite employing fewer people. While these data are not available for later years and therefore cannot be systematically integrated into the longitudinal model, they provide indicative evidence that sectoral expansion does not automatically correspond to increased economic capacity. On the other hand, the growth in the service sector could be dominantly assigned to quaternary activities. It may indicate the strengthening of institutional and public-service capacities in small towns, but it does not necessarily translate into a broader economic expansion or enhance their role within the settlement network. The expansion of quaternary employment reflects the concentration of administrative and social services serving local populations rather than indicating formal tertiarization. That indirectly indicates that the transformation may be interpreted as quasi-tertiarization. This is a process of a quantitative shift in sectoral structure that suggests functional change rather than a qualitative enhancement of economic capacity and developmental resilience of small towns. This divergence between formal tertiarization and limited economic expansion explains why demographic stabilization does not follow the growth of service activities.

5 Conclusion

The presented longitudinal analysis suggests a strong structural association between the demographic development of small towns in Serbia and their functional transformation. These processes should not be interpreted as a strictly linear causal sequence. The interac-

tion between economic decline and demographic out-migration operates through cumulative feedback mechanisms, in which functional weakening accelerates population decline, while demographic shrinkage further limits the economic base of small towns. Functional transformation has been the most significant driver of demographic change, providing the basis for the analysis of functional restructuring and development trajectories. Periods of demographic growth coincide with phases of industrial expansion and functional consolidation, while phases of depopulation accompany deindustrialisation, labour market contraction, and the loss of leader roles in local, regional, and consequently national development. These processes should be interpreted as mutually reinforcing and historically conditioned and overlapping rather than as a simple one-directional causal sequence. The results presented in this paper highlight the development trajectories of small towns through the identification, analysis, and explanation of the demographic and functional features, which could be considered as relevant not just in the scope of Serbia, but also in the wider region. Considering all, the current demographic situation in small towns is not exclusively the result of demographic factors such as depopulation, emigration, and population ageing, but also reflects levels of demographic resilience and the capacity to adapt to newly emerging socio-economic changes. Functional diversification has primarily manifested through changes in local labour markets, deepening the differences among small towns.

Between 1981 and 2022, it was observed that the majority of small towns experienced negative shifts in functional transformation. The most intense changes were observed in small towns with dominant industrial orientation (Majdanpek, Priboj, Vladičin Han, Trstenik) and in those that faced extremely negative demographic trends, resulting in a reduction of the labour force and consequently underdevelopment (Knjaževac, Kuršumlija, Dimitrovgrad, Svrlijig). Negative development changes can also be seen in small towns with weak economies (Bela Crkva, Ćuprija, Tutin, Bujanovac, Preševo, etc.). In such small towns, a gradual increase and dominance of the quaternary sector can be observed, which, due to the economic decline, assumes a leading role in the employment of the local population. The weakest transformation was recorded in the majority of small towns in Vojvodina and in those that already had a defined economic profile (Zlatibor, Surčin, Vrnjačka Banja, Negotin, Kostolac). Certain positive transformations were recorded in small towns, functionally oriented towards specific activities that redefined their functional role (Palić, Arilje, Čajetina, Lapovo, Futog, Rumenka, Mol, Lazarevac, Srbobran).

Small towns represent a distinct settlement type that requires transdisciplinary research formulated into a comprehensive theory and research approach that integrates spatial, social, cultural, political, and other aspects of their development. In this regard, future research should incorporate the qualitative dimension of functional restructuring to better distinguish between formal sectoral shifts and substantive economic transformation. Such an approach would provide a deeper understanding of the developmental capacity and long-term resilience of small towns in Serbia.

Data availability statement

Data are available from the authors upon request.

Coauthor contributions

Vlasta Kokotović Kanazir: Conceptualization (Developing and refining research ideas and plans), Methodology (Managing and organizing research data), Formal Analysis: analyzing data using statistical, mathematical, or other formal techniques, Visualization (Creating visual representations of data and findings), Writing – Original Draft)

Marija Drobñjaković: Conceptualization (Developing and refining research ideas and plans), Methodology (Managing and organizing research data), Formal Analysis: analyzing data using statistical, mathematical, or other formal techniques, Developing or selecting the methodologies used in the research, Creating visual representations of data and findings, Investigation, Writing – Review & Editing, Validation (Verifying the accuracy and validity of findings)

Milena Panić: Conceptualization (Developing and refining research ideas and plans), Developing or selecting the methodologies used in the research, Supervision (Overseeing the research project including mentoring and guiding junior researchers), Writing – review & editing, Verifying the accuracy and validity of findings

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The Integration Challenges in the Educational Context – A Comparative Perspective of the Refugees in Poland and in the Netherlands

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This text examines the specificities of migrants' integration by analysing the attitudes and expectations of the Ukrainian war refugees in Poland and their integration into the public education system, with a comparative perspective on the experience of the Moroccan refugees in the Netherlands. In both situations, the everyday challenges of growing multiculturalism in school environments are approached. The analysis presents challenges in integrating foreign-born students and their families into the public education system and mainstream societies in both selected countries. In this research, the authors used standardised questionnaires with both closed- and open-ended questions, distributed to a group of teachers (N=101) working in a multicultural environment in Poland. The results are presented in the text, with an emphasis on the challenges of teaching and general work with foreign-born pupils both in the Netherlands and Poland. In the discussion, the authors propose a list of challenges for integration and coexistence, as well as the potential for future return migration. Finally, an overview of dos and don'ts regarding national policies for settling and integrating refugees is provided. Both examples are treated according to their potential to be generalised in the integrational context of public education policies, the school environment, and the challenges that arise when the multicultural environment of pupils, teachers, and parents becomes a new reality.

Keywords: integration, multicultural education, Ukrainian war refugees, foreign-born pupils, international students

1 Introduction

Integration as a process can be analysed from many angles, dimensions, communities, and spaces (Gatrell, 2013). The authors selected two cases: the Dutch and the Polish, to show the general context of migratory strategies introduced in the specific cases, the educational system in both countries, and its integrational potential. Even if the two cases are based on

different contexts, they both demonstrate similar challenges and the ways these challenges were responded to. In both cases, a massive influx of newcomers necessitated the adaptation of various institutions of mainstream society. Among specific cases, the educational system in both countries, Poland and the Netherlands, were analysed. The research question we want to pose is: how these two examples, the Dutch and the Polish, can be compared to identify best practices for integrating refugees amid mass inflows and states' responses to the challenges ahead. Educational context is particularly relevant here as it shows the scale of challenges and the undertaken actions, as school, apart from its educational function, is perceived as the main integration institution incorporating new generations into the society, while transmitting social norms and values (Centre for Civic Education, 2023a, 2023b; Chrostowska, 2024).

After the Russian invasion of Ukraine on 24 February 2022, millions of people fled the country. Just three months after the invasion, approximately 2.9 million Ukrainians had fled to Poland (mainly women aged 18–65 – 40%, and children – 26%, as well as 2% elderly; source: Necel, 2024). This is the sum of two types of Ukrainian refugees: those who had been in Poland before the war (1.35 million) and those who arrived after the war started (1.55 million) (all data after National Bank of Poland [NBP], 2022). Though Ukrainian migration waves were present in Poland before 2022, the immigrants usually continued to take a circular approach to their move to Poland, migrating to and from, so technically, they can be classified as labour migrants even though many of them fled due to the conflict and Russian attacks in the eastern areas of Ukraine, including Crimea Peninsula. This pattern of working migrants has completely changed in 2022. According to the data the Polish Border Guard collected, the Polish Ukrainian border noticed a high increase in two-way border crossings – in 2022 alone, there were 9,677,000 entries and 7,611,000 departures. In the meantime, over 1 million Ukrainians in Poland were granted a PESEL (Polish ID) number, the registration procedure that gave them access to free healthcare, education, and various state-financed services in Poland. During the first month of their stay, they could travel across the country using public transportation free of charge and the estimated 25% of the refugees were hosted by Polish citizens. The quantitative change was caused by the invasion of Russia in February 2022, resulting in a more significant number of Ukrainian refugees who are still living with the desire to move back to their homeland, but could not be due to a variety of reasons connected with war and military actions, demolition of infrastructure, perception of threat, or military mobilization. However, the main issue is not in numbers, but in the modes of integration following the drawn context. The pre-2022 migration wave consisted mostly of working-age people, with limited interest in permanent settlement. What happened after February 2022 was the feminisation of the Ukrainian refugee community (Andrews et al., 2023), which led to the need for inclusion not only in social and labour market segments, but also in educational services for children. This context was relatively new to Poland, which had, for years, faced high out-migration and negative net migration rates. Duszczuk and Kaczmarczyk (2022) stated that “immigration to Poland also had several important qualitative features, starting with a minimal number of source countries (with a clear majority of post-Soviet countries and Ukraine as the most important country of origin)” (p. 165). The main reasons of in-migration were: the weak (although developing) Polish economy, relatively high unemployment rates (above 10%), and low labour demand since the early 1990s. What played a role here, initially,

was the fact that Polish society was not too enthusiastic about refugees' arrivals in general. Before February 2022, less than 45% of Poles declared their approval towards refugees from conflict regions, and 33% professed their support for granting refugees any temporary protection status (Lazarenko & Rabinovych, 2024), while a slightly higher rate – about 50% of the public opinion – declared interest in helping Ukrainian refugees. However, just after the Russian aggression, this rate changed and skyrocketed to 97% of Poles expressing positive attitudes towards Ukrainian refugees, and over 60% declaring their direct involvement in one of many forms of help and support to the refugees in their private households (including providing shelter and temporary housing free of charge, accessible transportation services with private cars, and many other forms of volunteering support, see Andrews et al., 2023). Similar high rates of perception of international Polish-Ukrainian relations were expected – over 90% of the poll respondents declared their positive attitude.

The integration challenges exceed social needs (Gońda, 2025; Grabowska et al., 2025; Polska pomoc Ukrainie, 2025) and can be analysed across various contexts. The authors chose to focus on educational practices (Tędziągolska et al., 2022; Directorate-General for Education, Youth, Sport and Culture, 2024) to determine which integration challenges occurred, according to teachers of both Polish and foreign origin.

This study analyses how such (un)conscious desire and external circumstances may affect the integration process of Ukrainian students and their families in Poland. By exploring public statistics in Poland and the empirical data collected from teachers in Polish schools (computer-assisted web interviewing [CAWI], N=101), this study presents the challenges Polish professionals face in integrating Ukrainian pupils and their families into the public education system and the mainstream society. By comparing these challenges with the existing theory concerning similar challenges in the Dutch education system, this study aims to provide an overview of the challenges faced by policy actors and active members of educational initiatives dealing with refugees. The selection of these two groups is based on the authors' research and, to some extent, the comparability of the newcomers' experiences and their adaptation in their new settings, as well as on their (Ukrainian) perspectives on integration challenges (Mieroszewski Centre, 2024).

2 Literature review: refugees and integration – terminologies and phenomena

When studying the flow of migrants who are also viewed as refugees in any national context, we realised that it is essential to make a difference between 'non-forced migration' and 'forced migration' due to, for example, war. The first transforms those who move elsewhere into 'migrants', often described in the existing literature as 'labour migrants' (Skeldon, 2008), while the latter transforms those affected into 'refugees' (Loescher, 2021). What both these groups have in common is that they leave their homeland to seek a better future for themselves and their relatives elsewhere. And yet, they are often treated differently upon arrival. "Most non-forced migration is demand driven. People, once they know about opportunities elsewhere, and that itself is a function of education, will tend to move towards them" (Skeldon, 2008, p. 4). People settle in the country where they seek these opportunities and

often differ in long-term plans or goals. Some plan to stay and return only occasionally to their homeland. Others plan to leave after a specific time (de Haas, 2003). Such differences may depend on both the individual and the conditions in the homeland.

“The term ‘refugee’ first entered English to describe the Huguenots expelled from France in the seventeenth century” (FitzGerald & Arar, 2018, p. 389). At the beginning of the twentieth century, many groups, such as White Russians, Armenians, and German Jews, were labelled as refugees by European government administrations (Gatrell, 2013). During that same period, Europe had an emerging sense that refugees deserved protections that other mobile persons did not (Gatrell, 2013). However, there is still debate in both the academic and public spheres over whether certain groups and individuals are refugees or “merely” migrants (FitzGerald & Arar, 2018). The open deterrence of refugees became less politically legitimate, even as the criteria for selecting these social groups in settler states continued to be deeply embedded in Western economics (Kofman et al., 2017; Blankvoort et al., 2024). After World War II, the Allied nations drafted the 1951 Convention Relating to the Status of Refugees. In Article 1 A.2, the Convention describes a refugee as someone who, because of a well-founded fear of persecution based on their race, religion, nationality, membership in a particular social group, or political beliefs, is outside their home country and cannot—or, due to that fear, does not wish to—seek that country’s protection. It also includes individuals without a nationality who, for the same reasons, are outside the place where they previously lived and cannot or do not want to return (FitzGerald & Arar, 2018). The existing literature shows that the unwillingness to return to the homeland often coexists with the desire for such a situation to change. Automatically, the way refugees and displaced people integrate into the host country is deeply affected by the understandable desire to return home. As Tabor and Milfont (2011) stated, when examining any migration process, it is essential to consider why people leave their countries (along with their jobs, friends, and familiar surroundings) and how they experience their migration. It is necessary to consider the experiences of those who move between countries and their descendants (Ouacha, 2024). The refugee and forced-migration context of Ukrainian migrants might be compared with the former experience of adaptation in the Netherlands, when the country had faced a comparable wave of newcomers decades earlier, and adapted its educational system and the country as a whole to the situation. Similar challenges in long-distance caring relations have been discussed in the literature on children in Polish migratory families (Kloc-Nowak & Ryan, 2023), in Ukrainian families, and among younger children attending schools in their new settings who needed to adapt to the situation.

The Stages of Change model (Tabor and Milfont, 2011, p. 825; see model in Figure 1 below) can, therefore, be used to develop a deep understanding of the effects of migra-

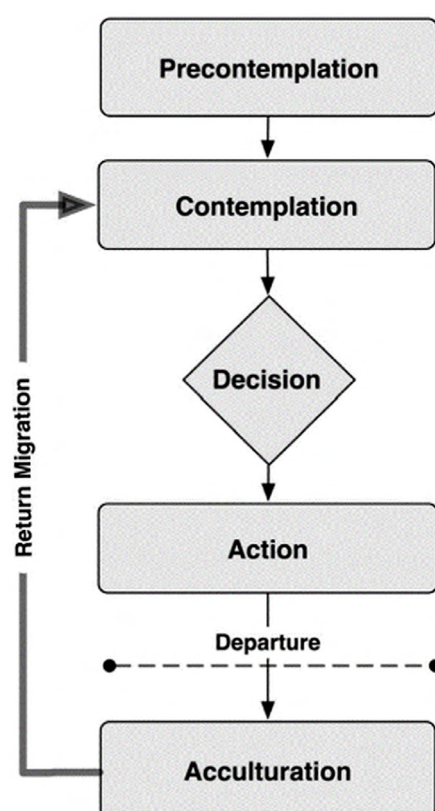


Figure 1. *Stages of Change model.*

Source: Authors; see Ouacha (2024) for further details.

tions and migrants' or refugees' integration, including children and youth, such as posttraumatic stress disorder (PTSD) or, at least, problems with self-regulation and self-expression (Suarez-Orozco et al., 2018), or language proficiency challenges (Seredyńska-Abou Eid, 2017).

Tabor and Milfont's model consists of five stages forming the migration process. The actual departure separates this model's first two and the last two parts from the homeland location. The first stage is pre-contemplation, i.e. the period in which the individual has not seriously considered moving abroad. The second stage, contemplation, examines the possibilities of moving out of the country of origin (Ouacha, 2024). This period may begin before any opportunity arises to make this possible, or immediately after an unexpected opportunity (e.g., job offers). When potential migrants decide to move abroad, they proceed to the third stage, i.e. action. Although decision is a step in itself, the actual psychological ramifications are not felt until acting on that decision has begun (e.g., applying for residence, purchasing an airplane ticket, or informing extended family members). These challenges may lead to higher stress levels, thus demanding a coping response. The stress and coping framework are often used to examine the acculturation experiences of migrants and refugees upon arrival in their new country (Ward et al., 2001).

Further down in the model, migrants move on from the action stage, as they depart from the country of origin, and enter the final stage, that of acculturation, i.e. the process resulting from intercultural contact. Psychologists have researched this topic more thoroughly than the other stages in the model (Ouacha, 2024). The two most essential aspects that migrants and refugees face at this stage are psychological adjustment and sociocultural adaptation (Ward & Kennedy, 2001). Within the new cultural context, migrants and refugees decide how they would cope in a society that is different from their own. The choices involve a relative preference for maintaining one's culture and cultural identity (cultural maintenance) and for having contact with and participating in the host culture (cultural reference) (Berry, 1980, 2005). Berry's model of acculturation identifies four distinct acculturation strategies: integration, segregation, assimilation, and marginalisation. These strategies depend on how migrants and refugees relate to the culture of origin relative to the settlement culture (Berry, 1980, 2005). This is both on an individual and a collective level.

The experience of marginalisation can present migrants and refugees with an ongoing choice of whether to stay in the new country or return to their country of origin (Ley and Kobayashi, 2005). Ouacha (2024) adds that historical colonial relationships could shorten the cultural distance, but this is not always true. For example, Algerians also experienced marginalisation in France, even after their country had been a French colony for 130 years. This also happened with the Indonesians migrating to the Netherlands after Indonesia's independence in 1945 (Zara, 2022). What is particularly interesting about this case concerns the way that the complex Polish-Ukrainian relations would influence present-day concerns. Poland and Ukraine are neighbouring countries with an intense migratory interconnection and a shared multicultural history of conflict and cooperation, to some extent comparable to the postcolonial perspective due to Polish domination over Ukraine in the XVI – XVIII centuries and, partly, in 1918–1939. Last year, unexpectedly, opened a new chapter in the acculturation processes, the one whose ending is still unknown, where Ukrainian refugees in Poland are increasingly analysed as merely migrants, or just members of the Polish society. As this process is, in fact,

ongoing, it draws public attention, and so researchers interested in its uniqueness search for other good practices. In this text, we try to analyse and compare Polish and Dutch cases in their integrative contexts.

3 Regional Contexts of Poland and the Netherlands

Based on the existing literature, this study aims to compare the selected cases—those of Poland and the Netherlands—to assess how, and to what extent, it is possible to identify or update a model of education-based integration for newcomers in their new environments. Both countries have experienced significant inflows of migrants and refugees and have been attempting to adapt state institutions to better manage and support these populations. In Poland, the 2014 Russian annexation of Crimea triggered the arrival of an estimated one million Ukrainian forced migrants, whose integration was primarily linked to the labour market. The mass arrival of war refugees after February 2022—predominantly mothers with children—created an urgent need to adjust the education system to accommodate many new pupils and students (see [Eurostat, 2026](#)).

In the Netherlands, 113,000 migrants arrived during the 1990s ([De Valk et al., 2004](#)). Migration increased further after the country joined the EU, although this study focuses on non-EU contexts. Migration has long shaped Dutch society, and the diverse influences of migrant communities continue to fuel political, academic, media, and public debates. These debates often revolve around the expected level of integration of migrant and refugee groups in Western European countries (e.g., [Vermeulen & Penninx, 2000](#)). Large-scale research among the four main migrant groups in the Netherlands—Turkish, Moroccan, Antillean, and Surinamese—found that “perceived discrimination was the strongest negative predictor of host national identification” ([Verkuyten, 2016, p. 585](#); [de Vroome et al., 2014](#); see also [Tolsma et al., 2012](#)). The presence of criminal networks within Surinamese and Moroccan diaspora groups has been used by extreme-right politicians to justify polarizing political agendas ([Cankaya, 2017](#)). Yet empirical evidence shows that navigating a new society can be profoundly challenging for migrants, refugees, and their descendants.

Focusing on one of these groups, research on Moroccan migrants in the Netherlands shows that education for children was not an immediate priority after migration ([De Haas, 2003](#)). Only when local authorities had noticed that immigrant children were not attending school—and that parents were unaware of the necessity of them doing so—did social workers and community organizers begin advocating for their participation in education. As the literature indicates, many Moroccan migrants initially intended to return to their homeland ([Ouacha, 2024](#)). Consequently, schooling in Dutch institutions was not considered essential. It was only after a substantial number of families had collectively decided to settle permanently in the Netherlands that Moroccan children began entering classrooms across the country.

A quantitative analysis by [Bevelander and Veenman \(2006\)](#) comparing Moroccan and Turkish migrants in the Netherlands shows that age of migration, and education strongly influence the likelihood of naturalisation. When including indicators of cultural integration, gender differences become particularly significant ([Kee, 1994](#)). Turkish women scored high on modernization measures, giving them a higher probability of naturalising. According to

Bevelander and Veenman (2006), naturalised Turkish women also have better employment prospects, which is linked to language acquisition, familiarity with Dutch society, and alignment with the norms and values of the host country (Verkuyten, 2016). Their findings support the argument that “employment integration analysis speaks in favour of the idea that modern Turkish women from traditional areas in Turkey (...) seem to have a higher naturalization rate and once naturalized have better employment opportunities” (Bevelander & Veenman, 2006, p. 343).

The Surinamese and Antillean communities in the Netherlands present another compelling case. Due to the colonial relationship between the Netherlands and Suriname—which was a Dutch colony for nearly 300 years—and the continued constitutional ties with the Antilles, these groups can be considered (former) Dutch citizens. After Suriname gained independence in 1975, many Surinamese migrated to the Netherlands while maintaining strong connections to their homeland, which was developing its own national identity (Tolsma et al., 2012). Fearing the political and economic consequences of independence, thousands moved to the Netherlands under visa-free travel arrangements. In total, around 100,000 Surinamese migrated, representing a population that mirrored Suriname’s ethnic and class diversity (Ogle, 2011). Today, approximately 350,000 Surinamese live in the Netherlands—almost equal to Suriname’s current population of 400,000 (Hoefte, 1996).

All the cases described above demonstrate that limited commitment to the host country does not necessarily indicate disengagement or rejection of the host society. Low identification with the country of residence also does not imply weak personal or group identity (Verkuyten, 2016; Kreiner & Ashforth, 2004). Nonetheless, fostering a meaningful sense of belonging—both to the host society and to one’s own identity—remains an important and attainable goal for migrants and refugees, as well as for the institutions that support them. Taken together, the Polish and Dutch cases illustrate how different historical trajectories, migration patterns, and institutional responses shape the integration experiences of refugees and migrants. While Poland is currently navigating a rapid and large-scale educational adjustment due to recent refugee and migrant inflows, the Netherlands offers decades of accumulated experience with diverse migrant and refugee communities and long-term integration debates. Comparing these contexts provides valuable insights into how education systems can be adapted to support migrants and refugees more effectively, and how integration models must remain flexible to respond to shifting demographic and political realities.

The influx of refugees from Ukraine was positively received in neighbouring countries and contributed to an increase in favourable attitudes towards migrants and their presence in these countries. Public opinion, as well as public space, was full of pro-Ukrainian initiatives and corresponding forms of support. Research carried out by various organisations show very high support for accepting refugees in Poland – at 80% in spring 2022, according to the [Pew Research Center study \(2024\)](#), and up to 94% in March 2022 in a survey conducted by the Polish Public Opinion Research Center ([Centrum Badania Opinii Społecznej \[CBOS\], 2023a, 2023b](#)). As mentioned, before February 2022, the percentage of Poles supporting the admission of Ukrainian refugees did not exceed 50%, while the percentage of people who supported accepting refugees from outside Europe and enabling them to apply for asylum was 33%. There may be many reasons for the change – the most obvious being the tendency

to help people in need or the attack on the neighbouring country of Ukraine by Russia, the country which attacked and occupied Poland many times throughout history.

Of the already mentioned number of the Ukrainian refugees who crossed the border with Poland in February 2022, over 675,000 were children under 18 years of age, and they received official temporary status protection in Poland in November 2023. To determine the exact number of these children that participate in the Polish education system is not easy, because a significant share (approx. 1/3) continue distance learning in schools operating in Ukraine, and many register in the Polish education system, but do not continue their education there. Additionally, approximately 1.5 million Ukrainians have been issued a PESEL (Polish ID) number, enabling them to use free health care and other state-financed services just like Polish citizens (children and adolescents constitute 43% of this group). According to other data, the number of Ukrainians residing in Poland in mid-2023 exceeded 3 million. Due to the distribution of Ukrainian refugees mainly in cities, their estimated number in the largest Polish cities amounts to 20% of the current total number of the inhabitants, e.g. in Poznań, the empirical study was carried out with about 100,000 Ukrainians living there, compared to less than 600,000 of the city's regular inhabitants.

Regardless of the threats related to military operations in Crimea and the eastern areas of Ukraine, as well as the danger of shelling and air raids throughout the country's territory, the declared tendency to emigrate has decreased in Ukraine since 2021, while the percentage of people planning to stay and work in their place of residence has increased. The course of hostilities has affected the spatial distribution of those who declare their willingness to migrate. Still, the principle of willingness to stay in the country is visible in extensive census surveys and in the statements by the people with whom we conducted in-depth interviews in Poland. The decision to return is influenced not only by arguments related to the challenges of life in emigration (these challenges are visible despite the relatively straightforward, positive assessment of the attitude of the inhabitants of the host country towards refugees; see [Isański et al., 2022](#)) – that is, the rising costs of living in the new place, the adaptation difficulties for children in new environments, or challenges in accessing specialist health-care. The decision to return is also influenced by homesickness, the desire to reunite with one's family, or to raise children in their homeland. It is also important to note that Polish, Ukrainian, and Russian are all Slavic languages and involve certain similarities, making mutual understanding and cross-cultural learning relatively easy. It is particularly relevant for children who, even with the limited language proficiency, have been able to learn Polish language quite easily at school.

Positive attitudes and openness correspond, only partially, with school achievements: the exam results depict the achievement gaps in the standardised test scores of Polish and foreign-born (Ukrainian) elementary school pupils (see Figure 2). The elementary school final tests were completed in May 2023 by c. 510 thousand pupils, including 13,800 Ukrainian pupils attending the Polish school system. In 2024, the test was completed by 220,900 Polish and 11,300 Ukrainian students, while in 2025 the number of Polish and Ukrainian students was 363,200 and 13,070 respectively. Ukrainians' results have been significantly lower in all the major subjects, which shows challenges for the education system in teaching Polish as a foreign language and other issues. Importantly, Ukrainian students achieved lower results

in the Polish language exam and subjects such as mathematics and English in all the three analysed years. This prompted us to look at this phenomenon and try to find possible answers to questions about its causes. Apart from the obvious ones resulting from the shorter stay in Poland, one should also examine the reasons related to the Polish education system, the teachers working there, and the students themselves.

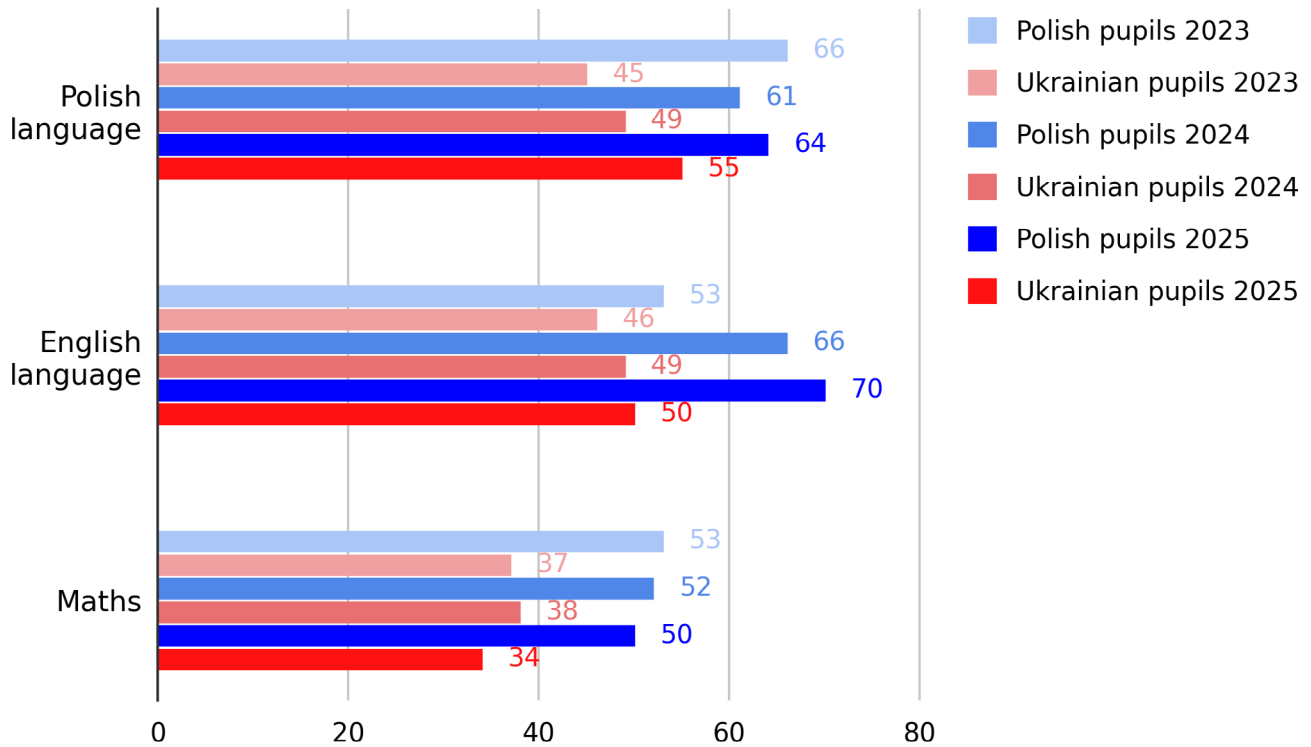


Figure 2. Elementary school final test in the school year 2023–2025, average results, data in %.

Source: Authors' elaboration based on Central Examination Board data (2023, 2024, 2025).

4 Data and Results

The research within the Polish part of the study was conducted as fieldwork between 2023 and 2025. It was two years after the outbreak of the full-scale Russian invasion in Ukraine, which resulted in the mass inflow of refugees and forced migrants to Poland. Children were incorporated into the educational system, and our data have shown particular challenges and obstacles that arose at both the systemic and micro levels. To make our analyses more accurate, we have also drawn on other research conducted across various areas of the Polish education system. Considering our own part of the research, it is also worth noting that we managed to reach a diverse sample of teachers, including those of Polish and Ukrainian origin. In our study, we aimed at examining the environments in which migrants functioned daily, particularly schools where children of Ukrainian refugees and migrants fulfilled their statutory schooling requirements. For this purpose, three schools were selected, supported by the Education Board in Poznań, in which a significant percentage of international students, mostly newly arrived pupils from Ukraine, were enrolled. All the study participants were informed about the anonymity and the right to withdraw from the study. The questionnaires were completed during an on-site study during regular school meetings.

As a part of the ongoing empirical research project, a CAWI study was conducted on a purposefully selected sample (N=101) of teachers working in three schools: two primary schools and one secondary school in Poznań, Poland, in environments with a substantial share of foreign-born pupils. Below (see Table 1), the data from our study are presented for a sample of 101 teachers working in an ethnically mixed environment with Polish and international students (among them, foreign-born Ukrainian students having clear predominance; over 95% arrived in Poland recently). Metric data (see Appendix Table A2) show that 3/4 of the sample were women. The majority of teachers declared higher education level, mainly with the substantial amount of additional professional courses, including education for children with special needs (various areas of physical and mental challenges, speech therapy, spectrum of autism), foreign language proficiency (i.e., Polish as a foreign language, Belarusian, Bulgarian, German, Russian, or Ukrainian), crisis interventions, informatics, or physical activities and fitness. Teachers see underachievement of foreign-born pupils (see Table 2), however their perception of the overall school environment is rather positive (see Table 3). In the following open-ended questions, they provided a variety of possible solutions to problems included in three main areas of interest. The first was the institutional one, linked with the upper limit of pupils in one class or group and additional teacher assistants with foreign origin themselves. The second area of suggestions was linked to language issues (see Appendix Table A1), and teachers suggested various actions, including “Polish language courses for foreigners” and “additional freshman year with extra Polish classes”. The third group of frequently suggested ideas were connected with the need to treat pupils individually, not only in terms of their ethnic origin, but also personal biographies connected with migratory trauma.

Table 1. Teachers' responses to the question: “Are you satisfied with the working conditions with foreign students?” (data in %, N=101).

Responses	General satisfaction with working conditions at school (data in %)	Satisfaction with respondents' work with foreign pupils (data in %)
Definitely yes	11	15
Moderately yes	36	46
Hard to say	23	24
Moderately no	16	8
Definitely no	14	7
Total	100	100

Table 2. Teachers' responses to the question: “How do you see/assess foreign-born pupils' achievements in comparison to Polish pupils?” (data in %, N=101).

Responses	% of responses
Much better	4
Better	8
Hard to say	29
Worse	46
Much worse	13
Total	100

Table 3. Perception of attitudes in multi-ethnic school environment; teachers' responses (data in %, N=101).

Responses	Perception of attitudes towards migrants in respondents' place of residence	Perception of Polish pupils' attitudes towards foreign-born pupils	Perception of other migrants' attitudes towards Ukrainian refugees
Very positively	14.9	8.5	8.5
Moderately positively	46.9	62.6	23.4
Hard to say	24.4	17.2	59.7
Moderately negatively	11.7	11.7	7.4
Very negatively	2.1	0	1
Total	100	100	100

5 Discussion

The results of our research show how challenging it is to adapt the education system to the current requirements posed by the sudden influx of international students. It should be remembered that students from Ukraine are unique, not only because they have to attend school in Poland, but also because their presence in Poland is related to the need to leave their home country and peer environment in stressful circumstances; the limited sample size and purposive selection procedure limit the potential for any generalisations. However, by analysing our data in a wider context based on the desk research, we found some interesting conclusions. The uncertainty about one's own and one's family's future is surely not conducive to adapting to a new place or learning at school. An additional difficulty is that the public education system in Poland has been struggling for many years with underinvestment, low teacher salaries, a high employee turnover rate, as well as frequent curriculum changes. All this together creates a very demanding situation for everyone involved – students, teachers, and school management. Again, the limited size of our sample does not allow us to generalise the results to the entire population. Still, the results confirm the crisis-like nature of the challenges emerging over the last two years and the manners to address them.

There is a lack of dissemination of best practices. Underinvestment in the system has had a negative impact, especially on international students – numerous working groups and classes, an insufficient number of Polish language hours, as well as teachers' excessive work burden mean that the crisis, as mentioned earlier, the context of leaving the place of origin of international students is also present as a key to describing their temporariness in functioning in the Polish education system. In this situation, the very positive attitudes of Poles towards Ukrainian refugees may not be enough to provide Ukrainian children with learning conditions outside their places of origin.

It also seems that this involves not only the need to increase expenditure on education, but also the need to rethink the requirements for international students, as well as to involve the children's teachers and parents in their adaptation to local conditions. This challenge may turn out to be no less problematic, since most Ukrainian children are in Poland without their fathers (usually breadwinners), who remained in Ukraine following the imposition of martial law in response to Russian aggression, while their mothers often possess limited competence

in Polish. Employing over 20,000 Ukrainian teachers in the Polish public education system only partially solved this problem. However, it should not be forgotten that a significant part of the problems faced by the Polish education system is related to the generally difficult financial situation and underinvestment in education. Even though the solutions are pretty obvious – reducing the size of classes, increasing the number of hours of teaching Polish, or employing additional supporting teachers – this requires increased spending on education. Given the ongoing war in Ukraine and the inflow of a large number of refugees to Poland, this is not an easy task.

Based on the results, the refugee integration experience in Poland provides a bridge to the existing effects in the Dutch contexts, as briefly addressed in the literature review. Furthermore, there are dos and don'ts in the management of refugee issues for Polish audiences and other societies hosting Ukrainian refugees. However, the durability of the change in the mutual perception of Poles and Ukrainians remains to be questioned. Regardless of a range of positive gestures, these relationships are full of obstacles.

Two dominant proposals were to introduce additional Polish language classes and reduce the number of pupils per class. The less frequently mentioned ones also include additional psychological support for students, co-financing for teachers working with international students, and the introduction of a cultural assistant role. A separate group of suggestions included those in which teachers indicated a need to change students' and their parents' approaches to school. These arguments point to systemic problems regarding the organisation of the teaching process and its adaptability to the sudden influx of students from another country (and, consequently, from a different teaching system with limited language competencies and a cultural barrier). However, it may be considered optimistic that the number of teachers reporting no significant peer conflicts was twice the number of those who wrote about any problems in this field (no=40; yes=20). If the problems did occur, they were due to language misunderstandings or Ukrainian-Russian personal conflicts stemming from their ethnic origin. It is complicated, and in most cases impossible, as the participating teachers wrote, to obtain information about these students' current educational path in Ukraine, which is essential for students with diagnosed special educational needs. The incompatibility of the legal provisions in both countries in this respect and the difficulties in validating relevant documents make it necessary, in many cases, to conduct long-term diagnostics of the needs of these children. The implementation on site, in Poland, is additionally hampered by the limited number of working specialists with appropriate qualifications and knowledge of Russian or Ukrainian.

A separate problem is the animosity between ethnic groups of international students, in this specific case, children from Ukraine, Belarus, and Russia. The current political situation and the ongoing war create conflicts between students from these countries. Solving them is an additional challenge for teachers. The teachers' suggestions in our study can be treated as bottom-up recommendations. Their implementation is in our collective interest.

6 Conclusions, Recommendations and Remarks for Further Research

The unexpected inflow of a large number of war refugees from Ukraine to Poland, and the visible change in the attitude of Polish public opinion towards their arrival and residence allow us to observe in vivo the processes of social dynamics. Compared with examples from the Netherlands, the results of both these pieces of research may serve as both a test of existing theoretical approaches and grounds for updating them. The process of influx and social integration is happening before our eyes, and it seems that so far, we have managed to avoid many dead ends, such as housing ghettoisation or social stigmatisation of refugees, particularly of the second generation. Our study will hopefully provide information about the mentioned dynamics of the social change process and its possible future course. The school environment seems to be a good laboratory for social changes and allows for assessing the depth of the changes in mutual relations between Poles and Ukrainians, similarly to the cases of Moroccans in the Netherlands. In the Polish case, this was demonstrated by the successful integration of Ukrainian students who arrived in Poland with their families before the outbreak of the refugee crisis in February 2022. The relatively low saturation of international students and the friendly atmosphere around Ukrainian migrants favoured this integration. As of 2022, the number of international students has increased dramatically. Although there was an amicable social atmosphere, questions arose concerning the system's capacity. Daily functioning in the same environment is an opportunity to verify the declaration of willingness to help, as well as to show the complexity of everyday life's challenges. These challenges are exceptionally difficult for refugee children and youth with possible post-traumatic stress disorder and accompanied by one or both of their parents. Comparing the Polish case to the Dutch one, we noticed similarities in the educational environment challenges and sought to discuss particular experiences from the Netherlands, including the educational system responses at the micro level and schools' responses in classroom environments. The data we have collected allow us to conclude that these challenges concern the organisational level of the researched schools rather than interpersonal relations or ethnic-based prejudices. This conclusion may be considered optimistic, but a system reform should follow bottom-up signals to respond to the challenges approaching. Such signals might also be analysed in the international context, as we have attempted to do in our research. Otherwise, the openness evident in public opinion polls and our respondents' statements may face increasingly severe challenges in the coming years, as recognised in the literature (Ivert & Magnusson, 2020). This might also be a critical issue in the acculturation stage of the presented model (see Figure 1), as well as when it comes to the possible return, or deeper integration incentives that may occur soon. The results do not lead to a simple conclusion about the outcomes in the educational system as predictors of successful acculturation; however, the stated expectation regarding its content may inform the priorities to be implemented in the critical areas linked to communication needs.

Many countries apply several requirements during the naturalisation procedure for migrants, concerning their age, education, condition and health, as well as the knowledge of the language, culture, and history of the receiving country. Fulfilling them usually requires many years of preparation, living, and learning, and this normally ends with an exam with

various possible results. The exceptional and urgent situation of refugees eliminated the possibility of preparation, and this role had to be fulfilled through years of contact between neighbours and the flexibility of both parties. To summarise the results of the statements we collected from teachers of various nationalities working in Poland, when it comes to dos, we can mention openness, avoiding stigmatisation, ghettoisation, and isolation on the part of the receiving community, and similar transparency on the side of the receiving society. However, among the don'ts, stereotyping, homogenisation of the arriving group, and demandingness are worth mentioning. In addition to the above, our data demonstrate the importance of racial familiarity, intersectional approaches, and discussions in specific research projects, such as this study.

It is fair to assume that the researcher's positionality becomes relevant as we progress. As [Holmes and Gary \(2020\)](#) argue, having the same personal background as one's participants can be highly beneficial for gathering data and translating it to co-authors. This was the case with the first and the second author in this study. Therefore, this study pleads for a more in-depth approach by researchers when approaching a vulnerable research group, as done in this study. The insider position of a researcher could lead to a deeper understanding of a research population, more in-depth data, and, therefore, a more intersectional approach when reflecting on the practical adjustments of theory.

As stated, our research is based on a limited sample and cannot be generalised to the general population in any country; however, we see the potential of the two analysed cases in the dynamics of their social status, from refugees to members of integrated societies. Remembering that integration is a process, as presented in the text, we see the educational system as a useful platform for implementing integration policies. Both authors continue their research based on such cases, to describe and understand the phenomenon, as well as its limitations. Anyway, even if authors would wish to refer to the field study results within a wider research project or in public statistics, the results should be treated with this caveat.

Data availability statement

Empirical database available upon reasonable request.

Coauthor contributions

Jakub Isański: main text writing, empirical data, analyses

Malika Ouacha: main text writing, analyses

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APPENDIX

Table A1. CAWI list of questions

No.	Question
1	Are you generally satisfied with the conditions of your work in school? (scale 1-5)
2	Are you generally satisfied with your level of contact with pupils? (scale 1-5) OR: can you see any pupils' linguistic/competence/knowledge progress?
3	Do you have any suggestions on how to improve the conditions of work in school? Please provide any details: ...
4	Are you generally satisfied with your conditions of life as a teacher in Poland? (scale 1-5) Please provide any details: ...
5	How would you rate locals'/Poles' attitudes toward migrants? (scale 1-5)
6	Did you notice any ethnic/national/... conflicts between pupils? (open-ended) ...
7	What is, as you see it, the biggest challenge for foreign pupils? ...
8	Do you have any friendly relations at work? If so, how many: ... (in your ethnic group/in other ethnic groups)
9	Do you plan to stay in Poland? If so, please explain why: ...
10	Do you have any family left in Ukraine? If so, please provide any details: ...
11	Have you visited Ukraine since Feb 2022? If so, how many times? ...
12	Do you have any friends at work? If so, how many: ... (in your ethnic group/in other ethnic groups)
Metric data:	
1	Place of origin in Ukraine: ...
2	Length of stay in Poland: ...
3	Type of settlement (housing): [I own a flat; I rent a flat on my own; I rent a flat with other migrants; I live with locals; other]
4	How many adult residents live with you in Poland: ...
5	How many children live with you in Poland: ...
6	Level of education completed: ...
7	Additional courses completed: ...
8	Professional experience as a teacher (in years): [0-1; 2-5; 6-10; 10+]
9	Professional experience in working with foreigners (in years): [0-1; 2-5; 6-10; 10+]
10	School subject(s) taught: ...
11	Language(s) used at work: ...
12	Age: ...
13	Sex/gender: ...

Table A2. *Sample metric data (N=101)*

Item	N=101
sex/gender	
man	20
woman	66
No responses	15
age	
Below 25	1
25–29	2
30–40	23
Above 40	55
No responses	20
Professional experience as a teacher (in years)	
Less than 1 year	6
1–2	6
3–5	15
6–10 years	10
More than 10 years	51
No responses	13
Professional experience as a teacher working with foreign pupils (in years)	
Less than 1 year	7
1–2	19
3–5	42
6–10	16
More than 10 years	4
No responses	13
Level of education	
BA	3
MA	85
Ph.D.	1
No responses	12

Whose Crisis, Whose Gain? The Socio-economic Consequences of Care Migration from Serbia to Germany

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This article investigates the phenomenon of care migration by analyzing the socioeconomic impacts associated with the internationalization of care work, using Serbia and Germany as case studies. Over recent decades, various social, economic, and demographic transformations have significantly affected the availability of both paid and unpaid care work. Notable trends—including population aging driven by declining fertility rates and increased life expectancy, reductions in average household size, and rising female labor force participation—have fundamentally reshaped the organization and provision of care services. These shifts have exacerbated the persistent global care crisis and underscored the growing role of migrant care workers in care provision. Drawing on the concepts of “global care chains” and “crisis of care”, this study analyzes the dynamics of care and migration, focusing on how policy and practice shape the integration of migrant care labor into transnational eldercare sector, with Serbia and Germany as illustrative cases. The article pursues three primary objectives: first, to assess care arrangements and the management of transnational care in both countries; second, to outline Germany’s policy strategies aimed at balancing care demand and supply in eldercare provision; and third, to evaluate Serbia’s responses to its care gaps within the national social policy framework. The findings indicate that Germany and Serbia face rising eldercare demand, but respond with unequal capacities. Germany expands services and recruits migrant workers, while Serbia relies on informal care amid workforce outflows. Embedded in global care chains, these strategies redistribute—rather than resolve—care deficits, reinforcing cross-national inequalities and long-term sustainability challenges.

Keywords: care migration, care work, global care chains, Serbia, Germany

1 Introduction

Care work represents a core component of individual and societal well-being and plays a critical role in sustaining a stable and resilient economy, making a substantial contribution to overall economic growth (World Health Organization [WHO], 2017, p. 14). Globally, the care sector employs approximately 381 million people—about 11.5% of total employment—and is characterized by a highly diverse workforce (International Labour Organisation [ILO], 2024). Ongoing demographic, socio-economic, and political changes within modern societies have far-reaching consequences for labor market configurations and the provision of care, thereby influencing the availability and composition of the care workforce. In particular, population ageing, higher dependency ratios, changing family structures, and greater female labor force participation, alongside expanding care requirements, are driving both care shortages and an increased reliance on migrant labor in the care sector across Europe and other economic contexts (WHO, 2017; Blower-Nassiri, 2023; ILO, 2024).

Population ageing already constitutes a major source of strain for long-term care systems and is anticipated to generate even greater pressure in the coming decades. This trend is particularly evident in Europe, where demographic ageing is driving a steady rise in long-term care demand, with the number of people requiring such care projected to increase from 30.8 million in 2019 to 38.1 million by 2050 (European Commission [EC], 2021). Many European countries have sought to address this issue by liberalizing labor mobility and recruiting a foreign care workforce, as a strategy to mitigate the “national care crisis” stemming from shortages in domestic labor and the limited capacity of families to provide adequate care.

Of the 169 million migrant workers around the world, a substantial proportion is employed in home-based care services—ranging from domestic work to long-term residential care—sectors that often remain underrecognized and insufficiently regulated (ILO, 2024). Within the European context, migrant care workers play a crucial role in sustaining health and social care provision (Eurodiaconia, 2024). Accurate data on the number of migrant care workers in Europe remains limited, as most countries can provide only rough estimates, with Austria being an exception (Sowa-Kofta et al., 2019). The free movement of workers and increased labor mobility have helped alleviate the care sector crisis at the European Union (EU) level by fostering transnational care chains, channeling labor from Central and Eastern Europe to the more affluent countries of Western Europe (Sowa-Kofta et al., 2019). However, despite these benefits, such migration—whether from within the EU or from third countries—can simultaneously weaken the care systems and care infrastructure of countries of origin, a phenomenon commonly referred to as “care drain”. Despite its general social legitimacy, most countries do not have systematically developed policies to regulate the care migration phenomenon, with Austria and Italy representing exceptions. The rising reliance on migrant labor in the care sector poses complex challenges for the design, coordination, and effective implementation of relevant policies in the field. The nature of challenges varies between origin and destination countries. Destination countries must manage the recruitment and employment of migrant care workers, uphold care standards, and apply coherent immigration policies. Origin countries, on the other hand, struggle to preserve a sufficient care workforce capable of meeting the growing long-term care needs of their own ageing populations.

Although Serbia and Germany occupy the same end of the demographic spectrum, given the pronounced extent of the population ageing process in both countries, their institutional and policy strategies for addressing the structural labor deficit in the care sector diverge considerably. In Serbia, individuals aged 65 and over constitute approximately 22.6% of the population ([Statistical Office of Republic of Serbia \[SORS\], 2025](#)), while in Germany this share is around 23% ([Statistisches Bundesamt \[Destatis\], 2026](#)), indicating a comparable intensity of demographic ageing. Projections by the Federal Statistical Office (Destatis) suggest that population ageing will increase the number of individuals requiring long-term care in Germany by about 37%, from roughly 5 million in 2021 to nearly 6.8 million by 2055 ([Destatis, 2023](#)). In Serbia, according to the latest Health Survey of the Population ([Statistical Office of Republic of Serbia, Institute of Public Health of Serbia “Dr Milan Jovanović Batut” & Ministry of Health \[SORS et al.\], 2021](#)), 31.5% of older people have serious difficulties with household activities and 9.5% with personal care, while 37.0% and 44.8%, respectively, report unmet needs for assistance ([SORS et al., 2021](#)). At the same time, Serbia faces ongoing depopulation and sustained emigration of younger cohorts, reflected in the phenomenon of “care drain”—the substantial outflow of health and care workers abroad. These dynamics position Serbia as an important source of qualified care-sector labor for foreign markets, particularly for countries such as Germany, while the domestic care system(s) continue(s) to depend largely on informal support and limited institutional capacities.

Therefore, this article examines the relationship between care work and migration through the theoretical lens of global care chains and care drain ([Hochschild, 2000](#); [Yeates, 2004, 2005, 2012](#)). It focuses specifically on institutional and professional forms of eldercare in transnational contexts. Accordingly, it does not address informal caregiving, care provided within private households and family settings in destination countries, or the childcare, in order to foreground the organizational and regulatory dimensions, as well as formalized structures of care provision, given their distinct conditions of labor, regulation, and visibility. By doing so, the article pays particular attention to the ways in which policy frameworks and institutional practices shape the incorporation of migrant workers into transnational care regimes, with Serbia and Germany highlighted as illustrative case studies. Within this analytical framework, the article seeks to address the following research questions: (1) How do global care chains structure the migrant labor flows between Serbia and Germany? (2) Which policy instruments and practical mechanisms for integration of the migrant workforce into the care sector are currently in place in Germany?; and (3) What are the principal challenges and implications of the care drain for Serbia? In the following sections, the article first presents the conceptual underpinnings that guide the current analysis, introducing the notions of care crisis, care drain, and global care chains, with particular attention to their expanded analytical scope, followed by the methodological approach based on a comparative design and secondary data analysis. Thereafter, it examines demographic ageing and long-term care systems in Germany and Serbia, followed by an analysis of the migration dynamics and policy responses to the care labor shortages. Finally, the article interprets these developments through the lens of global care chains and concludes by discussing their implications for the redistribution of care and emerging transnational inequalities.

2 Conceptual framework

Against the backdrop of demographic ageing and increasing pressures on long-term care systems, the mismatch between care needs and labor supply extends beyond national contexts and is increasingly conceptualized as a “care crisis”. As early as the 1990s, [Hochschild \(1995\)](#) pointed to a growing care crisis, emerging care deficits in economically advanced societies ([Fischbach, 2025](#)). Building on this, Nancy [Fraser \(2016\)](#) conceptualizes the crisis as a structural imbalance between care needs and their provision. These pressures have not remained confined within national borders but have contributed to the expansion of global care chains linking different welfare regimes, alongside the emergence of care drain in countries of origin. Since the early 2000s, this phenomenon has been increasingly theorized as “care drain,” referring to the systemic disruption of care provision in sending countries and its broader social, familial, and community-level implications ([Hochschild, 2000](#); [Yeates, 2004, 2005, 2012](#); [Lutz & Pallenga-Möllenbeck, 2012](#); [Gheaus, 2013](#)).

Rising demand for care workers reflects profound social and economic changes, including population aging, shifts in family structures, and the limited provision of public care services. At the same time, the increasing participation of women in paid employment, coupled with their historical role as primary caregivers, has created persistent care gaps. These gaps are increasingly filled by migrant women, illustrating the transnational redistribution of care responsibilities ([Kofman & Raghuram, 2009](#)). Migration within the care sector is highly gendered, predominantly undertaken by middle-aged women ([Shahd, 2024](#)), and often driven by economic pressures such as low wages, poor working conditions, and limited employment opportunities in their countries of origin ([Sowa-Kofta et al., 2019](#)). Beyond these economic drivers, care work also shapes and reinforces social hierarchies, particularly those associated with class and status ([Yeates, 2005](#)). Migration influences the provision and distribution of care, as care-related challenges may arise when individuals migrate as providers of care, migration results in the redistribution of care responsibilities left behind, migrants bring care responsibilities with them, or when they themselves experience ongoing or urgent care needs, particularly in later stages of life ([Kofman & Raghuram, 2009](#), pp. 10–11).

Given its fundamental role in shaping both individual and societal well-being, care has increasingly been recognized as a central concept within welfare state research and social policy studies. Within social policy analysis, it is broadly understood as a form of labor, encompassing both the direct, physical tasks of “caring for” others and the emotional work involved in “caring about” others ([Hooyman & Gonyea, 1995](#), cited in [Yeates, 2004](#), p. 371). Accordingly, care comprises a wide range of activities, from intimate social and healthcare tasks to domestic work, whether paid or unpaid, across household and institutional settings, and involves a highly heterogeneous workforce characterized by diverse skills, professional statuses, and employment conditions ([Yeates, 2004, 2005](#)).

The concept of global care chains, first introduced by [Hochschild \(2000\)](#), provides a valuable framework for examining the intersection of care, migration, and globalization. It contributes to a deeper understanding of the global organization and redistribution of care, and of the mechanisms through which states govern the care economy via public policies and programs. By highlighting the processes of care migration and the internationalization of care

services, the concept underscores the pivotal role of transnational social reproductive labor in shaping development across diverse contexts. Although these chains generate benefits for both states and individuals, they also reproduce global inequalities and underscore the uneven distribution of care responsibilities.

Describing global care chains as “a series of personal links between people across the globe based on the paid or unpaid work of caring” (Hochschild, 2000, p. 131), Hochschild argues that women—predominantly from lower-income countries—migrate to provide care work such as childcare, eldercare, and domestic work for wealthier households in high-income countries. This process creates a care deficit within their own families and communities. As care work moves along the chains, its social and economic value progressively declines, often becoming unpaid at the lower end of the chain (Yeates, 2004, 2005). This unequal distribution of care sets the stage for Hochschild’s concept of “emotional surplus value,” which further explains how the benefits and burdens of care labor are distributed along the chains. By emphasizing the gendered, classed, and global dimensions of care labor, Hochschild demonstrates how global economic structures systematically exploit emotional labor and reproduce transnational inequalities.

While acknowledging the undoubted importance and innovative nature of Hochschild’s concept of global care chains for understanding “the phenomena of migrant care workers, the globalization of families and households, and the internationalization of care services,” Yeates (2004, 2005) stresses the need for its further development. She argues that the concept’s early formulation was analytically limited, as it focused predominantly on “the transnational ‘nanny trade’, with international transfers of motherly labor and care labor provided in individualized, household contexts” (Yeates, 2005, p. 10). This emphasis effectively narrowed the analytical scope to domestic work and household-based childcare performed by migrant women. By confining the concept of the global care chains to such a narrow segment of workers, a broad spectrum of migrant care workers—whose labor takes place across diverse settings, involves multiple forms of care, and encompasses varied social groups—remains overlooked. It is on this basis that Yeates (2004, pp. 379–380; 2005, pp. 10–12) argues for an expansion of the conceptual boundaries of the global care chains in five principal directions.

First, Yeates critiques the global care chains framework for its predominant focus on “low-skilled” migrant workers, such as nannies and domestic laborers, arguing that research must also consider workers with diverse skills, given the growing significance of skilled labor in the global reproductive labor economy. She further contends that the framework’s traditional emphasis on married mothers with dependent children is overly restrictive. Migrant care workers exhibit considerable variation in family status and household arrangements, with caregiving often extending to intergenerational and extended family obligations. This demonstrates that care operates as a system of reciprocal responsibilities beyond the nuclear family. Moreover, Yeates argues for broadening the concept of care to encompass health, educational, sexual, and religious services, alongside social care, highlighting both the multidimensional nature of care and its transnational scope. She also emphasizes the need to account for institutional settings, such as hospitals and schools, and to differentiate between public and private spheres, reflecting variations in skill, compensation, resources, organizational structures, and regulatory contexts. Finally, Yeates underscores the importance of historical analysis in

understanding the evolution of global care chains, revealing shifts in states' positions within these networks and capturing the sector's inherent heterogeneity (Yeates 2005, pp. 11–12).

Therefore, the concept of global care chains constitutes a valuable analytical framework for examining migration patterns and the redistribution of care work between Serbia and Germany, with the migration of care workers from Serbia to Germany serving as a salient example of the complex dynamics inherent in these chains and their significant social, economic, and demographic implications. Building on Yeates' (2004, 2005, 2012) broadened conceptual framework of global care chains, this article critically examines the dynamics of care worker migration from Serbia to Germany, situating it within global care chains and highlighting how the interplay of labor demand, wage differentials, and recruitment networks shapes these migration patterns. It evaluates the policy instruments and practical mechanisms currently in place in Germany to facilitate the integration of migrant workers into the care sector, including regulatory frameworks for labor migration, recognition of professional qualifications, language and vocational training programs, and social inclusion measures. The article also considers the main consequences and ramifications of the "care drain" for Serbia as a country of origin, encompassing potential social consequences such as the disruption of family-based care arrangements, economic implications stemming from labor shortages, as well as demographic shifts driven by the emigration of a substantial segment of the working-age population. Finally, by providing a comprehensive understanding of the transnational organization of care labor, the article offers insights into how policy and practice can promote more sustainable and equitable migration flows, benefiting both sending and receiving countries.

4 Methodology

This article employs a qualitative comparative design to analyze eldercare systems and their links to migration dynamics in Germany and Serbia. These two cases were selected to reflect contrasting welfare and care regimes and their positions within global care chains, Germany as a high-income destination country with a highly institutionalized eldercare system, and Serbia as an upper-middle-income country characterized by a predominantly family-based eldercare system and significant outmigration of care workers. This contrast enables an exploration of both shared structural pressures—such as demographic ageing and care labor shortages—and divergent institutional responses.

The analysis method draws on secondary data and document analysis, including statistical sources (e.g., national statistical offices of both countries, Eurostat), strategic documents and relevant policy and legal frameworks. Statistical data from national and international sources are used for contextualization of demographic and labor market trends as well as the long-term care provision, while policy documents and legislative frameworks are analyzed for assessment of the institutional organization of the long-term care systems and migration policy measures aimed at addressing workforce shortages in both countries. The study is based on a theoretically informed, selective review of literature, focusing on key contributions to the concepts of care crisis, care drain, and global care chains, as well as selected relevant empirical studies on the long-term care and migration in Germany and Serbia. The temporal scope of the analysis covers the period from the early 2000s to the present; however, the

primary analytical focus is placed on the developments since 2012/2013, with a particular emphasis on the period following the COVID-19 pandemic, reflecting the acceleration of policy changes in migration and long-term care during this period.

5 Redistribution of care work between Serbia and Germany: care systems, migration, and policy responses

5.1 Population aging and long-term care systems

Despite their differing positions within the global economic hierarchy, both Germany and Serbia are experiencing pronounced demographic ageing, albeit driven by partially distinct dynamics and with varying implications for their care systems. Like other ageing societies, Germany is experiencing a continuous increase in the proportion of older and very old population groups, driven by low fertility rates and rising life expectancy. While the proportion of young people in Germany remains at a historically low level, with just over 8.3 million people aged 15 to 24 representing 10% of the total population (Destatis, 2025b), the share of people aged 67 and over is expected to increase from 20% in 2024 to 25%-27% by 2028. At the same time, the population aged 80 and over is expected to increase from around 6.1 million in 2024 to approximately 8.5–9.8 million by 2050 (Destatis, 2025a). The latest available data reveal that approximately 5.7 million people currently require care. Of these, more than a half (54.5% of the total) receive care exclusively from a family member, while a considerably smaller share (14.1) are fully cared for in institutions (Destatis, 2024). The future demand for long-term care in Germany is closely linked to the growth of the population aged 80 and over, as this age group has the highest likelihood of requiring care. For instance, in 2023, approximately one half of all the people aged 80 and above in Germany required care (Destatis, 2025a).

Unlike Germany, where population ageing is primarily associated with low fertility and increased longevity, in Serbia it is additionally reinforced by sustained emigration and overall population decline. The total population declined from approximately 7.2 million in 2011, to around 6.7 million in 2022 (Republički zavod za socijalnu zaštitu [RZSZ], 2023). These demographic trends are driven by a fertility rate below the replacement threshold, as well as a negative net migration balance, leading to an increasing share of the elderly population, with individuals aged 65 and over accounting for 22.0% of the total population (SORS, 2023). Consequently, demand for long-term care has increased substantially. According to the latest available data from the Health Survey of the Population of Serbia, slightly less than one-third of older people (31.5%) report serious difficulties in performing everyday household activities, while nearly one in ten (9.5%) experience difficulties with personal care activities; moreover, more than one-third of those with difficulties in household activities (37.0%), and almost a half of those with difficulties in personal care (44.8%) have unmet needs for assistance (SORS et al., 2021). However, in 2022, despite the existence of 297 residential care facilities (40 public and 257 private) accommodating approximately 14,370 older people, institutional long-term care capacity remained clearly inadequate, covering only 0.9% of the population aged 65 and over (SORS, 2023).

In both contexts, population ageing has generated a sustained increase in demand for care services. However, the capacity to respond to these needs differs significantly. Building on the demographic trends outlined above, Germany and Serbia exhibit both convergences and divergences in the organization and provision of long-term care, reflecting their distinct institutional arrangements and welfare regimes. Germany represents a highly institutionalized and regulated long-term care system, anchored in its long-established social insurance tradition, and maintains the world's oldest social health insurance (SHI) system (Güldemann, 2022). The long-term care insurance system, introduced in 1995 as one independent pillar of social insurance, requires all individuals, regardless of whether they are covered by statutory or private health insurance, to have long-term insurance. The system enables care recipients to choose how and by whom the care is provided, either through professional services or cash benefits for informal caregivers, to support independent living. Consequently, long-term care insurance, "following the subsidiarity principle typical for conservative corporatist welfare states" (Noack & Storath, 2022, p. 402), operates alongside family care traditions and an expanding formal care sector. Consistent with the principles of a conservative welfare regime, the introduction of cash benefits was intended to maintain the centrality of informal care within households, whereas in-kind benefits were designed to promote the growth of formal care provision (Shire & Nemoto, 2020, Götze & Rothgang, 2014, Gottschall 2023). This pattern—characterized by extensive informal care and limited formal provision—can be understood as a consequence of a conservative, familialistic care regime (Ariaans, 2021).

However, the growing number of people in need of long-term care, combined with the declining availability or willingness of family members to provide care, has steadily increased the demand for and persistent shortage of care workers, thereby reinforcing the role of migration as a key strategy for filling these gaps. Accordingly, long-term care in Germany is "characterized by a mixture of formal and informal care provision, and incorporation of migrant workers in both" (Gottschall, 2023). This hybrid model is further underpinned by high levels of public investment and an extensive service infrastructure. Germany has the highest share of GDP devoted to healthcare in the EU (12.27%). In 2023, €82.4 billion was spent on long-term care services, including ambulatory, inpatient, and semi-inpatient care, an increase of 6.3% compared with 2022, highlighting the significant financial pressure on the system.

In Serbia, long-term care is characterized by minimal state support, with the responsibility for eldercare largely falling on families, while care is formally organized within the social welfare system (cash benefits and institutional and non-institutional services), the health care system (palliative and in-home care), and the old-age and disability insurance system (allowance for support and care by informal caregivers).¹ While residential care for older adults in Serbia is managed exclusively by public or private entities, in-home support involves a broader spectrum of providers, including state institutions, NGOs, and the voluntary sector (Perišić & Pantelić, 2021). Both institutional care (residential care) and non-institutional services (in-home support and care, i.e., geronto-housewives) remain underdeveloped and spatially uneven, leading to unequal access to social rights. Prolonged waiting lists for residential care and the dependence of certain services on local government budgets render

¹ For more, see: Perišić (2021).

long-term care inaccessible for a substantial proportion of potential users. The marked fragmentation of the system and the absence of collaboration between the healthcare and social welfare sectors further undermine the quality, accessibility, and continuity of care provision. Simultaneously, a gradual commodification of care is occurring, driven by the expansion of the private sector, which operates according to market principles, but remains financially inaccessible to a significant portion of the population. In this context, access to high-quality care is strongly mediated by economic resources: wealthier individuals can secure enhanced support, while those with fewer resources remain largely dependent on family provision or minimal state-supported assistance. Such inequalities are embedded in an eldercare system that relies predominantly on the family, reflecting a feature of a familialistic care regime.

Within the context of deeply entrenched social and cultural norms, the burden of unpaid care work disproportionately falls on women (Perišić & Pantelić, 2021; Satarić & Perišić, 2017). This gender-asymmetric allocation of care responsibilities constitutes a central mechanism through which gendered and broader social inequalities are reproduced, while simultaneously contributing to the overburdening of family members and constraining the economic activity and social participation of female caregivers. Yet, this model is increasingly strained, as a growing number of older adults live in households without younger relatives available to provide care (Perišić, 2021). Nevertheless, similar to Germany, informal care remains the primary mode of support and relies dominantly on female family carers; however, this reliance is not embedded within a well-developed institutional framework, but rather reflects structural limitations in the availability, accessibility, and coordination of formal services. Furthermore, in contrast to Germany, Serbia's long-term care system operates under conditions of limited financial capacity and pronounced institutional fragmentation, accompanied by insufficient intersectoral coordination, which together produce gaps in addressing users' needs, as well as ambiguous allocation of responsibilities across different sectors. The total public expenditure on long-term care is estimated at approximately 0.5% of GDP, with cash benefits accounting for over 0.3% (Stanić, 2024, p. 158).

5.2 Migration and policy responses to care labor shortages: between compensation and destabilization

These demographic and systemic pressures not only intensify demand for long-term care, but also expose structural deficiencies in the care labor market, thereby increasingly positioning migration and policy strategies as key mechanisms for addressing workforce shortages.

Germany has responded to its care crisis through a multifaceted and increasingly differentiated policy framework, encompassing a range of complementary strategies rather than a single, unified approach. A set of diversified strategies, including the liberalization of immigration policies to recruit foreign healthcare workers, measures to enhance the attractiveness of care professions domestically, and reforms aimed at improving the recognition and standardization of foreign qualifications.

Nevertheless, it must be noted that rather than focusing on employment conditions and workplace issues, strategies to secure a qualified nursing workforce in Germany have increasingly emphasized the recruitment of care workers from abroad, implying that the care

crisis can, in principle, be mitigated through migration (Kordes, 2019; Kordes et al., 2020). Although since the 1990s, migration policy in Germany has increasingly been framed as a potential instrument for addressing demographic challenges (Schultz, 2016), concrete steps toward reforming of the immigration policy were only taken from the early 2000s onwards. The argument that migration could serve as a policy instrument to mitigate population ageing in Germany has repeatedly gained prominence during periods of major societal disruption, including phases of intensified migration, public health crises, and structural political change. In response, the recruitment of migrant workers in Germany has been facilitated by the gradual relaxation of migration policies.

The integration of nursing professionals into the German labor market is strongly shaped by legal frameworks. For EU, European Economic Area (EEA), and Swiss citizens, the right of residence and the EU Freedom of Movement Directive provide unrestricted labor market access, while the EU Professional Qualifications Directive ensures recognition of regulated qualifications, including nursing. In contrast, non-EU care workers face more restrictive entry conditions, requiring formal recognition of qualifications under German law, as well as proof of German language proficiency. Despite these general restrictions, the Recognition Act from 2012 (Anerkennungsgesetz) and specifically the Western Balkans Regulation² have lowered barriers for Albania, Bosnia and Herzegovina, Kosovo*, North Macedonia, Montenegro, and Serbia. Originally valid until 2023 and now extended indefinitely under the Skilled Immigration Act 2.0 (Fachkräfteeinwanderungsgesetz 2.0), these measures introduced significant legal changes to the labor migration framework for third-country nationals. As a result, the number of employees in the care sector from Western Balkan states has increased almost fivefold since 2015, the year before the regulation came into force, standing at 51,000 care workers (Statistik der Bundesagentur für Arbeit [Bundesagentur für Arbeit], 2025).

Alongside legislative changes, Germany has pursued various policy measures and programs to attract foreign care professionals as part of a broader strategy to alleviate chronic workforce shortages in long-term care, including targeted schemes such as the Western Balkans Regulation and bilateral recruitment programs. One of those measures is the recruitment program, the “Triple Win”, initiated in 2013. It is run by the German Society for International Cooperation (GIZ) and the German Federal Employment Agency through bilateral agreements, aiming to attract qualified nurses to the local labor market. Initially launched with the Philippines and later extended to Bosnia and Herzegovina, Serbia, and Tunisia, the program has since expanded to include partner countries in Central and South America, as well as Southeast Asia (Bundesagentur für Arbeit, 2024). Advertised as a win for all three parties—care worker, employer, and country of origin—the program has been supporting German employers in the health and social care sector with the selection, recognition, and integration of foreign skilled workers. At the same time, these workers from countries with a surplus of skilled workers are being offered professional and personal prospects in Germany.

² The Western Balkans Regulation allows for up to 50,000 approvals per year, without requiring prior recognition of qualifications, but excludes regulated professions such as medical doctors, nurses, and similar. Certified nurses must use the regular Skilled Immigration Act, while unregulated positions, such as nursing assistants, can be filled under the regulation if a job offer is available. This framework has facilitated the migration of care workers from the Western Balkans to Germany.

Serbia participated in this program under the Agreement on the Mediation and Temporary Employment of Serbian Citizens in Germany, concluded between the German Federal Employment Agency and the Serbian National Employment Service. Between 2013 and September 2019, a total of 941 nurses migrated to Germany through the above-mentioned *Triple Win Program* alone (World Bank [WB], 2021). However, prior to the COVID-19 pandemic, the issue of workforce shortages had not yet been systematically addressed as a central policy concern in Serbia. Instead, participation in international recruitment schemes—such as the Triple Win program initiated by Germany—was largely framed as an employment and labor market measure, facilitating the outward mobility of healthcare workers rather than mitigating domestic shortages. At the same time, early signs of strain were already visible: Serbian hospitals had begun to experience noticeable personnel shortages, marking the first instances of broader public recognition of labor deficits in the health sector. For example, Radonjić and Bobić (2021) report that approximately 150 hospitals in Serbia were facing significant staffing shortages as early as 2018. The COVID-19 pandemic subsequently exposed and intensified these structural vulnerabilities. Between 2020 and 2022, the healthcare system was confronted with unprecedented pressures, including increased workloads, high infection rates among medical staff, extended working hours, and rising levels of burnout, all of which further contributed to staff attrition and migration intentions (WHO, 2024). In this context, Serbia withdrew from both the bilateral agreement and the Triple Win program in 2020, reflecting its growing domestic demand for healthcare workers at the onset of the pandemic.

While these migration dynamics have contributed to care drain in the countries of origin such as Serbia, Germany's response has not been limited to the liberalization of immigration policies; rather, it has been accompanied by the implementation of legislative reforms aimed at addressing the growing challenges in long-term care and stabilization of care system. These changes included the revision of the definition and categorization of care dependency, expansion of care recipient groups, and the introduction of measures to enhance service provision and support for those in need. At the same time, it became evident that reforms within the nursing and care professions were necessary to address persistent workforce shortages, improve working conditions, and enhance the overall attractiveness of the profession. For example, The Act on Nursing Professionals (Pflegerberufereformgesetz – PflBRefG) that came into force on 1 January 2020, restructured nursing education by integrating what had previously been healthcare, pediatric, and geriatric nursing into a single nursing profession, with the aim of modernizing training, enhancing its attractiveness, and strengthening the professional status of nursing. The reform also sought to increase flexibility across areas of practice and introduced financial incentives in the form of training allowances for trainees. Within this broader policy framework, Germany has also sought to enhance the attractiveness of care work through rising minimum wages, which have increased significantly in recent years. As of the latest adjustment on 1 July 2025, the statutory minimum gross hourly wage in the nursing sector is €16.10 for nursing assistants, €17.35 for qualified nursing assistants, and €20.50 for registered nurses (Bundesregierung, 2025). Beyond financial incentives, the federal government also seeks to strengthen the nursing profession by reducing bureaucratic burdens, thereby further improving the appeal of these occupations. These reforms have shown some effectiveness in addressing the challenges. According to the latest data of the Federal

Employment Agency (Bundesagentur für Arbeit) from 2023, just under 1.8 million nursing staff were employed in Germany, reflecting a continued upward trend, with an increase of 24,000 employees (+1.4%) compared to 2022 (Bundesagentur für Arbeit, 2025).

Such policy approach, however, is embedded in a broader structural asymmetry: while Germany has increasingly positioned itself as an active destination country seeking to attract foreign care workers, Serbia has long functioned as a country of emigration. Within the framework of care chains and care drain, the recruitment of foreign care workers in Germany can be understood as a market and policy-mediated strategy to compensate for the gaps in the domestic care regime, whereas the emigration of care workers from Serbia contributes to the erosion of the already fragile, family-based care arrangement. Outward labor migration of Serbian care workers emerges not merely as an individual mobility strategy, but as a central factor further destabilizing the domestic care system. The drivers of health workforce emigration from Serbia—and the broader dynamics of care drain—have varied over time but display strong structural continuity. Between 2004 and 2011, the emigration of healthcare professionals from Serbia was primarily driven by high unemployment and low wages in the domestic health sector (WB, 2021). Since then, migration has continued, with Germany emerging as a key destination, reflecting persistent labor market constraints, particularly for younger professionals, as well as broader dissatisfaction with working conditions (WB, 2021; Vučković et al., 2022). Recent studies further indicate various motivations, with physicians primarily seeking professional development opportunities, while nurses are more strongly driven by higher wages (Blagojević et al., 2023). In this regard, the outflow of care workers from Serbia reflects and reinforces the dynamics of transnational care labor redistribution, serving as a profound destabilizing factor for the Serbian care system(s), while at the same time serving as a compensatory mechanism for addressing the existing gaps in the German care sector.

5.3 Care systems through the lens of care chains

As a result of all those policy strategies, the German health and social care sector has become increasingly transnational. Nearly one in five care workers originates from abroad (18% in 2024, up from 6% in 2014) (Bundesagentur für Arbeit, 2025). In 2024, applications for recognizing foreign professional qualifications rose by 14% to approximately 55,300, with 88% originating from third countries (Böse et al., 2025). Regulated professions comprised 76% of all the submissions, driven almost entirely by healthcare. Care workers dominated the process with 22,400 applications (41%), followed by medical doctors at 10,900 (20%) (Böse et al., 2025). This trend underscores the growing reliance of the German health and social care system on international migration—particularly from third countries—to address structural workforce shortages, while also increasing the administrative and regulatory importance of recognition and qualification equivalence procedures. Since 2015, recruitment patterns reveal strong diversification of the origin countries, including sharp increases in workers from Syria and India (ten times as many employees), as well as the Philippines (18 times as many), highlighting the expanding role of complex migration arrangements and integration processes in sustaining Germany's care system (Bundesagentur für Arbeit, 2025). Beyond the pronounced transnationalization of the care work sector, Germany has also experienced

a growing reliance on physicians with foreign citizenship. According to the German Medical Association ([Bundesärztekammer, 2025](#)), the number of physicians increased by 2.1% in 2024 compared to the year before, reaching approximately 581,000.

While the physician density has increased substantially in Germany, rising by 17.9 physicians per 10,000 population, from 27.4 in 1991 to 45.3 in 2022, the physician density in Serbia increased modestly, rising by 3.9 physicians per 10,000 population, from 27.1 in 2003 to 31.0 in 2022. ([WHO, 2025](#)). By the year 2024, 1899 Serbian physicians were working in Germany ([Bundesärztekammer, 2025](#)). Beyond workforce shortages, physician migration generates considerable indirect fiscal losses for the countries of origin, particularly through unrecovered public investment in higher education and training. These costs can be illustrated by the current estimates of expenditure per medical graduate. According to the data from the German Federal Statistical Office (as of 16 March 2020), the most recent available figures on medical education costs date from 2017. In that year, the current expenditure (basic funding) per degree in human medicine or health sciences—excluding teacher training programs—amounted to €170,500 ([Bundestag, 2020](#)), with the projections going up to €250,000 ([Agentur für Arbeit Würzburg, 2023](#)). International recruitment of already qualified physicians allows Germany to substantially reduce domestic training expenditures, as the financial burden of education and professional formation has been borne by Serbia.

In response, Serbian government implemented salary increases (2019–2020) and established the Diaspora Office to encourage the return of health professionals, with limited but notable results ([Ministarstvo zdravlja, 2025](#)). Also, the Office for Cooperation with the Diaspora of the Ministry of Health was established at the end of 2024 to support Serbian medical professionals abroad by facilitating professional exchange, training opportunities, and providing guidance for employment in domestic healthcare institutions. According to the latest data, in its first year of operation, the Diaspora Office facilitated the return of over 200 healthcare professionals to Serbia ([Ministarstvo zdravlja, 2025](#)). While these initiatives have so far yielded limited results, they represent initial steps toward addressing the structural challenges of workforce attrition and mitigating the adverse effects of the ongoing care drain. Despite those measures, sustained emigration of health care professionals has intensified the already existing care deficits and put the care system(s) under strain. This reinforces family-based care arrangements, as care remains mostly within households, thereby hindering the move toward defamilialization, while services remain underdeveloped.

Taken together, these developments illustrate how different care regimes are increasingly interconnected through transnational labor mobility, reflecting Yeates's expanded conceptualization of global care chains. Firstly, the Serbia – Germany case demonstrates complex, evolving care chains spanning diverse sectors, skill levels, and institutional frameworks, thereby highlighting the asymmetric consequences of transnational labor mobility. The care regimes of both countries are linked through a causal nexus, where policy shifts in one country trigger corresponding labor market responses in the other. Furthermore, this analysis challenges the narrow focus on domestic, low-skilled care, revealing a more nuanced landscape of mobility that includes both highly skilled physicians and mid-skilled nursing staff integrated into formal institutions, such as hospitals, and long-term care (LTC) facilities and community/ambulatory services in Germany. Moving beyond the "precarious informal

workers”, as suggested by Yeates (2005), is essential for deeper understanding of the systemic shocks in countries of origin, such as Serbia, where the outflow undermines the domestic care infrastructure across multiple sectors.

Secondly, the analysis indicates that eldercare systems in both countries rely heavily on informal (family-based) care, while the coverage of older adults in residential facilities remains very limited. Migration disrupts these domestic arrangements as caregivers emigrate, the care gaps in the country of origin intensifies, while family care in the destination country is increasingly supplemented by migrant labor. This demonstrates that care chains operate across several settings, including state and non-state care work environments. Linked to this is a clear sectoral differentiation, particularly in Germany, which exhibits a dual structure characterized by the division between formal and informal sectors, as well as distinctions between private/public and regulated/unregulated care.

Finally, the care outflow from Serbia to Germany points to important temporal dynamics within the global care chains. However, given the limited time span covered in this analysis, it is not possible to draw firm conclusions regarding their long-term evolution. While Germany has progressively moved toward a hybrid system that incorporates foreign labor to address workforce shortages, Serbia continues to be characterized by a predominantly familialistic model of care provision. At the same time, demographic ageing, combined with ongoing emigration—largely driven by wage differentials and working conditions—suggests that the workforce deficits in the Serbian care sector are likely to intensify, further reinforcing its position as a labor-sending node within transnational care chains. However, these positions are not fixed. Emerging labor shortages—already evident across several sectors of the Serbian economy—alongside increasing instances of labor import, indicate that Serbia may gradually assume a more complex role within global care chains, potentially becoming not only a sending but also a receiving country. This is particularly likely in the care sector, given the existing shortages of healthcare and care workers, coupled with the ongoing population ageing and rising care needs. This underscores the dynamic and relational nature of care chains, in which countries’ positions shift over time in response to evolving demographic pressures, labor market conditions, and policy strategies.

Thus, this analysis demonstrates that care regimes are not static. However, each of the countries examined maintains a relatively fixed position along the global care chain axis. Specifically, Germany has solidified its role as a primary destination country for care labor, whereas Serbia occupies the labor-supplying periphery.

6 Conclusions and limitations

Although positioned differently within the global economic hierarchy (WB, 2026), both Germany and Serbia are confronted with similar structural trends driven by population ageing, resulting in an increasing demand for eldercare provision and mounting pressure on health and long-term care systems. In response to these shared challenges, both countries have implemented measures aimed at addressing the growing care deficit, albeit from markedly different starting points and with divergent capacities. Germany, as a high-income economy, has pursued a multi-dimensional strategy combining the expansion of care services,

improvements in working conditions, and the systematic recruitment of foreign care workers. Serbia, an upper-middle-income economy, by contrast, has largely relied on informal (family-based) care, while only more recently beginning to recognize and address the workforce shortages, particularly in the context of the COVID-19 pandemic.

Despite these differing approaches, both systems continue to depend heavily on informal care, predominantly provided by women, highlighting persistent structural limitations in the organization of eldercare. From the care regime perspective, Germany's response can be understood as a gradual recalibration of its conservative model, combining elements of partial defamilialization, marketization, and transnationalization. By contrast, Serbia continues to exhibit the characteristics of a strongly familialistic care regime, where limited institutional capacity and insufficient policy responses leave families as the primary providers of care, even as demographic ageing and migration increasingly undermine this model.

At the same time, migration has emerged as a key mechanism of shaping the care provision in both contexts. While Germany actively incorporates migrant labor to sustain its care system, Serbia experiences a continuous outflow of healthcare and care workers, contributing to care drain and exacerbating the existing shortages. This dynamic not only weakens the capacity of the Serbian care system(s), but also reinforces inequalities in access to care, as limited resources and workforce constraints restrict the scope and quality of services. Against this backdrop, Serbia has only recently begun to acknowledge the workforce shortages, introducing measures such as wage increases and return-oriented migration strategies targeting its diaspora. However, unlike Germany, it has not systematically developed broader migration policies aimed at attracting foreign labor, or substantially improving the working conditions within the care sector.

These interconnected developments can be most effectively understood through the lens of global care chains, reflecting the diversity, complexity, and institutional embeddedness of contemporary care labor. In this regard, Germany's increasing reliance on migrant care workers is directly linked to the outflow of labor from countries such as Serbia, where the emigration of both highly skilled professionals (physicians) and mid-skilled workers (nurses and care workers) contributes to care drain and further weakens the already constrained systems of eldercare, while at the same time placing additional pressure on families caring for their elderly members. This dynamic extends beyond domestic or low-skilled care work, encompassing formal institutional settings such as hospitals and long-term care facilities, as well as informal and semi-formal arrangements, including live-in care. At the same time, migration is embedded in broader transnational family structures, where care responsibilities are redistributed across extended and intergenerational networks, rather than confined to nuclear households.

Concerning this, care deficits are not resolved but just reallocated across borders, reflecting structural asymmetries in resources, labor markets, and welfare state capacities, which are themselves subject to change over time and may lead to shifting distributions of care deficits, depending on the strategies countries are able to employ. Germany's multi-dimensional strategy—combining migration, service expansion, and reforms of the care profession—relies in part on external labor, while Serbia's limited policy responses and continued reliance on informal care render it particularly vulnerable to the loss of care capacity. The Serbia–Germany case thus illustrates how eldercare systems are embedded in asymmetric

and evolving global care chains, in which national strategies interact to reproduce inequalities in both care provision and labor distribution.

The dependence on migrant labor as a structural feature of care provision raises concerns regarding its long-term viability, particularly considering the globally increasing life expectancy and converging care demands. Consequently, the recruitment of foreign workers should be conceptualized as only one component of a broader policy mix, requiring the simultaneous development of internally grounded strategies aligned with national labor market conditions, demographic trajectories, and professionalization of care work.

This study is subject to several limitations. First, the analysis is based on secondary data and document analysis, which may be constrained by the comparability due to different applied methodologies, availability, and timeliness of the existing statistical and policy sources across the two country contexts, especially in the domain of comparability of indicators related to long-term care provision and labor market dynamics. This challenge is further compounded by the uneven availability and quality of data between the two countries: while Germany provides relatively detailed and systematic statistics on different profiles of healthcare workforce, Serbia lacks comprehensive and up-to-date data on the emigration of nurses, physicians, and care workers, thereby limiting the precision of comparative insights and potentially leading to an underestimation of the extent of care drain.

Second, the analysis is restricted to institutional and formal care provision, thereby excluding a substantial segment of care that takes place within private households and informal settings. In particular, informal caregiving provided by family members, as well as care delivered by undeclared or non-formally employed caregivers, remain outside the scope of this study. Given the central role of such forms of care—especially in familialistic care regimes—this constitutes an important limitation of the analysis. Finally, the temporal scope may not fully capture longer-term historical trajectories, or the long-term effects of recent policy changes, which are still unfolding.

Data availability statement

Data are available from the authors upon request.

Coauthor contributions

Dragana Stöckel: Conceptualization, Formal analysis, Investigation, Data curation, Writing – original draft, Writing – review & editing

Marina Pantelić: Conceptualization, Formal analysis, Methodology, Investigation, Writing – original draft, Writing – review & editing

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Social Inclusion of Roma through Active Labor Market Policies in Serbia

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Roma communities across Europe face persistent labor market exclusion, characterized by high unemployment, informal work, and limited access to formal employment. Despite numerous policy initiatives, evidence on the effectiveness of active labor market policies (ALMPs) targeting ethnic minorities remains scarce, largely due to the absence of ethnicity-disaggregated data. This paper evaluates the employment outcomes of a targeted ALMP program, "Inclusion of Roma and other Marginalized Groups in Serbia", implemented by German Development Cooperation in support of the National Strategy for Social Inclusion of Roma in Serbia 2016–2025. The program provided vocational training, practical skills acquisition, and self-employment subsidies to Roma and returnees facing multiple barriers to labor market participation. Using data from an endline survey of 350 program participants conducted on average 14 months after registration, the paper examines changes in employment status, sectoral employment patterns, job quality, and participant satisfaction. The results show a substantial increase in employment — from 23.4% before the program to 65.2% after participation. The largest employment gains were recorded in industry (+48.2 percentage points), followed by other sectors (+46.4 p.p.), self-employment (+33.5 p.p.), and services (+27.2 p.p.). Most participants expressed satisfaction with the program: 78.6% received certificates and 63.3% found the acquired skills useful. However, job quality improvements remained limited, only 18% of those employed held permanent contracts and just 11.4% reported increased earnings attributable to the program. Regression analysis indicates that educational attainment was the strongest predictor of post-program employment, while gender and returnee status showed no significant effect. The findings suggest that ALMPs can be an effective tool for promoting labor market inclusion of highly marginalized populations, but sustained improvements in job quality and earnings require complementary investments in formal education and demand-side policies.

Keywords: active labor market policies, Roma, social inclusion, employment, Serbia

1 Introduction

Social inclusion is the capacity of individuals and groups to participate fully and equally in society, with equitable access to opportunities and rights, irrespective of their socio-economic background. It is a multidimensional concept that spans key domains such as education, healthcare, housing, and employment. Across these dimensions, Roma population, an ethnic minority in many European countries, consistently lags behind majority populations ([European Union Agency for Fundamental Rights, 2022](#)). This study focuses specifically on the dimension of labor market inclusion.

Labor market participation and educational attainment among Roma are substantially lower than those in the majority population ([Dinca & Luches, 2018](#)). The Roma community as a whole experiences high unemployment rates, often leading to long-term unemployment and inactivity ([Cahn & Guild, 2010](#)). Discrimination and marginalization in the labor market have received much attention ([Ullah et al., 2024](#); [Simeunovic Bajic, 2011](#); [Lebedinski, 2019](#); [Lebedinski et al., 2025](#)), as have the measures designed to facilitate Roma access to employment ([Cace & Ionescu, 2006](#); [O'Higgins, 2012](#)).

Reliable data on formal employment are limited in many countries—including Serbia—because official statistics often under-represents marginalized populations. For Roma in particular, coverage is reduced when individuals choose not to self-identify in censuses and surveys, leading to systematic undercounting. When considering Roma self-identity, disparities are stark: unemployment rates are three times higher than in the general population ([Stankovic, 2022](#)). Occupational patterns within Roma communities often reflect precarious forms of work, including participation in the grey economy, informal labor, waste collection, traditional handicrafts, and seasonal or migrant agricultural work ([Preoteasa, 2013](#)). Informal work results in low and unstable incomes, with more than 70% of the employed Roma working without formal contracts or social insurance ([Vidojević & Perišić, 2015](#)). Indeed, a 2016 EU survey found that among the employed Roma, only “one in four” adults held formally paid employment ([European Union Agency for Fundamental Rights, 2016](#)). The survey data also indicate that a substantial share of working-age Roma have never held formal employment ([Hyde, 2006](#)).

Given these persistent challenges, breaking the cycle of poverty remains extremely difficult. In this context, active labor market policies (ALMPs) play a critical role in fostering inclusion. These policies aim to enhance employment opportunities, particularly for vulnerable groups such as the long-term unemployed, youth, women, persons with disabilities, and ethnic minorities—including Roma.

Although both strategies and action plans targeting Roma inclusion have been adopted over the last two decades, the practical results remain limited ([European Commission, 2020](#); [Vidojević & Perišić, 2015](#)). Additional obstacles lie in institutions, social policies, and their often ineffective implementation. [Rostas \(2019\)](#) argues that the absence of direct Roma political influence and involvement in formulating policies of consequence to their community is a root cause of policy failure.

Furthermore, although many Eastern European countries, including Serbia, have formally recognized Roma exclusion and developed policy responses, institutional weaknesses and policy gaps remain a barrier. Evaluations frequently highlight the mismatch between

policy aims and actual implementation. While numerous laws and strategies formally support Roma employment and anti-discrimination, bottlenecks arise from complex regulations, weak coordination, and insufficient local resources. Discrepancies between national commitments and local implementation further exacerbate these issues. The result is that “overall changes in the situation of Roma” remain limited and uneven ([United Nations Development Programme \[UNDP\], 2015](#); [European Commission, 2020](#)). In Serbia, for example, multiple Roma integration strategies (e.g. the [Strategy for Social Inclusion of Roma 2016–2025 in the Republic of Serbia, 2016](#)) have been introduced at the national level to improve education, employment, health, and housing. Nevertheless, these initiatives have often fallen short of achieving even their minimal aims.

The lack of high-quality data on Roma represents another substantial barrier, as it constrains planning processes. While considerable knowledge exists regarding the effectiveness of ALMPs and the conditions influencing their success, significant gaps remain in understanding how these programs reach ethnic minority populations, particularly those at the highest risk of exclusion. Most evaluations lack the data necessary for incorporating ethnicity as a factor. Consequently, “good practice” approaches often substitute for data-driven evaluations concerning ethnic minorities, specifically Roma population. A more serious issue is the absence of ethnicity-disaggregated data during the design phase of programs. Even one of the most comprehensive studies on ethnic minority labor market integration in Europe, conducted by the Institute for the Study of Labor (IZA) ([Kahanec & Zimmermann, 2010](#)), relies primarily on expert opinions, rather than scarce empirical evidence on how labor market policies affect ethnic minorities.

Given these data constraints, this paper adopts an exploratory and descriptive approach. The analysis is based on a single endline survey of program participants and does not include a control or comparison group. As a result, the findings should be interpreted as associative rather than causal, and may be subject to recall bias, social desirability bias, and non-response bias. While this study cannot establish causal inference, it allows for an empirical examination of self-reported employment-related outcomes among the marginalized groups that are typically underrepresented in official data.

A further limitation concerns potential selection and endogeneity in the observed associations. Participation in the program and assignment to different measures are not random, and may reflect unobserved characteristics such as motivation, job search effort, local labor market conditions, or prior employability. These factors may be correlated with both observed covariates and employment outcomes, which implies that even the estimated associations may partly reflect unobserved heterogeneity rather than structural relationships. As a result, the findings should be interpreted as descriptive patterns within the sample of participants, rather than as generalizable behavioral relationships.

To address these challenges, this paper examines a program of ALMPs targeting Roma and returnees (among other vulnerable groups), implemented by German Development Cooperation. By engaging participants in ALMPs and providing skills development, the program seeks to reduce Roma labor market exclusion as one key dimension of social exclusion. This paper assesses the outcomes of this program for Roma and other vulnerable labor market groups, focusing on several aspects of participants’ work lives, including employability,

income, and job security. Our findings contribute to the literature by evaluating the effects of targeted labor market interventions in the context of ethnic minorities and social exclusion.

The paper proceeds as follows: we begin with the country context, then describe the program and outline the methodology. We next present descriptive statistics and results, and conclude with a discussion of the findings.

2 Country context

The Roma are Europe's largest ethnic minority (estimated at 10–12 million) ([European Commission, 2020](#)), forming a small but significant share of national populations. They tend to be poorer, less educated, to experience worse health outcomes, and face widespread discrimination. A 2021 survey by the EU Fundamental Rights Agency covering Roma in ten European countries found that 80% of Roma are at risk of poverty, a figure in stark contrast to the 17% poverty risk affecting the wider EU population ([European Union Agency for Fundamental Rights, 2022](#)).

According to the 2022 census, approximately 131,936 Roma live in Serbia (1.99% of the total population). However, the actual number is believed to be at least double, as many Roma choose not to openly identify as such, or have more than one identity. Roma in Serbia are particularly affected by low participation in early childhood education: only 17% of Roma children attend preschool, leaving the vast majority under-stimulated, undereducated, and unprepared for primary school ([UNDP, 2018](#)). Dropout rates remain high, with roughly 50% of Roma students leaving school by the fourth year of primary education ([Vidojević & Perišić, 2015](#)). As a result, more than one-third of young Roma adults (18–21) in Serbia have not completed compulsory basic education ([UNDP, 2018](#)).

The European Union Agency for Fundamental Rights ([2022](#)) survey found that in Serbia, 51% of Roma were in paid work in 2021, compared with 66% of the majority population. Gender disparities are striking: 73% of Roma men reported being engaged in paid work, versus only 30% of Roma women. The share of youth not in employment, education, or training (NEET) was 47% among Roma, compared with 16% in the majority population. Furthermore, about one in three Roma in Serbia reported experiencing discrimination when looking for work.

Several affirmative action policies have aimed to improve Roma labor market outcomes in Serbia. The Roma population is explicitly listed as one of the primary target groups in several measures of the National Employment Service (NES), including the Internship Program, Practical Skills Acquisition, Employment Subsidies for Disadvantaged Jobseekers, and Professional Traineeship. Data on Roma participation are regularly included in NES implementation reports. In addition, a number of civil society organizations (e.g. Roma Education Fund, Roma Social Inclusion Network, etc.) provide education and employment support tailored to the Roma population.

2.1 Program description

In this paper, we use the data from the program “Inclusion of Roma and other Marginalized Groups in Serbia” (InR), which was implemented in the Republic of Serbia with the aim of supporting the implementation of the National Strategy for Social Inclusion of Roma

in Serbia 2016-2025. The main objective of the program was to improve the living conditions of Roma, returnees¹ and other marginalized groups (e.g. people with disabilities, women in rural communities, etc.) in Serbia, focusing on their general human, economic, social and cultural rights. In order to achieve the intended goal, the intervention was divided into 5 areas:

- (1) advisory support to the Ministry of Human and Minority Rights and Social Dialogue and the Coordination Unit for Monitoring the Implementation of the National Roma Strategy;
- (2) financial support to local actors in the implementation of the Strategy;
- (3) implementation of measures to improve the position of Roma and other marginalized groups in the labor market;
- (4) implementation of measures to reduce stereotypes and discrimination
- (5) support to local agencies in selected municipalities in addressing the economic challenges resulting from COVID-19.

The program placed particular emphasis on the economic inclusion of Roma and returnees, marginalized groups that face barriers to participating in economic activities. These barriers are reflected in unequal access to education and employment opportunities, with many individuals remaining economically inactive or engaged primarily in informal work. In addition to supporting the implementation of the strategy at the national and local level by facilitating cooperation, networking and providing both financial and non-financial systemic support for local inclusion measures, the program also included tailor-made measures to promote employment. As most of the target groups had multifaceted problems in finding an adequate job, the economic empowerment component of the program included the following active labor market measures based on the challenges reported by the beneficiaries, their current skills and their career aspirations:

- Vocational training for profiles that were in demand in the labor market (e.g. forklift operators, welders, caregivers, etc.);
- Practical training and employment with employers;
- Granting of subsidies for setting up their own business (e.g. hairdressers).

3 Methodology

The sampling frame for the survey consisted of all individuals who have participated in the training measures offered by the program. The sample was stratified by gender and returnee status; 855 participants (35.4% of the total 2,844) were randomly selected to be contacted. In the end, 350 individuals (12.4% of the total number of the participants) had been

¹ Serbian citizens of Roma ethnicity who have been returned to Serbia under readmission procedures from EU (or other) states after no longer meeting the legal conditions for entry, presence, or residence abroad (e.g., following a rejected asylum claim or irregular stay).

successfully reached and agreed to participate in the interview. Interviews were conducted by phone in three rounds. The main reasons for non-response (see Table 1) were incorrect or non-existent phone numbers (229 cases, or 26.8% of those contacted) and a lack of response (112 cases, or 13.1%).

Table 1. Survey responses

	Group 1
Interviewed	350 (40.9%)
Refusal	34 (4%)
Inexistent or wrong number	229 (26.8%)
No response	112 (13.1%)
Other	130 (15.2%)
Total (contacted)	855 (100%)

Note: The sampling frame for the survey included 2,844 persons who had participated in the program.

The primary instrument of this study is a quantitative endline questionnaire. Participants answered a series of structured questions about their experience with the program and its impact on their labor market status after completion. The endline questionnaire was complemented with the socio-economic background data from the registration questionnaire. On average, the interviews were conducted 14 months after the participants registered for the measure.

The endline survey is used to estimate the association between active labor market measures and employment outcomes. The main outcome of interest is participants' labor market status at the time of the survey. To contextualize program effects, we first examine participants' satisfaction and perceptions of the program's usefulness. We then provide descriptive statistics on labor market experience before and after program participation, as well as job characteristics of those employed.

To identify the characteristics of participants who benefited from the program, we employ regression analysis. Specifically, regression models are used to explore the relationship between being employed at the time of the survey and participants' socio-economic background, alongside characteristics of the measures attended. This approach allows us to examine which factors are associated with a higher likelihood of being employed following program participation. The following linear probability model is estimated (Eq. 1):

$$\text{employed}_{im} = \alpha_0 + \beta' X_{im} + \gamma_m + \varepsilon_{im} \quad (1)$$

where employed_{im} is a binary indicator equal to one if individual i , who participated in the measure category m , is employed at the time of the survey. The vector X_{im} contains individual background characteristics such as gender, age, and education, and β is the corresponding parameter vector. The term γ_m denotes the measure fixed effects, capturing all unobserved characteristics that are common to the participants within the same measure category, while ε_{im} is the error term.

With this specification, the estimated coefficients β are interpreted as *ceteris paribus* associations based on within-measure variation. In other words, they reflect how individual

characteristics are associated with employment outcomes when comparing participants who attended the same type of measure, holding constant both the observed individual covariates and all unobserved, time-invariant features of the measure itself. So, for instance, the coefficient of gender would give the association of gender and being employed for the same age, same level of education, same measure characteristics, etc.

4 Descriptive statistics

Table 2 presents the background characteristics of the 350 survey participants. The sample is almost evenly split by gender, with 52.9% women. Among the participants, 34.9% identified as returnees and 54.0% as Roma. The actual share of Roma is likely higher, as many choose not to self-declare as Roma due to stigma, multiple identities, or other reasons.

Table 2. *Background characteristics of participants*

Socio-demographic characteristics	
Female	52.9%
Returnee	34.9%
Roma	54.0%
Age categories	
Up to 29 years	40.1%
30 to 49 years	47.9%
50 years or older	12.0%
Educational level	
Incomplete primary school	1.6%
Primary school	38.2%
Secondary school (3 or 4 years)	48.9%
Tertiary education	11.4%
Employment	
Employed before program	22.9%
Registered with the National Employment Service	64.0%
	N=350

Source: *Registration questionnaire*

In terms of age distribution, most participants were under 50: 40.1% were younger than 30, 47.9% were aged 30–49, and 12.0% were 50 or older. With respect to education, nearly half (48.9%) had completed secondary school, while 38.2% reported primary education only. A smaller share held tertiary qualifications (11.4%), and 1.6% did not complete primary school. Regarding the employment history, just 22.9% were employed prior to the program, while 64.0% were registered with the NES. These figures confirm that the program predominantly targeted unemployed individuals actively seeking work.

To better capture the labor market outcomes of the participants, we classify respondents into four groups according to the type of measure: (1) self-employment and start-up measures (e.g., business beginners' courses, business planning and taxation, start-up training), (2) services (e.g., hairdressers, caretakers, caregivers), (3) industry (e.g., forklift operators, welders), and (4) other measures. This classification is applied consistently throughout the paper to analyze the specific outcomes that require further discussion. The participants are distributed approximately equally across the four groups.²

5 Results

5.1 Program satisfaction and usefulness

A large majority of the participants has been satisfied with the program, and found the program and certificate from the program useful for their future employment. Responses on satisfaction and self-reported impact of the program are shown in Table 3. A large share of the participants reported to be satisfied, since 92.1% of them gave a score of 6 or higher on the 1 to 10 points scale. They were similarly satisfied with the quality of theoretical and practical trainings (83.4% and 80.7% respectively).³ More than two thirds of the respondents said that the program was useful in their job search (71.9%). Four out of five participants received a certificate, and among those who received a certificate, 78.6% said that the certificate was useful for employment. Of all the participants, 63.3% responded that the skills acquired were useful for work. The participants of self-employment and start-up measures were the ones least likely to report that the skills were useful (54.2%). Conversely, among the participants in the measures for services sector, 70.3% reported that the skills were useful for the job.

Table 3. *Satisfaction and self-report impact of the program: Overall and by gender*

	Total	Female	Male	Diff.
	N=350	N=185	N=165	
Satisfied with the program	92.1%	93.0%	91.1%	not sign.
Satisfied with the quality of theoretical (classroom) learning	83.4%	87.4%	78.9%	**
Satisfied with the quality of practical learning	80.7%	83.0%	78.2%	not sign.
The program useful in job search	71.9%	79.2%	63.8%	***
Received a certificate	78.6%	86.2%	70.1%	***
The certificate useful for employment	73.0%	75.8%	68.9%	not sign.
The skills acquired useful for work	63.3%	70.0%	55.7%	***
Improved labor market status				***
Better preparation for job search	44.3%	50.7%	36.7%	
Finding an adequate job after finishing your program/measure	9.6%	9.5%	9.9%	

² Self-employment: 79, services: 85, industry: 83, other: 103.

³ The question on satisfaction as well as other questions with 1 to 10-point Likert scale were coded in the following way. Answers 1 to 5 are considered negative whereas 6 to 10 are positive.

	Total	Female	Male	Diff.
	N=350	N=185	N=165	
Earning a higher salary than before the program/ measure	11.4%	11.8%	11.0%	
Getting a better job	8.6%	6.5%	11.2%	
Labor market situation did not improve	7.4%	5.7%	9.5%	
Other	18.6%	15.8%	21.8%	
Improved aspects in current job due to participation...*				
Possibilities for applying the acquired competencies	58.5%	55.7%	61.6%	not sign.
Job security	33.8%	32.2%	35.5%	not sign.
Social status and recognition (no discrimination)	20.5%	17.0%	24.4%	not sign.
Satisfying salary	26.1%	23.7%	28.6%	not sign.
No effect on the suggested aspects	36.0%	40.8%	30.8%	not sign.
Changes planned within the next three years*				
I have no major changes in mind	32.8%	32.9%	32.6%	not sign.
To obtain higher income	25.1%	14.8%	36.8%	***
To start my own business	20.8%	22.7%	18.7%	not sign.
To get employed	31.9%	33.3%	30.4%	not sign.

Source: Authors

When asked about the ways the program helped them improve their labor market status, the respondents most frequently stated that it helped them be better prepared for the job search (44.3%), that it helped them earn a higher salary than before the program (11.4%) and that it helped them find an adequate job after the program (9.6%). While the responses suggest that some respondents benefited from the measures, the main improvement was that they were better prepared for job search.

Among the program participants, a certificate was received most frequently by those in industry and services (88.2% in both groups). However, the certificate (among those who received it) was more useful for the workers in services sector (81.5%) than for those in industry (67.2%). The workers in services sector were also most likely to find the skills acquired useful for work (70.2% vs. 64.4% in industry). Those involved in the self-employment and start-up measures were least likely to obtain the certificate (60.4%) and least likely to find it useful when receiving it (59.8%). This group was also least likely to find the skills acquired in the program useful for work (54.2%).

Employed persons were asked about the perceived benefits from the program attendance on their current job. They stated that they had the possibility of applying the acquired competencies (58.5%), that they had a satisfying salary (26.1%) and that their job gave them more job security (33.8%). Among the employed persons, approximately one out of three respondents stated that none of the suggested aspects improved in their current job, implying that they did not perceive any benefits from the program participation. We once again look through the lens of the four measure types (self-employment, services, industry and other) to

understand whether there are differences between the four groups. The participant from the measures classified as self-employment and start-up (38.6%) and industry (42.6%) reported less frequently that there were no effects on the suggested aspects, whereas the participants in the services measures stated at the rate of 69.9% that no aspects improved. When asked about expected changes within next three years, the most frequent responses were that they planned to (1) get employed (32.8%), (2) earn a higher income (25.1%), (3) start their own business (20.8%) and (4) achieve more secure employment (14.5%). Every third respondent (32.2%) said that he/she did not have any major changes on their mind.

The data suggest that females were, overall, more satisfied with the measures. In particular, women were more likely to report that the program was useful in job search, receive a certificate, and consider the acquired skills useful for work. There were some minor differences with regards to planned changes within the next three years. Compared to men, women were less likely to report that they planned to get a higher salary within the next three years and to achieve more job security.

5.2 Employment

Table 4 presents the participants' labor market status before the program and their subsequent experience after completing it. Prior to entering the program, 76.6% of the interviewed participants were unemployed. Among them, 20.1% were unemployed for less than one year, 14.6% between one and two years, and the majority (65.2%) for more than two years. This indicates that the measure was well targeted toward individuals actively seeking jobs, particularly the long-term unemployed.

Table 4. Labor market experience by gender before and after the program

Labor market experience	Total	Female	Male	Diff.
	N=350	N=185	N=165	
Before the program				
Unemployed before program	76.6%	79.5%	72.3%	not sign.
Unemployment length before the program				not sign.
Unemployed for less than 1 year	20.1%	18.3%	22.5%	
Unemployed between 1 and 2 years	14.6%	11.9%	18.1%	
Unemployed for more than 2 years	65.2%	69.8%	59.4%	
After the program				
Number of labor market transitions after the program				not sign.
1	81.9%	83.3%	80.4%	
2	11.9%	10.9%	13.0%	
3	4.1%	4.9%	3.3%	
4	2.1%	0.9%	3.3%	
Employed	65.2%	67.3%	63.1%	not sign.

Labor market experience	Total	Female	Male	Diff.
	N=350	N=185	N=165	
Current labor market status				not sign.
Employed full-time	33.2%	34.1%	32.2%	
Employed part-time	0.4%	0.7%	0.0%	
Self-employed/freelance work	22.7%	19.5%	25.8%	
Occasional job	6.4%	5.1%	7.6%	
Further vocational education/training	2.7%	3.6%	1.7%	
Not employed, but searching for a job	26.4%	22.8%	30.1%	
Inactive – Family issues (pregnancy, migration, illness, etc.)	6.6%	10.6%	2.6%	
Inactive other reasons (housewife/husband, etc.)	1.8%	3.5%	0.0%	
Length of employment (current months)	16.2	16.5	15.8	not sign.
Length of unemployment (current months)	12.5	14.3	9.8	**
Length of inactivity (current in months)	11.1	8.7	11.8	not sign.

A *p*-value lower than 0.1 implies that the difference between the two groups is statistically significant at 10%. * significant at 1%, ** significant at 5%, *** significant at 10%.

At the time of the interview, approximately two-thirds of the respondents (65.2%) were employed, most of them in full-time jobs or self-employment, while only few held occasional jobs. By contrast, 26.4% reported actively searching for work, and 6.1% were inactive due to education, family responsibilities, or other reasons. Given that only 23.4% were employed before entering the program, these results suggest an increase of about 38.8 percentage points in employment after the program participation. It is important to note, however, that this reflects the gross effect of the program, as no comparison group is available.

Those who were employed reported having worked, on average, for 16.2 months prior to the interview. Unemployed participants were in that status for 12.5 months on average, while the inactive reported 11.1 months. The respondents were also asked about their labor market trajectories following the completion of the GIZ program. Overall, relatively few job transitions were reported. Since transitions were only recorded for the post-program period, we observe that 81.9% of the participants continued in the same activity⁴ as immediately after the program, indicating no transitions. Another 11.9% reported one transition (two activities), 4.1% reported two transitions (three activities), and 2.1% reported three transitions (four activities). These findings suggest relatively stable labor market status: the participants tended to remain either employed or unemployed/inactive for a considerable period. This runs counter to the expectation that they would change their status more frequently.

There are no differences in the labor market experience of females and males.

Table 5 summarizes participants' training experiences and employment outcomes across different sectors. The lowest employment rate was observed in the services sector, where

⁴ The questionnaire includes the following activities: 1) Employed full-time, 2) Employed part-time, 3) Self-employed/freelance work, 4) Occasional job, 5) Internship, 6) Further vocational education/training, 7) Housewife, househusband, family work, 8) Not employed, but searching for a job, 9) Inactive – Family issues (pregnancy, migration, illness, etc.), 10) Inactive (other reasons).

53.8% of the participants were employed at the time of the interview. This sector also recorded the smallest gross effect of all groups—an increase of 27.4 percentage points (from 26.4% before to 53.8% after the program). By contrast, employment outcomes in the other three categories – self-employment, industry, and other sectors were more favorable, with about 69% of the participants being employed at the time of the interview. The lowest pre-program employment share was recorded in the industry group (21.6%), which resulted in the largest gross employment effect of 48.2 percentage points. In other sectors, the gross effect was 46.4 percentage points (from 22.4% before to 68.8% after), while among the self-employed it amounted to 33.5 percentage points (from 34.4% to 67.9%).

Table 5. *Training experience and employment outcomes by type of training*

	Self-employment	Services	Industry	Other	Total
	N=79	N=85	N=83	N=103	N=350
Training useful for job search	64.3%	73.3%	70.6%	77.6%	71.9%
Received certificate	60.5%	87.5%	88.2%	69.8%	78.6%
Certificate useful	59.8%	81.5%	67.2%	78.7%	73.0%
Skills acquired useful for work yes	54.2%	70.3%	64.4%	63.2%	63.3%
Employed before training	34.4%	26.4%	21.6%	22.4%	25.8%
Employed currently	67.9%	53.8%	69.8%	68.8%	65.2%
Increase in employment in p.p.	33.5 p.p.	27.4 p.p.	48.2 p.p.	46.4 p.p.	39.4 p.p.
No written agreement (if employed)	n/a	41.4%	7.2%	4.7%	11.6%

These results should be interpreted in conjunction with the participants' assessments of the program's usefulness. The service sector participants were most likely to report that the certificates and skills acquired were valuable, yet they also experienced the weakest employment gains. This may indicate that, despite improved skills, they still faced the greatest challenges in finding work. Conversely, the more modest improvements among the self-employed correspond with their relatively lower ratings of program usefulness.

Therefore, the gross improvement in employment was the highest in the industry sector. On the other hand, while the employment increased the least for the service sector workers, they found that this program significantly improved their chances of obtaining work in the labor market. For the self-employed, both increase in employment and opinion on the program were less favorable compared to the average values.

Turning now to the job characteristics of the employed persons (Table 6), it can be observed that, among the employed, a considerable share is self-employed (34.7%), while 52.0% are employed with a written contract and only a small share has only an oral contract (6.8%). Among the respondents, most had longer term contracts. 37.8% had a contract lasting 7-12 months, while another 18.3% had permanent contracts. This question was not applicable to the self-employed. Due to the low percentage of participants who have permanent contracts, we may conclude that the job security among the participants is low. The large group of self-employed in the sample does not have any job security. Most participants earn between 30,001 RSD (256 Euros) and 60,000 RSD (512 Euros), in particular, between 30.001

(256 Euros) and 40.000 RSD (341 Euros): 25.4%; between 40.001 (341 Euros) and 60.000 RSD (512 Euros): 40.9%). The median wage in Serbia in April 2022 stood at 55,267 RSD (471 Euros) and the mean was 73,012 RSD (622 Euros). It can be observed that the respondents rarely reported an income above the mean. Among the participants who are employed with a company, over 90% has the standard benefits such as annual paid leave, paid sick leave, pension benefits, medical insurance and social security contributions. There are significant differences in terms of wages between men and women, where the men reported higher earnings than the women. No other significant differences by gender are observed.

Table 6. Job characteristics of the employed

Panel B: Job characteristics of the employed (current)	Total	Female	Male	
	N=214	N=106	N=108	
Contract type				not sign.
A written agreement (unlimited duration)	18.0%	14.1%	21.4%	
A written agreement (limited duration)	34.0%	40.9%	28.0%	
An oral agreement	6.8%	10.2%	3.9%	
Not applicable (self-employed, etc.)	41.2%	34.8%	46.8%	
Contract duration				not sign.
Less than 3 months	5.5%	3.9%	7.0%	
From 7 to 12 months	37.8%	47.1%	29.6%	
More than 12 months	1.7%	1.2%	2.2%	
Permanent	18.3%	14.2%	21.9%	
Not applicable (self-employed, etc.)	36.6%	39.3%	33.6%	
Wage categories				***
Less than 20.000 RSD	8.1%	6.1%	10.2%	
Between 20.001 and 30.000 RSD	8.0%	11.6%	4.3%	
Between 30.001 and 40.000 RSD	25.4%	34.8%	15.9%	
Between 40.001 and 60.000 RSD	40.9%	44.2%	37.6%	
Between 60.001 and 80.000 RSD	9.7%	3.2%	16.3%	
More than 80.001 RSD	7.8%	0.0%	15.7%	
Benefits in current job+	100.0%	100.0%	100.0%	
Annual paid leave (holiday time)	93.8%	96.0%	91.4%	not sign.
Paid sick leave	92.3%	94.7%	89.7%	not sign.
Pension/old age insurance	93.6%	95.3%	91.6%	
Medical insurance coverage	97.3%	98.2%	96.2%	not sign.
Social security contribution	95.6%	97.1%	93.9%	not sign.

By the type of program, the lowest job security was observed among the respondents who participated in the service sector program. Among the wage-employed respondents, about 40% reported working under oral contracts; in industry and other sectors the corresponding shares were approximately 7% and 5%, respectively.

5.2.1 What are the characteristics of the participants who found employment?

In Table 7 we compare the labor market status before and after the program. Three out of four participants who were employed before the program remained employed. Before the program, 76.7% of the participants were unemployed, among these 47.5% went from unemployment to employment, 21.9% remained unemployed and 7.2% went from unemployment into inactivity.

Table 7. Labor market transition before and after the program

Before the program	After the program – at survey (N=350)			
	Employed	Unemployed	Inactive	Total
Employed	17.6%	5.1%	0.7%	23.4%
Unemployed	47.5%	21.9%	7.2%	76.6%
Total	65.1%	27.0%	7.9%	100%

We now turn to regression analysis to understand whether any individual characteristic is associated with a higher employment probability. We consider two sets of characteristics. First, we consider individual background characteristics such as gender, age, educational background and returnee status. The second set of characteristics are those related to the measure, in particular: the type of measure (self-employment/start-up, services, industry and other) and whether the person received a certificate. Our findings are shown in Figure 1

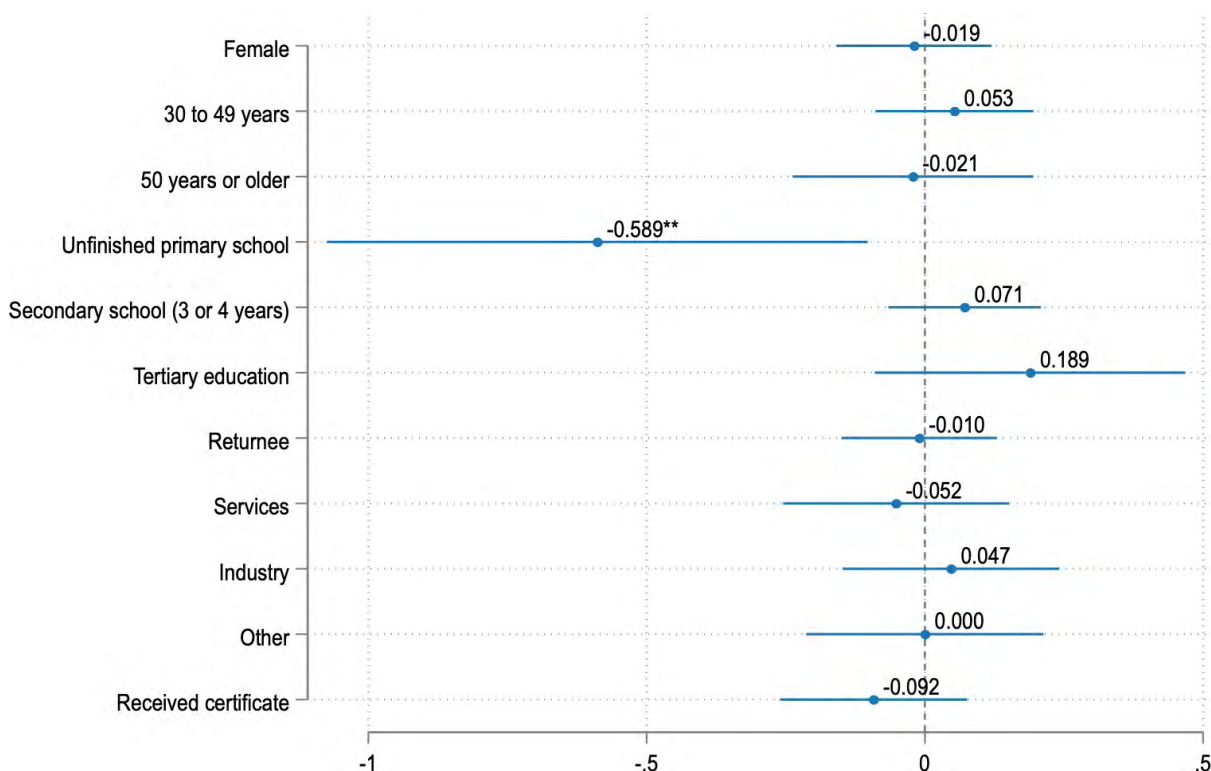


Figure 1. Regression coefficients for outcome employed

Notes: Baseline for age is group 29 or younger. Baseline for education is finished primary school. Baseline for measure category is self-employment. * significant at 1%, ** significant at 5%, *** significant at 10%.

and the only characteristic that makes a difference in terms of finding employment is the educational background. While statistically not-significant, there is some evidence that the individuals who were more educated, i.e. secondary or tertiary education, had a higher probability to be employed. Persons with unfinished primary school had lower chances of having employment, but there were very few of them in the sample (5 participants). The regression estimates should be interpreted in the following way. Holding all other variables constant (i.e. gender, returnee status, type of measures, certificate), a person with tertiary education was 18.9 percentage points more likely to be employed than a person with completed primary education (baseline category). While descriptive statistics suggest some differences in employment outcomes between measure types, these differences do not remain statistically significant once individual characteristics and measure fixed effects are controlled for. Women and returnees had the same chances to be employed as their respective counterparts.

6 Discussion and conclusion

The program comprised four interventions – self-employment/start-up, industry, services, and other measures, with impacts varying by category, consistent with sector-specific effects documented in prior studies (Crépon & van den Berg, 2016; Dvouletý & Lukeš, 2016). Overall, a majority of respondents considered the acquired skills useful. Among those employed at follow-up, outcomes were more favorable for the participants in self-employment and industry than for those in service-sector support, nearly 70% of whom reported no concrete on-the-job benefits, suggesting lower wage potential, or a training–market mismatch, in line with Escudero (2018).

Overall employment increased substantially following the participation, confirming the strong gross improvements documented in the Results section. Consistent with the descriptive evidence, employment gains were strongest in industry and weakest in services. Despite weaker employment effects, service participants reported slightly higher satisfaction with the training and credentials. Education strongly shaped transitions: higher educational attainment increased the likelihood of employment, supporting the existing evidence that ALMPs are more effective with better-educated participants (Plavgo, 2023). More broadly, this study follows a common approach in the ALMPs evaluation literature based on observational data and correlational analysis, which emphasizes descriptive patterns and heterogeneity rather than causal identification.

Job quality improvements were limited, with relatively low levels of employment stability. Very few respondents credited the program with higher earnings, consistent with the findings that training effects on wages often fade (Borra et al., 2012). While incentives can reactivate the long-term unemployed (European Training Foundation, 2025), effects here were modest on contract quality and pay. Confidence in future prospects remained limited: 32.2% expected no major change over the next three years.

Overall, the satisfaction with the program and its labor market effects was high, particularly among women. Yet the concrete outcomes in terms of income and job security were more limited. The heterogeneity of the results across interventions highlights the importance of aligning program content more closely with sector-specific labor market needs.

It should be noted that the analysis is based on a single endline survey of program participants and does not include a control or comparison group. The interpretation of the obtained findings should take into account potential biases mainly referring to social desirability and non-responsiveness. These limitations prevent the establishment of causal relationships between the intervention and the observed results, while the findings should be interpreted as descriptive and associative rather than causal.

The research findings suggest several policy recommendations for the design and implementation of similar programs in the future. First, intervention should be grounded in systematic, pre-implementation skills assessments. This would help ensure that employed participants receive support tailored to their current job requirements, while unemployed individuals developing skills aligned with actual labor market needs. Second, program effectiveness could be enhanced by integrating demand-side policies, thereby increasing the likelihood of successful labor market integration. Third, given the high vulnerability of the target population and the significant share of the participants with limited expectations for future improvements, systematic outcome monitoring is essential. Regular tracking of employment status, income, and job quality combined with follow-up support would strengthen the sustainability and impact of program results.

Finally, given that effects of the program were correlated with the educational background rather than the socio-economic backgrounds (gender or returnee status) of the participants, or the program design specifics (specific measure provided or certificate), future measures should be designed to address deficits in formal education. Incorporating investments in general skills development could improve long-term employability and resilience.

Data availability statement

Data are available from the authors upon request.

Coauthor contributions

Lara Lebedinski: Conceptualization, Data curation, Investigation, Methodology, Writing – Original Draft, Writing – Review & Editing

Mihajlo Đukić: Investigation, Writing – Original Draft, Writing – Review & Editing, Validation

Dejana Pavlović: Investigation, Writing – Original Draft, Writing – Review & Editing, Validation

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Local Governments as Missing Actors in Occupational Safety Governance

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Occupational safety and health (OSH) outcomes have been increasingly influenced not only by legal frameworks and workplace-level practices, but also by the governance capacity of institutions that act at the local or regional levels. This study aims to explore the role of local governments in multi-level OSH governance systems, which is an important knowledge gap in safety science literature where local governments have often been viewed as peripheral or supplementary actors. A qualitative comparative study approach is used in this study, with documentary study findings from Germany, Serbia, and Türkiye aimed at exploring how OSH governance influences local governments in OSH prevention, coordination, and crisis management. The findings of this study have revealed that European countries with multi-level governance systems that integrate local governments using formal mandates, coordination mechanisms, or preventive infrastructure have been more effective in OSH prevention, coordination, and crisis management. However, in the case of Türkiye, there is a highly centralized OSH system with limited integration of local governments, which is likely to have limited OSH prevention-oriented practices. The study on Serbia reveals that there is limited integration of local governments in OSH governance in the country, but with limited institutionalization. The findings of this study have revealed that local governments have been an important but not well-integrated part of OSH governance. A key recommendation of this study concerns the need of developing local institutional capacity in OSH governance.

Keywords: safety governance, local governments, multi-level regulation, occupational safety, occupational health

1 Introduction

Occupational safety and health (OSH) management in regional communities transcends the traditional role of OSH as a mere technical dimension of working life. It encompasses a multi-dimensional domain of governance that affects social well-being, economic security, and sustainable developmental paths. The contemporary safety science, in particular, increasingly acknowledges occupational safety as a foundational pillar of economic growth, social equity,

and preservation of human capital. In this regard, the provision of safe and healthy working environments no longer merely focuses on the prevention of occupational accidents and diseases. Instead, it becomes a strategic tool that improves quality of life, enhances productivity, and reinforces the resilience and competitiveness of regional and local economies (Zanko & Dawson, 2012; Sorensen et al., 2021).

The provision of occupational safety in regional communities does not merely rest on the shoulders of employers. Instead, it becomes a joint and collective governance task for local governments, trade unions, civil society, and workers. Among these groups, local governments assume a very strategic role. Their proximity to working life and the presence of a regulatory, coordinating, and service-delivery role enable them to become a bridge between the national OSH regimes on the one hand, and working life on the other. In this context, occupational safety management no longer merely becomes a task of ensuring compliance with the law. Instead, it becomes a hallmark of quality of governance, institutional capabilities, and social solidarity in local governments (Walters et al., 2018; Salguero-Caparrós et al., 2020).

Based on comparative international evidence, it has been found that the effectiveness of OSH governance also varies significantly across countries in terms of the degree of decentralization and capacity for coordination and governance. In Germany, OSH governance is a part of a broader corporatist and insurance-based system in which sectoral accident insurance institutions and public authorities work together. While regulatory authority is vested in national governments, regional and local institutions play an important facilitating role in terms of coordination and integration of prevention activities, while supporting enterprises, especially SMEs, and embedding OSH issues in regional economic development strategies. This is an important example that demonstrates the potential for coordination and integration at the local and sectoral levels through formal coordination structures (Rothstein et al., 2020). Serbia is an important case that exemplifies OSH governance in a transition economy undergoing significant institutional reform and integration into the European Union. While the OSH legislation in place is similar to that in other EU member states, the capacity for effective OSH governance at the regional and local levels is uneven. Local governments face challenges in terms of technical capacity and coordination. OSH practices in regional communities are often reactive and driven by regulatory compliance. This is an important case that demonstrates the need for capacity development in terms of effective OSH governance at the local levels (Uvalic, 2012). In contrast, in Türkiye, OSH governance is highly centralized and is supported by a comprehensive national regulatory framework, particularly the *Occupational Health and Safety Law No. 6331 (2012)*. However, significant differences in terms of formalized OSH practices are also observed at the regional levels. For instance, in the areas with higher industrial concentrations, OSH practices are relatively formalized, whereas in the areas dominated by SMEs, there is often a deficiency in inspection capacity and awareness (Isik, 2026).

2 Literature review

2.1 Regional Communities, Crisis Conditions, and the Integration of Occupational Safety into Social Security Governance

Whereas in the past, occupational safety research took place in an environment of relatively stable conditions, current research is increasingly pointing to the role of crisis conditions in safety governance. Natural disasters, economic crises, wars, and health crises, among other incidents, are increasingly being recognized to expose not only safety risks but also limitations in institutional coordination, social resiliency, and governance capabilities in regional settings (Lobel, 2005). All these call for rethinking and re-evaluating safety governance in regional settings.

Recent research in safety governance in regional settings has increasingly pointed to the fact that security in such settings can no longer be understood in terms of responding to crises or through state intervention. On the other hand, it is increasingly being understood in terms of societal responsibility, with every member of society contributing to it. Participatory and community-based governance is increasingly being recognized as an alternative way of governance in regional settings. In such an understanding of governance, safety is no longer being understood in terms of its role in governance (Hansen & Antonsen, 2024). Nowadays, OSH can hardly be perceived solely as a reactionary function geared towards resolving crises at the individual workplace level. Instead, it can be described as a societal function that ensures resilience, effectiveness of institutions, and sustainability. Within this definition, safety becomes a critical element of resiliency on the societal level. In other words, prevention from the occupational standpoint will contribute to the overall quality of life, safety of the environment, transparency of governance, and active citizenship. This approach fits contemporary OSH practices well as it focuses on prevention and preparedness. Furthermore, research shows that resiliency is likely to increase public trust in institutions and make them more effective, especially under conditions of a crisis (Jain et al., 2018; Friend & Kohn, 2023).

Occupational safety thus presents itself as an essential factor in social stability and sustainability in regions. The presence of safe and healthy working environments is conducive to economic continuity and is also essential in reinforcing safety culture in regions. It is therefore imperative that the minimization of accidents and diseases in the workplace be viewed not only as an essential aspect of compliance but also as an essential strategy in maintaining social stability during systemic crises (Forastieri, 2016).

It is also essential to present comparative examples of the level of integration of institutions in different regions. In Germany, occupational safety is present in multi-level governance structures in the form of sectoral accident insurance systems, which also include regional and local government actors (Scholtes et al., 2017). Serbia and Türkiye have also witnessed significant national-level OSH system reforms, but the level of integration of local government institutions is still relatively low. Serbia's alignment with European Union standards has improved the formal compliance in the country, but the presence of significant disparities and capacity constraints in local government is still a challenge in the minimization of accidents and diseases in the workplace (Đinđić & Bajić, 2018). Türkiye has also witnessed

significant national-level OSH system reforms in the form of the comprehensive system of laws established under the [Occupational Health and Safety Law No. 6331](#), but the recent crises of earthquakes and the COVID-19 pandemic have revealed significant gaps with the level of integration of local government institutions in the minimization of accidents and diseases in the workplace. Local government institutions in Türkiye are structurally present in the capacity to integrate OSH governance with social resilience, but this potential remains largely untapped ([Tekin-Apaydin, 2024](#)).

The wider literature also points to the fact that sustainability in regional security is not only dependent on physical infrastructure but also on governance standards, social values, and the level of participation of stakeholders in regions. Occupational safety governance is an essential interface between the economy and social values and is also essential in reinforcing regional resilience against systemic risks and crises. The wider comparative European literature also points to the fact that local government capacity and training systems, and employer-union cooperation are essential in reinforcing safety culture in regions.

2.2 Multi-Level Governance and the Role of Local Governments in Occupational Safety

The idea of multi-level governance is frequently used in public policy and safety research to characterize how intricate risks are handled through interaction among various levels of governance. Instead of depending on hierarchical and state-based regulation, this idea emphasizes vertical and horizontal interaction among public authorities, private actors, and civil society. In OSH, success is greatly dependent on the nature of interaction among public authorities in charge of regulation, enforcement, prevention, and response. Research is increasingly demonstrating that centralized frameworks of regulation are insufficient in ensuring uniform outcomes in occupational safety, particularly in socio-economically heterogeneous contexts. Although national legislation is vital in establishing OSH requirements, its success is greatly dependent on local interpretation and implementation. In addition, local differences in economic structures, size of enterprises, labor markets, and cultural settings contribute to inconsistent OSH performance in the context of a single country ([Hudzik, 2014](#); [Walters et al., 2018](#)).

The aforementioned limitations are also evident in the countries under analysis. In Germany, national OSH regulations are accompanied by local and regional governance mechanisms. These mechanisms are institutionalized in promoting local prevention, interaction, and stakeholder participation ([Aurich-Beerheide et al., 2015](#)). In contrast, in Serbia and Türkiye, OSH governance is highly centralized, with local authorities playing only auxiliary roles in OSH despite being in alignment with European OSH standards ([Isik, 2026](#)). This has led to an emphasis on intermediary bodies in ensuring OSH through appropriate local interpretation of European legislation. In multi-level governance structures, local authorities are increasingly being perceived as potential intermediaries due to their local nature. This is because of their proximity to local contexts, which can be used in responding to context-specific risks, supporting small and medium-sized enterprises, and interaction with stakeholders. This is supported by the findings of comparative evidence in Germany, which shows that local authorities could act as effective intermediaries in the OSH system through integrated

prevention and coordination mechanisms (Aurich-Beerheide et al., 2015). However, in Serbia and Türkiye, the involvement of the local authorities is low in the formal OSH system and prevention mechanisms (Dursun-Ozkanca & Crossley-Frolick, 2012).

Empirical research findings related to the involvement of the local governments in the occupational safety governance system are limited (Yi & Qiu, 2025). However, existing literature portrays the involvement of the local authorities in the occupational safety system, primarily through the implementation of the regulations (Kineber et al., 2023). This indicates that the capacity of the local authorities to engage in planning, resource allocation, and coordination with the stakeholders is not well analyzed. However, the occupational safety governance system is not limited to the implementation of the regulations; it is also related to planning, supervision, and crisis management, among others. Therefore, the capacity of the local governance system is low in Serbia and Türkiye. This indicates that the OSH system is primarily reactive, enforcement-based, and institutionally fragmented.

Moreover, the socio-economic disparities between the metropolitan and smaller cities in the country emphasize the significance of the capacity of the local governance system in the OSH system. This is because the metropolitan cities are likely to be more effective in the OSH system due to their technical and institutional capacity, whereas the smaller cities are likely to outsource the services, thus indicating the need to bridge the gap between the research findings and the policy. This is essential in the process of localizing the national OSH policy and bringing it in line with the European principles of good governance, and is possible through the involvement of the local authorities in the OSH system at the national level. This is supported by the findings of the comparative evidence, which show that occupational safety is embedded in the regional governance system through the involvement of the local authorities in the OSH system.

2.3 Local Governments as Underexplored Safety Actors

Despite their significant tasks in areas like public welfare, urban planning, emergency planning, infrastructure regulation, and service delivery, local governments have traditionally received scarce attention as actors in occupational safety governance. When incorporated into the safety science discourse, it is predominantly as supporting actors in areas like inspection support, emergency planning, and awareness promotion. Such a narrow view does not reflect the overall capacity and potential of local governments as actors in occupational safety governance (Almklov et al., 2014).

However, in contrast to this rather narrow view, there is evidence from various European contexts that supports the capacity and potential of local governments as actors in occupational safety governance. For instance, in Germany, local governments and regional authorities are recognized actors in occupational safety governance. Additionally, they are known to be supporting enforcement, coordination in preventive activities, training support for small and medium-sized businesses, and integration in regional development and labor market strategies. This indicates that, in practice, local governments can also function as actors in promoting safety culture, rather than only implementing centrally defined regulations (Kuhlmann et al., 2022). However, in countries like Serbia and Türkiye, the integration of local

governments in formal structures for OSH governance is rather weak. This is despite the fact that in both countries, there is significant alignment in national legislation with respect to European regulations. In both countries, it is also notable that local governments often operate with limited mandates, scarce information in terms of safety-related data, and insufficient resources in terms of preventive engagement. This means that in each of the countries, occupational safety governance is rather centralized and reactive, with scarce consideration for locally adapted approaches to prevention (Banjević & Gardašević, 2023; Isik, 2026).

The literature also supports the fact that local governments enjoy relational and spatial advantages, which enable them to function as an intermediary between the regulator, employer, worker, and civil society. Local governments' closeness to workplaces enables them to design prevention measures in line with local risk profiles. Evidence of the effectiveness of the participatory governance model, particularly in Scandinavian countries, confirms that local governments' intermediary roles are essential in developing trust, voluntary compliance, and collective responsibility for safety (Masuda et al., 2022). However, comparative research on local governments' capacity in occupational safety governance in various countries reveals that there are significant differences in local institutional capacity in various countries. For instance, financial, technical, autonomy, and maturity factors significantly affect local governments' capacities to engage in occupational safety governance. Local governments in Germany, for instance, possess the capacity to coordinate prevention measures, whereas financial and institutional limitations in Serbia and Türkiye hinder local governments' involvement in occupational safety, resulting in fragmented safety practices (Banjević & Gardašević, 2023).

The differences in local governments' capacities in occupational safety governance raise significant concerns about fairness and consistency in occupational safety systems in various countries. For instance, differences in local capacities may result in significant differences in safety outcomes in various countries, despite the adoption of identical occupational safety regulations, particularly in countries with significant differences in socio-economic profiles. Despite the implications of local governments' capacities in occupational safety governance, there is limited conceptual analysis of the local governments' roles in occupational safety governance. It is imperative to fill this gap, particularly in the comparative analyses of occupational safety governance in Serbia, Germany, and Türkiye, which demonstrate differences in the local governments' capacities for occupational safety governance. It is imperative to strengthen the analysis of the local governments' roles in occupational safety governance in order to improve the effectiveness of occupational safety governance in various countries.

2.4 Research Gap and Analytical Positioning of the Study

Despite an increased emphasis on governance aspects in OSH, local governments have not been adequately conceptualized in safety science literature. Existing studies have predominantly focused on the workplace-level aspects or national-level institutions. Therefore, the local governance dimension of occupational safety is still in an analytically embryonic state. This is unfortunate since it is crucial in explaining differences in occupational safety performance among regions that have similar national-level regulatory environments. For instance, empirical findings on occupational safety performance in European Union member

states and candidate countries have indicated significant differences in occupational safety performance among regions. This indicates that the differences in regulatory compliance cannot fully explain the differences in occupational safety outcomes. Without considering local-level institutions, occupational safety performance cannot be analyzed adequately (Bao et al., 2022; Rađenović, 2023).

For example, in Germany, local governments have been acting as institutionally embedded actors in multi-level occupational safety governance systems. Therefore, occupational safety is enhanced at the local level by providing preventive services, organizing stakeholders, and integrating occupational safety aspects into regional development strategies. Thus, the occupational safety standards set at the national level have been translated into local-level preventive strategies. However, in both Serbia and Türkiye, occupational safety governance is still formally centralized. Despite significant legal reforms in line with European standards, local governments in both countries have not been provided with clear mandates or access to occupational safety data. Therefore, in each country, the respective local government has been restricted to playing an indirect role in occupational safety.

Literature suggests that local governments hold a structurally strategic position in relation to regulation, service provision, regional development, and community engagement (Britton & Webb, 2024). Their proximity to workplaces and responsibilities in urban planning, infrastructural management, disaster preparedness, and social policy make them a potential intermediary that may help in the localization of national OSH standards. However, the role of safety science in exploring the influence of institutional capacities and limitations on occupational safety governance in different countries has not been explored.

This issue is more pertinent in countries that experience socio-economic and spatial disparities, such as Türkiye and Serbia. Variations in administrative resources, technical expertise, and organizational capacity contribute to uneven implementation of occupational safety policies, yet systematic analyses linking these differences to safety outcomes remain scarce.

To further increase the clarity and precision of concepts and analysis, this study is informed by the following research questions:

- (RQ1) What is the status and functional position of local governments in the occupational safety governance system?
- (RQ2) How far are local governments recognized, incorporated, or overlooked in national and international occupational health and safety systems?
- (RQ3) What structural, legal, and institutional factors are responsible for the marginalization of local governments in occupational safety governance?
- (RQ4) How can local governments be better incorporated into OSH governance systems for better effectiveness in prevention and policy implementation?

By attempting to address these questions, this paper will employ a multidisciplinary and comparative approach and will be informed by international standards and regulatory frameworks and theories of governance. The paper will not only aim to highlight and address the gaps in practice but also strive to develop an inclusive and functionally integrated model for occupational safety governance. The remainder of this paper is structured as follows:

The following part will discuss and develop the conceptual and theoretical framework for understanding and analyzing the governance system for occupational safety and the role and position of multi-level actors in it. This will be followed by a comparative and analytical part in which international OSH systems will be examined in terms of the incorporation and integration of local governments. The study will then be conducted in terms of the OSH system in Türkiye and will highlight and discuss the gaps in terms of integration and incorporation. Based on that, a model will be developed for repositioning and refunctioning local governments in OSH governance. The paper will conclude with recommendations and directions for further research.

The present study addresses this gap by adopting a governance-oriented perspective that conceptualizes local governments as active safety actors rather than peripheral implementers. Occupational safety is framed as a multi-dimensional governance system embedded within regional development, social welfare, and public administration. Using a comparative framework encompassing Germany, Serbia, and Türkiye, the study examines how different multi-level governance arrangements shape occupational safety outcomes. By doing so, the study contributes to the literature in three ways: it advances a governance-based conceptualization of occupational safety, empirically links local institutional capacity to safety outcomes, and offers context-sensitive insights for Türkiye and Serbia on localizing OSH policies in line with European Union principles of good governance. Overall, the study moves beyond compliance-centered approaches and highlights the institutional role of local governments in strengthening sustainable, resilient, and participatory occupational safety systems.

3 Method

3.1 Research Design and Analytical Approach

This study adopts a qualitative and comparative research design to examine the role of local governments in OSH governance. Given the institutional and governance-oriented nature of the research problem, a qualitative approach is appropriate for capturing how regulatory structures, institutional roles, and coordination mechanisms shape occupational safety systems across different national and regional contexts. Rather than focusing on accident statistics or firm-level performance indicators, the study seeks to understand how governance arrangements influence occupational safety outcomes at the local level. This approach is in line with both safety science and governance in public policy, which emphasize that occupational safety is not only an instrumental process but also that it is part of broader governance. This provides a foundation for an in-depth analysis of how capacity, decentralization, and local governance influence OSH.

The study is also informed by safety governance and multi-level governance theory. This theory is centered on the interactions among actors at different levels, namely national, regional, and local levels. From this approach, occupational safety is not only viewed at the workplace but also at an institutional level. Therefore, more emphasis is placed on governance than on quantitative aspects. This study is part of a comparative case study that involves three countries: Germany, Serbia, and Türkiye. The selection of countries is informed by differences in governance systems, levels of decentralization, and the institutional placement

of local governments in OSH. Germany is used in this study as an example of European governance in which local and regional governments have been formally placed in OSH at the national level with effective coordination. Both Serbia and Türkiye represent countries with more centralized governance in which local governments have little or no role in OSH, despite being compliant with European legislation.

Methodologically, this comparative qualitative design aims to identify governance mechanisms rather than establish causal relationships or rank countries by safety performance. By examining how different institutional configurations enable or constrain local government involvement, the study generates analytically generalizable insights into the role of local authorities within multi-level OSH systems.

3.2 Data Sources and Analytical Process

Data collection relied exclusively on secondary qualitative sources, consistent with the study's governance-oriented analytical framework. A comprehensive documentary review was conducted to examine the institutional, legal, and policy dimensions of OSH governance at national and local levels. This approach facilitated the comparison of formal mandates, governance structures, and the role of local governments. The documents were chosen according to the following three criteria: relevance to legal and/or regulatory issues of occupational safety, institutional authority, and relevance to the governance structure with national and subnational actors. For each country under analysis, the primary sources were:

Türkiye: [Occupational Health and Safety Law No. 6331](#); [Occupational Health and Safety Risk Assessment Regulation \(2012\)](#); secondary legislation and implementation guidelines issued by the Ministry of Labor and Social Security.

Germany: [Occupational Safety and Health Act \(1996\)](#) (Arbeitsschutzgesetz); [Social Code Book VII \(1996\)](#) (SGB VII – statutory accident insurance); federal and Land-level ordinances and implementation rules and guidance; [Deutsche Gesetzliche Unfallversicherung \[DGUV\], 2013](#) regulations and institutional documents. (The German reference framework was chosen because of the unique federal/Länder structure of the German state and the relevance of this structure to the question of how the governance structure of occupational safety might be organized around the principles of strong national-level regulation and differentiated subnational-level implementation)

Serbia: [Law on Occupational Safety and Health \(2023\)](#); Strategy on Safety and Health at Work (2018; 2024); policy and reform documents regarding harmonization with EU legislation.

In addition to the above primary sources, various reports and documents issued by institutions and national-level strategy documents were used in the analysis. For the Turkish case, the analysis focused on the national legislation, most notably the [Occupational Health and Safety Law No. 6331](#), municipal, metropolitan laws and strategic policy documents issued by the Ministry of Labour and Social Security and selected municipalities. Reports published by the Union of Municipalities of Türkiye were also examined to capture local governance perspectives on OSH-related activities.

In the European cases, documentary analysis covered national OSH legislation and regulatory frameworks defining the role of local and regional authorities. Particular attention was

paid to the federal-Länder distribution of responsibilities in Germany in order to assess how multi-level governance arrangements shaped the institutional role of subnational actors in occupational safety and guidance issued by the sector-based accident insurance institutions (Berufsgenossenschaften), and regional policy reports addressing prevention and coordination mechanisms. The Serbian case was analyzed using national OSH legislation aligned with the European Union *acquis*, government policy documents, and publicly available reports on labor inspection and local administration, with particular attention to the formal integration of municipalities into OSH governance.

To ensure analytical consistency, supranational and comparative policy documents were also reviewed, including reports published by the European Commission, European Agency for Safety and Health at Work, and Eurofound. These sources provided comparative benchmarks and supported the assessment of alignment with European standards and principles of good governance.

All documents were analyzed using thematic content analysis. Texts were coded according to analytically derived themes informed by safety governance and multi-level governance literature.

The main themes involved local institutional capacity, formal OSH mandates, coordination of stakeholders, inspection and enforcement, training and awareness, and alignment with national and international OSH standards. This coding approach facilitated the systematic analysis of governance strengths, weaknesses, and gaps, and ensured comparability and sensitivity to variations between countries.

This data matrix, as presented in Table 1, reveals that the analysis draws on a range of comparable documentary sources for all three cases. The analysis of various sources of national legislation, local governance arrangements, policy strategies, local-level documentation, and supra-national benchmarks allows for a comprehensive analysis of both the form and content of local-level governance narratives on the role of local governments in occupational safety governance. Perhaps most importantly, this matrix also reveals differences in the structure of these governance arrangements. Although there are extensive and systematic documentation sources available for the local level in Germany, there are significant limitations in the availability of formal local-level documentation on OSH in Serbia and Türkiye. Such differences are significant from a substantive analytical perspective, as they reveal differences in the institutional integration of local governments in OSH, rather than limitations in the analytical approach.

Table 1. *Data Matrix: Countries × Types of Documentary Sources*

Country	National OSH Legislation	Local Government Law/ Framework	National OSH Strategy & Policy Documents	Local/ Municipal Strategic Plans	Supranational/ EU Policy Documents	OSH Institutions & Advisory Bodies Reports
Germany	Yes	Länder & municipal frameworks	Yes	selected regions/ municipalities	Yes	Berufsgenossenschaften, BAuA
Serbia	Yes	local administration law	Yes	limited	EU alignment documents	Labour Inspectorate reports
Türkiye	Law No. 6331	Municipal & Metropolitan Laws	Yes	selected municipalities	EU-OSHA, EC	Ministry & Union of Municipalities

3.3 Case Selection and Comparative Logic

The comparative analysis will concentrate on the cases of Germany and Serbia, along with Türkiye. The selection of cases was grounded in a purposive sampling approach, where cases were considered appropriate if they met the following criteria:

- The presence of well-established OSH regulatory frameworks;
- Diverse patterns of governance and decentralization levels;
- Evidence of the involvement of local or regional authorities, both in a formal or informal manner, in any type of activity related to OSH.

Germany was considered a well-established model of OSH governance in the European context, characterized by a corporatist and insurance-based coordination of statutory accident insurance bodies and federal and regional authorities. Serbia, as a post-socialist country and EU candidate, was considered a transitional governance context. Although it possesses an OSH legislative framework which is well-aligned with EU directives, local governments are not properly institutionalized when it comes to OSH governance, including a very narrow scope of competencies, very limited administrative capacity, and a highly centralized system of labor inspection. Therefore, Serbia appears as a very important intermediate case, as it is positioned between mature multi-level governance systems and highly centralized models. The case of Türkiye was considered a contrasting model, characterized by a highly centralized regulatory environment and an extremely low level of integration of local governments in OSH governance. Although a well-founded legislative environment for OSH exists, as shown by the [Occupational Health and Safety Law No. 6331](#), municipalities are active in OSH only through indirect roles and not as active players. The above-mentioned cases are appropriate for an explanatory comparative analysis, focusing on governance, and not for a generalizing comparative analysis. The fact that the study focuses on cases that are positioned along a continuum of decentralization, institutionalization, and local governments' involvement allows for the isolation of the effect of variations in governance and local governments' capacities concerning the role of municipalities in occupational safety management.

3.4 Methodological Rigor and Limitations

For methodological rigor in the comparative analysis of Germany, Serbia, and Türkiye, certain measures were undertaken. Methodological triangulation was secured by relying on multiple secondary data sources. This involved using national legislation, policy documents, municipal strategic plans, and international reports. Documentary analysis, comparative analysis, and thematic content analysis were used in examining the data. This approach provides greater internal validity since it enables cross-verification of governance patterns. Furthermore, using an explicit governance-oriented analytical framework provides greater transparency, analytical coherence, and reproducibility. However, certain limitations need to be recognized. To start with, the study is exclusively based on qualitative secondary data. Primary data in the form of interviews with municipal officials, inspectors, or social actors is not used. This is consistent with the study's institutional focus. However, it limits in-depth insights into actor perceptions.

Secondly, the study's focus is restricted to only three countries. It is not representative of all occupational safety systems in European countries. Thirdly, the study's focus is on governance institutions, coordination mechanisms, and governance capacity. It does not involve safety performance indicators. Therefore, it is not possible to make causal inferences on outcomes. However, this is consistent with the study's focus on governance. The methodological approach is consistent with the study's core objective of developing a governance-based approach to occupational safety. Comparing a highly institutionalized system with more centralized or transitional governance contexts provides strong insights into the structural conditions that enable local governments to function effectively in safety governance. As such, the methodology provides a solid foundation for theory development in safety science and for policy-oriented discussions on strengthening local governance capacity in occupational safety systems.

4 Results

4.1 Comparative Analysis of Local Government Competences and Their OSH Relevance

For a more precise comparative evaluation, it is also necessary to assess not only whether local governments have a formal presence in occupational safety governance but also what kinds of competencies they have in the selected jurisdictions. To that end, the study makes a distinction between regulatory authority, implementation support, coordination capacity, preventive service delivery, crisis interface, and data management.

In Türkiye, local governments have extremely limited formal competencies in the basic architecture of occupational health and safety governance. Regulatory authority, inspection, and enforcement powers remain highly centralized. Local governments may indirectly contribute to occupational safety governance in crisis situations with regard to emergency preparedness, in service delivery, in environmental health, in fire safety, and in some aspects of public health. However, even in these domains, there is no institutional integration into the OSH system in terms of governance. Therefore, in terms of structured presence in occupational safety governance, local governments in Türkiye have limited capacity when it comes to structured prevention, coordination, and risk governance.

In Germany, the presence of local and subnational competencies in occupational safety governance is visible in a more functionally differentiated federal-Länder system. While core occupational safety governance is maintained at the national level with a strong presence in legislation and strategic oversight, implementation is supported with a multi-level institutional arrangement involving Länder authorities, accident insurance institutions, and territorially organized administrative mechanisms. This is not an arrangement that provides unconditional freedom for local governments but rather a coordinated approach in which subnational levels also contribute to occupational safety governance in terms of guidance, implementation, training, prevention, and coordination. Such an arrangement seems to provide greater system response capacity without compromising system integration at the national level.

With regards to Serbia, it is noticeable that the pattern of governance is still in the process of transition, in which local competencies are still in their early stages of development

and are relatively weaker in comparison to other countries in the sample. However, the evolution of policies in Serbia also points to an increasing awareness of the importance of territorial coordination, which is in line with the results of the case studies and the overall pattern of governance in the other countries of the sample.

When it comes to the comparison of the results of the case studies, it is noticeable that the importance of local government competences is not related to their role in the regulation of OSH, but rather to their role in supporting the process of prevention, coordination, and preparation in the context of crisis management and crisis response. The results of the case studies also indicate that in those countries in which the role of subnational actors is more clearly defined in the context of OSH, there is also more potential for developing territorially sensitive interventions, supporting access to guidance for SMEs, and developing stronger connections between occupational safety, crisis management, and local risk environments. However, in those countries in which the role of subnational actors is not clearly defined in the context of OSH, there is also more potential for limitations in the early detection of risks, inter-institutional coordination, and the capacity of early and ongoing preventive engagement.

It is therefore noticeable that the relationship between local competences and OSH outcomes should be related to the broader concept of governance and not to simplistic notions of cause and effect. The results of the case studies do not support the simplistic assumption that more local authority is likely to lead to more effective OSH outcomes, but rather that more clearly defined and institutionally coordinated local competences can support the enabling factors of more responsive, preventive, and integrated OSH governance.

With regard to the results of the case studies in Table 2, it is noticeable that the importance of local government units in the context of OSH governance is not related to the level of decentralization in general, but rather to whether their competences are institutionally defined and coordinated with national oversight in the context of preventive and territorially responsive governance functions.

Table 2. *Comparative Competences of Local Government Units in Occupational Safety Governance*

Analytical Dimension	Türkiye	Germany	Serbia	Governance Implications for OSH Outcomes
Regulatory authority	Highly centralized; local governments have no significant formal regulatory authority within the core OSH system.	Core regulation is nationally framed, but implementation is shaped within a federal-Länder structure.	Predominantly centralized, with limited local regulatory relevance.	Where local regulatory competences are absent, local adaptability depends on informal coordination rather than institutional mandate.
Inspection and enforcement role	Inspection and enforcement are concentrated at the central state level. Municipalities have no direct labor inspection authority.	Enforcement is institutionally differentiated across federal and Länder structures, supported by accident insurance bodies and administrative mechanisms.	Enforcement remains largely centralized, with weak local institutionalization.	Systems with territorially embedded enforcement-support structures may achieve better responsiveness and follow-up capacity.

Analytical Dimension	Türkiye	Germany	Serbia	Governance Implications for OSH Outcomes
Preventive support and training functions	Local contributions are indirect and fragmented; preventive support is not systematically embedded in municipal mandates.	Subnational and intermediary bodies contribute to prevention, training, guidance, and implementation support.	Emerging but still limited local support functions; preventive roles are not yet strongly institutionalized.	Stronger local preventive support can improve awareness, training access, and continuity of prevention, especially for SMEs.
SME-oriented guidance and service access	Limited structured local support for SMEs in OSH compliance and prevention.	More developed support environment through coordinated institutions and advisory mechanisms.	Partial and uneven; support capacity remains constrained.	SME-sensitive local support mechanisms may reduce compliance costs and improve access to expertise.
Crisis management and preparedness interface	Municipalities play a role in emergency management, but this is weakly integrated with OSH governance.	Better potential for coordination between occupational safety, emergency structures, and territorially differentiated administrative systems.	Transitional and uneven integration; preparedness functions remain underdeveloped in OSH terms.	Integration between OSH and crisis governance may enhance preparedness, resilience, and coordinated local response capacity.
Data use and regional risk mapping	OSH data systems are mainly centralized; local risk-based planning capacity is limited.	Greater potential for territorially differentiated implementation and data-informed coordination across governance levels.	Limited local data capacity and weak regionalized risk intelligence.	Regional risk mapping and local data use can strengthen targeted prevention and context-sensitive interventions.
Stakeholder coordination capacity	Local multi-actor coordination in OSH is weak and not systematically institutionalized.	A more mature coordination environment through multi-level governance and intermediary institutions.	Coordination mechanisms exist in limited form, but remain institutionally fragile.	Institutionalized local coordination can improve learning, participation, and sustained preventive engagement.
Institutional clarity of local roles	Local roles are indirect, fragmented, and not clearly codified within the OSH architecture.	Subnational functions are more clearly embedded in the governance structure, although not based on unrestricted local autonomy.	Local roles remain transitional and only partially defined.	Greater clarity of local competencies supports accountability, continuity, and more coherent governance design.
Overall position of local governments in OSH governance	Peripheral and supportive at best; largely outside the formal OSH governance core.	Complementary and operationally relevant within a strong, nationally supervised multi-level system.	Transitional and weakly institutionalized, with reform potential.	OSH performance is likely to benefit where local roles are defined as coordinated complements to national oversight, rather than as isolated actors.

Note: The table does not imply a causal link between local competences and occupational safety performance. Instead, it highlights the governance conditions that enable local institutional roles to build up prevention capabilities, coordination quality, preparedness, and context sensitivity.

4.2 Institutional Positioning of Local Governments in Occupational Safety Systems

The comparative analysis shows that local governments occupy a structurally important but unevenly defined position within the OSH systems in Germany, Serbia, and Türkiye. In all cases, local governments are heavily involved in the areas of policy that directly influence occupational safety, such as urban planning, licensing, infrastructure, emergency management, environmental protection, and local service delivery. Nonetheless, the extent to which such areas are formally articulated in explicit OSH governance structures varies significantly, depending on the specificities of the institutional design of each country. In the case of Germany, local and regional authorities are integrated into a corporatist insurance-based OSH system in which local governments function primarily as facilitators or coordinators. Through cooperation with the *Berufsgenossenschaften*, labour inspectorates, and social partners, local authorities can support the development of preventive measures, regional OSH communications, and the promotion of OSH in local economic development and spatial planning. The case of Serbia represents an intermediate scenario in which OSH governance is still largely centralized, with local governments having started to assume supportive roles in local safety promotion, emergency preparedness, and inspection coordination, partly as a result of the alignment process with the European Union. In the case of Türkiye, local governments are still peripherally integrated in the OSH governance structures. Despite their wide-ranging responsibilities in local service delivery, disaster management, and local development, local governments are not formally integrated into the OSH governance framework. Their participation in OSH is therefore indirect, fragmented, and primarily limited to areas such as licensing, infrastructure control, or emergency response.

4.3 Local Institutional Capacity and Preventive Safety Functions

The second key finding concerns the relationship between municipal institutional capacities and preventive OSH functions, with cross-national differences being evident in Germany, Serbia, and Türkiye. In the European Union case of Germany, for example, local authorities with specialized OSH units, secure sources of finance, and access to safety data are in a position to engage in prevention-oriented governance. In these contexts, local authorities complement an insurance-based system with support for localized training initiatives, dissemination of sector-specific advice, and access to advisory services. These are particularly important in small and medium-sized enterprises (SMEs) without in-house OSH capacities. This preventive role of local authorities in OSH governance shifts attention away from reactive inspection-based models and towards anticipatory management. In Serbia, local authorities are found to have an intermediate role in OSH governance. Although local authorities have weak formal mandates in OSH prevention, emerging practices in OSH governance's harmonization with EU requirements are evident. These include local authority-based awareness-raising activities, cooperation with labor inspectorates, and project-based training initiatives. However, these are uneven and dependent upon external sources of finance, with limited technical and financial capacities. In contrast, in Türkiye, local authorities are found to have

weak institutional capacities in OSH governance. In these contexts, local authorities are found to have limited capacities in terms of specialized OSH personnel, safety data mechanisms, and dedicated budgets for OSH prevention. Furthermore, local authority engagement is largely restricted to downstream activities such as response, licensing, and public information. The evidence in these cases suggests that municipal institutional capacities are a key enabling factor in OSH governance. In contexts with strong capacities, local authority engagement in OSH governance is evident in effective preventive functions. In contrast, where capacities are weak, local authority engagement in OSH governance is largely reactive, limited in scope, and uneven in effectiveness.

4.4 Stakeholder Collaboration and Participation as a Governance Condition

The results clearly reveal that the quality of regional OSH governance in these regional communities is closely linked to the presence of structured multi-actor collaboration. Differences in this respect are clearly evident across Germany, Serbia, and Türkiye. The quality of OSH systems is found to be most robust in the communities where regional governments are institutionally empowered to bring together employers and employees and their representatives, trade unions, civil society organizations, and knowledge institutions within regular and formally recognized coordination platforms. In the European Union country studied, namely Germany, multi-actor collaboration is recognized and functions as an institutionalized governance practice. Municipal and regional governments facilitate coordination among employers' organizations, trade unions, accident insurance institutions, and labour inspectorates. This enables the continuous exchange of information, the joint prioritization of risks and the development of common ownership for prevention activities. In these countries, the presence of participation is recognized and functions as one of the most important features of the OSH system. In Serbia, the presence of coordination platforms is low. However, emerging collaboration practices in the context of EU approximation are clearly evident in regional communities. Municipalities cooperate with labour inspectorates, chambers of commerce, trade unions, and donor organizations in the implementation of training and awareness activities. In Türkiye, the presence of participation at the local level is less evident. The quality of coordination is mostly based on informal networking and project-based and/or centrally driven campaigns rather than permanent coordination platforms. In the presence of collaboration in these countries, the quality of collaboration is mostly focused on administrative compliance and/or post-incident response rather than long-term prevention.

4.5 Local Governments as Intermediaries Between Regulation and Practice

The fourth key finding concerns the intermediary role of local governments as the bridge between formal OSH regulation and workplace practice, with cross-national variations between Germany, Serbia, and Türkiye. In the European Union cases, local governments and regional authorities are governance intermediaries in the process of translating national

OSH regulations into sector-specific guidance that is sensitive to the size of enterprises and socio-economic conditions. In the case of Germany, the intermediary role is embedded in the corporatist system of municipal cooperation with the *Berufsgenossenschaften*, the chambers of commerce, and social partners. Local governments provide access to sector-specific guidance, coordinate preventive initiatives, and support enterprises, especially SMEs, in coping with the complex rules and regulations. The intermediary role is particularly relevant in the case of SMEs, which are unable to deal with the complex OSH regulations. Local governments provide accessible support to enterprises, which leads to reduced uncertainty about regulations and increased voluntary compliance. From the perspective of governance, the OSH system is no longer limited to the enforcement of regulations but has shifted to the concept of shared responsibility and preventive learning. The case of Serbia is intermediate in the context of the intermediary role of local governments. Local governments occasionally perform intermediary functions, especially through EU-funded projects or cooperation with the labor inspectorates. However, the performance is episodic and not well institutionalized. As a consequence, access to sector-specific guidance is limited and varies significantly between the regions. In the case of Türkiye, the intermediary role of local governments is limited. OSH regulations are transmitted through centralized channels with limited interpretation and adaptation at the local level. Local governments do not perform the intermediary role of translating OSH regulations into practice. As a consequence, compliance is perceived as an external obligation rather than a part of the organizational process, which leads to uneven safety performance, especially in the case of SME-dominated regions.

4.6 Data Infrastructure and Digital Enablement in Local OSH Governance

The analysis suggests that data availability and digital infrastructure are important enabling factors for the development of prevention-oriented local OSH governance in Germany, Serbia, and Türkiye. However, there are marked differences between these countries. The EU countries benefit from the application of safety-related data and information, including standardized reporting of incidents and regional risk mapping. This helps regional and local authorities to strategically plan and monitor the implementation of prevention activities. In Germany, digital reporting systems operated by the *Berufsgenossenschaften* provide in-depth data that indirectly help municipalities in the development and implementation of evidence-based prevention campaigns. In Serbia, the country is in a transitional phase. The country's labor inspectorates have access to centralized databases containing data on accidents and inspections. However, the availability of data at the local level is low. The digital infrastructure at the local level is also lacking. The data-sharing process between the country and the local level is in the initial stages. In Türkiye, the availability and application of data at the local level are low. The country's institutions collect vast data on OSH. However, these data are collected centrally and are not made available at the local level. The absence of digital infrastructure at the local level hinders the development of prevention activities.

4.7 Regional Disparities and Uneven Safety Governance Outcomes

The results show that there are significant regional differences in OSH governance in Germany, Serbia, and Türkiye. In all cases, differences in the structure of the economy, density of industry, labor force, and institutional capabilities affect the way in which OSH are governed. However, the European system of governance appears to have a greater potential for compensating for these differences through region-specific interventions, coordinated resource allocation, and institutionalization of prevention. In the German system, existing differences between the more and less structurally developed regions are compensated for by the insurance-based system of OSH and the prevention networks. The combination of nationwide standards and regional adaptation allows for targeted prevention in regions and sectors where risks are especially high, so that the impact of economic disadvantages on OSH governance is minimized. Serbian OSH governance shows significant regional unevenness, especially between larger urban centers and economically less developed regions. Although the OSH legislation is applied uniformly, differences in local administrative capabilities are significant. The lack of a well-developed system of decentralization and resource availability means that regional differences are only compensated for to a certain extent, and there are significant differences in the engagement of regional authorities in prevention and the reliance on centralized control. OSH governance in Türkiye shows significant regional differences, but these are not compensated for to the same extent as in the European system. In economically more developed regions, municipalities have a higher administrative capacity and a denser network of institutions, ensuring active engagement in OSH even in the absence of specific mandates. In less developed regions, existing structural limitations, such as financial constraints, a lack of specialized staff, and a less developed network of stakeholders, mean that the OSH engagement is confined to reactive roles.

4.8 Summary of Key Findings

The findings illustrate that local governments represent an important but not well-integrated part of the OSH governance, with cross-national differences evident in Germany, Serbia, and Türkiye. The cross-national comparison reveals that the degree to which local governments are institutionally recognized, resourced, and coordinated in the national OSH systems is significant in determining the effectiveness, fairness, and durability of the occupational safety governance.

Table 3 presents a comparative synthesis of the local-level OSH governance in Germany, Serbia and Türkiye. The analytical themes emerged inductively from the safety governance and multi-level governance literature and were applied deductively in the document analysis process. The European case represents established models of OSH governance with different institutional logics, while Serbia and Türkiye exemplify transitional and centralized models of OSH governance, respectively. The categories reflect the dominant patterns of institutionalization in official legislation, policy documents, strategic plans, and reports, rather than exhaustive national practices or quantitative performance indicators. The table is based on a comparative qualitative analytical method based on document-based evidence.

The data sources include national OSH laws and regulations, secondary legislative instruments, policy documents, local government documents, and publications of European and International OSH institutions and organizations. The documents of each country have been systematically analyzed using thematic content analysis, focusing on the role of institutions, preventive capacity, coordination mechanisms, stakeholder involvement, data infrastructure, and differentiation. The themes emerged from the document analysis of the safety governance and multi-level governance literature and were refined during the iterative coding process. Each country is analyzed in relation to each of the themes, and dominant patterns of the respective local-level OSH governance are revealed. The European countries are grouped analytically based on their structural characteristics, while Serbia and Türkiye are treated as analytically distinct cases based on their differences in institutional maturity, decentralization, and local government integration. It is noteworthy that the table is not based on ranking the countries or quantitative measures of safety performance, but is rather used as a conceptual mapping tool to illustrate the relationship between different models of governance and their effects on the role of municipalities in the broader context of OSH systems. This methodological approach is more likely to yield more generalizable results in terms of governance mechanisms that could be transferred to other contexts and are more likely to be applicable in the realm of OSH governance.

Table 3. *Comparative Analytical Themes in the Local-Level OSH Governance*

Analytical Theme	European Core Case (Germany)	Serbia (Transitional/Hybrid Model)	Türkiye (Centralized Model)
Institutional positioning of local governments	Local governments are formally recognized as complementary OSH actors; roles embedded in national frameworks and coordination structures	Partial recognition of local authorities; roles emerging but weakly institutionalized	Local governments positioned peripherally; OSH roles largely indirect and ad hoc
Preventive capacity	Strong municipal/regional support for prevention (training, advisory services, psychosocial risk initiatives)	Limited but growing preventive capacity; often project-based or externally supported	Prevention capacity limited; focus predominantly on downstream and reactive functions
Stakeholder collaboration	Institutionalized multi-actor platforms involving employers, unions, municipalities, and OSH bodies	Stakeholder collaboration present but uneven and often dependent on donor or EU-alignment projects	Collaboration uneven; frequently informal, episodic, and compliance-oriented
Coordination mechanisms	Structured vertical and horizontal coordination across governance levels	Hybrid coordination: formal vertical links with limited horizontal integration	Predominantly vertical coordination; horizontal coordination remains weak
Brokerage (intermediary) function	Strong translation of national standards into locally adapted guidance, especially for SMEs	Partial brokerage role; local adaptation constrained by capacity and authority	Weak brokerage role; compliance largely perceived as formal obligation
Data and digital enablement	Systematic use of OSH data, risk mapping, and digital monitoring to support prevention	Fragmented data practices; limited local-level integration	Local data practices less standardized; limited integration into municipal OSH functions
Regional disparities	Disparities mitigated through coordinated resource allocation and regional mechanisms	Regional disparities evident; mitigation mechanisms underdeveloped	Disparities pronounced and weakly addressed; strong dependence on regional capacity

5 Discussion

5.1 Local Governments as Consequential—but Under-Theorized—Safety Actors

An important finding of this research is that local governments are more significant actors in OSH than they are generally recognized to be. Comparative analysis confirms that, in the cases where local governments are formally integrated into OSH governance structures, there is a significant shift from an enforcement-oriented to a prevention-oriented approach to governance. This is most clearly evident in the case of Germany, in which local governments are integrated into a corporatist insurance-based system, acting as facilitators and coordinators. The case of Serbia represents an intermediate case, in which local governments are involved in some safety-related activities, including emergency response, but in which their role in prevention is poorly institutionalized, primarily in the form of projects. The case of Türkiye represents a situation in which local governments are generally outside of OSH governance structures, with their role limited to indirect activities such as emergency response, licensing, or infrastructure management. It is worth noting that the experience of the EU does not support the substitution of local oversight with national oversight, but rather supports the view that complementarity, with local governments acting as the key nodes in the system, enhances the overall capacity for implementation.

5.2 Local Capacity, Prevention, and Equity

The findings also further specify municipal institutional capacity as a key factor in determining prevention-oriented OSH governance. For European countries, local institutions with in-house expertise, financial stability, and access to relevant safety data have greater potential in supporting localized prevention efforts, especially for SMEs. For Germany, governance mechanisms have been effective in reducing prevention costs for SMEs and addressing structural inequalities in protecting workers. Serbia is again placed in a transitional category, where uneven local prevention capacities are hindered by scarce resources and mechanisms for institutional learning. For Türkiye, local OSH capacities in municipalities have been generally low, with most local institutions lacking access to relevant data, prevention budgets, and/or specialized staff. From the governance point of view, there is an underlying equity concern with regard to SMEs and/or workers in high-risk sectors.

5.3 Coordination and Brokerage as Governance Mechanisms

Another implication is related to coordination and brokerage roles. The European examples show that coordination platforms, which integrate municipalities, inspectorates, social partners, and knowledge institutions, play a crucial role in ensuring coherent and adaptive safety governance. Such platforms facilitate the sharing of situation awareness, joint prioritization of risks, and learning processes. In Serbia, coordination is present, but in a disintegrated form, while in Türkiye, the interaction is mainly vertical and compliance-driven.

Related to these issues is the role of local governments as brokerage institutions between regulation and practice. The more local governments are capable of translating national OSH regulations into locally adapted guidance, the lower the level of uncertainty and the higher the level of voluntary compliance. The brokerage role of local governments is still in its infancy in Türkiye and to some extent in Serbia.

5.4 Interpreting Centralized Contexts

Most importantly, it is critical to note that the limited role of local governments in Türkiye is not an issue of local governance failure but, rather, an issue of the governance design. A similar, though less pronounced, trend is also evident in Serbia. In contrast, the European cases provide an indication of how local governments can be effective safety intermediaries without undermining national authority through role definition and institutionalized coordination. In conclusion, this study contributes to safety science by demonstrating that local governments are an important institutional site through which regulatory intent, organizational capacity, and community-level risk environments intersect. In addition, it is evident that enhancing local governance capacities represents an important strategic option for promoting prevention, equity, and resilience in multi-level occupational safety systems.

6 Conclusion

This study investigates OSH governance from the perspective of local governments and reveals that OSH outcomes are not only influenced by national-level laws and work-site-level interventions, but also by the role and capabilities of municipalities as part of a multi-level governance structure. Comparative evidence from Germany, Serbia, and Türkiye shows that local authorities constitute a structurally significant layer of OSH governance.

The purpose of this study was to explore the position of local governments in the context of occupational safety governance by comparatively investigating the ways in which different governance systems allocate responsibilities across levels of governance. The results reveal that, despite the direct proximity and relevance of local governments to workplaces and communities and the unique risk environment in each territory, they remain structurally marginal in the most prominent forms of OSH governance. The comparative evidence also reveals that this marginal position is neither uniform nor inherent in the way in which OSH governance is organized. In some systems, the highly centralized and state-centric approach is maintained, whereas in other systems, there is evidence of the functional involvement of local or regional actors in coordination, guidance, preparedness, and preventive support. More specifically, the study reveals that the most prominent forms of occupational safety governance remain organized around highly centralized legal and administrative frameworks in which the most important functions of the system, such as the exercise of regulatory authority and the power of enforcement and standard setting, remain concentrated at the national level. Furthermore, when evidence of functional involvement of local actors in OSH governance is revealed, it is most likely to be in a highly fragmented and indirectly supportive, rather than in an integrally and institutionally embedded way. The most functional forms of

OSH governance are likely to be those in which the capabilities of the local and regional levels are linked with the capabilities of the national level.

The above results indicate that the underrepresentation of the role of local governments in the OSH governance system is not just a question of legislative omission. Rather, it is an indication of the overall limitation of the governance system. The lack of clearly articulated roles for municipal actors, horizontal and vertical coordination, data sharing, and the integration of occupational safety with local risk management and crisis preparedness all contribute to the overall limitation of the OSH system in terms of flexibility and prevention depth. The limitation of the OSH system is most evident in sectors and regions with high industrial concentration of enterprises, dominance of SMEs, localized patterns of vulnerability, and multi-dimensional risk exposure. In this respect, the research contributes to the conceptual debate on the role of the local government in the OSH system. The research argues that the role of the local government should be recognized in the OSH system in such a way that it can contribute to the enhancement of the prevention depth and flexibility of the OSH system. The question is not whether the OSH system should be decentralized in general and in undifferentiated terms; it is rather that of how the role of the local government in the OSH system can be incorporated in such a way that the strategic overall coherence of the national OSH regulation is maintained.

The comparative analysis indicates that the overall capability of the OSH system in supporting the prevention and coordination functions in the sector and the region under consideration is not determined by the presence or absence of the role of the local government in the OSH system. Rather, it is determined by the overall scope and clarity of the competences of the local government in the OSH system.

The European experience demonstrates that with the formal integration of local authorities in their role as complementary governance actors, OSH systems become more preventive, adaptable, and resilient. In Germany, local integration reinforces national oversight through the integration of regulatory intent with local socio-economic contexts and networks. In contrast, Serbia's experience represents an intermediate case with partial and uneven institutionalization of local mandates, which limits local preventive capabilities despite alignment with European OSH governance. In Türkiye, findings indicate a structural gap in OSH governance between the national-level regulation and the local-level disparities in safety performance. Centralized regulation of OSH is insufficient to ensure consistency in prevention across diverse regional and local contexts, particularly in SMEs and high-risk industries.

In addition to its country-specific contributions, this research contributes to safety science by developing a governance-based understanding of OSH and reasserting local governments' role in OSH governance. Findings reinforce the understanding of OSH governance's role in shaping local-level occupational safety performance, which is contingent upon institutional design in local-level mandates, coordination, and enabling resources. Future research should expand upon these findings through primary empirical research, mixed-method research linking governance with safety outcomes, and longitudinal evaluations of governance reforms.

Consistent with the findings in European cases, recommendations for OSH governance in Türkiye should not be construed as a call for local-level governance in its own right, but rather as an argument for local-level institutional complements to strong national oversight.

Local and regional authorities can contribute meaningfully to OSH governance in contexts such as those in Europe, with clearly defined roles, strong coordination support, and activities consistent with national standards and enforcement.

Accordingly, the study points toward a staged, governance-oriented reform approach for Türkiye, centered on clarifying municipal OSH responsibilities, developing regional coordination capacities, strengthening the interface between OSH and crisis management, expanding preventive support for SMEs, improving risk-based data use, and institutionalizing stakeholder participation. Psychosocial risk governance, worker participation, proportionate incentives for management systems, and central–local funding arrangements should likewise be treated as complementary elements of a more adaptive and territorially responsive OSH structure. In this process, university–municipality–industry collaboration may also serve as an important platform for training, pilot interventions, and evidence-based policy learning.

Overall, the study concludes that the governance gap surrounding local actors in occupational safety cannot be addressed solely through regulatory expansion. What is needed is a structured model of vertical coordination, institutional clarity, and territorially grounded preventive capacity in which local governments operate as supportive and enabling actors under robust national oversight. Future research should build on these findings through empirical studies that test the measurable effects of local government involvement on prevention performance, compliance quality, institutional learning, and occupational safety outcomes across different national and regional contexts.

Data availability statement

All data used in the analysis were obtained from publicly available peer-reviewed journal articles. The bibliographic dataset supporting the findings of this study is available from the corresponding author upon reasonable request.

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Corporate Social Responsibility and Health-Vulnerable Workers: Legal Concepts and Future Directions

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The global normative framework for conceptualizing corporate social responsibility (CSR) is primarily shaped by non-binding, so-called soft law mechanisms, leaving companies to regulate this area internally. CSR generally refers to a voluntary commitment by companies to integrate ethical, social, and sustainability principles into their management and decision-making processes. A significant dimension of such voluntary engagement is the protection of vulnerable workers, particularly regarding their safety and health, which could be further strengthened and transformed into a legal obligation through the duty of care standard. This paper examines the role and place of CSR, from both labour law and company law perspectives, in enhancing the labour and social rights of health-vulnerable populations, including persons with disabilities and workers with rare diseases. Using legal-theoretical, normative, and comparative methods, it explores how CSR initiatives can complement formal legal obligations, bridging gaps in protection and fostering more inclusive and equitable workplace practices.

Keywords: Corporate social responsibility, Health vulnerable workers, Labour law, Company law, Duty of care

1 Introduction

In contemporary corporate discourse, Corporate Social Responsibility (CSR) has emerged as a highly debated topic, drawing significant attention from business leaders as well as regulatory bodies, including the United Nations Global Compact. [Khanifar et al. \(2012\)](#) define CSR as a set of practices through which companies act as responsible corporate citizens, contributing to social well-being beyond the pursuit of their own self-interest ([Nwobu, 2021, p. 1](#)). CSR has evolved from a voluntary business initiative into a key concept shaping the relationship between private/company governance and public regulation. Within the European Union (EU), CSR is increasingly recognized as part of a broader framework of sustainable corporate

conduct that links social justice, human rights, and economic performance. The European Commission defines CSR as the responsibility of enterprises for their impacts on society, emphasizing voluntary actions that integrate social, environmental, ethical, and human rights considerations into business operations and core strategies (European Commission, 2024a). This approach reflects a paradigm shift from purely profit-oriented management toward stakeholder-oriented governance, aligning private business goals with the EU's fundamental values of equality, inclusiveness, and sustainable development.

One of the central dimensions of CSR concerns the protection of vulnerable groups of workers, including those with health-related risks such as chronic conditions, disabilities, or rare diseases. Despite progress in occupational safety and health (OSH) legislation, these workers remain exposed to disproportionate challenges, including barriers to participation, insufficient accommodations, and higher psychosocial risks. The Framework Directive on OSH (Directive 89/391/EEC, 1989) and the Employment Equality Directive (Directive 2000/78/EC, 2000) set minimum obligations for employers regarding health protection and non-discrimination. However, they do not always ensure the full inclusion of workers with complex or long-term health vulnerabilities (Jones & Maucher, 2024; European Agency for Safety and Health at Work, 2022). In this context, CSR can provide a complementary and dynamic mechanism to bridge existing gaps in legal protection by embedding ethical and social considerations into corporate culture and governance.

Recent EU policy developments reinforce this convergence between CSR and law. Instruments such as the Corporate Sustainability Reporting Directive (EU) 2022/2464 and the Corporate Sustainability Due Diligence Directive (EU) 2024/1760 (CSDDD) progressively transform CSR from a purely voluntary practice into a regulatory framework that imposes transparency, accountability, and due-diligence obligations on companies (Kwao, 2024). This evolution demonstrates that CSR can function as both a policy and legal tool for advancing the rights of workers, especially those at the intersection of health and social vulnerability.

Accordingly, the protection of health-vulnerable workers is no longer merely a matter of compliance in OSH field but an essential component of responsible corporate governance. CSR initiatives that promote inclusive employment, adaptive workplaces, and health-sensitive management practices contribute to the realization of the EU's social objectives and to the strengthening of the duty of care principle in labour relations. By integrating CSR into labour and company law frameworks, companies can actively support the development of a preventive, proactive and rights-based approach to occupational well-being.

On the other hand, from a population and demographic perspective, the protection of health-vulnerable workers is particularly relevant considering aging workforces and increasing prevalence of chronic conditions in the European Union (EU) and globally. The EU's working-age population is shrinking due to low fertility and population ageing, creating pressures on labour supply and placing a greater premium on maintaining labour force participation across all age groups, including older workers and those with health vulnerabilities (Mentzelopoulou, 2025). Empirical evidence indicates that older workers (aged 55–64) have increasingly contributed to the EU labour supply over the past decade, but they still remain under-represented relative to prime-age adults, with illness and disability cited as major barriers to participation (European Commission, 2024b, p. 86). Simultaneously, chronic conditions

and rising morbidity pose risks for early labour market exit, undermining workforce sustainability if not addressed through inclusive workplace practices (Vieira, 2025). CSR policies that proactively address the needs of health-vulnerable populations thus not only support individual well-being, but also contribute to broader societal outcomes, including sustained labour force participation, reduced health-related employment disparities, and enhanced demographic resilience. Integrating such considerations into corporate governance aligns CSR with population studies and public health objectives, underscoring the demographic dimension of socially responsible business practices in the context of EU labour markets.

This paper explores the normative and conceptual relationship between CSR, labour law, and company law, with particular attention to the protection of health-vulnerable workers. It applies legal-theoretical and legal-normative methods to analyse the evolution of CSR within the EU's regulatory framework, assessing its potential to complement existing legal mechanisms for ensuring equality, safety, and well-being at work. Structurally, the paper proceeds as follows: after the introduction part, Section 2 examines the normative foundations and the EU approach for development of CSR; Section 3 analyses the duty of care and its potential to transform CSR commitments into enforceable standards; Section 4 explores the interaction between CSR, labour law, and company law in promoting the protection of health-vulnerable workers; and the concluding section outlines the implications of these findings for future legal and policy directions in the EU context.

2 The normative and regulatory landscape of CSR in the EU

A defining characteristic of the EU's approach to CSR has historically been its reliance on soft-law instruments and non-binding guidance. Through communications, recommendations, and multi-stakeholder initiatives, the EU has sought to influence corporate behaviour by shaping expectations and promoting voluntary adoption of responsible business practices rather than imposing strict legal obligations (European Commission, 2024a; Anglmayer, 2020). Such instruments perform an important policy-normative function by establishing frameworks for socially responsible conduct and encouraging companies to internalize sustainability and human rights concerns within their operations.

Although soft law lacks direct enforceability, it often exerts indirect legal influence by serving as a reference point in interpreting or applying binding norms and as an effective tool to "enhance compliance" (Andone & Coman-Kund, 2022, p. 22). Thus, Andone & Coman-Kund (2022) rightly emphasize that the legitimacy of EU soft law instruments rests primarily on the quality of their argumentation – namely, their clarity, coherence with primary EU law, and transparency of reasoning. In this view, the more well-reasoned and transparent such instruments are, the greater is their persuasive and regulatory influence within the multi-level EU legal order. The authors further highlight the ongoing trend of blurring the boundaries between EU policy and law, or between soft and hard law instruments. This observation is also supported by recent research, in which Ausfelder et al. (2024) demonstrate that, although EU soft-law instruments are formally non-binding, they often incorporate enforcement elements – both soft (such as monitoring and reporting mechanisms) and hard (such as conditionality or sanctions) – that enhance their practical effectiveness and perceived binding force at the

national level. Compared to hard law instruments, soft law flexibility allows faster adaptation and compliance across sectors and Member States, but this same flexibility has also led to fragmentation, uneven implementation, and limited accountability mechanisms across the EU (Anglmayer, 2020).

Over time, however, the EU has begun to complement this predominantly voluntary framework with a growing body of legally binding instruments that progressively transform CSR into a more prescriptive regulatory domain. The Corporate Sustainability Reporting Directive (CSRD) represents a significant step in this direction, requiring large undertakings and listed companies to disclose detailed information concerning their environmental, social, and governance (ESG) risks, impacts, and strategies (Directive (EU) 2022/2464, 2022). By replacing the earlier Non-Financial Reporting Directive (Directive 2014/95/EU, 2014), the CSRD expands the scope of reporting obligations, introduces mandatory European Sustainability Reporting Standards (ESRS), and subjects' sustainability information to independent assurance. This transition from voluntary to harmonized mandatory reporting aims to enhance corporate transparency and comparability across the single market (European Commission, 2024a). Nonetheless, the obligation to disclose information does not necessarily guarantee substantive improvements in corporate behaviour, as disclosure-based governance depends heavily on the accuracy, completeness, and interpretation of reported data.

The CSDDD takes this evolution further by establishing explicit duties of care and accountability obligations for large EU and non-EU companies operating within the Union. Adopted in 2024 (Directive (EU) 2024/1760, 2024), the CSDDD requires companies to identify, prevent, mitigate, and remedy adverse human rights and environmental impacts across their operations, subsidiaries, and value chains. It introduces civil liability for harm resulting from non-compliance and obliges Member states to designate supervisory authorities responsible for enforcement and sanctions. As national legal systems frequently fail to respond effectively to the multifaceted nature of disputes involving large corporations across global value chains, the CSDDD contributes to addressing these regulatory gaps by explicitly connecting civil liability to due diligence duties (European Union Agency for Fundamental Rights [FRA], 2025, p. 19). The Directive will be implemented progressively, beginning with the largest companies in 2027 and later extending to smaller undertakings (Connellan et al., 2024). By mandating substantive due diligence rather than mere disclosure, the CSDDD represents a paradigmatic shift from voluntary corporate ethics toward enforceable corporate accountability. In this regard, it establishes human rights due diligence as a binding legal obligation across companies' chains of activities, replacing what had previously been framed largely as a voluntary expectation (FRA, 2025, p. 9). It also requires large companies to actively pursue climate change mitigation planning. However, the effectiveness of this transformation will depend on the consistency of national transposition, the robustness of supervisory mechanisms, and the accessibility of remedies for affected stakeholders.

On the other hand, when considering the CSDDD's approach to social rights and corporate responsibility in the field of labour law, recent theoretical research highlights its limitations in addressing labour law issues arising from corporate operations, particularly in low-income countries. Morris (2025) emphasizes that while the EU CSDDD marks an important step toward integrating corporate accountability into labour law, its effectiveness in improving

labour standards – especially in least developed countries – may be limited. The article identifies key enforcement challenges, including the complexity of monitoring compliance across global supply chains, the difficulties faced by small and medium-sized enterprises (SMEs) in meeting due diligence obligations, and the constraints of civil liability mechanisms in providing effective remedies for labour violations. These factors indicate that, without targeted measures, the Directive may fall short of fully addressing labour exploitation.

Despite recent EU regulatory efforts to introduce mandatory corporate due diligence for sustainable business and labour practices, the EU's CSR framework continues to face structural and normative challenges. Fragmentation persists; while environmental and supply-chain due diligence have gained prominence, other socio-legal concerns – such as disability inclusion, emerging OSH risks and, the protection of health-vulnerable workers – remain less integrated within CSR regulation. Additionally, legally binding instruments adopted in these domains are likewise associated with challenges of implementation and operationalization, which, in turn, influence and often blur the boundaries between hard and soft law within the EU policy framework. These challenges are particularly visible in the field of corporate sustainability and labour protection, where the effectiveness of binding norms – such as those under the Employment Equality Directive or the forthcoming CSDDD – largely depends on national transposition and enforcement capacities. Consequently, the persistence of fragmented implementation across Member States reinforces the hybrid nature of the EU's CSR regime, situated between regulatory obligation and voluntary commitment.

The Employment Equality Directive (2000/78/EC) has been instrumental in promoting equal treatment of Persons with Disabilities (PwDs) in employment and labour; however, its uneven implementation across Member States has resulted in significant disparities in workplace inclusion. These differences are particularly evident in the application of reasonable accommodation practices, where varying levels of protection persist. Overall, studies indicate that sanctions for discriminatory behaviour remain relatively weak, while compensation for victims tends to be low, undermining the directive's effectiveness (Anglmayer, 2020). Similarly, although the Framework Directive on OSH (Directive 89/391/EEC, 1989) established a unified foundation for OSH across the EU, its practical implementation has remained highly fragmented. As Hämäläinen (2008) demonstrates, national OSH models have evolved differently depending on institutional capacity, labour market structures, and administrative traditions. While some Member States – particularly in Northern Europe – have effectively operationalized the Directive's preventive and participatory approach, others continue to rely on reactive, compliance-based systems. Significant disparities persist in the coverage and accessibility of occupational health services, with comprehensive systems in Nordic and Western European countries contrasted by partial or company-dependent arrangements in several Southern and Eastern European states. Moreover, enforcement mechanisms and resource allocation vary widely, reflected in differences in inspection capacities, budgetary support, and data quality. These inconsistencies have resulted in a patchwork of national systems that, despite sharing a common legal basis, deliver uneven levels of worker protection and undermine the Directive's objective of ensuring equal standards of occupational health and safety across the Union (Hämäläinen, 2008).

Conversely, within the CSR framework, disability inclusion has received growing attention but still remains peripheral compared to environmental sustainability. This imbalance

may be attributed, in part, to the limitations of the existing EU binding instruments, which, as discussed above, have failed to ensure coherent and non-fragmented protection across Member States. Analyses of corporate CSR reports reveal growing interest in disability inclusion, however, practical challenges persist in advancing meaningful workforce integration (Shen et al., 2009). Most recently, the [International Labour Organization \[ILO\] \(2024\)](#) has highlighted that disability inclusion remains a marginalized and weakly regulated element within the “social” dimension of ESG and CSR frameworks. Its Guide introduces a ten-domain KPI model to embed inclusion across corporate governance, due diligence, and disclosure practices, framing it as both a normative requirement under international equality standards and a strategic advantage for competitiveness and investor confidence. However, persistent gaps in data harmonization, monitoring mechanisms, and institutional coordination continue to impede consistent implementation across jurisdictions. In this respect, the ILO reframes disability inclusion not as voluntary CSR, but as an emerging component of binding sustainability governance aligned with global reporting standards such as the ESRS, and the Sustainability Development Goals (ILO, 2024). This approach resonates with the objectives of the EU CSDDD, which, despite advancing corporate accountability in environmental and human rights domains, still insufficiently operationalizes social inclusion – particularly concerning PwDs – as a due diligence obligation ([Directive \(EU\) 2024/1760, 2024](#); [Morris, 2025](#)). Furthermore, the protection of health-vulnerable workers, including those with pre-existing or chronic conditions, remains insufficiently addressed, underscoring the need for targeted measures within CSR frameworks that extend beyond disability inclusion to encompass broader supportive mechanisms. Such measures may include the integration of occupational health risk assessments including emerging risks from digital workplaces into corporate due diligence processes, establishment of flexible work arrangements and reasonable accommodation policies, and incorporation of preventive health programs aligned with Workplace Health Promotion (WHP) principles. In addition, CSR strategies should explicitly link employer obligations with labour law standards on non-discrimination and the duty of care, thereby ensuring that companies adopt proactive approaches to safeguard the well-being and sustainable employability of health vulnerable workers.

These further underscore the need for a comprehensive worker-sensitive CSR approach encompassing environmental, social, and labour dimensions. Addressing regulatory fragmentation constitutes a prerequisite for ensuring equitable protection and substantive inclusion of all workers – particularly those who are health-vulnerable or PwDs – through the development and enforcement of robust CSR-based governance mechanisms. In this regard, recent research highlights a strong conceptual and practical interrelation between CSR and WHP, which is particularly relevant for the inclusion of health-vulnerable workers. WHP represents an integral element of contemporary OSH models, extending the traditional focus on hazard prevention toward a more holistic approach that promotes workforce well-being and fosters healthier, more resilient organizations ([Schulte et al., 2019](#)). Thus, [Alonso-Nuez et al. \(2022\)](#) demonstrate that WHP constitutes a key dimension of internal CSR, as both aim to enhance employee wellbeing, organizational sustainability, and social value creation. Their systematic review finds that CSR and WHP reinforce one another – responsible corporate cultures foster health-promoting workplaces, while effective WHP practices operationalize

CSR commitments toward internal stakeholders. Successful integration, however, depends on leadership commitment, active employee participation, and the incorporation of WHP objectives into broader corporate sustainability strategies. This convergence positions workplace health not merely as a voluntary welfare initiative, but as a strategic and ethical dimension of CSR, reinforcing its emerging role within the evolving framework of OSH. In this context, the integration of CSR and WHP principles into psychological risk assessment and management emerges as a critical component of modern OSH frameworks. Psychological health risks – such as work-related stress, work-life imbalance, constant connectivity, and psychosocial hazards – are increasingly recognized as determinants of both employee well-being and organizational performance (Schulte et al., 2024). Addressing these risks aligns with the employer's legal and ethical duty of care, as established in occupational health legislation and CSR norms emphasizing worker-centred management. Consequently, the assessment and proactive management of emerging psychosocial risks should not be viewed solely as compliance obligations and OSH issue, but as integral to responsible corporate conduct and sustainable human-resource management.

Embedding psychological risk management within CSR and WHP strategies enables organizations to strengthen resilience, prevent mental health impairments and demonstrate accountability toward internal stakeholders, thus reinforcing the convergence of ethical responsibility, health promotion, and sustainable organizational governance. For instance, recent studies highlight that effective WHP programs (including mental health-oriented components) are more likely to succeed when aligned with responsible corporate cultures and committed leadership, which are core aspects of internal CSR (Alonso-Nuez et al., 2022). Likewise, systematic approaches to psychosocial risk assessment and intervention are now positioned as part of the broader OSH model, complementing traditional hazard prevention efforts with a focus on work-organization, employee participation, and mental well-being (Montes et al., 2025). Through this integrated lens, employers can operationalize their duty of care not only by safeguarding physical safety but also by fostering psychological safety, thereby advancing both workforce health and organizational/business sustainability.

Additionally, a pressing issue concerns the enforcement of CSR standards, which fundamentally determines their efficacy. In the absence of rigorous monitoring and sanctioning mechanisms, mandatory reporting and due diligence obligations risk developed into procedural formalities. Furthermore, a tension persists between voluntarism and regulation. Although a clear definition of the CSR concept remains urgently needed, it is still underdeveloped in both organizational science and legal theory. In practice, many businesses continue to treat CSR as a matter of corporate discretion and 'private self-regulation,' while policymakers grapple with the challenge of balancing regulatory certainty with incentives for innovation and proactive corporate behaviour – an evolution that is increasingly driving the public regulation of CSR (Sheehy, 2015).

Scope and proportionality also pose limitations when it comes to the recently introduced EU mandatory CSR framework: the CSRD and CSDDD primarily apply to large companies, thereby excluding a vast number of SMEs that collectively employ a significant portion of the European workforce (Junck et al., 2024). This selective applicability risks perpetuating protection gaps, particularly in sectors where vulnerable workers are concentrated. Finally, the

integration of diverse CSR-related instruments into a coherent legal framework remains incomplete. The coexistence of reporting duties, due diligence obligations, and voluntary soft-law commitments results in a complex and fragmented regulatory landscape. Achieving greater coherence between these instruments and ensuring that CSR obligations contribute meaningfully to labour and social rights, constitutes one of the central challenges for the EU's future CSR policy architecture.

3 CSR, duty of care and the legal embedding of health-vulnerable workers' protection

The doctrine of a duty of care occupies an important conceptual interface between voluntary CSR standards often labelled as 'moral and political commitments' and binding legal obligations, offering a mechanism by which employers may be held accountable not merely for disclosure, but for preventive and remedial conduct. In labour law tradition, a duty of care typically requires an actor to take reasonable steps to avoid harm to those within a foreseeable risk sphere (for example, employees), calibrating the standard of care to the context, the severity of possible harm, and the vulnerability of affected persons.

Thus, in the field of labour law, the concept of "duty of care" is applied in OSH field by imposing on employers both a common-law and statutory obligation to take all reasonably practicable steps to protect the health, safety and wellbeing of employees at work (McDiarmid et al., 2021; Wedagedara & Dissanayake, 2024). This obligation typically encompasses conducting risk assessments, implementing safe systems of work, providing appropriate equipment and training, and ensuring adequate supervision so that foreseeable hazards are eliminated or mitigated (McDiarmid et al., 2021; Wedagedara & Dissanayake, 2024). While the standard of care is not absolute – it demands what is "reasonably practicable" rather than guaranteed safety – failure to meet this standard can result in regulatory sanctions, civil liability, or other enforcement mechanisms (Wedagedara & Dissanayake, 2024).

In the OSH context, the duty of care is especially significant because the consequences of neglect – physical injury, illness or death – can be severe, and effective fulfilment of the duty contributes both to legal compliance and to improved worker well-being (McDiarmid et al., 2021). Overall, labour law frames the duty of care as a central pillar of employer responsibility in OSH, integrating legal accountability with health and safety-driven organizational practice. On the other side, in the corporate setting, embedding such a duty within CSR frameworks can help shift responsibilities from moral aspiration toward enforceable norms particularly in terms of vulnerable categories of workers such as health-vulnerable ones.

In many jurisdictions, employer obligations already include a generalized duty to safeguard employees' health, safety, and wellbeing. Under comparative labour law doctrine, the duty to "care for the employee" is sometimes recognized as a component of the employment relationship as noted by Jacobs (2021). German employment and labour law, for instance, imposes on employers a duty to take account of employees' legal interests, including life and health, in the workplace organization and risk mitigation as a part of OSH law. Therefore, the employer's duty of care in German labour law forms a *sui generis* element of the employment relationship, imposing on employers the obligation to safeguard the life, health, and

dignity of employees. It, however, means that the “duty of care” stems from the employer’s primary obligations and constitutes a secondary, ancillary duty grounded in the principles of good faith and loyalty between the contractual parties, which has been the prevailing view in the literature. German law, by emphasizing the employer’s duty to safeguard the health, life, and dignity of workers, exemplifies a holistic approach to the interrelation of health and work, a perspective broadly endorsed in international law, particularly by the World Health Organization and ILO. This duty is further codified in Article 618 of the German Civil Code (Bürgerliches Gesetzbuch, BGB), which requires employers to organize work in a manner that protects workers from harm “to the extent that the nature of the service permits” (Government of the Federal Republic of Germany, 2022, p. 14). The principle is further operationalized through the OSH Act, which mandates continuous risk assessments and the implementation of preventive measures to mitigate occupational hazards (Government of the Federal Republic of Germany, 2022, p. 14). Beyond physical safety, the duty of care encompasses the psychological well-being of employees, including protection from workplace stress and harassment, aligning with contemporary understandings of occupational health and safety (Hartmann, 2024). Recent legal scholarship emphasizes that this duty has evolved to reflect not only compliance with statutory standards but also a broader ethical and managerial responsibility to ensure a safe, fair, and health-promoting work environment (Hartmann, 2024). On the other side, an illustrative example of the duty of care in both labour and corporate German law is provided by the Supply Chain Duty of Care Act which entered into force on 1 January 2023. The Act operationalizes corporate human rights and environmental due diligence obligations by requiring large companies to implement comprehensive risk management, preventive, and remedial measures across their supply chains (Ahrens, 2023). This legislation exemplifies Germany’s broader legal approach to embedding the duty of care within corporate governance and labour regulation frameworks, extending employer responsibility beyond the workplace to encompass global supply-chain impacts on workers and communities.

France was a pioneer in the field of corporate human rights and environmental due diligence long before the adoption of the EU CSDDD. The French Loi de vigilance (Loi n° 2017-399, 2017) established a legal obligation for large parent and contracting companies to develop and implement a vigilance plan addressing risks of human rights violations and environmental harm throughout their own operations, subsidiaries, and global supply chains (Clerc, 2021). This law marked the first binding national framework in Europe requiring comprehensive risk mapping, preventive and corrective measures, alert mechanisms, and public reporting (Clerc, 2021; Savourey & Brabant, 2021). As the European Trade Union Institute (ETUI) notes, France’s model laid the conceptual and procedural foundation for the EU’s later due diligence initiatives by transforming CSR from a voluntary policy into a legally enforceable duty of vigilance applicable across complex supply networks (Clerc, 2021).

While member states CSR and due diligence legislation followed by recently adopted the EU CSDDD is not targeted explicitly at health-vulnerable workers, its due diligence logic and framework of responsibility can provide a legal infrastructure that can further be leveraged to protect such populations. However, embedding protection of health-vulnerable workers – such as PwDs or those with chronic health conditions and rare diseases – within a duty of

care framework raises specific challenges of standard-setting, risk calibration, and intersection with non-discrimination obligations. Because these workers may face elevated susceptibility to harm, ordinary “reasonable care” standards may not suffice to ensure equal protection. A risk mapping exercise under a duty of care scheme would need to account for differential vulnerabilities, requiring more stringent preventive measures and accommodations. In this respect, CSR initiatives focusing on occupational health and disability inclusion may complement statutory obligations and fill gaps, provided they are aligned with enforceable duty criteria.

From a corporate governance perspective, the duty of care can be woven into board-level responsibilities or managerial duties. CSR commitments may be operationalized through binding internal policies and employer-level codes of conduct developed with the participation of employee representatives. They may also be embedded in contractual or collective clauses subject to monitoring, internal audit, and enforcement mechanisms, potentially giving rise to liability in cases of non-compliance. This legal embedding aligns with the trend toward “hardening” CSR-transitioning from aspirational statements to governance obligations that can be judicially scrutinized. Nevertheless, several tensions and practical constraints must be acknowledged. First, determining the standard of care in multinational and multi-tier supply chains is complex, particularly when local legal, regulatory, or enforcement regimes differ across jurisdictions. Second, litigation and enforcement risks may lead to defensive compliance or strategic avoidance, especially where corporate resources or institutional capacities are uneven. Third, the transition from voluntary CSR to a duty of care involves aligning incentives, internalizing costs, and addressing corporate resistance to increased regulation, particularly when addressing vulnerable categories of workers.

Despite these challenges, the duty of care model offers a promising legal lever for strengthening protection of health-vulnerable workers, particularly when integrated with CSR practices and corporate governance structures. It provides a bridge between soft-law aspiration and binding legal accountability. Given that, in policy settings, CSR has increasingly been recognized as a strategic framework for advancing the inclusion and employment of PwDs (Mullin et al., 2024). Moving beyond traditional philanthropy, CSR can integrate disability inclusion into organizational governance, human resource management, and sustainability reporting, aligning corporate practice with the human-rights model of disability (Xu, 2022). Studies indicate that the companies internally adopting socially responsible human resource policies including WHP programs – such as accessible recruitment processes, workplace accommodations, and inclusive leadership leading to the development of “culture of care” – tend to demonstrate higher levels of disability inclusion and employee satisfaction (Kwan, 2020). However, content analyses of CSR reports reveal that disability issues are often underrepresented, with companies focusing on general diversity statements rather than measurable inclusion outcomes (Vogelauer et al., 2020). Scholars argue that aligning CSR commitments with the United Nations Convention on the Rights of Persons with Disabilities (CRPD) can transform disability from a “peripheral philanthropic concern” into a substantive component of corporate sustainability and ethical governance (Fasciglione, 2015). Overall, the literature suggests that when CSR is grounded in rights-based principles and embedded within business strategy, it can serve as a structural lever for achieving equal participation and reducing systemic barriers faced by workers with disabilities.

4 CSR as a complement to labour law and company law in protecting health-vulnerable workers

The relationship between CSR and labour law reflects the evolving interaction between voluntary corporate initiatives and statutory regulation. Labour law establishes the minimum standards for working conditions and occupational safety, while CSR enables enterprises to exceed these obligations by integrating ethical, social, and health-related principles into their governance structures. In this respect, CSR functions as a complementary framework that reinforces the social purpose of labour law – particularly in advancing the protection, health, and inclusion of workers facing specific vulnerabilities such as disabilities, chronic illnesses, or rare diseases.

Within the EU, labour law has progressively incorporated the principles of equality, inclusion, and occupational health through instruments such as the [Framework Directive on OSH 89/391/EEC](#) and the [Employment Equality Directive 2000/78/EC](#). These directives impose obligations on employers to ensure safe and non-discriminatory workplaces and to provide reasonable accommodation for workers with disabilities. However, they remain limited in addressing complex or emerging forms of health vulnerability, such as psychosocial risks, long-term illness, or rare diseases, which require proactive and individualized responses.

In this normative gap, CSR provides an adaptable and preventive instrument for strengthening the protection of health-vulnerable workers. CSR initiatives typically include programs promoting physical and mental well-being, early risk detection, health education, and workplace adaptations for employees with specific health conditions. Such measures align with the preventive logic of the Framework Directive on OSH ([Directive 89/391/EEC, 1989](#)) but extend it further by emphasizing continuous improvement, early intervention, and inclusive participation. By introducing voluntary measures such as flexible work arrangements, rehabilitation and reintegration support, and mental-health programs, companies can anticipate risks rather than merely comply with minimum legal duties.

From a labour law perspective, CSR thus reinforces the duty of care as a central element of employment relations in terms of OSH. Voluntary CSR practices translate abstract legal principles, such as the right to a safe and dignified workplace, into concrete workplace strategies. They reflect an expanded understanding of employer responsibility, one that integrates compliance with ethical accountability and recognizes the importance of occupational health as part of human rights at work.

Equally, CSR promotes inclusion as an essential element of decent and sustainable employment, in line with the Sustainable Development Goals (SDGs) and the United Nations 2030 Agenda. Through diversity-oriented recruitment, workplace accessibility, and reasonable accommodation measures, enterprises operationalize the objectives of EU equality and disability law. These practices help ensure that health-vulnerable workers are not only protected but actively included as valuable contributors to organizational performance. In doing so, CSR fosters a culture of care where health sensitivity, prevention, and inclusion are viewed as integral components of responsible business conduct.

The ongoing development of the EU's sustainability framework – exemplified by the CSRD ([Directive \(EU\) 2022/2464, 2022](#)) and the forthcoming CSDDD – further consolidates

this convergence between CSR and labour law. These instruments transform voluntary social commitments into quasi-legal obligations grounded in transparency and accountability. Within this evolving landscape, CSR becomes not merely a complement but a catalyst for strengthening labour law's protective function. By embedding occupational health and inclusion within corporate governance and reporting mechanisms, CSR contributes to a modernized and preventive understanding of the employer's duty of care – one that recognizes the protection of health-vulnerable workers as a cornerstone of sustainable and equitable labour relations.

On the other hand, the relationship between CSR and company (corporate) law is increasingly significant in modern business practice. Company law provides the legal framework that defines the rights, duties, and governance structures of companies, while CSR influences how companies apply this framework in practice. Through regulations on corporate governance, transparency, and directors' duties, company law encourages companies to consider not only the interests of shareholders but also those of other stakeholders, including employees, consumers, investors, and the wider community. As a result, CSR is no longer merely a voluntary ethical choice, but an important element influenced and supported by company law, contributing to sustainable and accountable business operations.

Based on the stakeholder theory proposed by [Freeman \(1984, p. 44\)](#), companies are expected to create value for all stakeholders rather than exclusively for shareholders. Stakeholders encompass individuals or groups who can influence, or are influenced by, the achievement of a company's goals. Corporate activities and operations inevitably influence both society and the environment, thereby generating social and environmental consequences ([Nwobu, 2021, p. 3](#)). [Huang & Watson \(2015\)](#) define CSR as the voluntary engagement of companies in initiatives that promote societal welfare, integrating ethical, social, and health-related principles into their governance structures, and extending beyond ordinary business operations and legal obligations ([Huang & Watson, 2015, p. 2](#)). In a similar vein, Radhakrishnan et al. argue that the allocation of resources to such initiatives constitutes an integral component of the business model that indirectly addresses social concerns, mitigates negative externalities, and enhances the positive impacts of corporate activities. They further emphasize that managers and directors are required to make informed decisions regarding the allocation of resources and inputs that ultimately generate the outputs intended to benefit both shareholders and the wider body of corporate stakeholders ([Radhakrishnan et al., 2018, p. 280](#)).

Over the past two decades, the concept of CSR has received increasing attention from corporate management, investors, stakeholders, community representatives, and researchers. The European Commission in its 2002 reports defines CSR as the voluntary integration of social and environmental considerations into companies' daily business operations and their interactions with stakeholders. In the context of an increasingly globalized economy, CSR has emerged a fundamental component of corporate conduct. Accordingly, beyond the pursuit of satisfactory economic performance, companies are expected to engage in a broad range of socially responsible practices to secure long-term sustainability, competitiveness, and growth ([Ying & Leung, 2011, p. 66](#)).

Meanwhile, CSR has evolved into a broader framework commonly articulated through environmental, social, and governance (ESG) considerations, and has become increasingly embedded in corporate strategy and reporting practices. An expanding number of companies

now publish standalone sustainability or ESG reports and integrate disclosures relating to environmental and social matters into their annual and integrated reports (Sovilj & Zlatanović, 2024, pp. 45–46). In the United States, regulatory agencies, such as the Federal Trade Commission and the Environmental Protection Agency, play a significant role in overseeing corporate environmental and social disclosures. Publicly listed companies are required to disclose material environmental information in their periodic filings, particularly where their business activities give rise to significant environmental risks or liabilities, in line with principles of materiality under USA securities law (Ying & Leung, 2011, p. 67). At the EU level, early regulatory initiatives anticipated the contemporary ESG disclosure framework. Notably, the French *Nouvelles Régulations Économiques* of 2001 (*Loi n° 2001–420, 2001*) constituted the first statutory regime requiring companies listed on the Premier Marché to disclose non-financial information concerning environmental and social impacts. This legislation introduced a structured disclosure framework, often regarded as a precursor to modern ESG reporting standards, covering matters related to employment, occupational health and safety, respect for human rights, community engagement, and environmental performance (Ying & Leung, 2011, p. 67).

CSR has increasingly been recognized as one of the central challenges of modern corporate governance. Companies and their boards of directors are required to integrate socially responsible investment considerations into the company's overall governance framework and strategic orientation. Corporate governance represents a specific institutional mechanism in which the board of directors plays a pivotal role in advising management on the adoption of appropriate strategic decisions and in ensuring the long-term sustainability of the company (Béji et al., 2021). Under Anglo-Saxon and European traditions of company law, the board of directors is subject to fiduciary duties, including duties of care and loyalty, which are generally interpreted as obligations to act in the best interests of the company as a separate legal entity (Vasiljević, 2007, p. 142). This conception of the company's interest allows and, in certain cases, requires directors to consider the long-term consequences of corporate decisions, including their impact on stakeholders such as employees, investors, creditors, consumers, and society at large. These duties may encompass the consideration of CSR and OSH-related factors insofar as such considerations contribute to the long-term value, risk management, and sustainability of the company. Consequently, decisions taken by the board of directors, in the exercise of their fiduciary responsibilities, may lead to the adoption and effective implementation of CSR and OSH policies as an integral component of sound corporate governance.

The literature has emphasized the crucial role of board members in the formulation and implementation of effective CSR and OSH strategies. In corporate governance and CSR extant literature, a range of theoretical frameworks, including agency theory, stewardship theory, resource dependence theory, upper echelons theory, and stakeholder theory, have been extensively employed to explain the relationship between the role of the board of directors and the adoption of CSR and OSH policies. Agency theory emphasizes the board's monitoring function, focusing on the alignment of interests between executive management and shareholders through effective oversight mechanisms. A contrary, normative compliance theory adopts a fundamentally different orientation, conceptualizing the board of directors

as bearing a moral and normative responsibility to adopt and oversee corporate policies that promote socially desirable outcomes, including environmental protection and occupational health and safety (Osemeke et al., 2020, p. 153). Under this approach, CSR is not merely an instrumental tool for reducing agency costs or enhancing company value, but rather an expression of the company's broader social obligations and ethical commitments. In particular, upper echelons theory offers a compelling analytical framework for understanding how the composition and characteristics of the board of directors influence corporate decision-making. From this perspective, greater diversity within the board can improve the quality of supervisory functions, thereby fostering a higher degree of strategic engagement in CSR and OSH issues (Aggarwal et al., 2019, p. 3).

Academic studies indicate that board diversity refers to the heterogeneity of the board of directors across a range of demographic characteristics, including age, educational and cultural background, gender, nationality, and tenure, as well as across structural characteristics such as leadership duality and director independence. Several authors further argue that board diversity may be regarded as an ethical objective, reflecting broader principles of equality, inclusiveness, and social justice embedded in contemporary European corporate governance discourse. Beyond its intrinsic value, board diversity is also associated with a number of governance-related benefits, including enhanced creativity, a more nuanced understanding of markets and stakeholder expectations, as well as improved problem-solving and deliberative processes (Shahgholian, 2017, pp. 4–6). In line with this view, Hafsi and Turgut (2013) emphasize that structural diversity of boards of directors alone does not sufficiently differentiate companies or explain variations in corporate conduct, whereas demographic diversity, particularly gender dimensions and high level of education, appear to play a more significant role in shaping corporate strategies and outcomes, including those related to sustainability and CSR. Accordingly, board diversity may be understood not merely as a matter of corporate ethics or representation, but as a functional governance mechanism that supports compliance with emerging EU sustainability due diligence requirements and the broader objective of long-term corporate sustainability (Béji et al., 2021).

In the context of EU law, the relevance of board diversity is further reinforced by the CSDDD, which imposes obligations on companies to identify, prevent, mitigate, and account for adverse human rights and environmental impacts throughout their operations and value chains. The effective discharge of these due diligence obligations requires informed, independent, and forward-looking oversight by the board of directors. In this sense, a demographically diverse board of directors may be better equipped to evaluate complex sustainability, occupational health and safety risk, understand the perspectives of affected stakeholders, and integrate due diligence considerations into corporate strategy and decision-making.

Another principal board characteristic frequently examined in the corporate governance is the presence of independent directors. Independent directors are commonly viewed as possessing a stronger stakeholder orientation and a higher degree of managerial objectivity, attributes that may contribute to the effective formulation and implementation of CSR and OSH strategies. In contrast to executive directors, who are involved in the day-to-day management of the company, non-executive and independent directors are primarily responsible for oversight, monitoring, and strategic supervision. In fulfilling their fiduciary obligations, they

are expected to act in the best interests of the company, a standard that, particularly within EU corporate law systems, encompasses the consideration of the interests of shareholders, as well as those of other relevant stakeholders (Vasiljević, 2007, p. 143). The presence of independent directors on the board serves to enhance the board's autonomy from executive management and reduce potential conflicts of interest, thereby reinforcing compliance with the duty of loyalty (Kodeks korporativnog upravljanja, 2012). At the same time, their detached position and oversight function support the proper exercise of the duty of care, enabling the board to assess sustainability-related risks, social and environmental impacts, and long-term strategic consequences of corporate decisions. Consequently, the involvement of independent directors strengthens the board's capacity to integrate CSR considerations into corporate governance, not as discretionary initiatives, but as components of the board's fiduciary responsibility to promote the company's long-term sustainability, and lawful conduct (Osemeke et al., 2020, p. 154).

5 Conclusion

This paper has emphasized that the protection of health-vulnerable workers should stand at the core of modern CSR. Workers facing chronic health conditions, disabilities, or rare diseases continue to experience unequal treatment and insufficient workplace accommodations, despite the existence of OSH and equality directives. In this context, CSR offers an important complementary mechanism that can strengthen their protection beyond the limits of traditional labour law. By embedding health sensitivity, inclusiveness, and ethical responsibility into corporate governance, CSR contributes to reducing structural inequalities and promoting the full participation of health-vulnerable individuals in the workforce.

The growing alignment between CSR, labour law, and company law also reflects a normative shift toward recognizing employers' duty of care as a central legal and ethical standard. Through new EU initiatives – such as the CSRD and the CSDDD – CSR is increasingly evolving from a voluntary commitment into a semi-binding framework that enhances transparency, accountability, and social responsibility. Within this emerging framework, the health dimension of CSR is particularly valuable, as it ensures that corporate sustainability is not pursued at the expense of workers' physical and mental well-being.

Protecting health-vulnerable workers through CSR-based governance thus represents both a moral imperative and a strategic business investment in human capital. Contemporary company law and corporate governance frameworks increasingly position companies as central actors in promoting CSR and OSH, transforming CSR and OSH from peripheral or purely voluntary initiatives, into integral components of corporate strategy, risk management, and long-term value creation. Through directors' fiduciary duties, enhanced transparency and disclosure requirements, as well as sustainability due diligence obligations, companies are encouraged, and in some cases required, to consider the social, environmental, and human rights impacts of their activities. The board of directors, particularly through the presence of independent and diverse members, plays a pivotal role in embedding inclusive health and safety policies into corporate decision-making. By integrating the protection of health-vulnerable workers into CSR and OSH standards, companies not only comply with legal and

social expectations, but also contribute to a more resilient and equitable labour market. Ultimately, this integration reinforces the principle that sustainable business performance, effective corporate governance, and the promotion of human dignity are mutually reinforcing and interdependent objectives.

This paper has focused on the EU approach to CSR in the field of OSH, reflecting recent regulatory developments at EU level, particularly the adoption of due diligence legislation. An international comparative perspective, as well as a differentiated analysis of specific protective measures for PwDs, individuals with rare diseases, and workers with chronic health conditions, fall outside the scope of the present study and are therefore identified as directions for future research. The main contribution of the paper lies in emphasizing the potential of CSR as a governance mechanism in the OSH field, supported by the interaction of labour law and company law. By conceptualizing CSR as a bridge between these legal frameworks, the article seeks to contribute to the ongoing debates on the future evolution of OSH regulation in the EU, particularly in the context of changing regulatory, technological, and socio-economic conditions.

Data availability statement

Data are available from the authors upon request

Coauthor contributions

Sanja Zlatanović: Conceptualization, Investigation, Methodology, Resources, Formal Analysis, Writing – Original Draft

Ranko Sovilj: Investigation, Methodology, Resources, Validation, Writing – Review & Editing

Ivana Stjelja: Supervision, Resources, Validation, Writing – Review & Editing

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Članci

Articles

Gender and Educational Inequalities in Active Ageing: Evidence from Slovakia in a European Context

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This study examines employment patterns among older workers in Slovakia compared to the European Union (EU), focusing on the Employment Domain of the Active Ageing Index (AAI). Using the Eurostat demographic data (2010–2024) and United Nations Economic Commission for Europe (UNECE) AAI measurements (2010–2020), we investigate gender and educational gaps across the age cohorts 55–74. Drawing on cumulative advantage theory and institutional legacy frameworks, the study addresses three hypotheses regarding socialist-era legacies, progressive educational stratification, and retirement age effects. Slovakia experiences rapid demographic ageing, with the population aged 65+ growing more than twice as fast as the EU-27 average between 2010–2024, and the old-age dependency ratio increasing at more than double the EU-27 rate. Slovakia's AAI ranking improved from the last place in 2010 to the 21st position in 2020. The study disaggregates Employment Domain scores by gender and educational attainment across all four age cohorts, an analysis not previously conducted for Slovakia within the AAI framework. Gender analysis reveals that Slovakia demonstrates one of the smallest employment gender gaps in the EU, substantially below the EU-28 mean, with particularly balanced outcomes in the 55–59 age cohort. The 60–64 age group shows maximum gender disparities across all EU countries, coinciding with retirement age transitions. Educational gaps widen dramatically with age, from a modest difference in the 55–59 cohort to more than three times higher employment rates for tertiary-educated workers in the 70–74 cohort, indicating progressive cumulative disadvantage for lower-educated older workers. The findings support Slovakia's active ageing initiatives while highlighting urgent needs for targeted interventions: gradual retirement pathways for the 60–64 cohort, workplace health promotion in physically demanding occupations, and lifelong learning programmes addressing educational stratification.

Keywords: Active Ageing Index, gender gap, educational gap, older workers, Slovakia

1 Introduction

Population ageing in Europe generates profound economic consequences, though perspectives on these consequences vary considerably. Some frame ageing primarily as an economic burden, emphasizing rising healthcare and social service costs, while others see opportunity in the “silver economy”, referring to economic activities serving people over 50. Recent meta-analyses suggest the optimists may have a point: workplace age diversity in organizations appears to yield enhanced problem-solving capabilities, improved organizational resilience, and increased innovation capacity (Okatta et al., 2024; Hertel et al., 2013). As workforces in many European countries age amid sustained below-replacement fertility, organizations face both challenges and opportunities that fundamentally reshape the labour market sustainability.

The World Health Organization defines Active Ageing as the process of optimizing opportunities for health, participation and security in older age to enhance quality of life as people age (World Health Organization, 2002). To translate this somewhat abstract concept into measurable outcomes, United Nations Economic Commission for Europe (UNECE) developed the Active Ageing Index (AAI), a composite tool measuring active ageing outcomes across European Union (EU) member states. The Employment Domain, which measures employment rates across the age cohorts 55–74, offers particularly valuable insights into how effectively countries integrate older workers and support extended working lives.

Post-transition economies face somewhat unique active ageing challenges, and Slovakia exemplifies these challenges with particular intensity. Between 2010 and 2024, Slovakia’s old-age dependency ratio increased from 17.3% to 27.9% — a growth rate of 61.3%, substantially higher than the EU-27 average increase of 28.9% over the same period, and among the steepest in Central and Eastern Europe. Slovakia exhibits what we might call a “demographic scissors effect”: the working-age population is shrinking while the post-productive population expands rapidly (Eurostat, 2025; European Commission, 2023). Slovakia improved from the 28th place in the AAI in 2010 to the 21st position in 2020, yet remains firmly in the lower tier of EU member states, indicating substantial room for policy development (Waligóra, 2024).

Significant gaps persist in our understanding of employment patterns among older workers in post-transition economies. Gender disparities represent a critical yet underexplored dimension. Slovakia’s remarkably small gender gaps compared to EU averages demand explanation; the explanatory factors remain unclear and warrant investigation. Educational attainment creates substantial stratification in employment outcomes, with cumulative advantage processes potentially widening disparities as workers age (Bayl-Smith, 2019; Getzmann et al., 2023). Understanding these patterns becomes particularly crucial for post-transition economies, where legacy effects of early retirement schemes, rapid technological change, and recent pension reforms create unique integration challenges that differ markedly from Western European contexts (Zacher & Rudolph, 2022, pp. 3–8; Debelak et al., 2023).

This study addresses two research questions:

RQ1: How does Slovakia’s position in the Employment Domain of the AAI compared to other EU member states, and what age-specific patterns characterise older worker employment in Slovakia?

- RQ2a: What institutional and historical factors account for Slovakia's notably small employment gender gap among older workers?
- RQ2b: How do educational disparities in employment rates evolve across age cohorts 55–74? Building on the theoretical framework developed in Section 2, we formulate three hypotheses:
- H1: Slovakia's small employment gender gap among older workers reflects the institutional legacy of socialist-era near-universal female employment participation.
- H2: Educational disparities in older worker employment widen progressively across age cohorts 55–59 to 70–74, consistent with cumulative disadvantage theory.
- H3: The 60–64 age cohort exhibits the largest employment gender gap across EU member states, reflecting the institutionalised legacy of gender-differentiated statutory retirement ages.

This study makes three contributions to active ageing literature. First, it provides a systematic disaggregation of Slovakia's AAI Employment Domain by gender and educational attainment across all four age cohorts, identifying which subgroups drive Slovakia's overall index position. Second, it offers an institutional explanation for Slovakia's notably small employment gender gap — a pattern that contradicts typical post-transition economy profiles and has not previously been examined within the AAI framework. Third, it provides empirical evidence for cumulative disadvantage theory in a post-transition context through quantification of the progressive educational gap widening across age cohorts.

2 Theoretical background

2.1 The Active Ageing Paradigm and Organizational Adaptation

The theoretical foundation for understanding active ageing in the workplace has expanded considerably since [Ilmarinen's \(2012\)](#) seminal work on sustainable work ability, which introduced the "House of Work Ability" model and demonstrated that work ability can be actively maintained through appropriate ergonomic, organisational, and leadership interventions — arguing that "good work ability is not just a consequence of health, but an achievable goal of workplace policy" ([Ilmarinen, 2012, p. 3](#)). Current frameworks integrate perspectives on active ageing and age management within organizational contexts, particularly drawing on demographic transition theory ([Notestein, 1945](#); [Davis, 1945](#)) as applied to post-transition economies, and on comparative welfare state frameworks ([Esping-Andersen, 1990](#); [Müller, 1999](#); [Cook & Inglot, 2021](#)) that situate Slovakia within the post-socialist institutional trajectory ([Fodor et al., 2022, pp. 5–8](#)). Contemporary research has enriched this foundation by highlighting the multidimensional nature of successful ageing at work, encompassing both the maintenance and adaptive recovery of older workers' abilities within dynamic organizational environments ([Debelak et al., 2024](#)).

The ageing workforce presents both considerable challenges and substantial opportunities for modern organizations, particularly regarding inclusive strategies to support and retain older workers through intergenerational knowledge transfer and flexible retirement pathways ([Debelak et al., 2023](#)). Active ageing policies have emerged as a key organizational

response to demographic shifts within EU member states, with research consistently emphasizing benefits of age diversity in problem-solving and innovation capacity (Hertel et al., 2013; Walker & Maltby, 2012).

The literature encompasses several theoretical perspectives on successful ageing, including activity theory (Havighurst, 1961), disengagement theory (Cumming & Henry, 1961), continuity theory (Havighurst et al., 1968), and the model of selective optimization with compensation (Baltes & Baltes, 1990). Together, these perspectives provide foundational understanding for organizational adaptation strategies in an increasingly age-diverse workforce (Zacher & Rudolph, 2017).

2.2 Gender Disparities in Older Worker Employment

Gender inequalities in employment represent persistent structural features of European labour markets, with a particular complexity in older age cohorts. Research consistently demonstrates that gender gaps in older workers' employment stem from multiple intersecting factors (Cordova et al., 2022; Organisation for Economic Co-operation and Development [OECD], 2025). Life course accumulation creates enduring disadvantages, as women's employment biographies typically include interruptions for childbearing and caregiving, resulting in shorter contribution periods, lower pension entitlements, and reduced access to employer-sponsored benefits. These accumulated disadvantages constrain women's labour market options in later life.

Pension system structures play a critical role in shaping gender employment patterns. Many European countries historically implemented lower statutory retirement ages for women than men, institutionalizing gender-differentiated labour market exits. Although EU policies promote gradual equalization, legacy effects persist in current cohorts of older workers. Occupational segregation further compounds these disparities. Women's concentration in certain sectors (healthcare, education, retail) and men's in others (construction, manufacturing, transportation) create different exposure to physical demands, technological change, and employment stability, all of which influence capacity and motivation for extended working lives.

Caregiving responsibilities disproportionately affect women's employment trajectories. Women provide substantially more informal care to grandchildren, ageing parents, and spouses, constraining their employment options. Care demands often peak during the pre-retirement years, pushing women toward early labour market exit. Research demonstrates that older women face intersectional disadvantage, experiencing both ageism and sexism simultaneously in employment contexts (Bayl-Smith, 2019). This intersectional disadvantage manifests in hiring discrimination, limited training opportunities, and workplace marginalization.

However, the direction and magnitude of gender gaps vary substantially across countries, reflecting different institutional contexts, policy frameworks, and cultural norms regarding work and retirement. Understanding these variations provides insights into policy levers for promoting gender equity in older worker employment. Across OECD countries, pension payments for women are on average 23% lower than those for men, with the gap below 10% in Slovakia and Estonia — reflecting these countries' historically high female labour force par-

ticipation rates (OECD, 2025). This cross-national variation confirms that institutional legacies, rather than individual choices alone, are the primary driver of gender employment gaps in later life (Cordova et al., 2022). Recent research further demonstrates that population ageing and gender gaps represent a dual challenge to economic growth, with their interaction producing compounding effects on labour market outcomes (Zvezdanović Lobanova et al., 2025).

2.3 Educational Attainment and Employment in Later Life

Educational qualifications significantly influence employment patterns throughout the life course, with effects often amplifying in older age. Higher educational attainment consistently associates with extended working lives, higher employment rates in pre-retirement years, and better quality employment conditions. This relationship reflects multiple mechanisms operating simultaneously.

Occupational characteristics differ systematically by education level. Higher-skilled occupations typically involve less physical strain, offer greater flexibility and autonomy, and provide stronger intrinsic motivation for continued employment. These characteristics facilitate employment continuation into later life. Labour market resilience represents another critical mechanism. Higher-educated workers demonstrate greater adaptability to technological change, organizational restructuring, and sectoral shifts. This resilience protects against premature labour market exit due to skill obsolescence or job loss.

Educational attainment strongly correlates with health outcomes throughout the life course (Balaj et al., 2024; Davies et al., 2023). Better health enables extended working capacity and reduces work-limiting disabilities that push lower-educated workers toward early retirement. Economic incentives also play a role. Higher-educated workers typically earn higher wages and accumulate greater pension entitlements, creating stronger financial incentives for employment continuation versus early retirement. Education provides access to professional networks, cultural resources, and symbolic capital that facilitate employment opportunities and workplace integration in later life.

Research demonstrates that educational gaps in employment participation tend to widen with age, as workers with lower qualifications face greater difficulties maintaining employment in the face of technological change, occupational health challenges, and age-based discrimination. The framework addresses emerging challenges in digital literacy and remote work adaptation (Nikou et al., 2022), while considering both constraints and opportunities in supporting older workers in digital environments. Understanding these educational disparities is crucial for designing inclusive active ageing policies that address the needs of diverse older worker populations.

2.4 Slovakia in European Context: Post-Transition Dynamics

Slovakia's labour market characteristics reflect its transition from a centrally planned to a market economy, with specific implications for older worker employment. Population ageing in post-transition economies generates macroeconomic pressures beyond labour market effects, including inflationary dynamics linked to demographic shifts and growing fiscal

imbalances in pension and healthcare systems (Filipović & Miljković, 2024). Several factors shape Slovakia's active ageing context. The legacy of early retirement schemes introduced during economic restructuring in the 1990s created expectations of early labour market exit that persist in current cohorts of older workers. Economic restructuring included generous early retirement schemes to facilitate industrial restructuring and reduce unemployment, establishing patterns that continue to influence contemporary employment behaviour.

Comparative evidence from other post-socialist countries contextualises Slovakia's position. Central and Eastern European labour markets share structural challenges — industrial restructuring legacies, gender-differentiated retirement systems, and incomplete adaptation to demographic change — yet with considerable variation in outcomes (Chłoń-Domińczak et al., 2012). Slovakia's intermediate AAI position, between lower-performing Central European peers (Poland, Hungary) and better-performing Baltic states (Estonia), suggests a hybrid institutional legacy. Baltic states exhibit more compressed gender employment gaps reflecting stronger Soviet-era female labour force participation norms (Botev, 2012), while the Czech Republic and Poland share Slovakia's pattern of early retirement legacies (Hoff, 2011). Research further documents shared dynamics across the region, including age discrimination (Vidovičová, 2005), employer reluctance to retain older workers (Łuczak & Szymańska, 2020), and institutional barriers to older workers' employment (Tardos, 2013).

Slovakia implemented substantial pension reforms in the 2000s and 2010s, including increases in statutory retirement ages and restrictions on early retirement pathways. The current constitutional cap (introduced in 2019) sets the retirement age at 64 years for men and childless women, 63 years and 6 months for women with one child, 63 years for women with two children, and 62 years and 6 months for women with three or more children. Early retirement is available up to two years prior to the statutory age. Historically, gender-differentiated retirement ages were considerably wider: a woman born in 1944 with no children retired at 57, while a woman with five or more children retired at 53. The reform trajectory from 2004 to 2014 gradually equalised these ages from the 53–57 range toward a common age of 62, before the 2019 constitutional amendment introduced the current cap. Notably, the right to a reduced retirement age based on the number of children raised can be transferred to the father if the mother does not claim it (European Trade Union Institute [ETUI], 2019; Ministry of Labour, Social Affairs and Family of the Slovak Republic, 2019; OECD, 2023).

This integrated theoretical approach connects macro-level demographic trends and institutional structures to micro-level individual employment behaviour and back to aggregate outcomes, following the analytical logic of Coleman's (1990) macro-micro-macro framework. In this framework, country-level institutions such as pension systems and labour market regulations shape individual retirement decisions, and the aggregation of these individual decisions produces measurable macro-level outcomes such as AAI Employment Domain scores. Cowen et al. (2022) applied this framework to organizational research in Eastern European contexts, demonstrating how post-socialist institutional legacies translate into individual workplace behaviour and aggregate into observable labour market patterns. In the present study, Slovakia's post-transition institutional inheritance at the macro level shapes older workers' employment trajectories at the micro level, which in turn aggregate into Slovakia's position in European active ageing rankings.

Understanding Slovakia's position within the broader European context provides valuable insights for other post-transition economies facing similar demographic and labour market challenges. The theoretical framework provides basis for examining how organizations can effectively support and leverage the potential of older workers in an increasingly digital workplace environment while addressing structural inequalities inherited from the transition period.

3 Method

3.1 The Active Ageing Index: Conceptualization and Measurement

The AAI translates the multidimensional active ageing concept into a measurable composite indicator. Developed through collaboration between UNECE, the European Commission, and academic experts, the AAI serves as a tool to monitor active ageing outcomes at the country level and describe the untapped potential of older people to participate actively in economic and social life. This definition adopts a broader, multidimensional approach that goes beyond one-dimensional concepts focused solely on formal employment, instead emphasizing the comprehensive nature of active and healthy ageing (Zaidi et al., 2017).

Building on this foundation, the AAI project operationalizes active and healthy ageing as a state in which people can live healthy and independently, and secure lives as they age, continuing to participate in formal employment as well as unpaid productive activities such as volunteering and family caregiving (Zaidi et al., 2017). The index structure reflects the multidimensional nature of active ageing through four domains (see Table 1).

Table 1. Structure of the Active Ageing Index – domains, indicators and their weights

Domains	Employment	Participation in Society	Independent, Healthy and Secure Living	Capacity and Enabling Environment for Active Ageing
	35 %	35 %	10 %	20 %
Indicators	Employment rate 55–59 25 %	Voluntary activities 25 %	Physical exercise 10 %	Remaining life expectancy at age 55 33 %
	Employment rate 60–64 25 %	Care for children, grandchildren 25 %	Access to health and dental care 20 %	Share of healthy life expectancy at age 55 23%
	Employment rate 65–69 25 %	Care for older adults 30 %	Independent living 20 %	Mental well-being 17%
	Employment rate 70–74 25 %	Political participation 20 %	Relative median income 10 %	Use of Information and Communication Technologies (ICT) 7 %
			No poverty risk 10 %	Social connectedness 13 %

Domains	Employment	Participation in Society	Independent, Healthy and Secure Living	Capacity and Enabling Environment for Active Ageing
	35 %	35 %	10 %	20 %
Indicators			No severe material deprivation 10 %	Educational attainment 7 %
			Physical safety 10 %	
			Lifelong learning 10 %	

Source: Author's elaboration based on AAI in non-EU countries and at subnational level: Guidelines (p. 6), by the [United Nations Economic Commission for Europe & European Commission, 2018](#).

Domain I: Employment (35% weight) comprises four indicators measuring employment rates for age groups 55–59, 60–64, 65–69, and 70–74 years, with each indicator weighted equally at 25%. The employment rate is calculated as the percentage of employed persons within each age group in relation to the total population of that age group, using data from the [EU Labour Force Survey \(LFS\)](#). The remaining three domains — Participation in Society (35%), Independent, Healthy and Secure Living (10%), and Capacity and Enabling Environment for Active Ageing (20%) — capture broader dimensions of active ageing but fall outside the scope of the present analysis ([Zaidi et al., 2017](#); [UNECE & European Commission, 2018](#)).

The Employment Domain's 35% weighting reflects the centrality of paid work in enabling economic security and social integration in later life, with each of the four age cohorts weighted equally at 25%. Table 2 illustrates the temporal evolution of AAI rankings across EU member states.

Table 2. AAI Country Rankings Evolution 2010–2020

AAI Ranking	2010	2012	2014	2016	2018	2020
Belgium	12	15	16	9	9	9
Bulgaria	23	24	23	21	22	22
Czech Republic	15	12	11	13	11	11
Denmark	3	2	2	2	2	3
Germany	9	9	9	8	8	6
Estonia	6	16	10	10	7	10
Ireland	7	5	6	7	10	7
Greece	22	25	28	28	28	28
Spain	18	17	17	19	17	20
France	8	11	7	6	6	8
Croatia	24	18	19	26	27	27
Italy	19	13	14	17	20	19

AAI Ranking	2010	2012	2014	2016	2018	2020
Cyprus	20	7	13	15	16	12
Latvia	10	22	18	16	12	14
Lithuania	17	19	21	20	13	18
Luxembourg	13	8	8	11	15	16
Hungary	25	27	26	27	25	24
Malta	26	20	20	14	18	15
Netherlands	5	4	4	3	5	2
Austria	14	14	15	12	14	13
Poland	27	28	27	25	24	25
Portugal	11	10	12	18	21	17
Romania	21	23	24	23	26	26
Slovenia	16	21	22	22	23	23
Slovakia	28	26	25	24	19	21
Finland	2	6	5	5	3	4
Sweden	1	1	1	1	1	1
United Kingdom	4	3	3	4	4	5

Source: Data derived from AAI results for EU (United Nations Economic Commission for Europe, n.d.).

This comprehensive measurement framework enables cross-national comparisons and longitudinal tracking (Zaidi et al., 2017; UNECE & European Commission, 2018).

3.2 Research Design and Approach

This study employs quantitative comparative analysis, utilizing the AAI framework to examine gender and educational disparities in older worker employment within the European context. The AAI framework is applied as constructed by Zaidi et al. (2017) and UNECE and European Commission (2018) without methodological alteration. The authors' analytical contribution lies in the disaggregation of the Employment Domain scores by gender and educational attainment across all four age cohorts, and in the institutional interpretation of patterns identified — analyses not performed in existing AAI publications for Slovakia. The research adopts a cross-sectional design with longitudinal comparative elements, examining data from multiple time points (2010–2024) to assess temporal trends in active ageing outcomes. The analytical approach addresses two dimensions: comparative analysis of Slovakia's position relative to other EU member states across the Employment Domain, and detailed examination of gender and educational stratification patterns within employment rates across four age cohorts (55–59, 60–64, 65–69, and 70–74 years).

The research strategy operates at three levels: macro (demographic indicators), meso (AAI country rankings and Employment Domain scores), and micro (within-country stratification by gender and educational attainment).

3.3 Data Sources, Time Horizon, and Variables

The study integrates three primary data sources that provide complementary information on active ageing and older worker employment.

[Eurostat Demographic Database \(2010–2024\)](#) provides population structure data by age groups, old-age dependency ratios, ageing indices, median age, and life expectancy by sex. These data are extracted from annual demographic reports that provide standardized comparable data across EU-27 member states. The observation period 2010–2024 captures recent demographic trends and enables calculation of relative growth rates. The demographic indicators used include: proportion of population aged 0–14 years (percentage); proportion of population aged 65 years and more (percentage); old-age dependency ratio (persons 65+/persons 15–64, per 100); ageing index (persons 65+/persons 0–14, per 100); median age (years); and life expectancy at birth by sex (years).

[UNECE AAI \(2010–2020\)](#) provides country-level AAI scores and rankings calculated biennially, including overall composite scores, domain-specific scores, and indicator-level data for four employment rate measures (ages 55–59, 60–64, 65–69, 70–74). The complete time series from 2010 through 2020 is utilized to track position evolution, with the 2020 AAI data serving as the primary reference point for cross-country comparisons, representing the most comprehensive recent internationally comparable active ageing measurements. The AAI indicators employed include: overall AAI score (0–100 scale); Employment Domain score (0–100 scale); country ranking (1–28); and age-specific employment rates for Indicators 1.1 (55–59 years), 1.2 (60–64 years), 1.3 (65–69 years), and 1.4 (70–74 years).

EU LFS ([Eurostat, 2023](#)) provides microdata aggregated at country level, with employment rates by age, sex, and educational attainment (International Standard Classification of Education [ISCED] classification). This large household sample survey, conducted quarterly across EU member states, allows extraction of annual average employment rates disaggregated by five-year age groups, sex, and three educational levels: lower secondary or less (ISCED 0–2), upper secondary (ISCED 3–4), and tertiary education (ISCED 5–8). The analysis draws on data for the reference year of 2023, which represents the most recent year available at the time of the manuscript preparation; the microdata were provided by the Statistical Office of the Slovak Republic under a restricted data access agreement and are not publicly available. The derived indicators include: gender gap (difference between male and female employment rates; positive values indicate higher male employment); and educational gap ratio (ratio of tertiary-educated (ISCED 5–8) to lower-educated (ISCED 0–4) employment rates; values above 1.0 indicate an advantage for higher-educated workers).

3.4 Analytical Methods and Procedures

The analytical strategy combines descriptive statistics, cross-national comparative analysis, and theoretical interpretation to address the research questions, moving systematically from demographic context, through gender and educational disparities, to integrated synthesis.

The analysis proceeds through four sequential stages. In the first stage, we calculate main demographic indicators representing the ageing level in Slovakia and compare them

with EU ones. In the second stage, we calculate the gender gap in the total AAI score and in the first (Employment) Domain of the AAI for all European countries, and then calculate gender gaps for the four age-specific employment rate indicators across all 28 EU countries in 2020, using cross-country comparisons to position Slovakia's standing. The year 2020 represents the latest available AAI calculation; while COVID-19 pandemic effects may influence absolute values, all EU countries were similarly affected, preserving the validity of the cross-national comparisons. We add descriptive statistics (means, standard deviations, minimum/maximum values) for the above-mentioned indicators across EU-27, and present AAI country rankings in tabular form to show temporal evolution across six biennial measurement points (2010–2020). This second stage also examines how gender gaps vary systematically across age cohorts. In the third stage, we draw on the [EU-LFS 2023 data](#) to calculate educational gaps for each age cohort, visualizing the widening of educational gaps across age groups, and interpreting findings through the cumulative advantage framework. In the fourth and final stage, we synthesize the findings across demographic, gender, and educational dimensions to address the research questions, interpreting Slovakia's AAI ranking improvement in the context of demographic pressures, explaining unexpectedly small gender gaps through institutional factors, and interpreting the educational gap widening through cumulative disadvantage mechanisms.

3.5 Limitations

Several methodological limitations should be acknowledged. The cross-sectional design limits causal inference, and the aggregate country-level analysis obscures within-country regional variation. The educational gap analysis uses a simplified three-category classification, while temporal misalignment between data sources (demographic data 2010–2024, AAI 2020, EU-LFS 2023) introduces minor inconsistencies. The study focuses exclusively on employment rates, omitting quality dimensions such as wages or job security, and the AAI Employment Domain does not capture subjective dimensions of ageing well ([Mentus, 2022](#)).

Future research could address these limitations through panel data analyses using Survey of Health, Ageing and Retirement in Europe (SHARE), subnational AAI calculations at Nomenclature of Territorial Units for Statistics (NUTS)-2 level, and extension to employment quality dimensions using EU Statistics on Income and Living Conditions (EU-SILC) longitudinal data.

4 Results

4.1 Demographic Context: Slovakia's Accelerated Ageing

Slovakia experiences accelerated demographic ageing, which is reflected in several demographic indicators (see Table 3). The population aged 65+ increased from 12.4% to 18.4% between 2010 and 2024 (48.4% relative growth), compared to EU-27 growth from 17.6% to 21.6% (22.7% relative growth) in the same period. The old-age dependency ratio surged from 17.3% to 27.9% (61.3% increase), more than double when compared to the EU-27 growth rate of 28.9% ([Eurostat, 2025](#)).

Table 3. Demographic Indicators Comparison between the EU-27 and Slovakia, 2010–2024

Year	2010	2012	2014	2016	2018	2020	2022	2024
Population of 0–14	in %							
EU-27	15.4	15.4	15.3	15.2	15.2	15.1	15.0	14.6
Slovakia	15.5	15.4	15.3	15.3	15.6	15.8	16.1	16.0
Population of 65+	in %							
EU-27	17.6	18.0	18.7	19.4	20.0	20.6	21.1	21.6
Slovakia	12.4	12.8	13.5	14.4	15.5	16.6	17.4	18.4
Ageing Index	in %							
EU-27	114.3	116.9	122.2	127.6	131.6	136.4	140.7	147.9
Slovakia	80.0	83.1	88.2	94.1	99.4	105.1	108.1	115.0
Old Dependenc y Ratio	in %							
EU-27	26.3	27.1	28.3	29.6	30.8	32.0	33.1	33.9
Slovakia	17.3	17.8	19.0	20.6	22.5	24.5	26.1	27.9
Median Age	in years							
EU-27	41.3	41.9	42.5	43.0	43.5	43.9	44.4	44.7
Slovakia	37.0	37.7	38.6	39.4	40.2	41.0	41.8	42.6
Life expectancy Males	in years							
EU-27	76.7	77.1	77.9	78.0	78.2	77.5	77.9	79.2
Slovakia	71.8	72.5	73.3	73.8	73.9	73.5	73.6	75.2
Life expectancy Females	in years							
EU-27	82.9	83.1	83.7	83.7	83.7	83.2	83.3	84.4
Slovakia	79.3	79.9	80.5	80.7	80.8	80.4	80.5	81.9

Source: Data from [Eurostat, 2025](#).

The overall population ageing in European countries has been driven both by ageing from above (an increase in the proportion of the population in the oldest age groups) and ageing from below (a decrease in the proportion of the youngest age groups). Both of these trends have subsequently led to a significant increase in the ageing index over the 15-year period (2010–2024) by 33.7 and 35 percentage points in the EU and Slovakia respectively (see Table 3).

The gaps in life expectancy at birth between Slovakia and the EU-27 average persist: Slovak men reached 75.2 years compared with 79.2 years in the EU-27 (a 4-year deficit), and Slovak women 81.9 years compared with 84.4 years in the EU-27 (a 2.5-year gap), suggesting an untapped potential for extending years of life in active ageing ([Eurostat, 2025](#)).

The demographic scissors effect is evident. A significant trend in the 20th and 21st centuries in Slovakia has been that of accelerating ageing of the population — characterised by declining birth rates, increasing life expectancy, and a growing share of seniors, while the proportion of the working-age population has gradually declined. This demographic shift became particularly evident after 2010, when the decline in the working-age population

was mainly driven by long-term ageing processes and persistently low birth rates following 1990. Smaller cohorts born in the 1990s gradually entered the working age, whereas the strong cohorts from the 1960s and 1970s moved into retirement. At the same time, the total fertility rate remained below the level required for simple population replacement. The trend was further reinforced by the migration of young people abroad after Slovakia's accession to the EU.

As a result, the number of people of working age in Slovakia decreased by 375,812 (9.6%) between 2010 and 2024, while the number of people of post-productive age increased by 334,354 (50.1%) over the same period (see Figure 1). This development led to a higher share of seniors in the population and placed growing pressure on the pension system, healthcare services, and the labour market.

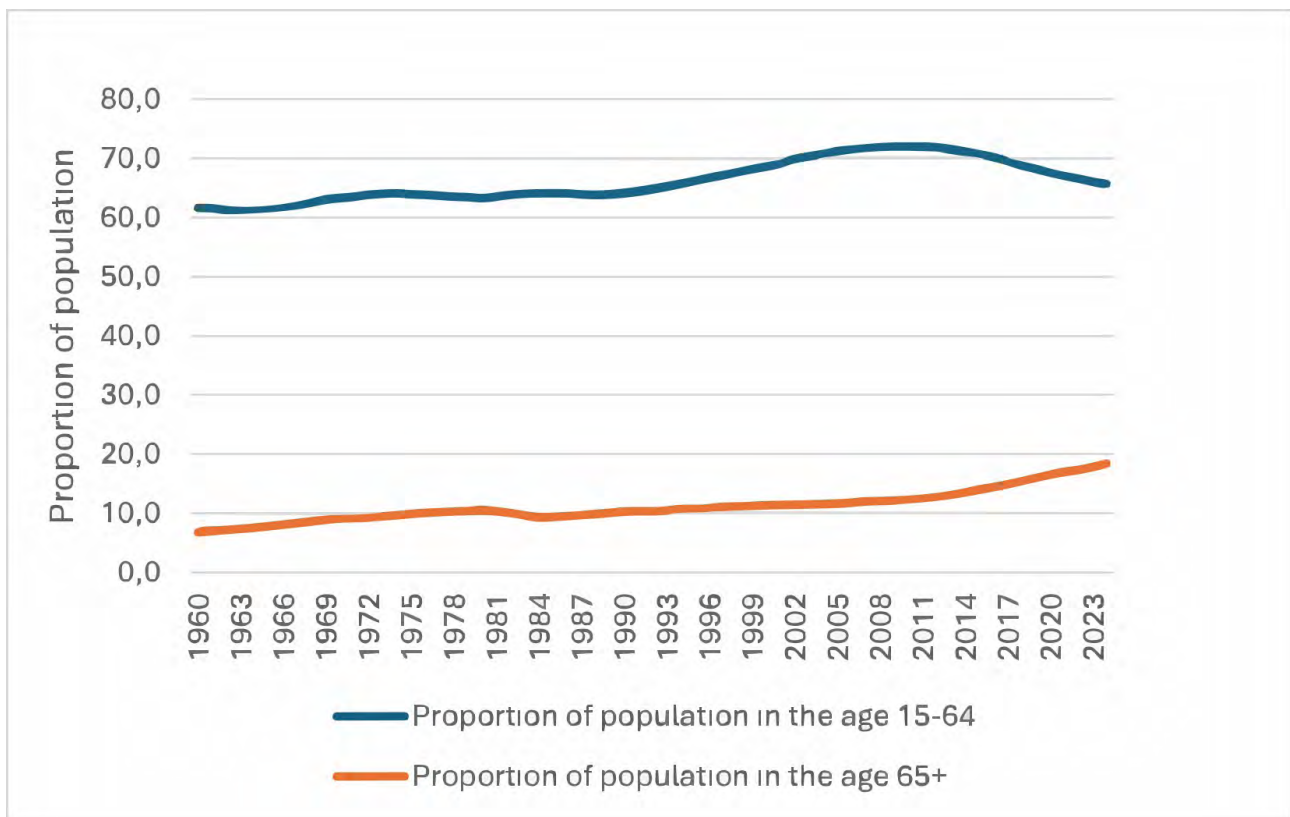


Figure 1. Development of age group proportions in Slovakia, 1960–2024 (in %)

Source: Data from Eurostat (2025)

4.2 Slovakia's Active Ageing Index Position: Progress amid Persistent Challenges

Slovakia's position in the AAI demonstrates notable improvement over the decade 2010–2020, though substantial challenges persist relative to the EU frontrunners. In 2010, Slovakia ranked last (28th) among the EU countries with the lowest AAI score, reflecting legacy effects of early retirement schemes and limited active ageing policy infrastructure (Zaidi et al., 2017). By 2020, Slovakia had climbed to 21st position, a seven-place improvement representing the most substantial upward movement among lower-performing countries (see Table 4).

Table 4. Gender Gap in Active Ageing Index for EU Countries in 2020 (in Percentage Points)

Country	Overall AAI	Domain I. – Employment
Cyprus	-7.7	15.5
Malta	-7.6	21.4
Netherlands	-6.6	14.1
Austria	-6.2	11.5
Ireland	-5.2	14.2
Portugal	-5.1	10.1
Hungary	-4.7	11.4
Greece	-4.7	13.8
Italy	-4.5	13.6
Luxembourg	-4.4	5.7
Germany	-4.0	7.8
Romania	-3.6	12.2
Spain	-3.6	8.2
Croatia	-2.7	9.0
Poland	-2.6	13.3
Czech Republic	-2.5	10.7
United Kingdom	-2.1	9.0
Slovenia	-2.0	6.7
Denmark	-2.0	11.1
Sweden	-1.9	5.8
Bulgaria	-1.9	6.8
Belgium	-1.4	6.2
Slovakia	-1.3	4.8
Latvia	-1.2	1.1
Lithuania	-0.9	4.4
France	0.2	2.7
Finland	0.6	1.8
Estonia	0.7	-1.8
EU28	-3.2	9.0

Source: Data derived from AAI results for EU (United Nations Economic Commission for Europe, n.d.).

However, Slovakia remains in the bottom quartile of EU countries, alongside other post-transition economies such as Poland (25th), Hungary (24th), Slovenia (23rd), and Romania (26th). Top performers maintain consistent leadership throughout the decade: Sweden (1st), Netherlands (2nd), Denmark (3rd), and Finland (4th) demonstrate stable high positions, with AAI scores 15–20 points above Slovakia’s 2020 level. The substantial gap between leading Nordic countries and post-transition economies suggests deep-rooted structural differences in labour market institutions, comprehensive lifelong learning systems, flexible pension arrangements, and cultural attitudes toward ageing and work (Ilmarinen, 2012). This persistent

stratification indicates that policy interventions must address not only formal institutional barriers, but also deeply embedded organizational practices and societal attitudes that constrain older worker employment.

4.3 Gender Gap Analysis in the Employment Domain: Slovakia's Unexpected Equity Pattern

Gender gap analysis in the Employment Domain reveals notably favourable patterns for Slovakia relative to EU averages, challenging conventional assumptions about gender equity in post-transition economies. The gender gap is calculated as the difference in percentage points between male and female employment rates, with positive values indicating higher male employment (Zaidi et al., 2017). When examining the composite Employment Domain, aggregating all four age-specific employment indicators (55–59, 60–64, 65–69, 70–74), the EU-28 mean gender gap in 2020 was 9.0 percentage points (median 9.0), with substantial variation across countries (standard deviation 6.4 points). Malta exhibited the largest gap (21.4 points), followed by Greece (13.9 points) and Cyprus (15.5 points), reflecting traditional gender role patterns and limited female labour market participation in Mediterranean countries (see Figure 2). Estonia stands as the only country with a negative overall gap (-1.8 points), indicating higher female employment rates, a pattern attributed to Soviet-era legacy institutions promoting universal female labour force participation (Dorjnyambuu, 2025, pp. 6–9).

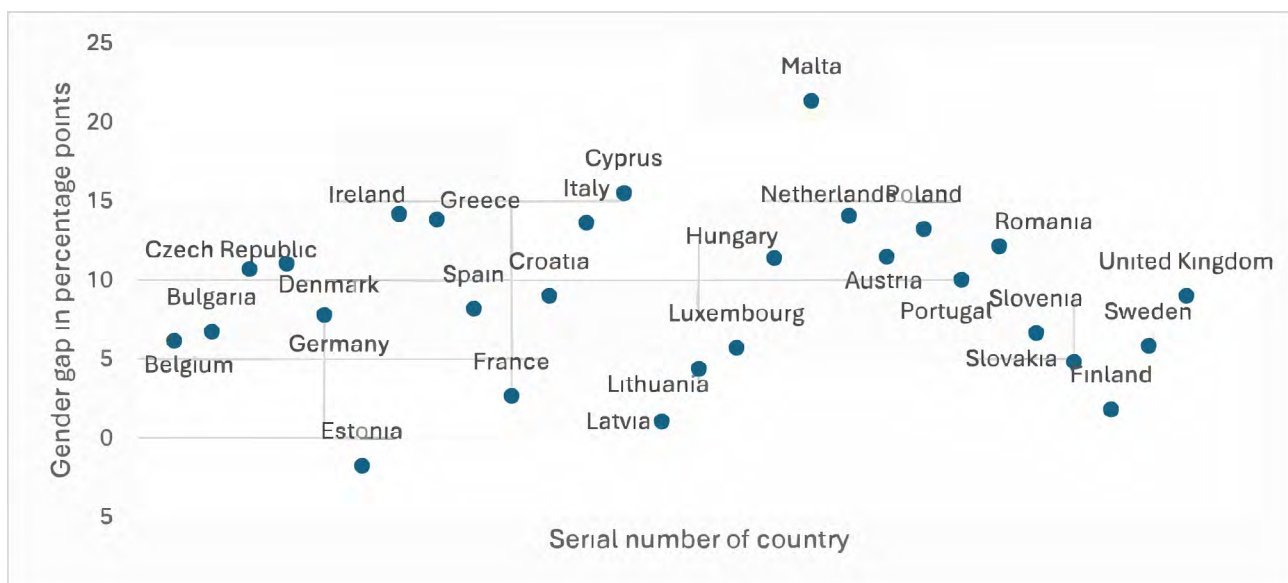


Figure 2. Gender Gap in the AAI 2020 Employment Domain by Country (in Percentage Points)

Source: Data derived from AAI results for EU (United Nations Economic Commission for Europe, n.d.).

Slovakia's overall Employment Domain gender gap is 4.8 percentage points, substantially below the EU mean and among the smallest in the EU. This positions Slovakia favourably alongside Nordic countries traditionally recognized for gender equity in labour markets, a finding that contrasts with Slovakia's position on other gender equity indicators, such as the gender pay gap (Eurostat, 2023).

Table 5 presents gender gap data for all four employment rate indicators across 28 EU countries, with descriptive statistics enabling systematic cross-national comparison across the full retirement transition spectrum (55–59 through 70–74).

Table 5. Gender Gap in the Overall AAI Score of AAI 2020, in the Employment Domain, and by Age Cohorts for EU Countries (in Percentage Points)

Nr.	Country	Overall AAI	Domain I. Employment	1.1 Employment rate 55–59	1.2 Employment rate 60–64	1.3 Employment rate 65–69	1.4 Employment rate 70–74
1	Belgium	-1.4	6.2	9.2	9.3	3.9	2.2
2	Bulgaria	-1.9	6.8	0.2	16.6	8.5	1.7
3	Czech Republic	-2.5	10.7	6.5	25.9	6.5	3.9
4	Denmark	-2.0	11.1	3.4	15.2	18.9	6.7
5	Germany	-4.0	7.8	8.3	10.0	7.8	5.1
6	Estonia	0.7	-1.8	-9.1	-2.9	2.0	3.0
7	Ireland	-5.2	14.2	16.6	15.9	14.2	10.1
8	Greece	-4.7	13.8	28.4	18.2	6.4	2.3
9	Spain	-3.6	8.2	16.9	12.1	2.2	1.5
10	France	0.2	2.7	6.9	-0.2	2.6	1.3
11	Croatia	-2.7	9.0	16.2	15.5	2.8	1.5
12	Italy	-4.5	13.6	21.9	18.4	9.0	5.2
13	Cyprus	-7.7	15.5	19.7	17.5	16.1	8.8
14	Latvia	-1.2	1.1	-1.4	4.0	-1.3	2.9
15	Lithuania	-0.9	4.4	-0.7	7.8	6.2	4.3
16	Luxembourg	-4.4	5.7	15.0	3.6	2.3	2.0
17	Hungary	-4.7	11.4	12.4	26.1	5.4	1.7
18	Malta	-7.6	21.4	44.1	24.4	9.0	7.9
19	Netherlands	-6.6	14.1	15.7	20.1	13.5	6.9
20	Austria	-6.2	11.5	12.3	25.2	5.3	3.1
21	Poland	-2.6	13.3	11.8	27.8	8.9	4.5
22	Portugal	-5.1	10.1	10.4	9.2	12.0	8.6
23	Romania	-3.6	12.2	20.8	21.9	4.5	1.4
24	Slovenia	-2.0	6.7	6.6	12.6	5.0	2.4
25	Slovakia	-1.3	4.8	3.2	11.1	3.1	1.9
26	Finland	0.6	1.8	-3.4	-1.6	7.0	5.3
27	Sweden	-1.9	5.8	4.5	4.8	9.7	4.3
28	United Kingdom	-2.1	9.0	8.2	11.3	10.0	6.5
	Mean	-3.2	9.0	10.9	13.6	7.2	4.2
	STDV	2.3	5.1	10.7	8.6	4.7	2.6
	Min	-7.7	-1.8	-9.1	-2.9	-1.3	1.3
	Max	0.7	21.4	44.1	27.8	18.9	10.1

Source: Data derived from AAI results for EU (United Nations Economic Commission for Europe, n.d.).

The descriptive statistics in Table 5 reveal several critical patterns. In the 55–59 age cohort, the EU-28 mean gender gap is 10.9 percentage points (median 9.2) with substantial variation (standard deviation 10.7), ranging from Malta's extreme gap of 44.1 points to Estonia's negative gap of -9.1 points indicating that women's employment actually exceeds men's. Slovakia exhibits a gender gap of 3.2 percentage points, substantially below the EU-28 mean and representing the second-smallest gap in the EU after Estonia. The minimal gap in Slovakia suggests relatively balanced employment participation in the early pre-retirement period, before statutory retirement ages become salient, reflecting both high female labour force participation rates and similar employment trajectories for men and women in their late fifties.

The 60–64 age cohort demonstrates maximum gender disparities across all EU countries. The EU-28 mean gender gap surges to 13.6 percentage points (median 14.1, standard deviation 8.6), ranging from France's near-zero gap (-0.2 points) to Poland's extreme gap of 27.8 points. Slovakia's gap increases to 11.1 points, still below the EU mean but substantially larger than in the 55–59 cohort (a 7.9 percentage point increase). This widening reflects historical retirement age differences: until recent reforms, Slovak women could retire at age 60 (or earlier depending on number of children), while men's retirement age was 62 ([Ministry of Labour, Social Affairs and Family of the Slovak Republic, 2019](#)). Countries with historically gender-differentiated retirement ages (Czech Republic, Poland, Hungary, Austria) exhibit the largest 60–64 employment gaps, providing compelling evidence for institutional policy effects on labour market behaviour.

In the 65–69 age cohort, gender gaps narrow substantially, with the EU-28 mean falling to 7.2 percentage points (median 6.4, standard deviation 4.7, range from -1.3 to 18.9 points). Slovakia's gap reduces to 3.1 points, among the smallest in the EU and substantially below the mean.

This convergence suggests that, past the statutory retirement age, both men and women exhibit low employment rates, reducing absolute gaps even as male employment rates remain modestly higher. The dramatic narrowing from the 60–64 peak (EU mean declining from 13.6 to 7.2 points) reflects floor effects: once most workers exit the labour market at statutory retirement age, the small minority remaining employed generates smaller absolute differences. In the 70–74 cohort, gender gaps narrow further to the EU-28 mean of 4.2 percentage points (median 3.9, standard deviation 2.6, range 1.3 to 10.1), with Slovakia's gap of 1.9 points representing the third smallest in the EU. With nearly universally low employment participation in this age group (typically below 10% for both sexes in most countries), gender differences become less pronounced in absolute terms.

An important distinction emerges when examining gender gaps across the complete AAI versus the Employment Domain. For overall AAI scores, most EU countries exhibit negative gender gaps, indicating that women score higher than men. However, when isolated to the Employment Domain alone, the pattern reverses: except for Estonia, all EU countries demonstrate positive gender gaps. This reversal demonstrates that women's higher overall AAI scores stem from the superior scores in non-employment domains, particularly Social Participation and Independent Living indicators ([Zaidi et al., 2017](#)).

4.4 Educational Disparities in Employment: Cumulative Advantage and Inequality Widening

Analysis of the employment rates by educational attainment reveals systematic and widening disparities as workers age, providing evidence for cumulative advantage theory in later-life labour market outcomes. The educational gap is calculated as the ratio of employment rates between tertiary-educated workers (ISCED 5–8) and those with lower secondary education or less (ISCED 0–4), using the EU LFS data for 2023 (Eurostat, 2023). In the 55–59 age cohort, tertiary-educated workers exhibit employment rates 1.15 times higher than workers with secondary education and 2.2 times higher than workers with lower than secondary education. This relatively modest gap suggests that in the early pre-retirement period, even lower-educated workers maintain substantial labour market attachment, with employment rates above 60% for both educational groups in most EU countries (Table 6).

Table 6. Employment rates by educational level in Slovakia in 2023

	Education level			Proportion	
	Primary	Secondary	Higher	Higher/primary	Higher/secondary
Employment rate 55–59	43.6	81.8	94.3	2.2	1.2
Employment rate 60–64	20.2	49.0	73.7	3.6	1.5
Employment rate 65–69	2.8	9.4	25.0	8.9	2.7
Employment rate 70–74	0.4	3.2	10.3	25.8	3.2

Source: Authors' calculations based on the *EU-LFS 2023 microdata* provided by the Statistical Office of the Slovak Republic. The data were accessed under a restricted-use agreement.

The ratio between the above-mentioned employment rates by age and educational categories can be illustrated with the following Figure 3.

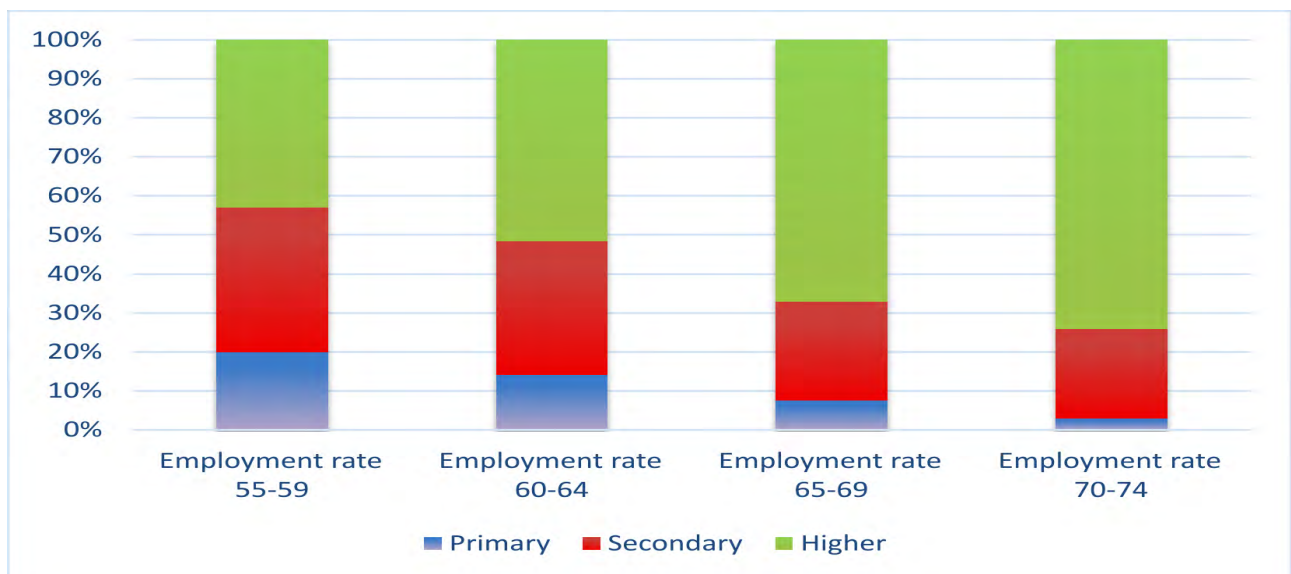


Figure 3. Educational Gap in Employment Rates by Age Cohort 2023

Source: Authors' calculations based on the *EU-LFS 2023 microdata* provided by the Statistical Office of the Slovak Republic. The data were accessed under a restricted-use agreement.

In the 60–64 cohort, the educational gap widens substantially to 1.5 times (resp. 2.2 times for lower education), indicating that lower-educated workers exit the labour market at significantly higher rates during the retirement transition period.

In the 65–69 cohort, past statutory retirement ages for most workers, the educational gap continues expanding to 2.7 times (resp. 3.6 times for lower-educated workers). Tertiary-educated workers demonstrate markedly higher propensity to continue employment beyond formal retirement age, likely reflecting several advantages: better health and lower rates of work-limiting chronic conditions associated with higher socioeconomic status (Debelak et al., 2023), more cognitively demanding and intrinsically motivating work that provides satisfaction beyond financial compensation (Hertel et al., 2013), occupations with greater flexibility for gradual retirement transitions and part-time arrangements (Ilmarinen, 2012), and substantially higher pension wealth reducing financial pressure for immediate benefit claiming.

In the 70–74 cohort, the educational divide reaches its maximum at 3.2 times (resp. almost 25.8 times for lower than secondary education). The small proportion of workers remaining employed at this age is disproportionately concentrated among the highly educated, predominantly in professional and managerial occupations that can be performed with reduced intensity and hours (Okatta et al., 2024). This extreme stratification represents the cumulative outcome of educational advantage processes operating throughout the life course and intensifying in later life. Lower-educated workers face compound disadvantages: earlier health deterioration and higher disability rates limiting work capacity, decades of exposure to physically demanding work creating cumulative wear, lower pension adequacy creating financial pressures for claiming benefits at earliest eligibility despite actuarial penalties, and limited access to lifelong learning opportunities that would facilitate occupational transitions or skill updates necessary for extended employment.

5 Discussion

The empirical findings address both research questions while revealing complex dynamics of active ageing in post-transition economies. Slovakia improved from 28th (2010) to 21st (2020) in the AAI rankings, yet remains in the bottom quartile. It exhibits one of the EU's smallest employment gender gaps (4.8 pp vs. EU-28 mean of 9.0 pp), with balanced outcomes in the 55–59 cohort and maximum divergence in the 60–64 cohort (EU mean 13.6 pp). Educational disparities widen from 1.15-fold in the 55–59 cohort to 3.2-fold in the 70–74 cohort.

Regarding RQ2, Slovakia's relatively small employment gender gap appears attributable to socialist-era legacy institutions establishing high female labour force participation, recent pension reforms equalizing retirement ages, and balanced educational attainment across genders. This pattern is consistent with findings from other post-socialist economies (Chłoń-Domińczak et al., 2012; Radulović & Kostić, 2021), while Fodor et al. (2022) demonstrate that the pension reforms equalizing statutory retirement ages in Slovakia contributed to narrowing gender disparities in the 60–64 cohort. However, this employment equity does not extend to other AAI domains, where traditional gender roles in caregiving result in female advantages in Social Participation scores. H1 is supported (Slovakia's 4.8 pp gap vs. EU mean 9.0 pp reflects socialist-era legacies, with particularly small gaps in the 55–59 cohort at 3.2 pp).

H2 is confirmed (educational disparities widen progressively: 1.15×, 1.5×, 2.7×, 3.2× across successive cohorts). H3 is supported (the 60–64 cohort exhibits the EU's largest mean gender gap at 13.6 pp, consistent with institutional legacies of gender-differentiated retirement ages).

Slovakia's Progress within European Context

Slovakia's seven-place jump in the AAI rankings reflects concrete pension reforms, including the statutory retirement age increase from 62 to 64 years and early retirement restrictions (Ministry of Labour, Social Affairs and Family of the Slovak Republic, 2014). However, the persistent 15–20 point gap between Slovakia and Nordic leaders reflects shared structural challenges in post-transition economies, including labour market rigidities and incomplete institutional adaptation (Cowen et al., 2022). Closing such gaps requires integrated systems of lifelong learning, flexible work arrangements, and cultural transformation (Ilmarinen, 2012).

Slovakia's small employment gender gap (4.8 points) contradicts expectations for post-transition economies, providing further support for H1. Women aged 55–74 entered labour markets during the 1970s–1990s when female employment was normalized, creating continuous employment biographies unlike Western European cohorts where career interruptions were more common (Chłoń-Domińczak et al., 2012).

The 60–64 Critical Period: Institutional Legacy Effects

The systematic concentration of maximum gender gaps in the 60–64 cohort across all EU countries (mean 13.6 points) provides compelling empirical validation for institutional retirement age theory, confirming H3. Statutory retirement age thresholds shape gendered labour market exit behaviour not merely through formal incentives, but through the internalisation of normative expectations about appropriate retirement timing (Zacher & Rudolph, 2022; Fodor et al., 2022). Where gender-differentiated thresholds persisted for decades, as in Slovakia and other Central European states, women developed systematically earlier exit patterns that persist even after formal equalisation (see Section 2.4). The strong correlations between historical retirement age gaps and current employment disparities across Central European countries confirm that these institutional legacies transcend country-specific contexts, extending Zacher and Rudolph's (2022, pp. 8–12) work on retirement transitions.

The recent pension reforms in Slovakia that gradually equalized retirement ages demonstrate policy impacts, yet our data show that the legacy effects persist. Current cohorts maintain behavioural expectations formed under previous regimes. The subsequent narrowing to 3.1 points (65–69 cohort) and 1.9 points (70–74 cohort) confirms Ilmarinen's (2012) findings that post-retirement labour market re-entry remains rare, creating floor effects that minimize gender differences. This pattern contradicts policy assumptions about flexible labour market transitions in later life. Indeed, anthropological evidence from Serbia confirms that working after retirement in post-socialist societies is shaped more by economic necessity and institutional constraints than by voluntary preference (Milosavljević et al., 2024).

The reversal between overall AAI gender patterns (favouring women) and Employment Domain patterns (favouring men) highlights that Slovakia's favourable employment rates may

partially reflect women's concentration in unpaid caregiving, thus raising questions about true equity versus gender-differentiated pathways.

Educational Stratification: Cumulative Disadvantage Amplification

The progressive widening from 1.15-fold to 3.2-fold across age cohorts provides strong empirical validation for cumulative advantage theory (DiPrete & Eirich, 2006; Crystal & Shea, 1990), confirming H2 and demonstrating systematic exclusion of lower-educated workers across the retirement transition.

Slovakia's specific trajectory reflects the post-transition economic transformation documented by Cowen et al. (2022). Automotive manufacturing expansion created skills obsolescence pressures that disproportionately affected workers with vocational training in obsolete technologies, generating cohort-specific disadvantages (Cowen et al., 2022).

Health inequalities further exacerbate employment differences. Eurostat (2025) documents pronounced educational gradients in self-reported health across Central Europe, and physically demanding lower-skilled work creates cumulative health deterioration that explains earlier labour market exit (Getzmann et al., 2023). Limited lifelong learning participation among lower-educated Slovak workers further constrains adaptive capacity (Nikou et al., 2022).

The educational gap widening in the 60–64 cohort reflects multiple intersecting mechanisms: higher physical demands and occupational health risks in lower-skilled occupations (Getzmann et al., 2023), stronger financial incentives for early retirement due to lower pension entitlements (Fodor et al., 2022, pp. 12–18), limited access to reskilling programmes (Nikou et al., 2022), and greater exposure to age-based discrimination (Bayl-Smith, 2019).

The extreme 3.2-fold gap in the 70–74 cohort confirms that extended working lives remain predominantly the highly educated professional class' phenomenon. This is consistent with Hertel et al.'s (2013) findings on knowledge-intensive sectors. This challenges policy optimism about universal extended working life feasibility, as active ageing policies risk exacerbating inequalities without targeted interventions.

6 Policy implications and future research

The concentration of maximum gender gaps in the 60–64 cohort identifies critical intervention timing. Policy supports including flexible work arrangements, gradual retirement pathways, and caregiving reconciliation programmes should target this age group, where disparities peak and where interventions can maintain employment continuation before permanent exit. This recommendation aligns with successful Nordic country practices documented in AAI research.

Addressing educational stratification requires multi-dimensional interventions. Workplace health improvements in physically demanding occupations, accessible lifelong learning emphasizing digital literacy, and pension reforms ensuring adequate retirement income for lower-educated workers facing earlier health deterioration represent essential components. Slovakia's demographic scissors effect, characterised by a shrinking working-age population

alongside a rapidly expanding retirement-age population, creates urgent fiscal pressures requiring extended working lives. Yet simply increasing statutory retirement ages without addressing disparities will disproportionately burden disadvantaged populations.

The reversal between overall AAI and Employment Domain gender patterns demonstrates the multidimensional nature of active ageing. Future research should investigate the intersections of employment, caregiving, health, and economic security rather than treating domains separately. Employment rate measures obscure quality inequalities, including working hours, wages, and conditions, which require further investigation.

Several study limitations should be acknowledged. The cross-sectional design limits causal inference about temporal dynamics, though our theoretical frameworks suggest plausible mechanisms. Panel data analysis following individual workers could strengthen causal claims about retirement transitions. The aggregate country-level analysis obscures regional variation and individual heterogeneity. The temporal misalignment between the data sources (demographic data spanning 2010–2024, AAI measurements covering 2010–2020, and EU-LFS data limited to 2023) introduces inconsistencies that cannot be fully resolved within the current study design. Future research should address this limitation by restricting analysis to a single reference year, once more recent AAI waves become available, or by extending the EU-LFS extraction to cover the full 2010–2020 AAI observation window. Nevertheless, the structural demographic and labour market phenomena examined here change sufficiently slowly that the directional patterns identified remain valid across the overlapping periods.

7 Conclusion

This study examined gender and educational disparities in older worker employment in Slovakia through a dual analytical approach: gender gap analysis using the AAI data and educational stratification analysis using the EU Labour Force Survey microdata. Five critical findings emerge: Slovakia experiences accelerated demographic ageing (old-age dependency ratio increasing 61.3% versus 22.7% in EU-27); has improved its AAI ranking from last to 21st position, yet remains in the bottom quartile; demonstrates an unexpectedly small employment gender gap (4.8 versus 9.0 points EU mean) reflecting socialist-era institutions; identifies the 60–64 cohort as the critical intervention group showing maximum gender disparities (13.6 points more than the EU mean); and reveals dramatic educational gap widening from 1.15-fold to 3.2-fold across age cohorts, demonstrating cumulative disadvantage among lower-educated older workers.

These findings advance active ageing theory by demonstrating how institutional contexts, historical legacies, and cumulative processes interact in post-transition economies. Policy implications involve comprehensive strategies extending beyond pension reforms, to encompass workplace health promotion and lifelong learning systems, targeted 60–64 cohort supports including flexible retirement pathways and caregiving reconciliation, as well as multi-dimensional educational equity interventions, including workplace ergonomics and accessible reskilling programmes.

Slovakia faces accelerated demographic ageing intersecting with post-transition transformation. The country achieved progress in maintaining strong gender equity in employment

rates, yet faces educational stratification challenges. Addressing these requires sustained policy commitment, comprehensive institutional transformation, and targeted interventions for disadvantaged populations. This study provides an empirical foundation for evidence-based policy development that extends working lives while promoting equity in Slovakia's rapidly ageing society.

Data availability statement

Data are available from the authors upon request.

Coauthor contributions

Andrea Seberíni: Data curation, Investigation, Writing – Original Draft, Writing – Review & Editing

Alena Kaščáková: Methodology, Validation, Writing – Original Draft, Writing – Review & Editing

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Hearing children of deaf parents and the brokering role: reflection on gender roles

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Language brokering by hearing children of deaf parents represents a complex practice situated at the intersection of multiple social, cultural, and family factors. This paper adopts a gender perspective to examine how the role of language broker is conceptualised and how it may contribute to the maintenance or transformation of stereotypical gender roles. The analysis relies on a critical review of available literature on the experiences of hearing children of deaf parents and language brokering, supplemented by findings from research on child language brokering in immigrant families. Special attention is given to how the broker role is linked to feminine and masculine gender roles, the role of shame and guilt, and the potential benefits of this practice for the development of autonomy, responsibility, and pride. The conclusion considers the possibility that language brokering may serve as a channel for questioning and redefining gender norms.

Keywords: child language brokering, gender roles, hearing children of deaf adults, CODA, sign language

Čujuća deca gluvih roditelja i uloga posrednika: perspektiva rodnih uloga

Jezičko posredovanje čujuće dece gluvih roditelja predstavlja kompleksnu praksu koja se odvija na preseku više društvenih, kulturnih i porodičnih faktora. U radu se, iz rodne perspektive, razmatra kako se uloga posrednika koncipira i na koji način može doprineti očuvanju ili transformaciji stereotipnih rodnih uloga. Analiza se zasniva na kritičkom pregledu dostupne literature o iskustvima čujuće dece gluvih roditelja i jezičkom posredovanju, uz oslanjanje na nalaze iz oblasti posredovanja dece u imigrantskim porodicama. Posebna pažnja posvećena je načinima na koje se uloga posrednika povezuje sa femininim i maskulinim rodnim

ulogama, ulogom emocija srama i krivice, kao i potencijalnim benefitima ove uloge za razvoj samostalnosti, odgovornosti i osećaja ponosa. U zaključku se razmatra mogućnost da jezičko posredovanje posluži kao kanal za preispitivanje i redefinisane rodnih normi.

Ključne reči: jezičko posredovanje dece, rodne uloge, čujuća deca gluвих roditelja, CODA, znakovni jezik

1 Uvod

Jezičko posredovanje dece (engl. child language brokering) se odnosi na dvojezičnu decu i adolescente, koji sprovode aktivnosti tumačenja i prevođenja, bez formalne obuke i nadoknade za to (Antonini, 2015a; Antonini, 2015b). Tema dečijeg jezičkog posredovanja dugo nije bila prepoznata u širem društvenom sistemu, i tek u skorije vreme postaje vidljivija (Hall i Guéry, 2010). Međutim, i dalje je slabo razvijena, uključujući nedostatak dubljeg adresiranja rodne perspektive i posredovanja čujuće dece gluвих roditelja (Antonini, 2015a; Napier, 2021). Da bi se lakše razumeo kontekst čujuće dece gluвих roditelja, kojem ćemo se posvetiti u ovom radu, kratko ćemo se osvrnuti na perspektive koje se koriste prilikom koncipiranja gluvoće.

Široko gledano, možemo naići na perspektive koje se tiču više medicinskog modela i one koje se više oslanjaju na socijalne i kulturne modele (npr. Glickman i Hall, 2018; Grujić, 2017; Leigh i dr., 2022; Mitchell, 2017). U okviru medicinskog modela, gluvoća se pretežno vidi kao audiološki deficit, a fokus je na aspektima koje bi takvo stanje mogle da poprave (Grujić, 2017; Leigh i dr., 2022; Mitchell, 2017). Često je praćeno i podsticanjem gluвих osoba da što bolje čitaju sa usana i koriste govorni jezik (Leigh i dr., 2022). Sa druge strane, u okviru perspektiva više kulturne orijentacije, gluvoća se ne vidi kao nedostatak koji bi trebalo tretirati, niti sažaljevati (Glickman i Gulati, 2003). Štaviše, u ovim okvirima se nalazi termin Gluvi,¹ koji je pozitivne konotacije i koristi se da referiše ka gluvim osobama koje dele jezik i kulturu, te ponos zbog pripadnosti takvoj zajednici (Leigh i dr., 2022). U okviru toga, znakovni jezik se smatra prirodnim jezikom i izrazom gluвих osoba (Dimić i dr., 2009; Leigh i dr., 2022) i važnim obeležjem ove zajednice (Grujić, 2017). Grujić (2017) smatra da kulturni aspekt ove zajednice nije prepoznat na odgovarajući način u društvu, te da se gluve osobe često mogu percipirati kao osobe nižeg statusa, velikim delom usled komunikacijskih barijera i drugačijeg načina komunikacije. U skladu sa tim, socijalna perspektiva se fokusira na barijere koje mogu otežavati participaciju u zajednici (Mitchell, 2017).

U ovom radu se nijedan pristup ne smatra inherentno lošim, ali može imati štetne posledice ako perspektiva ne odgovara fenomenu kojem se pristupa, odnosno ako ne uvažava stavove i doživljaje onih čija iskustva pokušavamo da razumemo. Iako bi medicinski model bio adekvatan odgovor za neke gluve osobe, propustio bi važne aspekte onih koji se identifikuju kao kulturno gluvi. Obrnuto, kulturni model možda ne bi bio adekvatan za osobe koje gluvoću vide kao nedostatak, ne žele da uče i služe se znakovnim jezikom, te vrednuju intervencije kojima to mogu popraviti (npr. osobe koje celog života čuju i izgubile su sluh u starosti).

¹ Napomena: Radi jasnoće će se koristiti samo malo slovo g, kako navedena razlika nije primarni fokus ovog rada, te nije detaljno opisana. U radu se govori o osobama koje koriste znakovni jezik i dele opisane kulturne vrednosti.

Sve navedeno je važno, jer način na koji pristupamo gluvoći, ima značajne posledice, ne samo za gluve osobe, već i za ljude u njihovom bliskom okruženju. Kada kulturno gluvi roditelji imaju decu koja čuju, ta deca su često dvojezična i bikulturna (Napier, 2017). Ako se u tom slučaju zanemare sociokulturni aspekti, to može da se odrazi i na to u kojoj meri će ova deca biti prepoznata od strane šireg društva kao takva (Bishop i Hicks, 2005).

1.1 Jezičko posredovanje dece i čujuća deca gluvih roditelja

Porodice sa čujućom decom i gluvim roditeljima predstavljaju relativno nevidljivu manjinu unutar šireg društvenog sistema (Bishop i Hicks, 2005; Heffernan i Nixon, 2023), a nalazi se da većinski procenat gluvih roditelja ima decu koja čuju (Bishop i Hicks, 2005; Hadjidakou i dr., 2009; Napier, 2017; Singleton i Tittle, 2000). Čujuća deca gluvih roditelja mogu da pripadaju kulturi gluvih osoba po svemu, osim po kriterijumu nedostatka sluha, te da imaju iskustva i veštine iz oba sveta, ali i doživljaj da ne pripadaju u potpunosti nijednom (Lane i dr., 1996; Moroe i De Andrade, 2018a). Usled takve pozicije, ona su sposobna da budu most između ova dva konteksta i neretko se nalaze u ulozi posrednika. Nalazi se kako se aktivnost posredovanja dešava veoma često i da je sastavni deo svakodnevnice u ovim porodicama (Napier, 2021), od odlaska do prodavnice i javljanja na telefon, do različitih administrativnih i zdravstvenih pitanja (Klimentová i dr., 2017). Stres povezan sa jezičkim posredovanjem može postati preplavljujući ako deca ne dobijaju dodatnu podršku od onih koji očekuju od njih da posreduju (Love i Buriel, 2007), a ova deca često ne dobijaju dodatnu podršku (Klimentová i dr., 2017). Dešava se i da različiti stručnjaci (npr. nastavnici, lekari), sa kojima ove porodice dolaze u susret, imaju ograničeno znanje o izazovima sa kojima se ove porodice suočavaju (Heffernan i Nixon, 2023) i mogu podrazumevati da će deca preuzeti ulogu posrednika (Gee i dr., 2022).

Učestalost ovakvih konteksta može zavisi od pristupa država neprofesionalnom prevođenju i tumačenju, kao i dostupnosti profesionalnih tumača. Neke zemlje (npr. Australija i Kalifornija) strogo zabranjuju neprofesionalno tumačenje i prevođenje, pogotovo u formalnim kontekstima poput prava i zdravstva (Antonini, 2015a). Međutim, mnogo je onih koje tolerišu takve aktivnosti i nemaju sistemski uređena rešenja² (Antonini, 2015a). Kada je reč o Srbiji, tu ne postoji formalno obrazovanje za tumača znakovnog jezika (Raicević Bajić i dr., 2021), ni zvanično prepoznavanje profesije. Procene govore da postoji približno 10 000 korisnika znakovnog jezika u Srbiji (Lindsay, 2016), a da se profesijom tumača najčešće bave deca gluvih roditelja (Raičević Bajić i Nikolić, 2022). Broj profesionalnih tumača je nepoznat, ali se smatra da je nedovoljan u odnosu na potrebe gluvih osoba.³

Ova tema postaje još relevantnija imajući u vidu nalaze koji ukazuju da obično postoji dete koje se češće određuje za ove aktivnosti (Napier, 2021; Orellana, 2009; Preston, 1996), te možda može doživljavati nesrazmerno opterećenje u poređenju sa braćom i sestrama. Neki autori to povezuju sa rodnom i redosledom rođenja, gde najstarije dete često preuzima tu ulogu (Orellana, 2009; Preston, 1996), osim kada je u pitanju dečak, gde ispitanici u istra-

² Napomena: Na primer, Italija i druge države južne i istočne Evrope se navode kao države u kojima imigranti i stranci često moraju da komuniciraju pomoću neprofesionalnih jezičkih posrednika (Antonini, 2010).

³ Procena je data na osnovu iskustva jedne od koautorki rada, koja je i sudski tumač za srpski znakovni jezik.

živanju⁴ često opisuju prebacivanje te uloge sestrama (Preston, 1996). U svetlu toga, može se primetiti tendencija da devojčice češće budu uključene u takve aktivnosti (npr. Buriel i dr., 1998; Moroe i De Andrade, 2018b; Napier, 2021⁵; Valenzuela, 1999; Weisskirch, 2005). Neki autori interpretiraju višu zastupljenost ženske dece kao odraz toga što se jezičko posredovanje dece može smatrati vidom neplaćenog reproduktivnog rada (Romero-Moreno i Vargas-Urpí, 2021). Slično tome, neki autori opisuju jezičko posredovanje dece i kao oblik brige koji olakšava drugoj osobi izražavanje misli (García-Sánchez, 2018).

Pitanje roda je veoma zapostavljeno u domenu posredovanja čujuće dece gluvih roditelja, imajući u vidu da je i sama oblast manje istražena u odnosu na posredovanje dece iz imigrantskih porodica (Antonini, 2015b). Preston (1996) objašnjava kako je vrlo moguće da rodne razlike u oblasti jezičkog posredovanja čujuće dece gluvih roditelja odražavaju širi kontekst obrazaca socijalizacije.

Shodno tome, ljudi mogu da izvode zaključke o tipičnim osobinama muškaraca i žena na osnovu posmatranja ustaljenih ponašanja i podele rada koja je zastupljena u tom društvu. Čak i ako se danas prepoznaje da žene imaju svoju ulogu u porodičnim finansijama, one su i dalje najviše zastupljene u poljima koja se bave edukacijom, brigom i negom. Takva uverenja o rodnim ulogama dalje mogu da podstiču socijalizaciju dečaka i devojčica u smeru koji razvija veštine i karakteristike koje odražavaju tu podelu (Wood i Eagly, 2012). Tradicionalno se muškarci mogu videti kao oni koji su zaduženi da finansijski obezbeđuju porodicu, dok žene preuzimaju ulogu nekoga ko brine (Wood i Eagly, 2002; Wood i Eagly, 2012). Deca mogu i pasivno usvajati ponašanja posmatranjem drugih u svom okruženju, tražeći potvrdu o prihvatljivosti ponašanja koja usvoje (Dodgers i dr. 2023). I žene, i muškarci mogu biti socijalizovani tako da usvajaju drugačije kulturne norme kada je reč o prigodnim emocijama za rodnu ulogu (Chaplin i dr. 2005).

1.2 Istraživački problem, cilj i pitanja

Sve navedeno nas dovodi do osnovnog problema ovog rada, a tiče se nedovoljno istražene oblasti posredničke uloge koju čujuća deca gluvih roditelja neretko zauzimaju, i rodno obojenih očekivanja i iskustava koja prate njeno preuzimanje. Cilj ovog rada je da, pomoću prizme rodne perspektive prepozna kako aktivnost jezičkog posredovanja čujuće dece gluvih roditelja može doprineti očuvanju i reprodukciji, ali i promeni, stereotipnih rodnih uloga, normi i ograničenja.

Takva analiza je poslužila kao sredstvo za postavljanje pretpostavke o suptilnim načinima putem kojih posrednička uloga može poprimiti rodnu dimenziju, čak i kada eksplicitno nije tako označena. Razumevanje tih procesa nije značajno samo za teorijsko dopunjavanje oblasti, već i za oblikovanje rodno osetljivih politika podrške. Opšti okvir ove analize, kada

⁴ Napomena: Odnosi se na učesnike istraživanja u Prestonovom istraživanju (Preston, 1996), čiji uzorak čine odrasla čujuća deca gluvih roditelja, odnosno 150 osoba, starosti od 18 do 79 godina.

⁵ Napomena: Podaci na kojima autorka Napier (2021) zasniva svoje nalaze se baziraju na različitim uzorcima u okviru knjige *Sign language brokering in Deaf-hearing families*. Uzorak u ovom slučaju čini 240 posrednika za gluve roditelje, od kojih su 77.5% ispitanice (166 čujućih i 20 gluvih osoba) i 22.5% ispitanici (48 čujućih i 6 gluvih osoba).

se radi o gluvoći, je sociokulturni, a detinjstvo se shvata kao društveno-istorijski konstruisan pojam.⁶

Cilj se ostvaruje kritičkom analizom dostupne literature, a istraživanje je vođeno sledećim pitanjima:

1. Koja značenja se pripisuju ulozi jezičkog posrednika čujuće dece gluvih roditelja, a mogu doprineti da devojčice budu viđene kao pogodnije za tu ulogu?
2. Koji procesi mogu objasniti ulogu čujuće dece gluvih roditelja u relaciji jezičkog posredovanja i održavanja stereotipnih rodnih uloga i normi?
3. Koji je potencijal jezičkog posredovanja čujuće dece gluvih da preispita i transformiše postojeće rodne norme i okvire?

2 Centralna analiza

U narednom odeljku će biti prikazani nalazi istraživanja koji se baziraju na iskustvima čujuće dece gluvih roditelja, dopunjujući ih sa nalazima u oblasti jezičkog posredovanja dece u imigrantskim porodicama. Iako postoji određen stepen opštih sličnosti ova dva konteksta, postoje i neke razlike, koje će ukratko biti navedene. Tumačenje i prevod, u kontekstu upotrebe znakovnog i govornog jezika, spada u bimodalni bilingvalizam, odnosno iziskuje vladanje i korišćenje jezika iz dva različita modaliteta, vizuelnog i auditivnog (Šešum i Šestić, 2025), a smatra se kognitivno napornijim za onog ko ga sprovodi (Padden, 2000 prema Napier i Leeson, 2015). Drugo, uključujući veći broj ispitanika u istraživanje,⁷ nalazi se da deca gluvih roditelja mnogo ranije stupaju u aktivnosti posredovanja, sa najvećim procentom njih koji navode uzrast od 4 do 5 godina (Napier, 2021). Zarad poređenja, procena prosečnog uzrasta dece imigrantskih porodica je između 8 i 12 godina (Napier, 2021).

Kako je literatura u oblasti iskustava čujuće dece gluvih roditelja oskudnija, nalazi bazirani na imigrantskim porodicama će biti korišćeni zarad sticanja šire slike, a fokus u analizi i diskusiji će biti dat kontekstu porodica dece sa gluvim roditeljima. Ključni kriterijum za uključivanje istraživanja u centralnu analizu je bavljenje temom čujuće dece gluvih roditelja,⁸ te radovi sa gluvom decom⁹ nisu uključeni, bilo da su u ulozi posrednika ili ne. Radovi se moraju baviti temom jezičkog posredovanja na znakovnom jeziku,¹⁰ a kako sam cilj uključuje osvrt

⁶ Napomena: U skladu sa tim, i posredničke prakse čujuće dece gluvih roditelja se više vide kao oblik adaptacije i specifičan način funkcionisanja, koji ne mora inherentno biti shvaćen kao patološki, niti kao odstupanje od poželjnih normi.

⁷ Napomena: Nalazi su bazirani na odgovorima 198 odraslih učesnika, koji izveštavaju kada su počeli sa posredovanjem na znakovnom jeziku za gluve roditelje.

⁸ Napomena: Rad koji se bavi specifičnim kontekstom čujuće dece gluvih roditelja koji su emigrirali u drugu državu nije razmatran, usled procene da kompleksnost ukrštanja dva konteksta u kojima se često odvija dečije jezičko posredovanje prevazilazi domete ovog rada (videti Pacheco, 2024).

⁹ Napomena: Izuzetak su istraživanja o kojima izlaže autorka Napier (2021) u knjizi Sign language brokering in Deaf-hearing families, u kojima su primarno čujuće osobe, koje su odrastale koristeći znakovni jezik sa gluvim roditeljima, ali su uključene i neke gluve osobe koje su odrastale na takav način.

¹⁰ Napomena: Rad nije uključen u analizu zbog izostanka fokusa na posredničku ulogu, iako se navode neki aspekti koji bi mogli da se uklope u opšti okvir teme, poput stavova koji uključuju i procenu kulturnih aspekata (videti Mand i dr., 2009).

na ne toliko vidljive obrasce u vezi rodne dimenzije prakse, izostanak eksplicitnog bavljenja rodom nije bio eliminacioni kriterijum. Insistiranje na tome bi značajno suzilo već ograničen obim literature i onemogućilo širu analizu. Nalazi su gledani kroz prizmu rodne perspektive, dovodeći ih u vezu sa stereotipnim rodniм ulogama, normama i očekivanjima.

Analizirani su dostupni podaci iz sadržaja transkripata kvalitativnih istraživanja, rezultata kvantitativnih istraživanja, kao i iz interpretacija koje nude autori. Pretraga je sprovedena u okviru Google Scholar pretraživača, pomoću kombinacije termina: children of deaf adults, CODA, hearing children of deaf adults, gender, child language brokering, broker. Literatura o jezičkom posredovanju u imigrantskim porodicama je uključena selektivno, iako sa tendencijom da bude obuhvatna u domenu latino imigrantskih porodica i rodne perspektive. Latino imigrantske porodice mogu biti slične kulturi gluвих osoba, gde se kultura gluвих osoba može smatrati više odrazom kolektivizma nego individualizma (Ladd, 2003).¹¹

2.1 Koncipiranje uloge posrednika i usklađenost sa ulogom devoјčice

Istraživanja u kontekstu imigrantskih porodica ukazuju na tendenciju da devoјčice češće budu uključene u aktivnosti posredovanja, te da imaju pozitivnija osećanja u vezi sa tom ulogom (Buriel i dr., 1998; Love i Buriel, 2007; Orellana, 2009; Valenzuela, 1999), poput višeg zadovoljstva sobom dok prevode za druge (Weisskirch, 2005). Kada je reč o dečacima, nalazi se da oni koji prevode u širem spektru okolnosti, pokazuju i viši nivo depresivnosti (Buriel i dr., 2006). To nas uvodi u pitanje, kako se ova uloga koncipira, te se devoјčice mogu videti kao prigodnije za nju?

Neki autori to dovode u vezu sa viđenjem rodniх uloga u latino imigrantskim porodicama (Buriel i dr., 2006; Love i Buriel, 2007). Na primer, traženje dodatnih pojašnjenja, poput nerazumevanja nekog aspekta dominantne kulture, može se videti kao ponižavajuće za dečake, a dečaci se obeshrabrivati da to rade (Love i Buriel, 2007). Dodatno, dečaci su često privilegovani, te imaju više slobode da provode vreme van kuće, dok se od devoјčica očekuje da više vremena provode sa porodicom, da pomažu roditeljima i imaju više porodičnih obaveza (Love i Buriel, 2007). Mogli bismo reći da se tako posrednička uloga vidi kao pozicija nekog ko više brine o roditeljima i kao nešto što se vezuje više za privatni domen i obaveze oko domaćinstva. Osim što je posrednička praksa na taj način više usklađena sa tradicionalnim viđenjem žene, devoјčice na ovaj način mogu biti i fizički dostupnije za tu ulogu od svoje braće.

Postoje istraživanja koja i ne nalaze rodne razlike u obimu posredovanja, a autori nude potencijalni razlog za to, u vidu uzrasta dece (Love i Buriel, 2007). Učesnici u tom istraživanju su bili mlađeg uzrasta, te su možda imali manje slobode van kuće i bili podjednako dostupni za tu ulogu. U tom kontekstu, Orellana (2009) napominje da rodno obojeni obrasci mogu postajati izraženiji tokom adolescencije, usled različitih ograničenja za dečake i devoјčice, koji se tiču aspekta izvan doma. Pored nalaza koji ukazuju na odsustvo rodniх razlika u učestalosti posredovanja, postoje i istraživanja u kojima dečaci izveštavaju o češćem posredovanju za roditelje (Weisskirch, 2007), te i da očevi mogu nekada smatrati ovu ulogu neprikladnom za ćerke (Morales i dr., 2012). Mogli bismo takve nalaze koncipirati pomoću objašnjenja

¹¹ Napomena: Autor (Ladd, 2003) govori o kolektivističkoj orijentaciji zajednice kulturno gluвих osoba, bez poređenja sa latino imigrantskim porodicama.

koje autori nude za takav stav očeva. U latino imigrantskim porodicama, očevi se mogu posmatrati kao donosioci odluka, dok se ćerkama dodeljuju potčinjenije uloge (Morales i dr., 2012). Pretpostavljamo da percepcija očeva da su zavisniji od ćerki, naročito u situacijama koje zahtevaju donošenje odluka, može biti značajan izvor frustracije, jer krši rodne norme i porodične relacije. To ide u prilog tome da smeštanje posredničke uloge više u domen brige i nege čini devojčice pogodnijim za to, dok se smeštanjem u domen nezavisnijih i dominantnijih uloga, približava slici koja nije toliko u skladu sa percepcijom devojčice i žene. U skladu sa tim, u uzorku u kom se beleži veća učestalost dečaka u posredovanju za roditelje, devojčice izveštavaju o višem stepenu problematičnih odnosa u porodici (Weisskirch, 2007).

Drugo, zanima nas kako najčešće karakteristike posrednika, koje se ne tiču eksplicitno roda, mogu doprineti objašnjenju toga da se devojčice i dalje vide prigodnije za tu ulogu, iako to nije nužno označeno kao takvo. Neke od karakteristika posrednika uključuju više samopouzdanje, dobrodušnost (engl. good-natured), prijateljsku nastrojenost i druželjubivost, kao i veštine aktivnog slušanja i kapaciteta za ekspresivno izražavanje emocija i doživljaja (Morales i Hanson, 2005; Preston, 1996; Valdés i dr., 2003). To sve može ići u prilog tome da se ova uloga koncipira kao ona u kojoj je značajno biti prosocijalno nastrojen i više percipiran kao neugrožavajući za druge. Možemo pretpostaviti da negovanje harmoničnih odnosa i usmerenosti na odnose sa drugima, jesu važne odlike koje mogu služiti kao kriterijum za procenu ko bi bio pogodniji za tu ulogu. Usklađenost sa stereotipnim viđenjem ženske uloge, može stoga činiti devojčice pogodnijim u tom smislu. U prilog tom navodu, meta-analiza dokumentuje da se žene i adolescentkinje značajno više osmehuju (engl. smile) (LaFrance i dr., 2003), da pokazuju više pozitivnih emocija od dečaka, a manje ljutnje (Chaplin i Aldao, 2013). Kod žena je primećeno češće klimanje glavom tokom interakcije, što se može tumačiti kao znak aktivnog praćenja sagovornika (LaFrance i Ickes, 1981). Emocije se same po sebi snažno vezuju za femininost, odnosno veruje se da žene izražavaju i doživljavaju širi spektar emocija nego muškarci, ponovo, izuzev ljutnje (Kite i dr., 2008).

To nas dovodi do ekspresivnosti, koja bi mogla biti naročito vrednovana osobina u kontekstu posredovanja na znakovnom jeziku. Znakovni jezik se spolja može percipirati kao više feminin, a i sam doživljaj tokom njegove upotrebe može odražavati stereotipne rodne osobine.¹² Nalazi se kako učesnici u istraživanju (osobe koje čuju i odrastale su sa gluvim roditeljima),¹³ govorni jezik opisuju kao formalniji, ograničeniji i čvršći, slično većoj kontrolisanosti u pokretima kod muškaraca. Nasuprot tome, prilikom upotrebe znakovnog jezika se osećaju ekspresivnije, prisnije i opuštenije, sličnije većoj slobodi u telesnom izrazu koja se više pripisuje ženama (Preston, 1996). Osim jezika, ponašanje pripadnika kulturne zajednice gluvih osoba se razlikuje od većinske (čujuće) (Lane i dr., 1996). Na primer, izraženija je upotreba mimike i telesnih pokreta u prenošenju emocija (Lane i dr., 1996), a stereotipno očekivanje je da žene pokazuju širi spektar emocija nego muškarci (Kite i dr., 2008). Dakle, usled važnosti koju sve navedene odlike imaju za ostvarivanje kvaliteta komunikacije i razumevanja osoba koje su kulturno gluve, mogli bismo pretpostaviti da je facijalna i telesna ekspresivnost kriterijum koji može voditi proceni toga da su devojčice pogodnije za tu ulogu u ovom kontekstu.

¹² Napomena: Autor (Preston, 1996) ističe da se odnosi na ponašanje i vrednosti u kontekstu američke kulture.

¹³ Napomena: Uzorak u istraživanju je uključivao 150 osoba, u rasponu od 18 do 79 godina.

Dalje, dete u ulozi posrednika nije nužno samo tumač i prevodilac, već i facilitator interakcije, koji filtrira i usmerava tok komunikacije. U zdravstvenom kontekstu, čujuća deca su ponekad morala da potisnu svoja osećanja i potrebe, kako bi mogla da održavaju i usmeravaju razgovor između zdravstvenih radnika i gluвих roditelja (Gee i dr., 2022). Slično tome, mogu se naći u poziciji da su nevoljno prvi koji primaju poverljive i osetljive informacije (Heffernan i Nixon, 2023). U svetlu toga, mogu biti u konfliktim ulogama, na primer, u ulozi deteta koje je u patnji jer je primilo vest o ozbiljnom zdravstvenom stanju svog roditelja, ali i u ulozi posrednika koji treba da se nosi sa složenom situacijom i zastupa roditelje (Heffernan i Nixon, 2023). Dakle, možemo govoriti o potiskivanju sopstvenih emocionalnih doživljaja zarad drugih, gde se društvenoj ulozi žene stereotipno pripisuje veća usmerenost na dobrobit drugih ljudi (Kite i dr., 2008). Pritom, deca se kao posrednici mogu naći u kontekstima koji nisu primereni njihovom razvojnom dobu (Erceg, 2022; Napier, 2021; Preston, 1996), što može biti naročito stresan aspekt ove aktivnosti (Morales i dr., 2012; Heffernan i Nixon, 2023). U skladu sa svim navedenim, mogli bismo pretpostaviti da češće uključivanje u posredničke aktivnosti može doprinositi i češćem izlaganju situacijama koje su u vezi sa doživljajem nedovoljne kompetentnosti i emocijama anksioznosti, straha, te ponovo, brige za druge.

Dodatno, gluve osobe mogu biti percipirane kao osobe nižeg društvenog statusa, a njihova deca se mogu suočavati sa predrasudama (Hadjikakou i dr., 2009) i stigmom povezanom sa gluvoćom, uključujući osećaj da ih drugi posmatraju sa visine ili sažaljevaju (Heffernan i Nixon, 2023). To ulogu posrednika može smeštati u kontekst podređene i marginalizovane pozicije, te biti u neskladu sa viđenjem muškaraca kao dominantnih (Katz, 2008). U skladu sa tim, može postojati implicitno očekivanje da je prikladnije za devojčice da se suočavaju sa takvim situacijama, odnosno da bi mogle biti i sposobnije u nošenju sa opisanim emocijama i doživljajima, ako se u društvu veruje da ona i zaista jesu ženska. To nas dovodi do razmatranja potencijalnih mehanizama kojima i sama deca mogu da doprinesu održavanju stereotipnih rodnih uloga u kontekstu jezičkog posredovanja.

2.2 Koncipiranje uloge posrednika i mehanizam održavanja stereotipnih rodnih uloga

Deca su često svesna načina na koji zajednica posmatra njihovu porodicu (Napier, 2021), a rekli bismo da se stupanjem u ulogu posrednika izlažu tome da i sami dele poziciju koja ima niži društveni status. Iskaz jedne učesnice u istraživanju¹⁴ ilustruje kako posebno ovaj aspekt može biti ugrožavajući za dečake, opisujući da brat, iako generalno nije stidljiv, jeste stidljiv po pitanju posredovanja, te izbegava takve aktivnosti (Moroe i De Andrade, 2018a).

Sram nas često obaveštava da smo neadekvatni na neki način, što nas može navoditi da se povučemo i sakrijemo, kako ne bismo dodatno nastavili da narušavamo svoj identitet i odnose (Ferguson i Eyre, 2000; Tangney i dr., 2007). Uloga posrednika čujuće dece gluвих roditelja može biti u većem neskladu sa rodnom ulogom dečaka, te oni mogu doživeti viši stepen srama kada se nađu u takvoj ulozi. To može da podstiče dečake da aktivnije izbegavaju

¹⁴ Napomena: Radi se o istraživanju koje se bavi rodom i redosledom rođenja u kontekstu jezičkog posredovanja, u okviru porodica sa gluvim roditeljima. Uzorak su činili učesnici koji čuju, starosti od 22 do 40 godina.

preuzimanje ove uloge. Dodatno, sam doživljaj i/ili ekspresija emocije srama može doprineti doživljaju da dečak nije dovoljno adekvatan dečak, upravo zato što se tako oseća. Tuga, strah i sramota se više vezuju za žene i devojčice (Brody i Hall, 2010).

Jedna od pretpostavki koje nudimo je da to može podstaći sram povodom srama i emocija poput tuge i anksioznosti. Dakle, čak i ako pođemo od pretpostavke da dečaci i devojčice mogu podjednako doživljavati emociju srama u ovoj ulozi, dečaci je mogu interpretirati negativnije, u skladu sa normama koje određuju kako dečaci treba da se osećaju ili ne. Pored toga, dečaci mogu doživljavati da imaju zabranu na njegovo ispoljavanje, proisteklom iz društvenih očekivanja i normi koje se vezuju za konvencionalni identitet muškarca (Jansz, 2000) i potencijalno iziskivati dodatno ulaganje truda da emocije u situaciji ne budu slobodno izražene. U tom okviru, sakrivanje samokritičnih i nežnih osećanja može biti strategija očuvanja rodnog identiteta, odnosno trud da se ne prikažu kao slabi i ranjivi (Jansz, 2000).

Iako bi se zbog veće usklađenosti rodne uloge devojčice sa ovim aspektom, moglo pretpostaviti da se devojčice osećaju adekvatnije i sposobnije u takvoj ulozi, treba imati u vidu da su i one u ulozi deteta, koje se može naći u situacijama za koje često nemaju dovoljno veština. U tom smislu, nalazi se da devojčice možda mogu da ispunjavaju zahteve odraslih i da učestvuju u zadacima u kojima nisu naročito vešte, zbog propisanih kulturnih uloga, dok dečaci mogu češće da odbijaju kada se ne osećaju podobno (Weisskirch, 2005).

2.3 Koncipiranje uloge posrednika i potencijal za transformaciju rodni normi i ograničenja

Pored negativnih aspekata, kao rezultat tumačenja i prevođenja u različitim kontekstima, poput banaka i zdravstvenih ustanova, čujuća deca gluvih roditelja mogu steći viši stepen zrelosti, samopouzdanja i nezavisnosti, što ih je u poređenju sa vršnjacima, bolje pripremio za izazove odraslog doba (Erceg, 2022; Gee i dr., 2022; Hadjidakou i dr., 2009; Heffernan i Nixon, 2023; Moroe i De Andrade, 2018b). Neki od učesnika u takvim istraživanjima ističu i da su, zbog svoje specifične situacije, stekli iskustva koja su im pomogla da bolje razumeju i empatišu sa osobama koje su na neki način marginalizovane (Erceg, 2022; Heffernan i Nixon, 2023). Ako se izuzme komponenta empatije, ostale karakteristike koje učesnici¹⁵ u istraživanjima navode, su bliže muškim rodnim ulogama, poput samostalnosti, asertivnosti i odgovornosti. Ove osobine mogu predstavljati kanal kroz koji devojčice pomeraju granice svojih rodno očekivanih okvira.

Na primjer, u latino imigrantskim porodicama, devojčice mogu imati manju nezavisnost, te i niži status od svoje braće (Buriel i dr., 2006; Love i Buriel, 2007). Uloga jezičkog posrednika može devojčicama da pruži priliku da steknu određeni stepen nezavisnosti, autonomije i autoriteta, te tako podignu svoj status, dok su i dalje u okviru tradicionalnih očekivanja (Love i Buriel, 2007; Valenzuela, 1999). Postoje nalazi i da otpornost na sram povodom korišćenja

¹⁵ Napomena: Odnosi se na učesnike prethodno navedenih istraživanja, u kojima se izveštava o benefitima posredovanja. Istraživanja se bave iskustvima čujuće dece gluvih roditelja i kontekstom jezičkog posredovanja, a uzorci su uključivali osobe uzrasta 24–26 godina (Erceg, 2022), 21–30 godina (Hadjidakou i dr., 2009), 17–23 godine (Gee i dr., 2022), 22–54 godine (Heffernan i Nixon, 2023) i 21–40 godina (Moroe i De Andrade, 2018b).

znakovnog jezika, može da se stekne pomoću emocije ponosa¹⁶ (Napier, 2021). Posredovanje može doneti doživljaj ponosa jer deca mogu da pomognu svojim roditeljima (Gee i dr., 2022), a to nas navodi da bi veći doživljaj uspešnosti u ovoj ulozi doprinio i većem doživljaju ponosa.

Sa druge strane, iako ovakav vid aktivnosti može doprineti ranijem sazrevanju, izraženija zavisnost roditelja od deteta može se tumačiti i kao dečije preuzimanje uloge koja nalikuje roditeljskoj (Erceg, 2022; Gee i dr., 2022), što se može povezati sa konceptima parentifikacije i adultifikacije. Pojmovi parentifikacije i adultifikacije se odnose na promenu porodične dinamike, gde dete preuzima roditeljsku ili odraslu negujuću ulogu prema braći i sestrama i/ili roditeljima (Bauer, 2017). Mogu implicirati kako postoji normativan odnos u porodici, u vidu roditelja koji ima poziciju moći, donosi odluke i ima autoritet, i deteta koje zauzima potčinjeniju poziciju (Orellana, 2009). Dakle, pretpostavka iza toga je da postoji jasna granica između sveta odraslih i sveta dece (Crafter i Iqbal, 2021), te da ako dete pređe u domen odgovornosti i brige o drugom, na neki način nije tamo gde treba da bude (Orellana, 2009).

Ipak, neki autori smatraju da se detinjstvo može videti kao društveno-istorijski konstrukt, te da je isticanje zavisnosti i nezrelosti deteta nešto što dominira konstrukcijama detinjstva u okvirima zapadnih vrednosti (García-Sánchez, 2018). Shodno tome, nalazi se saglasnost oko toga da će deca koja pripadaju jezičkoj manjini verovatno u nekom trenutku tokom života biti uključena u aktivnosti jezičkog posredovanja (Antonini, 2016), te da uloga posrednika nije tako redak slučaj učešća u zajednici (García-Sánchez, 2018).

Autorka Napier (2021) objašnjava da se posredovanje može videti kao kooperativna i međuzavisna aktivnost, gde roditelji i deca¹⁷ imaju zajednički cilj i međusobno se podržavaju na tom putu. Prema njoj, cilj ne bi trebalo da bude potpuno ukidanje i zabrana jezičkog posredovanja, već bolje razumevanje takve uloge unutar porodične dinamike, sa oslanjanjem na teorijske okvire koji se baziraju na odgovornosti i kooperaciji. U prilog tome, na srpskom uzorku je odnos sa roditeljima percipiran kao privržen i blizak, i kao nešto visoko vrednovano i u poređenju sa decom roditelja koji čuju, iskazujući zahvalnost roditeljima za stečene benefite (Erceg, 2022).

Autorka Garsija-Sančez (García-Sánchez, 2018) vidi jezičko posredovanje dece kao vid brige od strane dece, ali ne nužno disfunkcionalan vid brige. Ona navodi i da bi korišćenje perspektiva koje uvažavaju decu kao društvene aktere u domenu brige, mogle voditi ka novom shvatanju brige, gde može biti viđena kao dinamičan i interaktivan proces, koji uključuje društvene aktere, ali i međusobne relacije, kao i resurse zajednice.

3 Diskusija

Problem ovog rada se ogleda u nedovoljnoj istraženosti rodne perspektive u kontekstu jezičkog posredovanja čujuće dece gluvih roditelja. Glavni cilj je osvetliti kako praksa jezičkog

¹⁶ Napomena: Autorka Napier (2021) nalazi ovu temu na osnovu podataka koje prikuplja u okviru polu-strukturisanih intervju sa tinejdžerima i odraslim posrednicima na znakovnom jeziku (od 13 do 55+ godina) i grupnih intervju sa gluvim roditeljima i čujućom decom, od 6 do 15 godina.

¹⁷ Napomena: Autorka Napier (2021) nalazi ovu temu na osnovu podataka koje prikuplja u okviru polu-strukturisanih intervju sa posrednicima na znakovnom jeziku, u tinejdžerskom i odraslom dobu, od 13 do 55+ godina, i grupnih intervju sa gluvim roditeljima i čujućom decom, od 6 do 15 godina.

posredovanja čujuće dece gluvih roditelja doprinosi očuvanju i održanju stereotipnih rodni uloga muškarca i žene, te na koji način može biti deo promene takvih normi. Prvo, otvara se pitanje načina na koji se koncipira uloga posrednika, koje značenje joj se pridaje i kako je povezano sa stereotipnom maskulinom i femininom ulogom.

Uloga posrednika čujuće dece gluvih roditelja se često percipira kao tradicionalno ženska i feminina uloga. Ova percepcija obuhvata povezivanje sa brigom, te usmerenost na dobrobit drugih. Takođe, uključuje odlike koje se mogu smatrati prosocijalnim, i doprinositi harmoničnim relacijama u okruženju, ali i deljenje pozicije nižeg društvenog statusa i stigme povezane sa gluvoćom. U tom kontekstu, kratko ćemo se osvrnuti i zašto bi usmerenost na održavanje harmoničnosti bila važna prilikom odabira posrednika.

Jezičko posredovanje dece može biti vidljiva oznaka kulturnih razlika, te može i da pojačava postojeće nejednakosti u društvu i mikroagresije, a deca mogu biti i kanal kroz koji se to komunicira (Crafter i Iqbal, 2021). U takvim okolnostima, deca se mogu naći u poziciji da posreduju za svoje roditelje u komunikaciji sa drugom odraslom osobom, koja ima moć, autoritet i od kojih zavise ishodi komunikacije, nekad i veoma važni za održanje kvaliteta života ovih porodica. Ispoljavanje prijatnih emocija, stavljanje svojih potreba po strani i usmerenost na održavanje dobrih međuljudskih odnosa mogu povećati verovatnoću za pozitivan ishod u komunikaciji, te učiniti devojčice boljim izborom za takvu ulogu. Suprotno tome, mogli bismo pretpostaviti da ako se uloga posrednika percipira više kao pozicija koja uključuje moć i donošenje odluka, ta uloga postaje sve više u neskladu sa predstavom devojčice (Morales i dr., 2012). U skladu sa navedenim, iako se samopozdanje navodi kao bitna karakteristika dece koja se nađu u posredničkoj ulozi, te se češće dovodi u vezu sa stereotipno muškom ulogom (Kite i dr., 2008), u specifičnom kontekstu može da proističe i iz (ne) poklapanja rodne i posredničke uloge, u kojoj se devojčice mogu osećati adekvatnije i/ili ih drugi tako percipirati.

Dalje, mogli bismo reći i da se upotreba znakovnog jezika i poistovećivanje sa kulturom gluvih osoba može tumačiti kao odraz femininosti. Korišćenje znakovnog jezika u javnosti može biti i obeležje koje upućuje na niži socijalni status, a to može biti shvaćeno kao znak nemoći i ranjivosti, te podsticati emocije poput srama (Fischer i Manstead, 2000). To može biti u suprotnosti sa shvatanjem maskuline uloge (Jansz, 2000), a dečaci mogu biti visoko motivisani da izbegnu ove aktivnosti, i zbog doživljaja neadekvatnosti, ali i potencijalnog doživljaja srama usled toga. Ekspresija srama može da ih dovede u rizik od kršenja rodni normi, te posledično do socijalnog odbacivanja (Jansz, 2000). Koliko su velike rodne razlike u prihvatljivosti ekspresije srama, mogli bismo sagledati i kroz meta-analizu koja nalazi najveću rodnu razliku upravo u ekspresiji ove emocije (Chaplin i Aldao, 2013).

Međutim, to što je emocija srama društveno prihvatljivija kod devojčica, njihovo učestalije pozicioniranje u ulogu posrednika za gluve roditelje, koja se može vezati za stigmatu i marginalizovan položaj, može doprinositi i da je češće doživljavaju, te i pokazuju. Takođe, sram i krivica mogu biti intrapsihički veoma bolni i mučni (Kaufman, 1996; Tangney i dr., 2007). Samo zato što može biti prihvaćenije da devojčica oseća i izrazi sram, ne čini emociju srama poželjnijom od strane pojedinca, te ona i dalje jeste povezana sa neprijatnijim doživljajima. Na kraju, sram se može posmatrati kao afekat inferiornosti (Kaufman, 1996) koji je često povezan sa fenomenološkim doživljajem bespomoćnosti, bezvrednosti i osećajem da osoba postaje manja (Tangney i dr., 2007).

Prepuštanje takve uloge dominantno ćerkama, sestrama, odnosno devoćicama i ženama, održava se vezivanje ove emocije za žensku rodnu ulogu, ali i na neki način potkrepljuje da to i jeste njihova dužnost, i da su možda takva osećanja i opravdana. U svetlu toga, potencijalno viši doživljaj dužnosti može dovoditi do krivice, ako ne ispune takva očekivanja. Krivica se može svrstati u emocije koje su velikom merom pobuđene samoevaluacijom (Tangney i dr., 2007), koja može uključivati procenu da je osoba uradila nešto suprotno sopstvenim standardima (Barrett, 1995). Kako je krivica emocija koja može motivisati ponašanje kojim se ispravlja ili nadoknađuje ono što je učinjeno pogrešno (reparativno ponašanje) (Barrett, 1995), možda devoćice svoje dalje uključivanje u posredovanje doživljavaju na taj način, što može doprineti njegovoj učestalosti. Sa tim u vezi su i nalazi koji pokazuju da roditelji koji imaju ćerke mnogo ređe koriste usluge formalne brige (npr. starački dom) jer ćerke na sebe preuzimaju ovu brigu i obaveze (Batur i dr., 2024).

Na osnovu svega toga, mogli bismo konstruisati kako ovaj aspekt doprinosi održavanju kompleksnog, cirkularnog obrasca koji potvrđuje viđenje žena kao bespomoćnih, ranjivih i manjih u odnosu na muškarce. Sa druge strane, uloga srama u odvrćanju dećaka od takvih aktivnosti može učiniti da se održava slika muškarca kao nekog ko nema te karakteristike i uskrati ih prilike da praktikuju veštine i doživljaje izvan domena propisane rodne uloge – na primjer, ućeći da je u redu biti muško i biti ranjiv, te biti onaj koji traži zaštitu.

Na kraju, pitanje potencijala za transformativnu moć ove uloge i prakse jezičkog posredovanja može se sumirati pod znaćenjem koje pripisujemo znaćenju uloge posrednika i znaćenju uloge deteta. Uloga posrednika ima potencijal da doprinese benefitimima u vidu sticanja više odgovornosti, odlučnosti i samostalnosti, koje bi se pre mogle smatrati stereotipno muškim (Kite i dr., 2008). Pružanje podrške deci u ovoj ulozi može doprineti isticanju njenih koristi i umanjnju negativnih posledica (npr. ogranićavanjem ili adekvatnom pripremom za situacije koje nisu primerene dećijem uzrastu, može se umanjiti doživljaj nekompetentnosti, anskioznosti i stresa). Ovako oblikovana uloga može devoćicama pružiti priliku da praktikuju ponašanja koja odstupaju od rodni normi (npr. odlučnost i samostalnost), ali i da, u odrećenoj meri, ostanu u okvirima tradicionalno propisane rodne uloge (npr. vid brige o drugima).

Kada je reć o znaćenju uloge deteta, mogli bismo reći da ako se deca ne vide samo kao pasivni objekti socijalizacije, već i kao aktivni agenti, onda možemo uvaćiti doprinos koji imaju u ulozi posrednika, koji je evidentan. Oni mogu biti aktivni ćinioci u prevazilaćenju teškoća koje manjinska zajednica gluvih osoba može imati, i možemo ih razumeti kao društvene aktere (videti Garcća-Sánchez, 2018; Orellana, 2009). U skladu sa tim, možemo se usmeriti na to da praksu posredovanja dece konstruišemo tako da deca i roditelji razvijaju međuzavisan odnos. Pri tome, i dalje mogu doprinositi različito, ali balansirano, u skladu sa sopstvenim potrebama i kapacitetima, a sve to usmereno ka zajednićkom cilju (Orellana, 2009). Na taj način, uloga jezićkog posrednika ima potencijal da bude shvaćena, ne samo kao oblik društvenog ućešća, već i kao sredstvo njegove transformacije (Orellana, 2009). Kada je povećemo sa svim prethodno opisanim, otvara se prostor za snažno preispitivanje i redefinisanje rodni granica kroz spajanje domena koji se stereotipno vezuju za maskulinitet, poput aktivnosti, samostalnosti, instrumentalnosti i asertivnosti, sa onima koji se tradicionalno pripisuju femininosti, poput usmerenosti ka zajednici, empatiji i brizi.

4 Zaključak

U ovom radu, vodili smo se analizom dostupne literature o iskustvima i jezičkom posredovanju čujuće dece gluvih roditelja, sa posebnim osvrtom na rodnu perspektivu. Vođeni istraživačkim pitanjima, sumiramo zaključke u daljem tekstu.

4.1 Značenje uloge jezičkog posrednika čujuće dece gluvih roditelja i uloga devojčice

Uloga posrednika čujuće dece gluvih roditelja se može videti kao više feminina, i često se percipira kao usmerena na brigu, negu i očuvanje harmonije. Tip osobina koji se tumači kao poželjan kod posrednika, poput topline, prosocijalnosti i ekspresivnosti, češće se pripisuju ženama i devojčicama. Znakovni jezik, zbog svoje izražajnosti, dodatno može doprineti percepciji ove uloge kao više feminine u kontekstu posredovanja za gluve roditelje. Pored toga, češće suočavanje sa stigmom povezanom sa gluvoćom, može ulogu posrednika učiniti niže vrednovanom, što je u neskladu sa stereotipnom muškom pozicijom moći, i bliže femininim odlikama.

4.2 Uloga posrednika čujuće dece gluvih roditelja i održavanje stereotipnih rodni uloga

Kako može postojati veći nesklad između rodne uloge dečaka i uloge posrednika u ovom kontekstu, dečaci se mogu osećati neadekvatnije u ovoj ulozi, te doživljavati sram povodom toga. Doživljaj srama kod dečaka može podstaći i sram povodom srama, i viši trud da se on sakrije, te ih dodatno udaljavati od ovih aktivnosti. Sa druge strane, devojčice mogu potencijalno doživljavati i veću spremnost, te i dužnost, da budu u ovoj ulozi. Češćim nalaženjem devojčica u ovoj ulozi, mogu se dodatno učvrstiti viđenja koja ih vezuju za podređeni položaj i osećanja anksioznosti, srama, krivice i brige, ali i onih koji sprovode akt brige. Sa druge strane, dečake mogu lišavati prilika da praktikuju aktivnosti koje nisu u skladu sa rodno propisanim normama.

4.3 Jezičko posredovanje čujuće dece gluvih roditelja, preispitivanje i transformacija stereotipnih rodni uloga i normi

Jezičko posredovanje čujuće dece gluvih roditelja ima potencijal da doprinese promeni konvencionalnih rodni normi i ograničenja, posebno ako se prepozna značaj te uloge i adresiraju problemi stigme i diskriminacije. Kada se ova deca posmatraju kao aktivni društveni akteri, kojima to pravo nije uskraćeno, već im se pruži odgovarajuća podrška, posredovanje može doprineti razvoju pozitivnih osobina. Te pozitivne osobine uključuju samostalnost, odlučnost, odgovornost i ponos, koje su često povezane sa tradicionalno maskulinim osobinama.

Iako je izvesno da će se, usled ukorenjenih rodnih obrazaca, devojčice i dalje verovatno češće nalaziti u ovoj ulozi, upravo njihovo prisustvo može doprineti širenju granica o tome kome se ovakve osobine pripisuju.¹⁸ Istovremeno, jačanjem podrške i podsticanjem pozitivnih aspekata uloge, otvara se prostor da se i dečaci lakše uključuju u ove aktivnosti.

Na kraju, važno je naglasiti da isticanje benefita koji se povezuju sa maskulinim karakteristikama, ne znači potiskivanje komponente brige, koja se tradicionalno vidi kao feminina. Naprotiv, zadržavanjem posredovanja unutar domena brige, ali uz njegovo priznanje kao značajne društvene uloge, otvara se mogućnost afirmacije brige kao ravnopravnog i vrednog oblika rada.

Data availability statement

The data are available from the authors upon request.

Coauthor contributions

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From Soviet Legacy to European Integration: Decent Work in Ukrainian Labor Reforms

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The article examines reforms of the labor legislation of Ukraine from the point of view of their compliance with international and constitutional norms, particularly the principles of the ILO and EU directives. A theory under consideration argues that decent work should serve as the foundation of social justice policy in a democratic state. The study emphasizes the importance of balancing the interests of employers and employees in the process of aligning Ukrainian labor legislation, particularly the draft Law “On Labor”, with EU standards. It also analyzes state regulation of employment and labor migration in order to clearly define the roles and funding sources of employment institutions. The article highlights the need to update the Law “On Employment of the Population”. Scrutiny is invited of legislative initiatives that could undermine Ukraine’s legal commitments and weaken both trade union institutions and democratic labor discourse.

Keywords: principles of humanism and social justice, labor rights, social dialogue, liberalization of labor law, cooperation among social partners

1 Introduction

The concept of decent work introduced by the International Labor Organization (ILO) has become central in global debates on labor policy, economic justice, and human rights ([International Labour Office, 2008](#)). It integrates elements of fair employment, equality, and human dignity and provides a normative framework for labor reforms worldwide. Recent

literature situates decent work at the intersection of welfare state development, post-socialist legal transition, and global economic restructuring (Bogg et al., 2015; Adamczyk & Surdykowska, 2024). However, the implementation of this concept varies significantly across jurisdictions. Countries of Central and Eastern Europe (CEE), such as Poland, Estonia, and Romania, have been studied as examples of post-authoritarian transitions, as they aligned their labor systems with the EU acquis (Publications Office of the European Union, 2010; Blanpain, 2012). By contrast, academic coverage of Ukraine's labor law reforms remains fragmented, despite the country's EU accession trajectory and unique wartime context. This article aims to bridge that gap by examining how the concept of decent work is integrated into recent Ukrainian labor reforms, focusing on international legal compliance, constitutional principles, and comparative perspectives.

By comparison, the countries of Central and Eastern Europe undertook significant reforms of their labor legislation following the collapse of communist regimes in order to align with European and international legal standards. One dimension of this transition has been the shift from a prescriptive model of labor management to a market-oriented system that seeks to balance social security with employment flexibility – a concept commonly referred to as “flexicurity”. Scholars argue that this approach is particularly well-suited to post-socialist economies, as it enhances competitiveness, while preserving the core principles of the European social model (Cazes & Nesporova, 2007). In this context, contemporary labor law doctrine is evolving to promote collective representation, legal pluralism, and the autonomy of the parties in labor relations (Bogg et al., 2015). Modern European labor law is founded on the principle of balancing fundamental rights of employees with labor market flexibility (Blanpain, 2012).

As a post-Soviet country pursuing European integration, Ukraine is undertaking labor law reforms aimed at aligning its legal framework with EU standards. Human dignity and social justice are fundamental ideals of the democratic, social, and legal state model enshrined in the Constitution of Ukraine (1996). Labor law reform in Ukraine has picked up pace since the country was granted EU candidate status in 2022. International commitments have been central to this progress. In particular, Ukraine's involvement in the ILO Decent Work Programme and its obligations under the EU Association Agreement (EU-Ukraine Association Agreement, 2014) have been the key drivers. These agreements set out a framework for gradually aligning Ukrainian standards with European norms in areas like employment, social protection, gender equality, and working conditions (International Labour Office, 2008; EU-Ukraine Association Agreement, 2014).

In September 2022, the Ministry of Economy of Ukraine presented a new Draft Law of Ukraine “On Labor” (2022), which aims to remove Soviet-era elements from the legal framework and modernize labor relations in accordance with European standards. According to the project note, the legislation aims to ensure gender equality, transparency in employment contracts, a balance between the interests of employers and employees, and the legal regulation of flexible and remote work arrangements (Explanatory Note to the Draft Law “On Labor”, 2022; Khomych, 2022). These provisions align with the fundamental principles of decent work, which include respect for workers' rights, fair remuneration, and employment accompanied by social protection.

Despite the growing body of literature on labor law reforms in Central and Eastern Europe, the case of Ukraine remains underexplored. Existing comparative studies have largely focused on Poland, Romania, and the Baltic states, while Ukraine's development trajectory has been discussed only fragmentarily, often limited to descriptive reports or narrow institutional analyses (Bafoil, 2009). This leaves a gap in understanding how the concept of decent work is being implemented in a country undergoing a post-socialist legal transition, rapid EU approximation, and governance under wartime conditions.

Ukraine represents a notable example of a state striving to harmonize its labor legislation with international obligations, while undertaking reforms under exceptional circumstances. Scientific benchmarking could greatly benefit from this experience, particularly for countries facing comparable development challenges. However, in-depth studies examining changes in Ukraine's labor legislation from a comparative and international legal perspective remain scarce in academic debates, despite noticeable progress. In this context, a key question arises regarding the extent to which Ukraine's recent labor law reforms, particularly the draft Law "On Labor", comply with the ILO's Decent Work framework and EU labor standards. What does this tell us about the challenges of implementing international labor standards in an EU candidate state affected by war? This article addresses this gap by systematically analyzing Ukraine's draft labor legislation and related reforms in the context of the ILO Decent Work Agenda and relevant EU directives. It also situates Ukraine's development trajectory within the broader comparative experience of post-socialist states. In contrast to previous studies, it provides a focused examination of how martial law, large-scale labor migration, and the weakening of trade union capacity influence the implementation of international labor standards.

This article's novelty lies in its systematic examination of Ukraine's labor law reform through an integrated framework comprising the ILO Decent Work Agenda, EU directives, and constitutional principles. Unlike prior works that provide descriptive or institutional overviews, this study combines doctrinal and comparative analyses to assess how wartime governance and EU approximation jointly shape the labor policy transformation. The findings extend the literature on post-socialist legal transitions by introducing Ukraine as a unique empirical case where labor modernization occurs under martial law and external integration pressures.

2 Materials and Methods

This study uses a qualitative legal methodology with an emphasis on doctrinal analysis and comparative content analysis. The aim is to assess how Ukraine's labor law reform reflects the concept of decent work as articulated in international law, and how this reform process compares with analogous developments in selected post-socialist EU countries. The qualitative nature of the research demonstrates the normative and interpretive focus of legal inquiry, particularly in contexts involving international obligations, constitutional principles, and policy reform in transition economies. The first component of the methodology is doctrinal analysis, which involves a systematic interpretation of primary legal sources of Ukraine and relevant international instruments. These texts were examined for their substantive content, legal innovations, and alignment with the decent work agenda. This approach allows for

a systematic interpretation of Ukraine's legal framework with regard to binding obligations and international benchmarks.

The second component is a comparative qualitative content analysis. Within the framework of a comparative approach, Poland, Romania, and the Baltic states (Estonia, Lithuania, and Latvia) have been selected for the analysis as EU member states with post-socialist legal legacies. Georgia is included as a non-EU comparator with a similar transition trajectory. The selection of these cases is based on several factors. Poland, a key destination for Ukrainian labor migrants, demonstrates a gradual harmonization of its labor legislation with the EU acquis. Romania illustrates the risks associated with excessive liberalization and the institutional challenges of aligning national legislation with EU directives. The Baltic states serve as examples of rapid modernization of labor standards and the digitalization of labor relations, contributing to high levels of legal transparency. Although Georgia does not hold the EU candidate status, it has introduced reintegration policies. It has also developed mechanisms for engagement with its diaspora. These efforts offer a contrast to Ukraine's attempts to regulate labor migration and protect workers largely outside the EU legal framework. This selection of cases enables two types of comparison. First, a horizontal comparison among post-socialist EU member states. Second, a vertical comparison between the countries undergoing EU integration and those implementing reforms independently of it.

The coding was performed according to deductive categorical system based on the four pillars of the ILO Decent Work Agenda. The first category of job creation includes provisions regarding probationary terms, regulation of remote work, flexible contracts, and incentives to participate in the labor market. The second category, "labor rights and equality," covered provisions on non-discrimination, equal pay, safe conditions, and protection from unlawful dismissal. The third category, "social protection," included provisions on unemployment insurance, wage guarantees, pensions, and healthcare contributions. The fourth category, "social dialogue," concerned provisions on collective bargaining, trade union rights, and the functioning of tripartite councils. For each category, criteria of legal harmonization (degree of compliance with EU directives and ILO conventions), institutional capacity (existence and effectiveness of supervisory and enforcement bodies), and contextual adaptation (consideration of martial law, migration pressure, or digitalization) were applied. This approach enabled a structured comparison between Ukraine and selected jurisdictions, allowing for an assessment not only of the formal approximation of norms, but also of their viability in a specific political and socio-economic context.

In addition, an inductive coding strategy was employed to identify Ukraine-specific variables such as the impact of martial law on labor rights, the role of the diaspora, and the institutional weaknesses in trade union representation and enforcement mechanisms. The findings were subsequently integrated into the normative framework of decent work through a deductive synthesis. While the study does not include interviews or survey data, it incorporates a wide array of documentary sources, including parliamentary bills, explanatory notes, academic commentary, ILO and EU reports, and secondary literature on comparative labor law. These sources were selected based on their formal legal authority, academic credibility, and relevance to international benchmarking.

Finally, the research adheres to comparative legal methodology standards, emphasizing functional comparison and contextual interpretation. This enables a nuanced understanding of how Ukraine's reforms correlate with broader legal trends and contributes to scholarly discourse on labor transitions in post-socialist and EU candidate states. This dual method, combining doctrinal legal research with comparative policy analysis, provides both conceptual depth and empirical grounding to the study.

3 Results

3.1 Labor relations and prospects for their regulation in today's environment

Ukrainian labor legislation, based on the Labor Code, needs to be significantly updated, as it remains largely influenced by the methods of the Soviet era ([Labor Code of Ukraine, 1971](#)). The urgency of labor law reform in Ukraine has been significantly heightened by the country's EU candidate status and the ongoing disruptions to the labor market caused by the war. The Russian Federation's military aggression has resulted in profound shifts in employment patterns, job security, and working conditions. These developments underscore the necessity for a modern, adaptive, and rights-based labor law framework aligned with EU standards and ILO conventions ([Pham et al., 2023](#); [Klymenko & Chepak, 2024](#)).

In response, the Draft Law of Ukraine "On Labor" (2022) was submitted. The proposed legislation aims to replace outdated standards with modern regulatory mechanisms. Key innovations include mandatory written employment contracts, a limit on the probationary period to three months, clear provisions on working time and overtime, an increase in statutory annual leave (to the minimum of 28 days), and comprehensive regulations governing telework. These characteristics are similar to those observed in other post-socialist countries after joining the EU ([Bogg et al., 2015](#)).

While the draft law reflects modern EU-aligned norms, critical analysis shows that many of these principles, such as gender equality, fair wages, and transparency in contracts, were already recognized in Ukraine's earlier legislation, albeit inconsistently implemented. For instance, the current Labor Code of Ukraine includes basic guarantees of non-discrimination and working hours but lacked effective enforcement mechanisms, especially regarding informal employment and individualized contracts. The new draft strengthens these protections, although the effective enforcement of these rights through existing institutional infrastructures remains uncertain in practice. A comparative lesson from Romania's 2011 liberalization illustrates this challenge: legislative alignment with EU standards was insufficient without institutional reform and active engagement of social partners ([Trif, 2013](#)). Thus, while the legal provisions have improved, the reform's transformative impact depends on administrative capacity and sustained social dialogue.

The Ukrainian draft law attempts to formalize individual employment contracts as central legal instruments, reflecting EU standards. However, similar shifts in Poland and Romania were accompanied by effective institutional guarantees for dispute resolution, employee representation, and judicial enforcement ([Publications Office of the European Union, 2017a](#)).

In Ukraine, trade union capacity and labor inspections remain weak, especially in small and medium enterprises. Formal legal rights may prove insufficient without corresponding institutional investment to ensure their practical enforcement. Comparative experiences suggest that flexibility must be counterbalanced with real social protections, which may not yet be firmly established within Ukraine's institutional framework.

The Labor Code of the Republic of Poland was updated in 1996 and 2002, reflecting labor reforms that removed communist-era aspects and encouraged flexibility ([Office for Official Publications of the European Communities, 2006](#)). Current employment concepts were adopted through the Labor Code of Romania and its revisions in 2005 and 2011. However, trade unions reacted negatively to the 2011 liberalization, believing it would lead to a reduction in guarantees for employees ([Trif, 2013](#)). In the 1990s and 2000s, Estonia, Latvia, and Lithuania adopted new legislative frameworks that prioritized digitalization, reduced bureaucracy, and equality between employers and employees ([Publications Office of the European Union, 2010](#)). The Employment Contracts Act (2009) set the standard for an effective EU-compliant legislation.

These lessons are reflected in the Ukrainian draft law, which contains similar provisions. For example, it requires that written contracts contain the necessary conditions, which has already been present in the Estonian and Polish law. Such formalization guarantees transparency and contributes to reducing informal employment. In addition, it introduces confidentiality agreements, non-competition agreements, and individual conditions for the termination of employment contracts with legal force. Articles 12, 18, and 40 of the draft law address such contractual innovations, providing a balanced legal framework for addressing sensitive employment scenarios ([Furman et al., 2023](#)).

Article 55 aligns Ukraine with the EU Working Time Directive, regulating working hours and overtime. With the rise of teleworking, gig work, and flexible labor arrangements, which have been the trends driven by the war and the COVID-19 pandemic, it is essential to maintain an accurate record of work schedules and rest intervals. Compliance with the Directive has enabled economic flexibility while protecting employees from exploitation in countries such as Romania and Poland ([Publications Office of the European Union, 2017a](#)). Delays in the payment of wages are also covered by the legislation. By imposing penalties for delay in payment, Article 88 serves as a financial deterrent against non-compliance. To safeguard timely compensation as a fundamental labor right, penalties for delayed payment of wages are codified in EU countries, and this approach is similar to their wage protection mechanisms ([Aumayr-Pintar, 2015](#)).

Holiday policy receives similar attention. According to EU regulations, the proposal extends the basic annual leave to 28 calendar days (Article 64), exceeding the minimum of 20 days defined by the Working Time Directive. This level is already being reached or exceeded by countries such as Latvia and Lithuania. By defining unlawful refusal of leave as a serious breach of the law (Article 65), the proposal strengthens workers' rights to rest and further enhances the existing guarantees ([Draft Law of Ukraine "On Labour", 2019](#)). The 30-day annual limit on unpaid leave (Article 74) provides flexibility without risk of abuse. In addition to providing a framework for addressing extraordinary personal circumstances, the measure also addresses a legislative gap. Unpaid leave is similarly regulated in many EU countries to

achieve a balance between employees' autonomy and business stability ([International Labour Office, 2020a](#)).

Teleworking is another important area of innovation. The draft legislation legally regulates equipment obligations and telework arrangements. The Romanian Telework Act of 2018 and the amendments to the Labor Code of the Republic of Poland propose models to ensure the performance, safety, and compliance of telework with the law ([Publications Office of the European Union, 2022a](#)). Employers' responsibilities regarding teleworkers are clarified in Ukrainian labor legislation, which is an important development in the context of the ongoing conflict and population displacement ([Inshyn et al., 2023](#)).

In addition, the proposal provides more precise definitions of employment relationships, distinguishing them from freelance or civil law contracts. In post-socialist economies, labor rights have long been threatened by misclassification. Employment contracts are expressly required by Estonian law, which stipulates working conditions that include established working hours and subordination. Comparable standards are designed to protect employees' rights and prevent undeclared employment in Ukraine ([Publications Office of the European Union, 2017b](#)). The draft law explicitly includes provisions on non-discrimination and gender equality. Under the EU regulations such as Directive 2006/54/EC (2006), gender-based discrimination is prohibited and equal pay for equal work is mandated. This update aligns with Baltic customs, where labor law contains explicit non-discrimination provisions ([Publications Office of the European Union, 2022b](#)).

The role of collective bargaining and trade unions is a significant issue in Ukraine, as well as throughout Central and Eastern Europe. The emphasis on individual contracts in the draft raised concerns about the marginalization of trade unions. Similar problems arose during the changes introduced in Poland in 2002 and Romania in 2011, when greater flexibility was accompanied by a decrease in trade union power and coverage by collective agreements ([Trif, 2013](#); [Vysoky Zamok, 2020](#)). However, previous changes in Romania in 2005 balanced the interests of trade unions and employers, while reforms in Poland in 2002 were coordinated through a tripartite commission.

These incidents demonstrate the value of constructive social dialogue.

The project promotes economic recovery, job creation, and worker protection. The reform aims to promote employment by streamlining recruitment and dismissal procedures, ensuring flexibility in contracts, and clarifying probationary periods. This objective resembles the Romania's strategy to foster a more dynamic labor market in the context of EU accession and Poland's investment benefits following the reforms ([Cazes & Nesporova, 2007](#)). Administrative simplification is another fundamental idea. The proposal provides for fewer formalities, faster notification of redundancies, and digital record-keeping. Similar changes were implemented in Estonia and Romania, which strengthened employer participation and compliance. The simplified procedures are expected to reduce legal ambiguity and promote formal employment ([Aumayr-Pintar, 2015](#)).

The draft law is guided by the key principles including the recognition of the employment contract as the primary regulatory instrument; equality between employer and employee in the negotiation of terms and conditions of employment; clear demarcation of individual and collective labor relations; promotion of flexible and secure frameworks to stimulate job

creation; adherence to EU labor law and ILO standards; reduction of bureaucratic barriers; and assurance of non-discrimination and equitable remuneration. Comparative studies highlight these trends. In Poland, probationary periods are limited to three months, and employment contracts are mandatory. Early Romanian reforms placed a strong emphasis on EU compatibility, while later liberalization came under criticism. The Baltic States have achieved both flexibility and legal clarity by introducing completely new labor standards.

The Ukrainian legislation requires institutional capacity, the continuous involvement of relevant stakeholders, and measures to ensure the successful implementation of the proposed law. However, enacting the legislation represents only the first step; effective enforcement measures are also necessary. Investment in judicial and inspection systems is crucial. Successful reform requires not only well-crafted laws but also appropriate training, monitoring, and adaptation, as demonstrated by the experiences of European countries (Table 1). If implemented fairly and with the participation of all stakeholders, the Ukrainian labor reform can promote economic integration, provide employees with more guarantees, and bring the country closer to EU social standards. The proposed legislation provides an opportunity to update labor relations, taking into account the achievements and shortcomings of neighboring countries. Its success will depend on maintaining flexibility while embedding equity, social partnership, and the rule of law into the foundation of the Ukrainian employment system.

Table 1. Comparative analysis of the Ukrainian labor law reforms in light of EU/ILO standards

Course	Previous law (Labor Code of 1971 and related) – key features	Draft Labor Law and recent reforms – trajectory of change	EU/ILO baseline – core requirements	Analytical conclusion on compliance/risks
Contracts and working hours	Predominance of permanent contracts, strict dismissal procedures; working hours and overtime regulated, but with many exceptions; little detail on flexible forms of labor	Expansion of fixed-term/flexible contracts, individualization of the conditions; more detail on remote/home working; simplification of termination in certain regimes	Directives 2003/88/EC (working time), 2019/1152 (transparent and predictable conditions) – transparency, minimum rights, restrictions on night work/overtime (Directive 2003/88/EC, 2003 ; Directive (EU) 2019/1152, 2019)	Approximation with the <i>acquis</i> in terms of the transparency and forms of contracts; risk of excessive flexibility without sufficient safeguards against abuse and “fixed-term chains”
Equality and non-discrimination	General guarantees, partly declarative; gaps in evidence procedures and remedies	Clarification of the grounds for discrimination, strengthening of procedural guarantees; progress in equal pay	Directive 2006/54/EC (gender equality), principle of “equal pay for equal/equivalent work,” reversed burden of proof (Directive 2006/54/EC, 2006)	Regulatory convergence exists, but practical application depends on supervisory/judicial mechanisms and methods for assessing “equivalent” work
Social protection	Traditional schemes (unemployment, sick leave, pensions) with fragmented coordination; protection	Clarification of guarantees, digitization of processes; separate anti-crisis/war instruments; steps	ILO standards on minimum protection; EU coordination rules (for migration within the EU)	Progress in access/administration, but risks of underfunding and payment delays;
	of payments is not always effective	towards integration with e-services		coordination challenges for migrant workers

Course	Previous law (Labor Code of 1971 and related) – key features	Draft Labor Law and recent reforms – trajectory of change	EU/ILO baseline – core requirements	Analytical conclusion on compliance/risks
Social dialogue and collective rights	Formally guaranteed, but low coverage density of collective agreements; weak inspection/mediation capacity	Partial simplification of procedures, digital consultation tools; restrictions on practices during wartime	ILO Conventions Nos. 87, 98, 144, 154; participation and consultation, protection from interference (Freedom of Association Convention (No. 87), 1948 ; Right to Organise and Collective Bargaining Convention (No. 98), 1949 ; Tripartite Consultation Convention (No. 144), 1976 ; Collective Bargaining Convention (No. 154), 1981)	Risk of de facto weakening of dialogue in conditions of war and fragmentation of trade unions; guarantees against reprisals and practical mediation mechanisms are needed
Atypical/ remote work	Incomplete regulation until the 2020s; gaps in reimbursement of expenses/right to disconnect	Introduction of remote/home-based work arrangements, IT security rules, partial compensation; testing of flexible schedules	EU: transparency of conditions, occupational security in remote work; trend towards the “right to disconnect” (at the member state level)	Significant progress; gaps – systematic compensation, right to disconnect, equal access to career opportunities

The experience in implementing similar reforms in post-socialist countries demonstrates that formal approximation of standards does not guarantee their sustainability. In Poland, the expansion of fixed-term contracts led to the widespread practice of “chain fixed-term contracts”, which was only restrained after the EU intervention and the introduction of clear sanctions, with the increased transparency of conditions proving effective only in the presence of functioning labor inspections ([Kahancová, 2015](#)). In Romania, the 2011 liberalization reduced administrative costs for employers, but the lack of strengthening inspections, violations of working hours and undeclared employment increased significantly, which subsequently forced the government to partially revise its approach ([Trif, 2013](#)). In contrast, the Baltic states were able to combine regulatory innovations with institutional tools. Digital labor relations registries and unified online channels for complaints allowed for a rapid detection of abuses, while the regulation of remote work through cost compensation and occupational security guarantees reduced conflict. Georgia’s experience highlights other risks, e.g. rapid liberalization without sufficient institutional safeguards led to the fragmentation of collective rights and low-quality social dialogue, while progress only came after the gradual strengthening of supervisory bodies and negotiation procedures ([Adamczyk & Surdykowska, 2024](#)).

These comparisons are indicative for Ukraine. The labor inspectorate requires restoration of its personnel and technical capacity, as there is a risk of formal “paper” control without actual visits and digital tracking. The judicial system is overloaded, which negates substantive legal guarantees, so it is reasonable to expand administrative and mediation procedures with defined deadlines for consideration ([Kortukova et al., 2023](#)). Trade unions

remain fragmented and weakened, and martial law conditions limit their participation in negotiations, creating a risk of marginalization of social dialogue (Lelyk et al., 2022). At the same time, digital tools, e.g. electronic work time logs, online registers of employment contracts, and complaint submission systems, have the potential to multiply compliance with rights without excessive financial costs.

Possible gaps in compliance with the standards primarily concern fixed-term contracts, which can be used for hidden permanent employment; working hours, where the lack of electronic recording creates opportunities for abuse; equal pay, which requires methods for assessing “equal work” and transparency in salary ranges; social protection for migrant workers, where there is a lack of coordination and guarantees of timely payments; and social dialogue, which risks remaining formal. Although regulated, remote work requires clarification of compensation and the establishment of the employee’s right to “disconnect.” To remove these gaps, it is reasonable to apply tools that have been tested in neighboring countries, in particular setting limits on the extension of fixed-term contracts, introducing electronic recording of working hours, developing methods for evaluating work to ensure equal pay, and institutionalizing mediation and arbitration in labor disputes.

Thus, Ukraine is at a stage where legal approximation to EU and ILO standards is already incorporated into the draft new labor legislation, but its effectiveness will be determined not only by the quality of the legal wording, but also by the institutional capacity to ensure its implementation. The experience of Poland, Romania, the Baltic states, and Georgia shows that without real oversight mechanisms, quick dispute resolution procedures, and inclusive social dialogue, even the most progressive norms risk remaining declarative.

In summary, while the draft law incorporates key principles from the EU labor directives, it also reproduces tensions seen in other CEE countries during legal harmonization, particularly the risk of weakening collective bargaining and over-relying on individual contracts. A clear gap remains in building institutional infrastructure and participatory frameworks to ensure that formal rights translate into workplace realities. A comparison with Estonia and Lithuania, where digital labor management, active labor market policies, and a functional tripartite dialogue complement legal reforms, underscores the gaps currently present in Ukraine. Addressing these gaps is crucial for Ukraine to implement both the letter and the spirit of decent work standards.

3.2 Legal foundations and problems of state regulation of labor migration in Ukraine

Labor migration is one of the key factors determining the state of the Ukrainian labor market. According to estimates by the ILO (International Labour Office, 2020b), between 2.2 and 2.7 million Ukrainians were working abroad in 2022, accounting for 13–16% of the workforce. The highest concentration was observed in Poland, which accepted more than one million Ukrainian workers annually between 2018 and 2021 (Duszczuk & Kaczmarczyk, 2022). According to the European Commission and briefing of the European Parliament, in May 2025, there were about 5.6 million Ukrainians abroad, a significant portion of whom were economically active and integrated into the labor markets of EU member states. For example,

in Poland, more than 50% of working-age Ukrainian refugees were already employed in 2023, contributing to a 2.7% increase in Poland's GDP in 2024 (Mentzelopoulou & Orav, 2025; Publications Office of the European Union, 2022c). These figures show that migration has become not only a social challenge for Ukraine, but also a significant economic resource for neighboring countries.

Sharp wage differences and enhanced opportunities abroad were the primary reasons for this significant outflow; for example, in 2018, the average monthly wage in Ukraine was less than 25% of that in Poland, prompting many people to seek work abroad (International Labour Office, 2020b). These problems have only been aggravated by the conflict that began in 2022. Due to the conflict, it is estimated that approximately 5.6 million Ukrainians were living abroad as of May 2025 (Mentzelopoulou & Orav, 2025; Publications Office of the European Union, 2022c). The conflict has exacerbated existing pressure on labor migration in Ukraine, as evidenced by the fact that many of these Ukrainians who were forced to leave their homes due to the war are now working in international labor markets, particularly in Europe (Neal, 2023).

Ukraine has a basic regulatory framework in the field of labor migration represented by the Law of Ukraine "On Employment of Population" (No. 5067-VI) (2013) and the Law of Ukraine "On External Labor Migration" (No. 761-VIII) (2015). These laws define the administrative basis for protecting the rights of labor migrants and provide social protection mechanisms for their families. However, these instruments remain fragmented and largely declarative. In practice, only a small proportion of labor migrants participate in voluntary social insurance while abroad, which limits the possibilities for providing them with insurance payments upon their return. The system for financing reintegration measures is currently implemented mainly through the Compulsory State Social Insurance Fund for Unemployment, i.e., funds paid by domestic employers and employees, while no special state programs or separate funds for migrants have been created. This raises questions about the fairness and sustainability of such financing. Without reforming financing mechanisms and interagency collaboration, Ukraine risks institutional overload and failing to protect both migrant and domestic workers.

Currently, general unemployment and employment insurance programs in Ukraine provide most of the funding for reintegration support (such as training or employment services). This leads to a political dilemma: payments that returning migrant workers and non-contributory workers can benefit from while abroad are financed by payments from domestic companies. The viability and fairness of this system have been questioned by analysts and policymakers, who argue that efforts to reintegrate returnees should be funded through special government programs or diaspora assistance, rather than by burdening an insurance fund designed for local workers (Semenets-Orlova et al., 2022).

Meanwhile, the reintegration of returnees and the Ukrainian diaspora has become more visible, especially during the conflict. The Ukrainian diaspora, comprising approximately 20 million members worldwide, is vast and encompasses both contemporary labor migrants and historical emigrants. Since 2022, this diaspora has demonstrated its potential as a partner in Ukraine's growth, providing vital support to Ukraine through humanitarian aid, fundraising, campaigns for Ukraine abroad, etc. Ukrainian politicians began actively courting the diaspora.

For example, in 2023–2024 the administration proposed granting Ukrainians living outside the country dual citizenship to strengthen their ties with their country (Koinova, 2024).

According to President Zelenskyi, the “millionth diaspora” are unofficial ambassadors and defenders of Ukraine’s interests around the world. One of the current priorities for Ukraine’s reconstruction is the reintegration of members of the diaspora and recent refugees who have decided to return. The State Migration Policy Strategy specifically encourages voluntary return and connections with the diaspora, calling for the strengthening of social and cultural relations with the Ukrainians living abroad, the creation of incentives for the return of displaced citizens, and collaboration with foreign partners to manage migration flows. In addition, tangible measures are beginning to take shape. For example, in several EU cities, including Berlin, “Unity Centers” were established to assist individuals intending to return and provide information on housing and employment prospects in Ukraine (Action Plan for the State Migration Policy of Ukraine, 2024).

Ukraine can learn a lot from regional comparisons of approaches to migration management. Poland introduced an open labor market strategy, which made it a leading destination for Ukrainian labor migration. For years, Poland has focused on allowing foreigners to enter its labor market, even in the absence of a single comprehensive migration policy instrument. Between 2018 and 2021, Ukrainians accounted for 88% of simplified employment declarations in Poland and more than 70% of work permits, making Poland the largest issuer of work permits in the EU until the end of the 2010s (Duszczuk & Kaczmarczyk, 2022). Poland quickly allowed persons fleeing Ukraine access to the labor market when the war caused an influx of refugees. By 2023, more than half of working-age Ukrainian refugees in Poland had secured employment, contributing to an eight-percentage point increase in the overall employment rate in Ukraine, from 61% to 69%, in just one year. Their economic impact has been significant; in 2024, Ukrainian workers, including war refugees, were projected to contribute approximately 2.7% more to Poland’s GDP (Mentzelopoulou & Orav, 2025; Publications Office of the European Union, 2022c).

On the other hand, countries such as Moldova and Georgia, which are major countries of origin for migrants, have focused on engaging with their diasporas and facilitating repatriation. With one of the highest levels of emigration in Europe, Moldova has created powerful diaspora initiatives to transform “migration from a problem to an opportunity”. Moldova’s efforts to cooperate with its diaspora through Hometown Associations and district development initiatives have been a notable success. Community development initiatives were proposed to be co-financed and led by migrants from Moldovan towns and villages. Between 2015 and 2018, some 38 pilot communities organized 40,000 migrants to participate in local projects, which provided a significant amount of funds for internal infrastructure and services (United Nations Development Programme, 2019). Additionally, authorities in Moldova set up employment reintegration services for returnees.

Another comparable example, particularly in terms of structured reintegration, is provided by Georgia. Returnees can receive temporary housing, professional training, and help in opening a small business within the framework of the State Program for the Reintegration of Returnee Migrants (Parliament of Georgia, 2025). In 2025, Georgian officials announced that a new policy document and e-administration system would be integrated into this reintegration

program. The return of Georgians home is seen by Georgian politicians as critical in their diaspora strategy (Parliament of Georgia, 2025).

In conclusion, Ukraine is at a turning point in its labor migration strategy. The scale of emigration, which is exacerbated by the conflict, necessitates that policies have a tangible impact and extend beyond the mere replication of legal standards. This involves addressing the labor drain and protecting workers by implementing data-based policies, as recommended by the EU and the ILO. It also entails learning from international experiences, particularly by examining Moldova's and Georgia's approaches to diaspora engagement and the facilitation of repatriation, as well as utilizing aspects of Poland's integration into the open labor market to more effectively support Ukrainians living abroad.

These demands are now recognized in Ukraine's policy documents, which place a strong emphasis on reintegration assistance, cooperation with destination countries, and diaspora participation. In the future, it will be essential to align the legal structure with adequate support. Ukraine can turn the "insurmountable problem" of labor migration into a growth opportunity by adopting a more comprehensive approach, safeguarding the rights of individuals working abroad, and facilitating their eventual return.

However, Ukraine's strategy remains primarily declarative, with limited evidence of systemic results. EU and ILO guidance emphasize the need for data-driven reintegration strategies, including labor market matching, skills recognition, and benefit portability (Hacker, 2023; Rovelli, 2024). Without robust administrative support and accountability frameworks, voluntary return programs may fail to meet expectations. For example, Georgia's digital monitoring tools allow real-time tracking of returnee outcomes – a mechanism currently absent in Ukraine (Parliament of Georgia, 2025). Moving forward, Ukraine must align its migration law with practical economic instruments and lessons from successful diaspora governance models, or risk continuing labor loss and ineffective reintegration.

4 Discussion

Laws and regulations in Ukraine legally recognize social dialogue, i.e. the cooperation of employees, employers, and the government, as a fundamental principle of social policy. The commitment to tripartite dialogue is reflected in the Constitution of Ukraine (1996) and the Law of Ukraine "On the Principles of Domestic and Foreign Policy" (No. 2411-VI) (2010), which defines civil solidarity and social partnership as integral components of domestic policy. Ukraine has established an institutional framework for social dialogue, comprising a National Tripartite Socio-Economic Council and a hierarchy of collective agreements at the national, sectoral, regional, and entrepreneurial levels (International Labour Office, 2020a). In addition, Ukraine has formally committed to international norms by ratifying key ILO conventions on social dialogue and labor rights, such as Tripartite Consultation Convention (No. 144) (1976) and Collective Bargaining Convention (No. 154) (1981).

However, in reality, social discussion in Ukraine was often unbalanced or insufficient, especially in earlier rounds of the reforms. During the turbulent economic shifts and reform movements of previous decades, policy changes were usually implemented with little involvement from employers' organizations or trade unions. Tripartite organizations existed, but they

were not always successful. For example, only a small number of major tripartite institutions have recently begun functioning, and even these have done so rarely. For this reason, the collective bargaining process – from the national “General Agreement” to workplace-level agreements – has captured most employer-employee negotiations ([Freedom of Association Convention \(No. 87\), 1948](#)). As a result of this arrangement, a system of social protection for workers has been introduced in part. However, this also means that more extensive policy changes have sometimes been implemented without a strong tripartite agreement. Employers often had an advantage in labor relations due to an imbalance of power over time and the limited ability of unions to govern ([Kuzio & Jajeczyk-Kelman, 2023](#)). Rapid privatization and the closure of large state-owned enterprises have exacerbated these trends, undermining the traditional foundations of trade union power ([Inshyn et al., 2012](#); [Inshyn & Shcherbyna, 2016](#)).

These historical deficits in social dialogue highlight a broader issue, namely the gap between formal institutional structures and their operational effectiveness. While Ukraine has ratified key ILO conventions and established tripartite councils, the practical functionality of these bodies remains limited. Comparative experience from Estonia and Lithuania demonstrates that effective collective bargaining depends not only on legal recognition, but also on political will, stable funding, and professionalized union leadership. Ukraine’s reliance on national-level general agreements, without sufficient sectoral or workplace bargaining frameworks, limits adaptability and undermines local-level labor representation ([Aumayr-Pintar, 2015](#)). Unless institutional reforms strengthen their autonomy and negotiating power, unions are likely to face further marginalization as privatization continues, especially in conflict-affected regions.

Despite obstacles, a significant portion of the workforce in Ukraine remains represented by trade unions. The percentage of employees who are members of trade unions, or the density of trade union membership, was approximately 36–37% in the early 2020s, which is relatively high by global standards ([International Labour Office, 2020a](#)). However, this number has decreased sharply compared to the previous decade; during the 2010s, union density decreased by almost 20 percentage points ([Burke, 2023](#)), reflecting the membership losses caused by industrial restructuring and the growth of the unorganized sector ([Mulaska et al., 2022](#)).

As of January 2024, about 1.9 million of the 2.7 million members of the Federation of Trade Unions of Ukraine, the largest trade union confederation, were active workers. As of 2022, the Confederation of Free Trade Unions of Ukraine, the second-largest trade union organization in Ukraine, had approximately 159,500 members. These figures show a continuing widespread presence of organized labor, but also show a sharp decline since the 1990s, when almost all jobs were unionized. The percentage of workers covered by a collective agreement, or the coverage of collective bargaining is also declining. As of 2023, more than 40% of Ukrainian workers were covered by collective agreements, which was lower than in previous years, but still relatively high for this region ([Burke, 2023](#)).

The practice of social discussions often proved controversial during significant waves of reform in recent Ukrainian history. The administration occasionally carried out labor and social policy reforms unilaterally, which strained the discussion process and caused resistance from trade unions. For example, without prior interaction with trade unions, the administration published a comprehensive draft law on labor code liberalization at the end of 2019. By limiting the position of trade unions and reducing guarantees for workers, the draft

law No. 2708 ([Draft Law of Ukraine “On Labour”, 2019](#)) fundamentally bypassed the existing processes of social dialogue.

Ukrainian trade unions strongly opposed this strategy and staged demonstrations, accusing the government of violating the norms of social partnership. International trade union organizations also took this into account; in support of Ukrainian trade unions, a high-ranking delegation of the International Trade Union Confederation and the European Trade Union Confederation arrived in Kyiv in February 2020. The authorities changed their strategy in response to growing domestic and international pressure. To consider any changes to labor law, the administration decided to halt unilateral reform and organize a working group comprising employers, trade union leaders, and independent experts. During the reform process, the country's leadership publicly undertook to adhere to the labor standards of the European Union and the recommendations of the ILO.

To ensure that the proposed amendments to labor law align with international standards, the EU and the ILO have commissioned their thorough review. The episode serves as an example of how social interaction was initially avoided but was eventually corrected due to active union campaigning and criticism worldwide. The changes were delayed and revised with a more participative procedure. It is noteworthy that the policy change was caused by the very threat of non-compliance with ILO conventions and labor provisions of the EU–Ukraine Association Agreement (2014). It also showed that even with reduced membership, Ukrainian trade unions had the latent ability to attract support and influence policy when fundamental labor rights were considered to be at risk.

Another notable example is the draft law No. 2681, which specifically targeted trade union activities ([Draft Law on Amendments to Certain Legislative Acts of Ukraine \(No. 2681\), 2019](#)). In addition to other provisions that would significantly limit collective labor rights, this bill introduced strict restrictions on unions, including limiting the number of major unions per enterprise and establishing minimum membership requirements for union registration. Since it violated ILO Conventions Nos. 87 and 98 on Freedom of Association and Collective Bargaining, the bill was heavily criticized for being contrary to international standards. The plan was condemned by ILO supervisory authorities and international trade union federations as an attack on autonomous trade unions and a violation of Ukraine's obligations under the EU–Ukraine Association Agreement (2014) and Employment Service Convention (No. 88) (1948).

Trade unions in Ukraine objected, arguing that by undermining their ability to represent workers, such actions would essentially destroy aspects of social discourse. After the attempt at unilateral reform, open social discussion (and respect for ILO norms) had to be confirmed, as can be seen from the amendments made to draft law No. 2681 in response to pressure from both local and foreign sources. A recurring theme of these reforms has been that social discourse has often acted more reactively than proactively. True discourse tended to emerge only after the conflict erupted, rather than being a fundamental component of policy-making from the outset. Although in Ukraine national agreements were periodically concluded, and tripartite agreements existed on paper for a large part of the 1990s and 2000s, there were few real negotiations. In the past, observers noted that major trade union organizations were sometimes too close to government or employers, leading to “dialogue” that was symbolic rather than essential ([Greskovits, 2002](#)).

However, as additional waves of liberalization reforms were implemented (for example, under President Yanukovich around 2010 and later, after 2014, as part of Ukraine's EU membership program), the unions found that they were more opposed to these changes. As a result, reforms were often delayed or stopped. Significant socially sensitive changes, such as raising the retirement age and limiting wages for the public sector under IMF programs, were implemented between 2015 and 2017 with little union involvement. This caused considerable dissatisfaction, but did not stop these measures. On the other hand, it was more challenging to introduce substantial amendments to labor legislation without their consent. Thus, the lack of trust between groups of employees and the government was often found in previous cycles of the reform. Instead of being carried out through cooperation, the reforms have turned into a struggle of wills, with government officials sometimes seeing unions as obstacles to "modernizing the economy", and unions using international alliances and protests to prove their position.

Compliance with ILO requirements and the effectiveness of social dialogue: International organizations studied the uneven experience of reform in Ukraine in the field of social dialogue. Ukraine has pledged to adhere to European labor standards through the Association Agreement with the EU. However, shortcomings in compliance have been highlighted on several occasions. The ILO Committee of Experts and other supervisory organizations recommended that Ukraine harmonize its labor legislation with its obligations under Convention No. 154, particularly regarding the rights to collective bargaining and consultations ([Collective Bargaining Convention \(No. 154\), 1981](#)). For example, remarks reminding Ukraine of its responsibilities to ensure trade union freedom under Convention No. 87 were provoked by controversial plans to restrict trade union activity (such as draft law 2681) ([Freedom of Association Convention \(No. 87\), 1948](#)).

Both the European Union and the ILO intervened to assess whether the draft changes met international criteria in the 2020 labor law incident, and they warned that moving forward without changes would be a violation of Ukraine's obligations. These episodes reflect recurring tensions between liberalization efforts and the protection of collective rights. The framing of unions as political obstacles, rather than social partners, undermines efforts to institutionalize decent work. As documented in EU accession states, trade unions can act as stabilizers in labor transitions if empowered through genuine consultation frameworks. Ukraine's tendency to adopt reforms under external pressure, rather than through negotiated consensus, limits policy sustainability ([Mukiur, 2024](#)). Future reforms must be based on co-determined policy cycles, where trade unions are not reactionary actors but proactive stakeholders in shaping the direction of labor legislation.

This type of external assessment emphasizes that Ukraine's shortcomings in social discourse are both a global and an internal problem. Additionally, Ukraine has recently received low ratings for labor rights from international trade union groups. Ukraine is often ranked among the lowest when it comes to the protection of workers' rights according to the Global Index of Rights of the International Trade Union Confederation; in 2023, Ukraine received the rating of 5 (on a scale from 1 to 5+, where five is one of the worst rankings) for systematic violations of labor rights ([International Trade Union Confederation, 2023](#)). Ukraine belongs to the countries whose basic labor standards are under serious threat. This judgment is influ-

enced by several factors, including incidents involving union violations, restrictions on strikes, and the incomplete implementation of collective agreements. These problems are typically exacerbated during periods of rapid transformation or, more recently, during the periods of martial law ([Draft Law on Amendments to Certain Legislative Acts of Ukraine \(No. 2681\), 2019](#)).

It should be noted that the social discourse has been further deteriorated by the continuous conflict (which has been ongoing since 2022). During martial law, the government introduced emergency labor measures. For example, Law No. 2136 relaxed dismissal rules and allowed employers to suspend specific provisions of collective agreements without conducting normal union negotiations (Kuzio & Jajecznyk-Kelman, 2023). The unions viewed these actions as erasing the rights that workers had acquired, even though the authorities protected them as necessary for economic survival during the conflict. Formal social dialogue organizations, such as the National Tripartite Council, were largely inactive during the martial law, and civil liberties, including the right to strike or hold large-scale demonstrations, were severely limited. This aggravated the decline of social discourse, as despite their assistance in defense and humanitarian efforts, unions struggled to advocate for employees' rights in the political sphere. As employee representatives exert limited influence over policy decisions, there is a democratic deficit in labor relations, raising concerns that the ideals of social partnership may be neglected in post-war reconstruction and reform.

In summary, Ukraine's experience illustrates the fragility of social dialogue under conditions of economic disruption and conflict. While ILO and EU commitments provide normative benchmarks, enforcement is weakened by under-resourced institutions, declining union density, and political marginalization. Comparative data from Poland and Romania show that even under economic stress, structured tripartite frameworks can mitigate reform backlash and improve compliance. To embed decent work as an implementation of legal provision, Ukraine must reform its industrial relations system, invest in institutional trust-building, and ensure that social dialogue is embedded not just in legislation, but in everyday practice.

5 Conclusions

This study analyzed the reform of Ukrainian labor legislation through the lens of international labor standards, with particular emphasis on the ILO's decent work agenda, constitutional principles, and comparative legal experiences in post-socialist and EU-integrated states. An analysis based on the ILO's four pillars showed that in certain areas, such as transparency of employment contracts, definition of equality guarantees, and regulation of remote work, Ukraine has already come close to the EU *acquis* and international standards. At the same time, significant gaps remain in the areas of social protection, effective enforcement of equal pay, and social dialogue, where war restrictions and institutional instability of trade unions reduce the practical effectiveness of the regulations.

Critically, the reforms in Ukraine reflect an attempt to shift from the Soviet-era regulatory legacy toward the European model that values contractual autonomy, procedural clarity, and labor market flexibility. However, this transition is incomplete. As shown by the comparative analysis with Poland, Romania, and the Baltic States, legal harmonization is necessary, but not sufficient for effective labor governance. Institutional mechanisms, such as functioning

labor inspectorates, tripartite consultation bodies, and social protection financing schemes, must be embedded in the legal architecture to operationalize decent work standards.

While reforms often emphasize flexibility, they risk reproducing inequality unless complemented by inclusive policy tools and mechanisms for voicing and representation. The case of Ukraine demonstrates that adopting EU-compatible labor laws does not automatically result in equitable labor outcomes without strong stakeholder engagement.

In the short term, the priorities should be the introduction of electronic tools for monitoring labor relations and working hours, development of methodologies for assessing equivalent work to ensure “equal pay for equal work”, and creation of effective procedures for administrative resolution of labor disputes. In the long term, the strategic objectives include creating a special fund for reintegration of labor migrants, and expanding bilateral agreements on mutual recognition of insurance periods.

The study is not without limitations. It is based primarily on legal and documentary sources without empirical fieldwork, which constrains the analysis of the enforcement practices and worker-level outcomes. Future research should therefore complement the doctrinal and comparative findings with sociological or policy evaluation methods in order to assess how the reforms function in practice once implementation has advanced.

Data availability statement

Data will be available on request.

Coauthor contributions

Victor Shcherbyna: Data curation, Writing – review & editing

Volodymyr Pikul: Investigation, Validation, Writing – original draft

Vita Shal: Methodology, Conceptualization, Resources

Oleh Vitruk: Project administration, Visualization, Formal analysis

Daryna Svitovenko: Writing – Original Draft, Supervision, Software

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Institutional Context and Generational Divisions among Bosniaks

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The study analyses generational divisions in value orientations and political preferences among Bosniaks in three post-Yugoslav states (Bosnia and Herzegovina, Serbia, and Montenegro). The aim is to determine whether contextual factors (institutional status and ethno-political mobilisation) shape the strength and manifestation of generational differences. Using a sample of 800 respondents and applying the PAPI method in 2022, the analysis tests hypotheses on the effects of formative experiences (the SFRY generation, the transitional generation, and the post-war generation) on religiosity, authoritarian traditionalism, economic orientations, and political preferences. The results indicate that contextual factors exert a stronger influence than generational affiliation itself. The country accounts for 7.7% of the variance in religiosity, whereas generation explains 3.4%. In Bosnia and Herzegovina, Bosniaks display the most pronounced generational divisions, alongside a paradox in which the post-war generation is the most religious while simultaneously favouring civic-secular parties. In Serbia, the analysis identifies generational homogeneity, neutralised by reactive ethnicity. Montenegro represents the most complex constellation, where generational divisions overlap with an identity-nomination cleavage (Bosniak versus Muslim). The findings confirm Mannheim's theory of formative experiences in Montenegro, partially support it in Bosnia and Herzegovina, and challenge it in Serbia, demonstrating that institutional context substantially shapes generational effects.

Keywords: generational cleavages, Bosniaks, religiosity, post-conflict societies, reactive ethnicity

Institucionalni kontekst i generacijske podele među Bošnjacima

Istraživanje analizira generacijske podele u vrednosnim orijentacijama i političkim preferencijama među Bošnjacima u tri post-jugoslovenske države (Bosna i Hercegovina, Srbija, Crna Gora). Cilj je da se utvrdi da li kontekstualni faktori (institucionalni status, etnopolitička mobilizacija)

utiču na snagu i manifestaciju generacijskih razlika. Na uzorku od 800 ispitanika, primenom PAPI metode tokom 2022. godine, testirane su hipoteze o uticaju formativnih iskustava (SFRJ, tranziciona i post-ratna generacija) na religioznost, autoritarni tradicionalizam, ekonomske orijentacije i političke preferencije. Rezultati pokazuju da kontekstualni faktori imaju snažniji uticaj od same generacijske pripadnosti. Država objašnjava 7,7% varijanse religioznosti, dok generacija objašnjava 3,4%. U Bosni i Hercegovini Bošnjaci pokazuju najizraženije generacijske podele, uz paradoks gde je post-ratna generacija najreligioznija ali istovremeno preferira građansko-sekularne partije. U Srbiji je uočena generacijska homogenost koja je neutralizovana reaktivnim etnicitetom. Crna Gora predstavlja najkompleksniju konstelaciju gde se generacijske podele preklapaju sa identitetsko-nominacijskom podelom (Bošnjak/Musliman). Nalazi potvrđuju Mannheimovu teoriju formativnih iskustava u Crnoj Gori, delimično u BiH, ali osporavaju u Srbiji, pokazujući da institucionalni kontekst značajno oblikuje generacijske efekte.

Ključne reči: generacijske podele, Bošnjaci, religioznost, post-konfliktna društva, reaktivni etnicitet

1 Društveni i politički kontekst

Kakav je uticaj generacijskih podela u vrednosnim orijentacijama i političkim preferencijama među Bošnjacima u tri post-jugoslovenske države? Klasična modernizacijska teorija pretpostavlja linearan trend gde mlađe generacije pokazuju veću sklonost ka sekularizmu, modernizmu, liberalnim i pro-evropskim orijentacijama (Inglehart, 1977). Međutim, post-komunistička iskustva pokazuju složenije obrasce u kojima religiozna renesansa (*religious revival*), ekonomska nesigurnost i etnopolitička mobilizacija proizvode suprotne efekte, u kojima mlađe generacije pokazuju veću religioznost uprkos modernizaciji (Norris & Inglehart, 2004; Froese, 2004). Dodatnu kompleksnost unosi institucionalni kontekst, odnosno, da li Bošnjaci žive u konsocijativnom sistemu (Bosna i Hercegovina), kao nacionalna manjina bez teritorijalne autonomije (Srbija), ili u kontekstu u kom su Bošnjaci priznata nacionalna manjina ali sa tendencijom potpune integracije (Crna Gora)?

Ovo istraživanje analizira generacijske podele među Bošnjacima u tri post-jugoslovenske države, ispitujući kako različita formativna iskustva, odnosno stabilni socijalizam (SFRJ generacija, rođeni pre 1971), ratna trauma i tranzicija (tranziciona generacija, 1971–1990), i post-ratna demokratizacija (post-ratna generacija, nakon 1991), oblikuju vrednosne orijentacije i političke preferencije.

SFRJ generacija (rođeni pre 1971) formirala je vrednosti u stabilnom socijalističkom sistemu koji se odlikovao, između ostalog, intenzivnom sekularizacijom (Zrinščak, 2004) gde je religija potisnuta iz javnog u privatni prostor. Ova generacija doživela je raspad Jugoslavije nakon završetka ili tokom završne faze formativnog perioda (18–25 godina), što znači da su njihove bazične vrednosne orijentacije već bile formirane u stabilnom socijalističkom sistemu. Tranziciona generacija (1971–1990) odrasla je tokom raspada države, ratnih sukoba i ekonomske krize. Njihova adolescencija i rano odraslo doba (18–25 godina) odvijali su se u atmosferi etničke polarizacije gde je religija instrumentalizovana kao ključno obeležje nacionalnog identiteta. Nakon raspada Jugoslavije dolazi do procesa reislamizacije, koji je bio posebno intenzivan u Bosni i Hercegovini tokom i neposredno nakon rata (Bougarel,

2007; Perica, 2002). Post-ratna generacija (rođeni nakon 1991) odrasla je u novoformiranim državnim okvirima, demokratskim institucijama i procesu evropskih integracija, bez direktnog iskustva ratne traume. Za njih, tri konteksta (Bosna i Hercegovina, Srbija i Crna Gora) nisu proizvod istorijske krize, već naturalizovani okvir svakodnevnog života. Religioznost je postala normalizovani deo post-ratnog bošnjačkog identiteta, prenošen kroz porodičnu socijalizaciju.

Ključno pitanje je da li su generacijske podele uniformne kroz različite institucionalne kontekste, ili njihova snaga i manifestacija zavise i od institucionalnog i kontekstualnog okvira? U Bosni i Hercegovini, Dejtonski mirovni sporazum institucionalizovao je konsocijativni (etnokratski) politički sistem u kojem političke partije reprezentuju etnički definisane segmente društva, održavajući etničke podele kroz institucionalnu strukturu. Politička kompeticija odvija se maltene isključivo unutar etničkih segmenata, pri čemu se unutar bošnjačkog segmenta sve relevantne partije mogu svrstati u dva bloka: nacionalno-konzervativni i građansko-sekularni (Hodžić, 2024: 115–124). Konsocijativni sistem održava etničke podele kroz institucionalni okvir, ali istovremeno ne sprečava pojavu unutaretničkih podela, otvarajući mogućnost za generacijske razlike u vrednosnim orijentacijama i političkim preferencijama.

Bošnjaci u Srbiji imaju status nacionalne manjine i pretežno žive na području Sandžaka (Raška oblast), koji neformalno obuhvata šest opština: Novi Pazar, Tutin, Sjenicu, Prijepolje, Priboj i Nova Varoš. Naziv Sandžak uglavnom upotrebljavaju Bošnjaci, dok Srbi koriste termin Raška oblast, pri čemu Raška oblast označava šire područje i češće se koristi u administrativnoj terminologiji i srpskoj historiografiji. Političku dinamiku karakteriše podela između "tvrdih" (autonomaških) i "mekih" (integralističkih) opcija (Hodžić, 2020; Zuber, 2011). Tri bošnjačke partije, Stranka demokratske akcije Sandžaka (SDA), Sandžačka demokratska partija (SDP) i Stranka pravde i pomirenja (SPP), bore se za reprezentaciju bošnjačke zajednice, pri čemu razlike između njih nisu zasnovane na ideološkim ili socio-ekonomskim podelama, već se odnose na statusna pitanja i pitanja u vezi autonomije Sandžaka (Hodžić, 2024: 124–131). Manjinski status suštinski određuje dinamiku političke kompeticije, u kojem asimetrija moći između manjinske bošnjačke zajednice i većinskog naroda oblikuje političke strategije bošnjačkih partija. U kontekstu percepcije nacionalne ugroženosti i marginalizacije, etnički identitet može postati „vrhovni princip i vrednost“ koji potencijalno anulira druge linije podela.

Crna Gora se izdvaja po specifičnosti u odnosu na druge dve države, zbog postojanja izraženih nominacijskih podela među Bošnjacima. Jedan deo bošnjačke populacije izjašnjava se kao "Muslimani", pokazujući sklonost ka crnogorskom kulturološkom obrascu, većim nivoom sekularnosti i nominiranjem crnogorskog kao maternjeg jezika.¹ Drugi deo bošnjačkog segmenta prihvatio je bošnjačku nacionalnu nominaciju koja implicira jaču religioznu komponentu identiteta i dominantno svoj maternji jezik naziva bosanski (Hodžić, 2024: 298–299). Partijska kompeticija među Bošnjacima u Crnoj Gori strukturirana je kroz identitetsko-nominacijsku podelu. Muslimani maltene uopšte ne glasaju za bošnjačke partije i skoro isključivo podržavaju građanske i procrnogorske političke partije. Sa druge strane, nacionalno nominirani Bošnjaci podjednako podržavaju kako bošnjačke tako i građanske partije, nezavisno od

¹ Nominacijska varijacija Bošnjak/Musliman postoji i u Srbiji (popis 2022: 92,20% Bošnjak, 7,80% Musliman), ali nije analitički relevantna za ovo istraživanje jer nominacija nije statistički značajan prediktor, niti političke partije mobilisu pristalice duž ove linije. U Crnoj Gori, nasuprot tome, nominacija strukturira partijske preferencije, čineći je konstitutivnom dimenzijom političkog rascepa.

toga da li su deo vladajućeg ili opozicionog bloka (Hodžić, 2024: 266–269). Specifična pozicija između identitetske integracije i priznate posebnosti omogućava različite strategije kolektivnog delovanja, sto može uticati i na unutaretničke podele.

Ekonomska transformacija post-jugoslovenskih država uz različita formativna iskustva generacijskih kohorta doprinose razlikama u preferiranju određenih ekonomskih modela. Sve tri države prošle su kroz tranziciju od socijalističke ka tržišnoj ekonomiji, pri čemu su različite generacije imale različita iskustva ekonomske (ne)sigurnosti. SFRJ generacija, formirana u periodu garantovane zaposlenosti i socijalne sigurnosti socijalističkog sistema, doživela je promenu ekonomskog poretka u zreloom dobu, imala je referentnu tačku ekonomske stabilnosti, dok su mlađe generacije (tranziciona i post-ratna generacija) odrasle u uslovima nestabilnog tržišta rada.

2 Konceptualni okvir istraživanja

Mannheimova (1952) teorija generacija pretpostavlja da se politički stavovi formiraju tokom adolescencije i ranog odraslog doba (18–25 godina) kroz „formativna iskustva“ koja ostaju relativno stabilna tokom životnog ciklusa. Iskustveni doživljaji u ovom periodu oblikuju vrednosne orijentacije koje ostaju stabilne, pri čemu kasnija iskustva dobijaju značenje iz tih ranih iskustava. Inače, Mannheim razlikuje tri osnovna koncepta: generacijsku lokaciju (rođenje u istom istorijskom periodu), generacijsku aktuelnost (zajedničko učešće u sudbinskim društvenim događajima) i generacijske jedinice (grupe koje na slične načine doživljavaju i interpretiraju istorijske događaje). Inglehart (1977) operacionalizuje ovu teoriju kroz hipotezu o „oskudnosti“, prema kojoj se osnovna vrednosna orijentacija formira u mladosti i reflektuje socio-ekonomsko okruženje, pri čemu se najveći značaj pridaje relativno oskudnim dobrima. U periodima stabilnosti, materijalna sigurnost generiše postmaterijalne vrednosti, dok u periodima nesigurnosti ljudi prioritizuju sigurnost i tradicionalne vrednosti. Bešić (2014) uvodi koncept „tranzicionih trauma“ radi objašnjenja specifičnosti post-jugoslovenskih društava koja su, za razliku od drugih post-komunističkih društava, prošla kroz simultane procese raspada države, etničkih sukoba i ekonomskog kolapsa, proizvodeći fundamentalno različita formativna iskustva za tri generacijske kohorte.

Froese (2004: 63–65) i Zrinščak (2004) objašnjavaju kako intenzivne sekularizacijske kampanje komunističkih režima kreiraju trajne sekularne orijentacije. U slučaju SFRJ generacije, većina društva je bila u stanju „zarobljene publike“² (*captive audience*), izložene višedecenijskom ateističkom obrazovanju (Zrinščak, 2004; Perica, 2002). Nasuprot tome, mlađe generacije koje nisu bile izložene direktnoj ideološkoj indoktrinaciji odrastale su u periodu u kojem je religija bila normalizovana kao deo nacionalnog identiteta. Prema ovoj teorijskoj perspektivi, starije generacije zadržavaju sekularnost iz perioda socijalizacije, dok mlađe generacije pokazuju višu religioznost jer su odrasle u kontekstu u kojem je religija postala sastavni deo nacionalnog identiteta, prenošena kroz porodičnu socijalizaciju.

² Zarobljena publika označava populaciju prinudno izloženu sekularizacijskim kampanjama kroz monopol države nad obrazovanjem i javnim prostorom, bez mogućnosti pristupa alternativnim religioznim socijalizacijskim kanalima (Froese, 2004).

Međutim, post-komunistička iskustva ukazuju na složenije obrasce od onih koje nude klasične teorije sekularizacije. Norris i Inglehart (2004: 111–118) nude teoriju egzistencijalne sigurnosti, gde religioznost opstaje među populacijom koja je suočena sa rizicima po opstanak, dok sa druge strane religioznost erodira među prosperitetnim slojevima. Teorija objašnjava religijsku renesansu kao racionalan odgovor na porast egzistencijalne nesigurnosti. Kada državna zaštita opada ili se finansijska sigurnost pogoršava, ljudi se okreću religijskim vrednostima kao alternativnom izvoru sigurnosti. Egzistencijalna nesigurnost post-ratnog perioda (kolaps države, ratna trauma, ekonomska nestabilnost) predstavlja potencijalni mehanizam kroz koji mlađa generacija može razviti veću religioznost.

Dobbelaere-ova (2002) multi-dimenzionalna teorija sekularizacije pravi ključnu distinkciju između individualne religioznosti (lično verovanje i praksa) i društvene sekularizacije (institucionalno odvajanje religije od politike i drugih sfera). Ova dva nivoa mogu da se kreću nezavisno u kojem religioznost (ili sekularnost) na jednom nivou ne implicira nužno sklonost ka religioznosti (odnosno sekularnosti) na drugom nivou. Teorijski, ovo znači da individualna religioznost i društvena podrška klerikalizmu ili umešanosti religije u politiku ne moraju biti u linearnom odnosu. Primenjeno na bošnjački kontekst, teorija otvara mogućnost da se religioznost i klerikalno-tradicionalističke vrednosti uz preferenciju političkih partija koje promovišu takve vrednosti mogu kretati u različitim pravcima.

Različiti institucionalni konteksti mogu uticati na to da li će se i kako će se generacijske razlike manifestovati na političke podele. Wimmer (2008: 970–982) tvrdi da manjine u podređenim pozicijama češće pribegavaju strategijama koje naglašavaju grupno jedinstvo i minimizuju unutaretničke razlike radi maksimizacije kolektivne moći. Kada manjine nemaju institucionalnu moć, one se oslanjaju na strategije „jačanja granica“ (boundary strengthening) radi očuvanja grupne kohezije kao političkog resursa. Portes i Rumbaut (2001: 148) uvode koncept „reaktivnog etniciteta“, koji podrazumeva jačanje (umesto slabljenja) etničkog identiteta u kontekstu diskriminacije i isključivanja, pri čemu se članovi etničke zajednice, bez obzira na generacijske razlike, okupljaju oko zajedničkog etničkog identiteta kao odbrambene strategije. Ovo sugeriše da manjinski status može neutralizovati generacijske podele kroz zajedničke adaptivne strategije, dok kontekst u kojem grupa uživa institucionalnu moć i konstitutivni status omogućava da se unutargrupne (pa i generacijske) razlike slobodno izraze i manifestuju kroz političke preferencije.

U kontekstu našeg istraživanja, može nam biti od koristi i teorija deprivacije. Stark i Bainbridge (1980) ovom teorijom tvrde da su ekonomski marginalizovani članovi zajednice religiozniji, ali samo u kontekstima gde religija nije kulturni kapital dominantne elite. Ovo ukazuje da obrazovanje može imati suprotne efekte na religioznost zavisno od funkcionalne uloge religije u datom kontekstu. U društvu gde religija označava pripadnost višim društvenim slojevima i omogućava pristup resursima, visokoobrazovani mogu biti religiozniji. Istovremeno, u manjinskim kontekstima religija može funkcionisati kao kompenzatorni mehanizam za ekonomski i društveno marginalizovane grupe koje ujedno imaju i niži nivo obrazovanja.

Kada su u pitanju generacijske razlike u ekonomskim orijentacijama, ključnu ulogu igra Inglehartova (1977) teorija postmaterijalizma. Ova teorija polazi od premise da ekonomski uslovi tokom formativnih godina oblikuju trajne vrednosne prioritete. Prema ovoj teoriji, generacije koje odrastaju u uslovima ekonomske sigurnosti i prosperiteta razvijaju postmateri-

jalne vrednosti, stavljajući akcenat na samoiskazivanje, kvalitet života, participaciju i socijalnu pravdu. Nasuprot tome, generacije formirane u uslovima ekonomske nesigurnosti imaju veću sklonost ka materijalnim vrednostima, te su usmerene na ekonomsku i fizičku sigurnost. Prema ovoj teoriji, kontekstualni faktori u formativnom dobu mogu uticati na generacijske razlike u preferiranju ekonomskih modela.

Na osnovu izloženih teorijskih paradigmi postavljamo četiri centralne hipoteze.

Prva hipoteza: Post-ratna i tranziciona generacija pokazuju višu religioznost od SFRJ generacije usled različitih konteksta socijalizacije.

Druga hipoteza: Generacijske podele u vrednosnim orijentacijama variraju zavisno od institucionalnog konteksta: manjinski status (Srbija) umanjuje generacijske podele kroz reaktivni etnicitet i strategije grupnog jedinstva, dok konstitutivni status (BiH) omogućava manifestaciju unutaretničkih generacijskih razlika.

Treća hipoteza: Individualna religioznost i društvena sekularnosti mogu biti u linearnom odnosu, zavisno od institucionalnog i društvenog konteksta.

Četvrta hipoteza: SFRJ generacija, formirana u periodu relativnog ekonomskog prosperiteta, pokazuje veću sklonost egalitarnim vrednostima u odnosu na mlađe generacije formirane u ekonomskoj nestabilnosti.

3 Metod, podaci i merenje

Istraživanje je sprovedeno na uzorku od 800 ispitanika bošnjačke nacionalnosti iz tri države: Bosne i Hercegovine (N=400), Srbije (N=200) i Crne Gore (N=200). Podaci su prikupljeni tokom 2022. godine primenom PAPI metode u domovima ispitanika. Uzorak je formiran kao prigodan (convenience sample), vodeći računa o reprezentativnosti prema polu, starosti, mestu stanovanja, radnog statusa i nivou obrazovanja. Usled specifičnosti terenske dostupnosti ovaj uzorak se ne može smatrati reprezentativnim, jer je nejednaka distribucija urbano-ruralnih ispitanika u pojedinim državama (Tabela 1).

Polna struktura uzorka je balansirana, a u starosnoj strukturi dominiraju grupe 31–45 godina (28,1%). Srednjoškolski obrazovni nivo dominira (55,5%), dok visokoobrazovani čine 21,6% uzorka. Tip naselja pokazuje značajne međudržavne razlike: Bosna i Hercegovina ima ruralno-urbanu ravnotežu, dok su Srbija (92,5%) i Crna Gora (79,5%) pretežno urbani uzorci zahvaljujući koncentraciji bošnjačke populacije u gradovima. Ova neravnoteža ograničava međudržavnu komparabilnost jer urbano-ruralno stanovanje pokazuje značajne efekte na tradicionalizam. Međutim, urbano-ruralno stanovanje je kontrolisano u svim multivarijantnim modelima, što omogućava parcijalizaciju efekta tipa naselja od generacijskih efekata. Multivarijantne analize pokazuju da generacijska homogenost u Srbiji opstaje i nakon kontrole urbano-ruralnog statusa, što sugeriše da nalaz nije artefakt urbane pristrasnosti uzorka, već suštinska karakteristika manjinskog konteksta. Identitetska nominacija pokazuje dominaciju bošnjačke identifikacije u sve tri analizirane države, uz primetno odstupanje kod uzorka u Crnoj Gori, gde je podeljenost izraženija (Bošnjaci 63,7% prema Muslimani 35,8%).

Tabela 1. Deskriptivne karakteristike uzorka

Karakteristika	BiH (N=400)	Srbija (N=200)	CG (N=200)	Ukupno (N=800)
Generacijska kohorta				
SFRJ generacija (rođeni pre 1971)	129 (32,2%)	54 (27,0%)	53 (26,5%)	236 (29,5%)
Tranziciona generacija (1971–1990)	154 (38,5%)	69 (34,5%)	74 (37,0%)	297 (37,1%)
Post-ratna generacija (nakon 1991)	117 (29,2%)	77 (38,5%)	73 (36,5%)	267 (33,4%)
Pol				
Muški	200 (50,0%)	100 (50,0%)	97 (48,5%)	397 (49,6%)
Ženski	200 (50,0%)	100 (50,0%)	103 (51,5%)	403 (50,4%)
Starosna dob				
18–30	83 (20,8%)	53 (26,4%)	57 (28,5%)	193 (24,1%)
31–45	113 (28,3%)	55 (27,3%)	57 (28,5%)	225 (28,1%)
46–55	78 (19,6%)	36 (17,8%)	35 (17,5%)	149 (18,6%)
56–65	55 (13,8%)	28 (14,0%)	28 (14,0%)	111 (13,9%)
66+	70 (17,5%)	29 (14,5%)	23 (11,5%)	122 (15,3%)
Obrazovanje				
Nisko	92 (23%)	68 (34%)	23 (11,5%)	183 (22,9%)
Srednje	244 (61%)	82 (41%)	118 (59%)	444 (55,5%)
Visoko	64 (16%)	50 (25%)	59 (29,5%)	173 (21,6%)
Tip naselja				
Selo / varošica	233 (58,2%)	15 (7,5%)	41 (20,5%)	289 (36,1%)
Grad	167 (41,8%)	185 (92,5%)	159 (79,5%)	511 (63,9%)
Nacionalna nominacija				
Bošnjak/inja	387 (96,8%)	176 (88,1%)	127 (63,7%)	690 (86,3%)
Musliman/ka	10 (2,5%)	21 (10,4%)	72 (35,8%)	103 (12,9%)
Bošnjak/Musliman	3 (0,8%)	2 (1,0%)	0 (0,0%)	5 (0,6%)
Drugo	0 (0,0%)	1 (0,5%)	1 (0,5%)	2 (0,3%)

Izvor: Podaci prikupljeni tokom terenskog istraživanja.

Napomena: Nivo obrazovanja: nisko – bez osnovne + osnovna škola; srednje – trogodišnja + četvorogodišnja škola; visoko- viša škola + fakultet + magistratura/doktorat.

Generacijski kohorti operacionalizovani su na osnovu godina rođenja: SFRJ generacija (rođeni pre 1971, N=236), tranziciona generacija (rođeni 1971–1990, N=297), i post-ratna generacija (rođeni nakon 1991, N=267).³ Ova podela odražava različita formativna iskustva, odnosno socijalistički period, ratni period i post-ratni period demokratske tranzicije. Granične tačke (cut-off) postavljene su tako da osoba rođena 1971. godine ima 20 godina 1991. godine

³ Alternativne operacionalizacije (npr. deljenje SFRJ kohorte na pre-1951 i 1951–1970) ne bi imale teorijsko utemeljenje jer bi delile populaciju sa identičnim formativnim iskustvom (stabilni socijalizam). Mannheimova teorija zahteva da cut-off tačke reflektuju kvalitativne promene u društvenom kontekstu tokom formativnog perioda (18–25 godina), a ne kalendarske intervale fiksne dužine.

kada počinje raspad zajedničke države (kritični period 18–25 po Mannheimu/Inglehartu kada se vrednosti kristalizuju). Osoba rođena 1991. godine ili kasnije nije doživela ratnu traumu tokom formativnog perioda.

Varijabla religioznosti je operacionalizovana kroz deklarativnu i praktikovanu religioznost (učestalost molitve, posećivanje džamija, praktikovanje posta itd.). Faktorska analiza ekstrahovala je jedan faktor koji objašnjava 88,2% varijanse, sa visokom internom konzistentnošću ($\alpha=0,845$) i identičnim faktorskim punjenjem (0,939) za obe varijable.⁴ Faktor je standardizovan na $M=0$, $SD=1$.

Autoritarni tradicionalizam i klerikalni nacionalizam operacionalizovan je kao faktor drugog reda koji integriše pet dimenzija: tradicionalizam (rodne uloge), klerikalizam (uloga Islamske zajednice), demokratsku orijentaciju, autoritarnost i nacionalizam. Faktorska analiza ekstrahovala je jedan faktor koji objašnjava 44% varijanse, sa umerenom internom konzistentnošću ($\alpha=0,659$) i faktorskim punjenjem u rasponu 0,52–0,77.⁵ Umerena konzistentnost je očekivana, jer pet dimenzija mere povezane ali ne i identične konstrukte.

Egalitarna ekonomska orijentacija operacionalizovana je kroz dva pitanja: (1) individualna naspram državne odgovornosti za ekonomsku sigurnost i (2) privatno naspram državnog vlasništva nad privrednim subjektima. Faktorska analiza potvrdila je jednofaktorsku strukturu koja objašnjava 63% varijanse, sa umerenom konzistentnošću ($\alpha=0,41$).⁶ Nizak alfa koeficijent posledica je malog broja pitanja (dva) i širokog spektra ekonomske dimenzije, ali faktorska punjenja (0,793) opravdavaju kompozitni skor ove varijable.

Političke preferencije operacionalizovane su kroz ocenjivanje partija na skali od 1 do 10, gde je partija sa najvišom ocenom (a da je veća od ocene 3) tretirana kao izbor ispitanika.⁷

Statistička analiza obuhvata ANOVA sa post-hoc testovima, dvosmernu ANOVA za testiranje interakcije generacije i države, multiplu linearnu regresiju uz kontrolu socio-demografskih varijabli i binarnu logističku regresiju za partijske preferencije. Prag statističke značajnosti postavljen je na $p<0,05$. Za sve regresione modele testirane su pretpostavke linearnosti, nezavisnosti reziduala, homoskedastičnosti i normalnosti distribucije reziduala. Multikolinearnost je testirana kroz faktor inflacije varijanse (VIF – *Variance Inflation Factor*), pri čemu sve vrednosti ostaju ispod kritičnog praga od 5 (raspon 1,03–2,73). Testirana je pretpostavka homogenosti varijansi kroz Livinov test (*Levene test*) u svim ANOVA procedurama, bez značajnih odstupanja. Za logističke regresije korišćen je Hosmer–Lemešou test (*Hosmer–Lemeshow test*) prikladnosti modela, dok je uklapanje modela (*model fit*) evaluirano kroz Nagelkerkeov R^2 (*Nagelkerke R²*) i tačnost klasifikacije (*classification accuracy*).

⁴ Tehnički detalji: KMO=0,50; Bartlett's $\chi^2=696,76$ (df=1, $p<0,001$); communalities=0,882.

⁵ Tehnički detalji: KMO=0,745; Bartlett's $\chi^2=466,09$ (df=10, $p<0,001$). Faktorska punjenja: nacionalizam (0,771), klerikalizam (0,751), autoritarnost (0,672), tradicionalizam (0,569), demokratska orijentacija (0,517).

⁶ Tehnički detalji: KMO=0,50; Bartlett's $\chi^2=51,36$ (df=1, $p<0,001$).

⁷ U slučaju da je ispitanik ocenio sve ponuđene partije istim ocenama, smatran je volatilnim biračem. Ako je svim partijama dodelio ocene 1 ili 2, smatran je apstinentom i ti ispitanici su isključeni iz analize partijskih preferencija.

4 Rezultati

4.1 Religioznost

Analiza varijanse pokazuje statistički značajne razlike u religioznosti između generacija na ukupnom uzorku ($F(2,794)=14,570$, $p<0,001$, $\eta^2=0,035$). Post-ratna generacija beleži najviše skorove ($M=+0,18$), tranziciona generacija intermedijarne vrednosti ($M=+0,06$), dok SFRJ generacija ima najnižu religioznost ($M=-0,28$). Najizraženija razlika uočena je između post-ratne i SFRJ generacije ($+0,46$, $p<0,001$), što predstavlja umeren efekat veličine (Cohen's $d=0,46$). Ovaj nalaz potvrđuje Mannheimovu teoriju formativnih iskustava, prema kojoj mlađe generacije (post-ratna i tranziciona generacija), socijalizovane u periodu normalizovane religioznosti, pokazuju viši nivo religioznosti u odnosu na SFRJ generaciju, koja je zadržala sekularne vrednosti iz perioda socijalizacije. SFRJ generacija ne pokazuje porast religioznosti uprkos post-ratnoj religijskoj renesansi, što ukazuje na stabilnost vrednosnih orijentacija formiranih tokom socijalizacije.

Analiza po državama pokazuje kako se generacijske razlike, drugačije manifestuju u zavisnosti od konteksta. U Bosni i Hercegovini, generacijski jaz je najizraženiji ($F=13,378$, $p<0,001$, $\eta^2=0,063$), gde post-ratna generacija pokazuje najvišu religioznost ($M=+0,47$), dok SFRJ generacija ima najnižu ($M=-0,17$) (Tabela 2).

Tabela 2. Deskriptivna statistika vrednosnih dimenzija po državama i generacijskim kohortama

Država	Generacija	N	M	SD	Min	Max	95% CI
A) Religioznost							
BiH	Post-ratna	117	0,47	0,97	-1,27	1,83	[0,29, 0,65]
	Tranziciona	154	0,25	0,97	-1,27	1,83	[0,09, 0,40]
	SFRJ	129	-0,17	1,05	-1,27	1,83	[-0,36, 0,01]
Srbija	Post-ratna	76	-0,47	0,81	-1,27	1,99	[-0,65, -0,28]
	Tranziciona	69	-0,31	0,87	-1,27	1,37	[-0,52, -0,10]
	SFRJ	54	-0,64	0,79	-1,27	1,53	[-0,85, -0,42]
CG	Post-ratna	73	0,39	0,91	-1,27	1,37	[0,18, 0,60]
	Tranziciona	73	0,01	0,91	-1,27	1,37	[-0,21, 0,22]
	SFRJ	52	-0,18	1,00	-1,27	1,99	[-0,45, 0,10]
B) Autoritarni tradicionalizam							
BiH	Post-ratna	117	-0,03	0,83	-2,13	2,19	[-0,18, 0,12]
	Tranziciona	154	-0,36	0,89	-3,18	1,49	[-0,50, -0,22]
	SFRJ	129	-0,01	0,86	-2,62	1,86	[-0,16, 0,14]
Srbija	Post-ratna	78	-0,08	1,00	-2,29	2,60	[-0,30, 0,15]
	Tranziciona	69	0,10	0,96	-1,68	2,24	[-0,13, 0,33]
	SFRJ	54	0,52	1,30	-2,17	2,99	[0,17, 0,88]
CG	Post-ratna	73	-0,23	1,17	-3,00	2,52	[-0,50, 0,04]
	Tranziciona	74	0,23	0,96	-3,20	2,35	[0,01, 0,45]
	SFRJ	53	0,60	0,96	-2,33	2,25	[0,34, 0,87]

Država	Generacija	N	M	SD	Min	Max	95% CI
C) Egalitarna ekonomska orijentacija							
BiH	Post-ratna	115	0,56	0,17	0,17	0,94	[0,53, 0,59]
	Tranziciona	126	0,53	0,18	0,00	0,83	[0,50, 0,56]
	SFRJ	116	0,61	0,18	0,06	0,94	[0,57, 0,64]
Srbija	Post-ratna	74	0,54	0,23	0,17	0,94	[0,49, 0,60]
	Tranziciona	69	0,55	0,22	0,22	0,94	[0,50, 0,60]
	SFRJ	50	0,56	0,25	0,17	0,94	[0,49, 0,63]
CG	Post-ratna	72	0,51	0,29	0,00	0,94	[0,45, 0,58]
	Tranziciona	73	0,64	0,24	0,06	0,94	[0,58, 0,70]
	SFRJ	52	0,74	0,24	0,00	0,94	[0,67, 0,80]

Izvor: Podaci prikupljeni tokom terenskog istraživanja.

Razlika između ove dve generacije iznosi +0,64 ($p < 0,001$). Post-ratna i tranziciona generacija nalaze se na granici statističke značajnosti (razlika +0,22, $p = 0,068$), dok se obe mlađe kohorte značajno razlikuju od SFRJ generacije. Sve tri generacije se statistički značajno razlikuju jedna od druge, što ukazuje na jasne generacijske podele kroz sve kohorte.

U Srbiji, gde je nalaz suštinski drugačiji, nema statistički značajnih razlika između generacija ($F = 2,450$, $p = 0,089$, $\eta^2 = 0,024$). Sve tri kohorte beleže negativne skorove religioznosti ($M = -0,31$ do $-0,64$), pri čemu SFRJ generacija pokazuje najnižu religioznost ($M = -0,64$), a tranziciona najvišu ($M = -0,31$) (Tabela 2). Bošnjaci u Srbiji pokazuje nižu religioznost od svojih sunarodnika u Bosni i Hercegovini i Crnoj Gori. Post-hoc analiza otkriva da jedina značajna razlika postoji između tranzicione i SFRJ generacije (+0,33, $p = 0,028$), ali ukupna ANOVA nije značajna, što potvrđuje generacijsku homogenost.

U Crnoj Gori, rezultati pokazuju statistički značajne razlike ($F = 6,153$, $p = 0,003$, $\eta^2 = 0,059$). Post-ratna generacija beleži najvišu religioznost ($M = +0,39$), tranziciona intermedijarnu ($M = +0,01$), dok SFRJ generacija ima najnižu ($M = -0,18$) (Tabela 2). Ovaj obrazac prati bosanskohercegovački trend, ali sa slabijim intenzitetom. Post-hoc testovi pokazuju da se post-ratna generacija značajno razlikuje od obe starije kohorte (+0,38 i +0,57, $p < 0,05$), dok tranziciona i SFRJ generacija ne pokazuju međusobnu razliku ($p = 0,286$).

Dvosmerna ANOVA pokazuje dominaciju kontekstualnog nad generacijskim faktorom (Tabela 3). Država objašnjava 7,7% varijanse ($\eta^2 = 0,077$), dok generacija objašnjava 3,4% ($\eta^2 = 0,034$). Ukupan model objašnjava 12,8% varijanse ($R^2 = 0,128$), što je najsnažniji prediktivni potencijal među svim dimenzijama. Hijerarhija efekata (omer 2,3:1 u korist države) pokazuje da su religiozne orijentacije primarno kontekstualno uslovljene. Interakcija između generacije i države je statistički značajna ($F = 2,913$, $p = 0,021$, $\eta^2 = 0,014$), što pokazuje da efekat generacije zavisi od države, odnosno da generacijske razlike nisu iste u sva tri konteksta.

Tabela 3. Dvosmerna ANOVA: Hijerarhija glavnih efekata kroz dimenzije

Dimenzija	Generacija		Država		Interakcija		Model R ²	Hijerarhija
	F	η ²	F	η ²	F	η ²		
Religioznost	13,989***	0,034	33,568***	0,077	2,913*	0,014	0,128	Država >> Generacija
Tradicionalizam	11,325***	0,026	12,236***	0,029	–	–	0,051	Država ≈ Generacija
Ekonomija	8,575***	0,022	6,207**	0,016	–	–	0,036	Generacija > Država

Izvor: Podaci prikupljeni tokom terenskog istraživanja.

* $p < 0,05$; ** $p < 0,01$; *** $p < 0,001$.

Međutim, multivarijantne analize otkrivaju da generacijski efekti gube ili menjaju značajnost kada ih kontrolišemo socio-demografskim varijablama (Tabela 4). U Bosni i Hercegovini, multivarijantni model objašnjava 15,1% varijanse religioznosti, pri čemu obrazovanje dominira kao ključni prediktor. Nisko obrazovanje pokazuje snažan negativan efekat ($\beta = -0,380$, $p < 0,001$), gde niže obrazovani Bošnjaci pokazuju značajno manju religioznost od visoko obrazovanih. Ključni nalaz je da generacija gubi statističku značajnost kada se kontroliše obrazovanje (post-ratna generacija: $\beta = 0,085$, $p = 0,183$; tranziciona generacija: $\beta = -0,055$, $p = 0,426$), što ukazuje da je obrazovanje pravi uzrok prividnih generacijskih razlika. Urbano-ruralna podela, pol i radni status nisu pokazali statističku značajnost ($p > 0,05$). Multikolinearnost nije prisutna jer su sve VIF vrednosti ostale ispod kritičnog praga (raspon 1,03–2,73).

U Srbiji se javlja obrnut obrazac, gde nisko obrazovanje pozitivno korelira sa religioznošću ($\beta = +0,291$, $p = 0,006$), kao i srednje obrazovanje ($\beta = +0,243$, $p = 0,006$). Niže obrazovani Bošnjaci u Srbiji su religiozniji od visoko obrazovanih, što ukazuje na različitu funkcionalnu ulogu religije u manjinskom kontekstu. Model objašnjava samo 9,8% varijanse i najslabiji je rezultat među sve tri države. Generacija i dalje nije značajan prediktor (post-ratna generacija: $\beta = 0,127$, $p = 0,205$; tranziciona generacija: $\beta = 0,173$, $p = 0,073$). Takođe, i u slučaju Srbije VIF vrednosti ostaju ispod 3 (maksimum 2,29).

Za razliku od BiH i Srbije, u Crnoj Gori post-ratna generacija ostaje značajan prediktor čak i u multivarijantnom modelu ($\beta = +0,206$, $p = 0,039$), što je jedinstven nalaz. Dakle, samo u Crnoj Gori generacijski efekti opstaju nakon kontrole socio-demografskih faktora. Aktivni radni status je najjači prediktor ($\beta = 0,220$, $p = 0,008$), a srednje obrazovanje takođe pokazuje pozitivan efekat ($\beta = 0,200$, $p = 0,012$), sličan obrascu u Srbiji. Model objašnjava 13,5% varijanse, pozicionirajući se između BiH i Srbije. I u slučaju Crne Gore, VIF vrednosti su zadovoljavajuće (maksimum 2,16).

4.2 Autoritarni tradicionalizam

Analiza varijanse kompozitne skale autoritarnog tradicionalizma u ukupnom uzorku pokazuje značajne generacijske razlike ($F = 10,587$, $p < 0,001$, $\eta^2 = 0,026$), maltene identične religioznosti, što ukazuje na koherentan generacijski sindrom. Post-ratna i tranziciona generacija beleže gotovo identične negativne skorove ($M = -0,10$ i $-0,11$), dok SFRJ generacija pokazuje pozitivne

skorove ($M=0,25$). Post hoc analiza otkriva da ne postoji razlika između post-ratne i tranzicione generacije ($p=0,904$), ali SFRJ generacija se značajno razlikuje od obe ($-0,35$ i $-0,36$, $p<0,001$).

I analiza autoritarnog tradicionalizma po državama pokazuje različite obrasce. U Bosni i Hercegovini, generacijske razlike su statistički značajne ($F=11,096$, $p<0,001$, $R^2=0,165$). Post-ratna generacija beleži blago negativne skorove ($M=-0,03$), tranziciona je najmanje tradicionalna ($M=-0,36$), dok SFRJ generacija pokazuje skorove blizu nule ($M=-0,01$). Post-hoc testovi pokazuju da se tranziciona generacija značajno razlikuje od obe druge kohorte. U Srbiji, obrazac je suštinski drugačiji, gde je SFRJ generacija najtradicionalnija ($M=+0,52$), dok tranziciona i post-ratna generacija pokazuju niže ili negativne skorove (post-ratna: $M=-0,08$, tranziciona: $M=+0,10$). Generacijske razlike su statistički značajne, pri čemu se SFRJ generacija jasno izdvaja. U Crnoj Gori, nalazi pokazuju najjasniju linearnu progresiju: tradicionalizam raste sa starošću, pa je post-ratna generacija najmanje tradicionalna ($M=-0,23$), tranziciona intermedijarna ($M=+0,23$), dok SFRJ generacija beleži najviše skorove ($M=+0,60$).

Dvosmerna ANOVA (Tabela 3) pokazuje približnu ravnotežu generacijskih i kontekstualnih efekata ($\eta^2=0,026$ naspram $0,029$), sugerišući da je autoritarni tradicionalizam stabilniji generacijski sindrom od religioznosti. Ukupan model objašnjava samo 5,1% varijanse, što je značajno manje nego kod religioznosti.

Multivarijantne analize pokazuju različite obrasce prediktora tradicionalizma. U Bosni i Hercegovini, post-ratna generacija postaje tradicionalnija uz kontrolu drugih faktora ($\beta=0,186$, $p=0,004$), što je neočekivan nalaz. Urbano-ruralna podela dominira kao prediktor ($\beta=0,239$, $p<0,001$). Model objašnjava 16,5% varijanse. U Srbiji, generacijski efekti nisu značajni. Urbano-ruralna podela ($\beta=0,201$, $p=0,017$) i aktivnost na tržištu rada ($\beta=0,192$, $p=0,028$) su ključni prediktori. Model objašnjava 11,4% varijanse. Crna Gora pokazuje najsnažnije i najkonzistentnije efekte. Post-ratna generacija je značajno manje tradicionalna ($\beta=-0,259$, $p=0,007$), što odgovara očekivanjima. Pol ima značajan efekat (žene su tradicionalnije, $\beta=0,154$, $p=0,025$). Model objašnjava najviše varijanse među sve tri države ($R^2=19,3\%$) (Tabela 4).

Tabela 4. Dominantni prediktori po državama

Država	Religioznost	Tradicionalizam	Ekonomija	Politika
BiH	Obrazovanje (nizak)***	Urbano-ruralno***	-	Post-ratna gen.*
	$\beta=-0,380$	Post-ratna gen.**†		OR=2,465
	$R^2=0,151$	$R^2=0,165$	$R^2=0,044$	$R^2=0,116$
Srbija	Obrazovanje (nizak+srednji)**	Urbano-ruralno*	Homogenost	Parcijalni rascepi
	$\beta=+0,291/+0,243$	Aktivnost*	$F=0,044ns$	
	$R^2=0,098$	$R^2=0,114$	$R^2=-$	$R^2=0,030-0,084$
CG	Post-ratna gen,* + Aktivnost**	Post-ratna gen,**	Post-ratna gen,**	Identitet***
	$\beta=+0,206/+0,220$			
	$R^2=0,135$	$R^2=0,193$	$R^2=0,143$	$R^2=0,126-0,224$

Izvor: Podaci prikupljeni tokom terenskog istraživanja.

* $p<0,05$; ** $p<0,01$; *** $p<0,001$; ns = nije značajno;

+ Neočekivan pozitivan efekat.

4.3 Ekonomska orijentacija

Analiza varijanse ukupnog uzorka pokazuje značajne razlike ($F=8,556$, $p<0,001$, $\eta^2=0,023$) sa linearnim trendom, gde ekonomski egalitarizam raste sa starošću ($M=0,54$ do $0,63$). Post-ratna i SFRJ generacija se značajno razlikuju ($0,08$, $p<0,001$), ali se post-ratna i tranziciona generacija ne razlikuju ($0,02$, $p=0,223$).

Analiza ekonomske orijentacije po državama, kao i po pitanju drugih vrednosti, otkriva različite obrasce. U Srbiji nema generacijskih razlika ($F=0,044$, $p=0,956$), pri čemu sve tri kohorte beleže gotovo identične vrednosti ($M\approx 0,55$). Ovaj nalaz potvrđuje generacijsku homogenost i ukazuje da su socio-politički procesi proizveli uniformnost ekonomskih stavova. U BiH se pokazuju značajne razlike ($F=8,196$, $p<0,001$, $\eta^2=0,078$) sa jasnim trendom, dok se u Crnoj Gori javlja najjači efekat ($F=11,208$, $p<0,001$, $\eta^2=0,104$) i predstavlja jedinu državu gde su sve međugeneracijske razlike značajne.

Dvosmerni ANOVA pokazuje inverznu hijerarhiju jer generacija blago dominira nad državom ($\eta^2=0,022$ naspram $0,016$), mada ukupan model objašnjava samo 3,6% varijanse, što je najslabiji prediktivni potencijal.

Multivarijantne analize ekonomske orijentacije pokazuju različite obrasce. U Bosni i Hercegovini, nijedan prediktor nije značajan ($R^2=4,4\%$). U Srbiji, nema značajnih generacijskih efekata, što je konzistentno sa ANOVA nalazom i deskriptivnom statistikom ($M\approx 0,55$ za sve kohorte). U Crnoj Gori, post-ratna generacija je jedini značajan prediktor ($\beta=-0,283$, $p=0,004$), pri čemu mlađa generacija pokazuje niže skorove egalitarizma, gde model objašnjava 14,3% varijanse.

4.4 Političke preferencije

Rezultati binarne logističke regresije za predikciju partijskih preferencija u Bosni i Hercegovini potvrđuju postojanje statistički značajnog prediktivnog modela ($\chi^2=22,092$, $p=0,002$, Nagelkerke $R^2=0,116$; Hosmer-Lemeshow $\chi^2=2,589$, $p=0,957$). Post-ratna generacija je jedini značajan prediktor ($OR=2,465$, $p=0,022$), pri čemu ispitanici iz post-ratne generacije imaju 2,47 puta veću verovatnoću glasanja za građansko-sekularne partije u odnosu na SFRJ generaciju. Osnovno obrazovanje pokazuje granično značajan negativan efekat ($B=-0,976$, $p=0,052$, $OR=0,377$), što ukazuje da ispitanici sa osnovnim obrazovanjem imaju 62% manju verovatnoću glasanja za građansko-sekularne partije u odnosu na visoko obrazovane. Urbano-ruralna podela takođe pokazuje granično značajan efekat ($B=-0,483$, $p=0,087$, $OR=0,617$), gde urbani ispitanici imaju 38% manju verovatnoću glasanja za građansko-sekularne partije, što predstavlja neočekivan nalaz. Tranziciona generacija, aktivnost na tržištu rada, srednje obrazovanje i pol ne dostižu statističku značajnost.

U Srbiji, sva tri modela multiple linearne regresije pokazuju slabe efekte (R^2 od 3% do 8,4%) bez značajnih generacijskih prediktora. Analiza kroz tri relevantne bošnjačke partije (SDA Sandžaka, SDP, SPP) otkriva minimalne generacijske efekte bez jasne socio-demografske osnove. Za SDA Sandžaka, model dostiže marginalnu statističku značajnost ($F(7,192)=2,105$, $p<0,05$), ali objašnjava samo 7,1% varijanse ($R^2=0,071$). Ni post-ratna ($\beta=0,089$, $p=0,379$) ni tranziciona generacija ($\beta=0,050$, $p=0,612$) ne pokazuju statistički značajan efekat, dok su jedini

granično značajni prediktori osnovno obrazovanje ($p=0,093$) i srednje obrazovanje ($p=0,097$), što sugeriše izvesne obrazovne podele u podršci ovoj partiji. Za SDP model nije statistički značajan ($F(7,192)=0,842$, $p>0,05$), objašnjavajući samo 3,0% varijanse ($R^2=0,030$). Generacijski efekti su praktično nulti, tj. post-ratna generacija ($\beta=-0,013$, $p=0,898$) i tranziciona ($\beta=0,045$, $p=0,650$) ne pokazuju nikakav uticaj, dok je jedini granično značajan prediktor pol (β negativan, $p=0,087$), pri čemu žene pokazuju nešto nižu podršku ovoj partiji. Za SPP, model dostiže marginalnu značajnost ($F(7,192)=2,521$, $p<0,05$), objašnjavajući 8,4% varijanse ($R^2=0,084$), gde su jedini značajni prediktori osnovno obrazovanje ($p=0,008$, negativan efekat) i aktivnost na tržištu rada ($p=0,015$, negativan efekat), što može ukazivati na specifičnu socio-ekonomsku bazu ove partije. Generacijski efekti ponovo nisu značajni, kako post-ratna ($\beta=-0,092$, $p=0,362$) tako ni tranziciona generacija ($\beta=0,018$, $p=0,849$).

Crna Gora pokazuje najkompleksniji obrazac sa različitim prediktorima kroz tri partijska bloka u kojem identitetska nominacija (Bošnjak vs Musliman) i generacijski faktori imaju selektivnu prediktivnu moć zavisno od partijske opcije. Za Bošnjačku stranku, identitetska nominacija je najsnažniji prediktor ($\beta=0,262$, $p<0,001$), pri čemu Bošnjaci više glasaju za etničke (bošnjačke) partije od Muslimana. Post-ratna generacija pokazuje negativnu sklonost ka etničkim partijama ($\beta=-0,231$, $p=0,035$), tj. mlađi Bošnjaci manje glasaju za ovakve partije. Za Bošnjačku stranku, model dostiže statističku značajnost ($F(7,192)=3,060$, $p=0,002$), objašnjavajući 12,6% varijanse ($R^2=0,126$), gde identitetska nominacija predstavlja najsnažniji prediktor ($\beta=0,262$, $p<0,001$), tj. ispitanici koji se izjašnjavaju kao Bošnjaci pokazuju veću podršku ovoj etničkoj partiji u odnosu na one koji se nacionalno izjašnjavaju kao Muslimani. SDP-URA blok (Socijaldemokratska partija Crne Gore; Udružena reformska akcija) karakteriše dominacija obrazovanja kao prediktora, gde model dostiže snažnu statističku značajnost ($F(7,192)=6,150$, $p<0,001$), objašnjavajući 22,4% varijanse, što predstavlja najjači prediktivni potencijal među svim analizama. Osnovno ($\beta=-0,465$, $p<0,001$) i srednje obrazovanje ($\beta=-0,425$, $p<0,001$) pokazuju negativne efekte, što znači da visoko obrazovani birači više podržavaju opozicione opcije. Pol takođe ima značajnu ulogu ($\beta=-0,148$, $p=0,039$), gde muškarci više podržavaju opoziciju, dok generacijski efekti i identitetska nominacija ne pokazuju uticaj ($\beta=0,085$, $p>0,05$). Kod DPS bloka (Demokratska partija socijalista; Socijaldemokrate) ekonomska aktivnost zadržava ključnu ulogu ($\beta=0,263$, $p=0,003$), tj. radno aktivni birači više podržavaju DPS blok od radno neaktivnih, dok generacijska pripadnost i identitetska nominacija nisu značajni faktori (Tabela 4).

4.5 Komparativna sinteza

Analiza generacijskih podela kroz tri vrednosne dimenzije i političke preferencije otkriva razlike u strukturi i intenzitetu rascepa među Bošnjacima u tri analizirane države. Hijerarhija efekata varira zavisno od dimenzije: religioznost karakteriše dominacija konteksta nad generacijom (η^2 odnos 2,3:1 u korist države), tradicionalizam pokazuje približnu ravnotežu efekata (odnos 1,1:1), dok ekonomske orijentacije beleže inverznu hijerarhiju sa blagom dominacijom generacije nad kontekstom (odnos 1,4:1 u korist generacije). Ukupan objašnjavajući potencijal modela kreće se od najjačeg za religioznost (12,8%) do najslabijeg za ekonomske orijentacije (3,6%), što sugeriše da različite vrednosne dimenzije oblikuju različiti skupovi faktora (Tabela 3).

Religioznost pokazuje različite obrasce po državama: BiH ima najjači model ($R^2=15,1\%$) sa obrazovanjem kao dominantnim prediktorom, pri čemu su visokoobrazovani religiozniji, što predstavlja inverzan obrazac u odnosu na klasične teorije sekularizacije. Srbija i Crna Gora pokazuju suprotan obrazac gde niže obrazovanje korelira sa većom religioznošću (Srbija: $R^2=9,8\%$; CG: $R^2=13,5\%$). Tradicionalizam varira od najjačih efekata u Crnoj Gori ($R^2=19,3\%$), gde je post-ratna generacija značajno manje tradicionalna, do slabih efekata u Srbiji ($R^2=11,4\%$) bez značajnih generacijskih prediktora. BiH zauzima intermedijarnu poziciju ($R^2=16,5\%$) sa pozitivnim efektom post-ratne generacije. Ekonomske orijentacije pokazuju potpunu homogenost u Srbiji ($F=0,044$, $p=0,956$) bez razlika između kohorti, umerene efekte u BiH ($\eta^2=0,078$), i najjače efekte u Crnoj Gori ($\eta^2=0,104$) gde je post-ratna generacija jedini značajan prediktor. Političke preferencije beleže najsnažniji generacijski efekat u BiH gde post-ratna generacija ima 2,47 puta veću verovatnoću glasanja za građansko-sekularne partije (Nagelkerke $R^2=11,6\%$), slabe efekte u Srbiji (R^2 od 3% do 8,4%) bez značajnih generacijskih prediktora, i najkompleksniju strukturu u Crnoj Gori gde identitetska nominacija objašnjava podršku Bošnjačkoj stranci ($\beta=0,262$, $p<0,001$), dok obrazovanje dominira kod SDP-URA bloka ($R^2=22,4\%$).

5 Završna razmatranja

Rezultati istraživanja potvrđuju postojanje generacijskih podela u vrednosnim orijentacijama i političkim preferencijama među Bošnjacima u tri post-jugoslovenske države, ali sa kontekstualnim varijacijama koje dovode u pitanje uniformnost procesa generacijske promene u post-komunističkim društvima. Nalazi pokazuju da kontekstualni faktori, tj. institucionalni status, etnopolitička mobilizacija i specifičnosti političkog sistema, imaju snažniji uticaj od same generacijske pripadnosti. Generacijske podele postoje i statistički su značajne, ali njihova snaga i manifestacija se razlikuju zavisno od toga da li Bošnjaci žive u konsocijativnom sistemu (BiH), kao nacionalna manjina (Srbija), ili u hibridnom kontekstu integracije i priznate posebnosti (Crna Gora). Država objašnjava 7,7% varijanse religioznosti, dok generacija objašnjava 3,4%. Ova hijerarhija efekata (odnos 2,3:1 u korist konteksta) predstavlja centralni empirijski nalaz koji zahteva preispitivanje pretpostavki o uniformnosti generacijskih promena u post-konfliktnim društvima.

Bosna i Hercegovina pokazuje najizraženije generacijske podele u deskriptivnoj analizi ($\eta^2=0,063$ za religioznost), pri čemu post-ratna generacija beleži najvišu religioznost ($M=+0,47$) dok SFRJ generacija ima najnižu ($M=-0,17$). Ovaj nalaz inicijalno potvrđuje Mannheimovu (1952) teoriju formativnih iskustava, gde mlađe generacije socijalizovane u periodu normalizovane religioznosti pokazuju višu religioznost od SFRJ generacije koja zadržava sekularnost iz perioda socijalizacije. Froese (2004) i Zrinščak (2004) objašnjavaju kako intenzivne sekularizacijske kampanje u SFRJ kreiraju trajne sekularne orijentacije kod starijih generacija, dok Norris i Inglehart (2004) povezuju religijsku renesansu sa egzistencijalnom nesigurnošću post-ratnog perioda. Međutim, multivarijantni modeli otkrivaju složeniji obrazac, gde generacija gubi statističku značajnost kada se kontroliše obrazovanje ($p=0,183$), dok nisko obrazovanje postaje najsnažniji prediktor ($\beta=-0,380$, $p<0,001$). Ovo znači da prividni generacijski efekat je zapravo obrazovni artefakt, tj. post-ratna generacija nije religioznija zato što je mlađa, već zato što ima specifičnu obrazovnu strukturu. Ovaj nalaz problematizuje direktnu primenu Mannheimove

teorije na bosanskohercegovački kontekst. Starije generacije u proseku imaju niže formalno obrazovanje ali su bile formirane u sekularnijoj SFRJ, dok mlađe generacije u proseku imaju više obrazovanje ali su socijalizovane u periodu kada je religija postala normalizovani deo identiteta. Kada se ove dve dimenzije razdvoje statistički, obrazovanje se pokazuje kao dominantno.

Dodatna kompleksnost dolazi iz činjenice da u BiH, za razliku od Srbije i Crne Gore, visokoobrazovani su religiozniji. Ova inverzija potvrđuje Stark i Bainbridge-ovu (1980) teoriju deprivacije koja predviđa da su ekonomski marginalizovani članovi društva religiozniji, ali samo u kontekstima gde religija nije kulturni kapital dominantne elite. U BiH, gde Bošnjaci imaju konstitutivni status i institucionalnu moć, religija funkcioniše kao kulturni kapital koji signalizira pripadnost nacionalnoj zajednici i omogućava pristup resursima. Visokoobrazovani Bošnjaci pokazuju višu religioznost jer religija nije znak marginalizacije već marker elite pripadnosti.

Empirijski najznačajniji nalaz za BiH je paradoks religioznosti i političke sekularizacije, gde post-ratna generacija istovremeno pokazuje najvišu individualnu religioznost ali najveću sklonost građansko-sekularnim partijama (OR=2,47). Klasična teorija sekularizacije (Berger, 1967) ne razlikuje sekularizaciju pojedinaca od sekularizacije institucija, pretpostavljajući linearan trend gde modernizacija proizvodi opadanje religioznosti na svim nivoima. Međutim, mladi Bošnjaci u BiH više se mole, poste i posećuju džamije od svojih roditelja, ali istovremeno dvostruko ređe glasaju za nacionalno-konzervativne partije koje se zalažu za značajniju ulogu Islamske zajednice u društvenom (pa i političkom) životu. Ovaj nalaz empirijski potvrđuje Dobbelaereovu (2002) teoriju diferencirane sekularizacije koja razlikuje individualni mikro-nivo (lično verovanje i praksa) od institucionalnog makro-nivoa (uloga religije u političkom sistemu). Ova dva nivoa mogu se kretati nezavisno, gde individualna religioznost može rasti dok istovremeno raste podrška političkoj sekularizaciji. U Bosni i Hercegovini, gde je religija bila neretko instrumentalizovana za etnopolitičku mobilizaciju, mlađa generacija razvija senzibilnu političku kogniciju koja razdvaja privatnu religioznost od javne politike. Mlađi Bošnjaci internalizuju islam kao sastavni deo identiteta, ali istovremeno odbacuju klerikalizam kao političku platformu.

Srbija predstavlja potpuno drugačiji obrazac i teorijski najznačajniji nalaz koji otkriva granice generacijskih teorija. Odsustvo statistički značajnih razlika između generacija u religioznosti ($F=2,450$, $p=0,089$), tradicionalizmu i ekonomskim orijentacijama, uz generalno niže skorove religioznosti kroz sve kohorte (M od -0,31 do -0,64), sugeriše drugačiji proces generacijske diferencijacije nego u BiH i Crnoj Gori. Wimmerova (2008) teorija etničkog konstruisanja granica (*ethnic boundary making*) i Portes i Rumbautov (2001) koncept „reaktivnog etniciteta“ (*reactive ethnicity*) objašnjavaju ovaj obrazac. Manjine u podređenim pozicijama pribegavaju strategijama koje naglašavaju grupno jedinstvo i minimizuju internu diferencijaciju da bi maksimizirale kolektivnu moć. Asimetrija moći između manjinske bošnjačke zajednice i većinskog naroda podstiče etničku solidarnost koja prevazilazi kohortne razlike. U kontekstu percepcije diskriminacije, isključivanja i manjinske ugroženosti, etnički identitet jača kao odbrambena strategija, pri čemu se članovi zajednice, bez obzira na generacijske razlike, okupljaju oko zajedničkog identiteta. Spoljni pritisak prema asimilaciji ili marginalizaciji aktivira defanzivnu mobilizaciju koja umanjuje unutaretničke podele, uključujući i generacijske. Stariji i mlađi Bo-

šnjaci u Srbiji dele zajednički manjinski status koji postaje dominantnija socijalna kategorija od generacijske pripadnosti.

Ovo objašnjava zašto SFRJ generacija u Srbiji ne pokazuje višu religioznost uprkos post-ratnoj religijskoj renesansi, gde reaktivni etnicitet proizvodi ujednačenost kroz generacije kao adaptivnu strategiju u uslovima etnopolitičke nesigurnosti. Za razliku od BiH gde konstitutivni status dozvoljava unutaretničku diferencijaciju i artikulaciju generacijskih razlika kroz političke preferencije, u Srbiji potencijalna etnopolitička nesigurnost čini da unutaretnička saradnja postaje dominantnija od unutaretničke diferencijacije. Dodatna specifičnost konteksta u Srbiji je inverzan obrazovni efekat, gde je niže obrazovanje povezano sa većom religioznošću ($\beta=+0,291$ i $+0,243$), što je suprotno obrascu u BiH. U manjinskom kontekstu, religija funkcioniše kao kompenzatorni mehanizam za ekonomski marginalizovane segmente manjine koji nemaju pristup drugim resursima. Niže obrazovani imaju manje alternativnih strategija za obezbeđivanje statusa i ekonomske sigurnosti, te se okreću religiji kao izvoru identiteta i zajedničke pripadnosti.

Crna Gora predstavlja najkompleksniji odnos faktora gde se tradicionalne generacijske podele (najjači efekat za ekonomiju, $\eta^2=0,104$) preklapaju sa specifičnom identitetsko-nominacijskom podelom između Bošnjaka i Muslimana. Crna Gora je jedini kontekst gde post-ratna generacija ostaje značajan prediktor religioznosti čak i u multivarijantnom modelu koji kontroliše obrazovanje, radni status i urbano-ruralno stanovanje ($\beta=+0,206$, $p=0,039$). Ovo sugeriše da u Crnoj Gori formativna iskustva imaju autonomni efekat koji nije posredovan socio-strukturnim faktorima. Specifičnost nalaza u Crnoj Gori leži u preklapanju generacijske i identitetsko-nominacijske podele u kojem identifikacija kao "Bošnjak" (naspram "Musliman") snažno korelira sa religioznošću i generacijskom pripadnošću. Mlađe generacije biraju bošnjačku nominaciju koja implicira jaču religioznu komponentu identiteta, dok starije zadržavaju muslimansku nominaciju vezanu za veću sekularnost. Identitetska nominacija objašnjava podršku etničkim (bošnjačkim) partijama ($\beta=0,262$, $p<0,001$), ali post-ratna generacija istovremeno pokazuje negativnu sklonost ka ovim strankama ($\beta=-0,231$, $p=0,035$), ukazujući na generacijski pomak ka postidentitetskim političkim opcijama.

Ovakav odnos faktora stvara paradoks sličan BiH, gde su mlađe generacije religioznije (biraju bošnjački identitet), ali manje sklone etničkim partijama i preferiraju građanske opcije. Teorijska implikacija je da dostupnost alternativnih identitetskih nominacija omogućava različitim generacijama da artikuliraju svoje razlike kroz izbor različitih identitetskih pozicija, čime se generacijske podele institucionalizuju. U BiH i Srbiji, gde je maltene isključivo bošnjačka nominacija prisutna, ovaj mehanizam ne postoji, te generacijske razlike moraju pronaći druge artikulacije (obrazovanje u BiH, ili bivaju neutralizovane u Srbiji). Kao i u BiH, u slučaju Crne Gore se pokazuje inverzan obrazovni efekat u odnosu na klasične teorije sekularizacije, gde srednje obrazovanje pozitivno korelira sa religioznošću ($\beta=+0,200$, $p=0,012$), što sugeriše da u post-konfliktnim kontekstima gde je religija re-nacionalizovana, obrazovanje ne proizvodi automatski sekularizaciju već njegov efekat zavisi od funkcionalne uloge religije u datoj društvenoj strukturi.

Ekonomске orijentacije pokazuju inverzan generacijski obrazac u odnosu na religioznost u kojem su starije generacije egalitarnije (SFRJ generacija: $M=0,61-0,74$; post-ratna: $M=0,51-0,56$), što potvrđuje Inglehartovu (1977) teoriju postmaterijalizma. SFRJ generacija

formirana u relativnom prosperitetu socijalizma zadržava egalitarne vrednosti, dok post-ratna generacija formirana u ekonomskoj nesigurnosti pokazuje niže skorove. Međutim, sve generacije zadržavaju relativno visoke apsolutne nivoe podrške redistributivnim politikama (sve iznad sredine skale), što sugeriše da objektivni socioekonomski položaj Bošnjaka i istorijsko iskustvo socijalizma ublažavaju intenzitet generacijskog jaza. Crna Gora pokazuje najjače efekte ($\eta^2=0,104$), gde post-ratna generacija je jedini značajan prediktor ($\beta=-0,283$, $p=0,004$), dok Srbija ponovo pokazuje generacijsku homogenost ($F=0,044$, $p=0,956$), potvrđujući obrazac uniformnosti kroz sve vrednosne dimenzije. Ovo ukazuje na dvostruki paradoks – post-ratna generacija je religioznija ali manje egalitarna od starijih, što pokazuje da post-konfliktna socijalizacija proizvodi kombinaciju kulturnog konzervativizma i ekonomskog liberalizma. Ekonomska dimenzija pokazuje najslabiji prediktivni potencijal među svim vrednosnim orijentacijama ($R^2=3,6\%$), što sugeriše da ekonomske orijentacije nisu tako duboko kodirane vrednosti kao religioznost. Moguće je da post-ratna generacija internalizuje neoliberalni diskurs ("privatizacija = napredak") uprkos ličnom iskustvu ekonomske nesigurnosti, ili da SFRJ generacija pokazuje nostalgiju za socijalizmom kao periodom sigurnosti. Niska pouzdanost merenja ($\alpha=0,41$) dodatno ograničava interpretaciju ovih nalaza.

Komparativna sinteza pokazuje da Mannheimova teorija formativnih iskustava ima kontekstualne granice. Teorija je potvrđena u Crnoj Gori (gde generacija zadržava autonomni efekat), delimično potvrđena u BiH (gde se manifestuje kroz obrazovanje kao posredujuću varijablu), ali nije potvrđena u Srbiji gde formativna iskustva nisu proizvela trajne generacijske razlike. Mannheim pretpostavlja da se generacijske razlike javljaju kada postoji *generacijska lokacija*, *generacijski aktuelitet* i *generacijska jedinica*, ali ne specifikuje institucionalne uslove pod kojima formativna iskustva proizvode trajne podele. Nalazi pokazuju da formativna iskustva imaju dugoročni efekat samo u kontekstima gde institucionalna struktura „zamrzava“ i reprodukuje generacijske razlike kroz vreme. U Crnoj Gori, identitetsko-nominacijska podela koja je u vezi sa generacijom dobija institucionalnu potvrdu kroz partijski sistem. U BiH, obrazovni sistem i etnokratske institucije reprodukuju socio-strukturne podele koje koreliraju sa generacijom. U Srbiji, međutim, reaktivni etnicitet prevazilazi generacijske razlike, koji je zasnovan na zajedničkom manjinskom statusu koji neutralizuje generacijske razlike.

Ključno ograničenje ovog istraživanja je prosečni (*cross-sectional*) dizajn koji ne omogućava razlikovanje efekte kohorta, kao i starosne i periodične efekte. Nalaz da je post-ratna generacija religioznija od SFRJ generacije može biti rezultat generacijskog efekta (formativna iskustva proizvode trajne razlike), periodičnog efekta (svi Bošnjaci postaju religiozniji nakon 1995, ali mlađi pokazuju jaču adaptaciju), ili starosnog efekta (religioznost raste sa starošću). Kontrola kroz regresione modele, pokazuje da SFRJ generacija zadržava niske skorove religioznosti ($M=-0,28$) uprkos post-ratnoj renesansi, što sugeriše efekte kohorta kao dominantan, ali samo longitudinalni podaci mogu definitivno razlučiti ove efekte. Buduća istraživanja trebalo bi da uključe longitudinalne podatke koji omogućavaju praćenje istih ispitanika kroz vreme, kvalitativne metode koje mogu otkriti mehanizme kroz koje formativna iskustva oblikuju vrednosti, i komparativnu ekstenziju koja uključuje druge manjinske zajednice u regionu.

Nalazi pokazuju da generacijske podele postoje i imaju statistički značajan efekat, ali da njihova snaga, smer i manifestacija zavise od konteksta u kojem se odvijaju procesi političke socijalizacije. Pretpostavka da će mlađe generacije biti sekularnije, liberalnije i pro-evropski

orijentisane ne važi uniformno. U BiH mlađi su religiozniji ali politički sekularniji, u Srbiji nema razlika između generacija, dok samo u Crnoj Gori generacijski efekti prate očekivani smer sa autonomnim efektom koji opstaje i u multivarijantnom modelu. Kontekst ne samo da oblikuje generacijske efekte već može potpuno neutralizovati kohortne razlike kroz reaktivne mehanizme grupne solidarnosti. U post-konfliktnim društvima Zapadnog Balkana, gde etnička pripadnost ostaje dominantna linija podele, generacijske razlike nastaju samo kada institucionalna struktura dozvoljava njihovu artikulaciju. Bosna i Hercegovina pokazuje da čak i u etnokratskim sistemima mlađe generacije mogu tražiti izlaz iz nacionalno-religijskog okvira, ne kroz sekularizaciju identiteta, već kroz razdvajanje privatne religioznosti od javne politike. Ova diferencijacija, paradoksalna na prvi pogled, možda predstavlja najrealističniji put ka transformaciji post-Daytonske političke kulture. Rezultati nam sugerišu da se svaka buduća istraživanja moraju osloboditi uniformnih teorijskih modela i razviti kontekstualno senzitivne pristupe koji prepoznaju kako institucionalni okvir, etnopolitička polarizacija i manjinski status oblikuju generacijske efekte, naročito u post-konfliktnim društvima.

Data availability statement

The data supporting the findings of this study originate from the authors' original empirical research. All aggregated and analysed data necessary to understand the reported results are included in the manuscript. The raw data are deposited with the authors and will be made available upon reasonable request to the corresponding author, in accordance with relevant ethical and legal requirements.

Coauthor contributions

Jasmin Hodžić: Conceptualization, Data curation, Methodology, Software, Writing – original draft, Formal analysis

Uroš Kandić: Conceptualization, Investigation, Writing – review & editing, Validation

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Osvrti

Reviews

The Geo-economic Landscape: A Market and Social Approach

edited by Marijana Maksimović and Wolfgang Rohrbach, Belgrade: Institute of Social Sciences; Krems: University for Continuing Education Krems, Danube University Krems, 2024, 353 pp, ISBN 978-86-7093-283-8

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The edited volume entitled “The Geo-economic Landscape: A Market and Social Approach” was created as a result of the editors’ endeavor to bring closer to the readership the challenges stemming from recent trends in geoeconomics, which have been affecting businesses and countries’ economic development, competitiveness and policy-making. This scientifically significant and compelling series of research chapters is logically structured into two related units, analyzing the issues of geoeconomics from market and social perspective. The studies presented in this thematic collection of papers contribute to the body of knowledge on geoeconomics and open new avenues for further research.

The relevance of geoeconomics in contemporary multipolar world has been reviewed in the introductory part of the volume. The struggle for the dominant position among the countries has resulted in the emergence of new technologies and new ways of using resources. Soft power tools have been gaining pertinence in international relations. At a micro level, in addition to customers and human resources, information has been added to businesses’ strategic resources. The editors emphasize the relevance of social transformation in response to geo-economic changes, which represents an adaptation to new circumstances. The geo-economic approach implies a sectoral approach, and what can be expected is that governments in international relations, but also in domestic contexts, would favor industrial policies and sectors that are of strategic importance for the country. The chapter entitled “International Human Resource Management in the New Geoeconomic Order and Artificial Intelligence”, authored by Marijana Maksimović, Jelena Zvezdanović Lobanova and Ivan Nikolić (Institute of Social Sciences, Serbia) addresses the relevance of international human resource management (IHRM) in the context of globalization, rapid technological advancement and knowledge-based economies. Authors review the challenges of HRM in the context of geoeconomics, with particular attention to artificial intelligence (AI). Using AI, organizations deal with changes and align HRM strategies accordingly. While digital technologies have become a strategic imperative for companies, expected to improve employees’ performance and pro-

ductivity, their application is also associated with the employees' anxiety related to potential abuse of personal data and their feelings of being faced with impossible expectations and unlimited working time. The lack of empirical evidence on the impact of AI application on the performance of HRM as a corporate function, noted by the authors, clearly points to an avenue worthy of future examinations.

In the chapter entitled "Culture-related Contingencies in International Human Resource Management Hofstede's Framework in IHRM Research 1982-2024", Mikael Sondergaard (aarhus University, Denmark) highlights the relevance of understanding characteristics of national cultures and differences among the cultures for successful global HR strategies and response to challenges in international business environment. Bibliometric analysis of approximately 2600 papers on Hofstede's cultural dimensions, which spans the period of more than four decades of research, reveals the relevance of Hofstede's dimensional framework in HR management research, especially power distance and individualism. The moderating role of culture emerges as a relevant consideration in HRM of multinational companies operating across diverse cultures. The main finding is that the use of IHRM is increasing in both depth and breadth.

The chapter entitled "Human Resource Management Through the Prism of the Emergence and Development of the Concept", authored by Jelena Premović (University of the Economy Academy in Novi Sad, Faculty of Economics and Engineering Management) and Branislav Dudić (Comenius University in Bratislava, Faculty of Management, Slovakia), addresses the emergence and development of human resource management concept and underscores its relevance in contemporary business environment, influenced by globalization, increased competition and rapid technological changes. As the primacy shifts from capital-intensive to knowledge-intensive companies, human resources have been recognized as one of the key business assets, a source of competitive advantage and a driver of economic development. Proactive response of companies, which is essential in new business environment, necessarily emphasizes the pertinence of HRM. Lifelong learning and the development of long-term potential of employees to the full extent are underscored. Rapidly changing business environment poses challenges to HRM as a business function, such as e.g. how to integrate into corporate culture and retain knowledge-workers who are more likely to identify with their profession than a company that hires them. The impact of artificial intelligence (AI) and green economy orientation have been recognized as avenues worthy of future examination.

In the chapter entitled "The Multifaceted Implications of Generative Artificial Intelligence on Consumer Behaviour: A Conceptual Analysis", Dušan Mladenović (Masaryk University, Faculty of Economics and Administration, Czech Republic) delves into transformative potential of generative AI in influencing consumer behavior and its ethical and practical challenges. Generative AI has a potential to predict customers' future needs, based on previous interactions with a brand, which enables tailoring of marketing campaign in accordance with individual preferences, leading to a higher level of customer engagement with the brand, as well as to customer satisfaction and loyalty. Deeper insights into consumers' preferences and behavior can be obtained due to generative AI, as it facilitates collection of data from various sources, such as social media, online reviews and recommendations. These technology-based solutions are useful in many ways in new product development processes. Not only does it shorten

the development cycle, but it also ensures that new products are adjusted to customers' preferences and equipped with previously unanticipated albeit highly desirable features, which gives companies competitive advantage on the market. Whereas generative AI enables personalization of marketing efforts and higher levels of product and service customization, leading to enhanced customer experience, it is also associated with ever-rising customer expectations, possibilities of misleading and deceptive content and privacy and personal data security concerns, which could ultimately provoke trust issues and affect purchase decisions. In addition, as highlighted by the author, if data sets and model evaluations are not supervised, AI-generated outcome could further contribute to inequalities and marginalization of certain consumer segments.

In the chapter entitled "Die Neuvermessung der Versicherungswelt" Wolfgang Rorhah (Danube University Krems, Europäischen Akademie der Wissenschaften, Salzburg, Republik Österreich) indicates that insurance must adapt to changes for an adequate protection to be provided to persons and their property. The insurance industry should encourage governments as well as individuals to focus on prevention, protection and safety of persons and property. The insurance industry is constantly being modernized and harmonized with market innovations. Digitalization and artificial intelligence are interlinked with the insurance industry and at the same time pose many challenges to the industry. In addition, there are also other key impact factors affecting insurance industry, such as population aging, health status and work flexibility.

In their chapter entitled "Organizational Culture Through Technological Infrastructure And Innovation", Emanuela Esmerova (MIT University, Republic of North Macedonia) and Riste Temjanovski (Goce Delcev University, Faculty of Economics, Republic of North Macedonia) analyze multidimensional nature of organizational culture and its interrelatedness with organizational structure in contemporary highly digitalized business landscape. Organizational culture, which includes values, beliefs, behavioral norms, but also symbolic elements, such as stories, myths and rituals, is shaped by historical, social and technological influences. It affects employee behaviour and interactions among employees, and significantly contributes to business success, calling for multicultural literacy of HR managers. The authors further discuss the impact of information technology on communication channels and organizational structure, which further require changes in organizational culture, emphasising the lack of empirical evidence on the influence of information technology on organizational culture.

In the chapter entitled "Threats To National Security in The Context of Digital Transformation Of The Economy And Public Administration", Belyaevskaya-Plotnik Lyubov A. (Plekhanov Russian University of Economics, Center for Scientific and Methodological Support of Strategic Planning; Institute of Economics of the Russian Academy of Sciences) analyzes expected effects of digital transformation on economy, public services and companies. Whereas digital transformation is expected to result in an improved quality of living, due to improved speed of service delivery, and higher level of business performance, it is also associated with potential risks to national security. In addition, the author highlights and calls for further empirical research on potential risks of digital transformation, and their impact on company's performance, such as the lack of interdepartmental integration, the lack of data verification and validation, as well as high and non-transparent costs related to the creation of platforms.

The chapter entitled “From Neomercantilism To Free Trade And Back”, authored by Marjan Svetličič (University of Ljubljana, Faculty of Social Sciences, Slovenia) deals with the evolution of protectionism and pros and cons of free trade, as well as protectionist interventions in the changing global environment, influenced by growing geopolitical tensions. With the rise of China, including the domains of technology and telecommunications, advanced economies turn to neomercantilistic measures, such as hidden non-tariff barriers, import or export quotas and voluntary export restraints, to defend their privileged positions in international economic relations. While actively promoting free trade and demanding free access to foreign markets, leading economies protect their industries by preventing access of foreign goods to domestic markets.

Environmental degradation and limited reserves of fossil fuel have prompted a rise in popularity of biofuels. Biodiesel, as a non-toxic and biodegradable fuel, primarily produced from waste remains of edible vegetable oil, is increasingly popular fuel in the combustion engines of the machinery used in construction industry, agriculture and transportation in the European Union. Currently, high production costs are the main obstacle to its more widespread use. The chapter entitled “Research Of The Possibility And Development Of Biodiesel Production From Lipids And Waste Lipids Of The Industry And Hospitality”, compiled by Tamara Premovic (University Union – Nikola Tesla, Faculty of Information Technologies and Engineering, Serbia) and Seddiq Mrihil Ali Esalami (Azzaytuna University, Libya), deals with the possibility of producing biodiesel from waste lipids in hospitality industry and lipids and by-products of food processing industry, taking into account their constant availability, low price and environmental footprint of their emission into the environment. The chapter opens new avenues for research on more economically justified production of biofuels, as well as new pathways towards higher levels of an economy’s energy independence.

Klaus Zapotoczky (Johannes Kepler University – JKU, Linz, Austria), in his chapter entitled “Zur Bedeutung von Religion für die Gesellschaft”, emphasizes the role of religion in the geoeconomic context, highlighting that religion in such conditions can be a means to achieving goals related to the competitive battle with another country. This work emphasizes the impression that peace conferences only somewhat resolve disputes between countries and then, only for the conflicts between the opposing narratives of the parties reoccur after a few years or decades. This questions the proper understanding of religion and whether it leads to “eternal peace” through conquest-driven ambitions. However, the author states that love as a driving force, as well as serving one another, remain ongoing postulates of religion.

In the chapter entitled “Harmonie Von Ökonomie Und Von Kulturerbe: Die Tradition Der Christkindlmärkte”, Silke Vollenhofer (Universität für angewandte Kunst, Wien, Austria) indicates a specific connection between the economy and culture that emerged from the tradition of a Christian society. Within this context, the author includes the senses through which this traditional symbolism is retained in memory over the long term and can be transmitted. She emphasizes that the economic principle emerges through human behavior within a community. This intangible cultural heritage, which remains in the senses, essentially becomes a driving force for action, i.e. consumer behavior, as described by the modern language, encompassing the sphere of thoughts, the sphere of feelings, and finally, the sphere of action. However, the culture consists of traditional values and beliefs, and as such, it can refer to an

entire geo-economic region, representing a connection or link between neighboring countries that are similar in their historical and cultural characteristics.

In the chapter entitled “Geopolitical And Social Significance Of The Magna Graecia Development – From Yesterday To Today”, Alexsios Panagopoulos (Ministry of Education of the Republic of Greece; International Slavic Academy of Sciences, Education, Arts and Culture, Moscow; European Academy of Sciences and Arts, Class V, Social, Political Sciences and Law) discusses Magna Graecia, as an important part of the European civilization and its social and geopolitical history, emphasizing the relevance of culture as a social worldview shaped by peoples. The author highlights a new geopolitical role of Magna Graecia in economic and cultural unification of the Mediterranean peoples.

The thematic collection highlights the geo-economic redistribution of power between the USA, on one side, and China, Russia, and India, on the other. In their economic policies these countries emphasize those industrial sectors that enable them to gain geo-economic and geostrategic advantages in international relations. The collection of papers highlights the interdependence between the sectoral resource approach and foreign policy in geo-economics. What is evident is that there are connections between the sectors, such as the trade sector (protectionism), financial sector (insurance), information technology sector (artificial intelligence and digitalization), labor market sector (HRM), and the energy sector. This thematic collection of papers displays that there is an impact of contemporary economic trends on countries and their business models, whereas the social perspective is a part of the geo-economic approach, or it appears as a geosocial approach, which includes religion, cultural heritage, or propaganda. Related cultural and geographical areas get connected, in line with nearshoring, where business practices and processes are transferred as a form of outsourcing, and where business partners are sought from neighboring countries in close proximity. However, this indicates the emergence of numerous smaller alliances, dialogues, or platforms based on the values and beliefs of a geographical region.

This thematic collections of papers contains original research papers, based on scientifically grounded methods, utilizing both quantitative and qualitative data. As such, it yields new and original conclusions and recommendations for further research. Herein, current topics have been studied, by utilizing relevant scientific literature, with new perspectives being offered and a foundation for further research established. The thematic collection provides an original approach to examining current challenges of economic development in an era of intense geoeconomic competition.

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Visions of Inequality: From the French Revolution to the End of the Cold War

by Branko Milanovic, Cambridge, Massachusetts; London, England: Belknap Press of Harvard University Press, 2023, 369 pp, ISBN 10:0674264142 (paperback)

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The book by Professor Branko Milanovic, entitled “Visions of Inequality: From the French Revolution to the End of the Cold War” follows inequality from the point of view of economic population and distribution over a period of about 200 years. The evolution of economic thought begins with the scientific work of François Quesnay, followed by Adam Smith, David Ricardo, Karl Marx, Vilfredo Pareto and Simon Kuznets. The book is a scientific study, but also an interesting read, which depicts inequality throughout the centuries in an interesting and colourful way. What is more, inequality is the topic that professor Milanovic has been dealing with for decades.

So this is a historical approach to income distribution, so the account does not involve a normative approach, but there are a lot of empirical data included. In the scientific literature, the historical approach is little used. In Milanovic’s opinion, the best studies on income distribution combine narration, theory and empiricism. Here, data from the past are processed in a modern way. In writing this book, the author used a large number of references, processed a large number of texts, where the literature on Marx alone had over 120 volumes. The same is true of Adam Smith. In their works, they mention a special type of racial exploitation. When Pareto is added, the work by the three authors cover economics, political science, sociology, philosophy, anthropology and epistemology. However, for the majority of authors, the study of inequality predominant involves men, not women or disadvantaged groups. Only in Quesnay, Marx, Ricardo and Smith, inequality is a class phenomenon. ‘Milanovic’s book represents a credible and scientific contribution to the study of inequality issues, as interest in these increased with the beginning of the 21st century. The book abounds in graphs, formulas, tables and quotes from the mentioned scientists, which, with the help of the author’s interpretation, should complete the narrative presentation of the understanding of inequality. The data from Milanovic’s book are important for economic science, but also for social sciences in general.

The book contains a Prologue (pp. 1–30), followed by seven chapters, of which the first six bear the names of the mentioned authors, namely: Chapter One: François Quesnay: Social Classes in a “Rich Agricultural Kingdom” (pp. 31–46); Chapter Two: Adam Smith: “Progress of Opulence” and an Implicit Theory of Income Distribution (pp. 47–81); Chapter Three: The Ricardian Windfall: David Ricardo and the Absence of the Equity–Efficiency Trade-off (pp. 82–105); Chapter Four: Karl Marx: The Decreasing Rate of Profit but Constant Pressure on Labor Incomes (pp. 106–162); Chapter Five: Vilfredo Pareto: From Classes to Individuals (pp. 163–188); Chapter Six: Simon Kuznets: Inequality during Modernization (pp. 189–216). Chapter Seven is entitled “The Long Eclipse of Inequality Studies during the Cold War” (pp. 217–286) and ends with “Epilogue: The New Beginning” (pp. 287–297). The chapters are followed by the Notes (pp. 299–335), Acknowledgments (pp. 337–339) and Index (pp. 341–359). The works of these economists deal directly or indirectly with income inequality or income distribution.

François Quesnay (the founder of political economy with the Physiocrats) studied inequality because it was very high in his time (Chapter 1). According to Quesnay, the goal of economic activity was the production of surpluses. Physiocrats introduced for the first time in economics the delimitation of the principle of economic class. “It is important to note that the only capitalists in the physiocratic system are the tenant-farmers who rent the land from the landlords.” (p. 40).

Furthermore, Adam Smith (worked as Commissioner for Scottish Customs, considered as development economist), wrote *The Wealth of Nations* as a sceptical observer of economic life and social customs (Chapter 2). In his time, England and Scotland were developing economies, and inequality was very high. Observed in today’s units, it was in the range of 45 to 51 Gini coefficient. In addition to inequalities, he was interested in rent, profits and wages, and according to him, the prosperity of the largest class of workers and peasants was an indicator of the economic success of the state. He believed that high wages and low interest rates were the most desirable for a society that wanted to advance economically. “He was mainly interested in the three components that make up the ‘natural price’ (rent, profit, and wages) and his theory of distribution and the attendant class structures emerged as the byproduct of price formation.” (p. 61).

As for David Ricardo, from the very beginning of his scientific career, he was troubled by the issues of growth and distribution (Chapter 3). For him, three classes were important in the *Principles*: workers, capitalists and landowners. Ricardo advocated bourgeois production insofar as it meant the unlimited development of the social product. This does not mean that Ricardo denied raising the standard of living in the upper class. For him, there was no limit to the employment of capital as long as it brought any profit. “The best we can do to make it consistent is to argue that Ricardo foresaw an increase in real wages over the long term as society became richer, but for the purposes of his analysis, and as a practical matter, he preferred to assume that real wages were constant.” (p. 99).

Karl Marx also deals with issues of poverty and inequality, with which he wanted to describe the reality of the capitalist society (Chapter 4). In his time, inequality was pronounced in Britain, while in the late 19th century Germany, inequality was increasing. For Marx, equality was only a political concept, and the true meaning of the proletarian demand for equality was the abolition of classes. For Marx, there were three classes: landowners, workers and

capitalists. Workers were divided into two categories, landless peasants and proletarians. The last class was that of the lumpenproletariat – unemployed beggars and vagabonds. The mentioned classes were the basis for income distribution. “Marx’s theory of exploitation is an integral part of his theory of distribution.” (p. 121). Thus, Marx’s interest in wages and the reduction of the profit rate is highlighted here. In doing so, Marx defines two types of work, complex and simple work.

When one speaks of Vilfredo Pareto, one refers to the writings that abound in his penchant for paradox (Chapter 5). The class struggle is not only limited to the two classes of the proletariat and the capitalists, but also occurs within the elites (social hierarchy) fighting for power. “While earlier economists were primarily, or even solely, interested in functional income distribution, which then resolved itself into interpersonal income inequality, Pareto was the first to look at interpersonal equality as such.” (p. 173). There is Pareto’s law and Pareto’s coefficient, which ranges between 1.5 and 2. Pareto argued that a change in the y-equality coefficient could only occur through a change in real income.

Simon Kuznets was an influential economist, and his definition of national product was adopted by the United Nations (Chapter 6). His work on the distribution of income is not widely accepted, but it is present in economics. He reduced the analysis of inequality to the level of the individual, which was made possible by the availability of the data from the income tax records that were kept on the income of the individual. At the time of his activity, the Gini coefficient was over 50 in the USA in 1933, while it fell to 34 in 1957. Kuznets’ model contains five variables, namely the share of the urban population, the level of rural inequality, the level of urban inequality, the mean rural income and urban median income. “Kuznets does not question the positive role of incentive of higher income; he questions whether the greatest gain can be realized through the provision of such an incentive to the rich or to the poor.” (p. 192). Somehow, after Kuznets’ research, interest in inequalities declined.

Milanovic himself notes that there is no uniformity of theory, empiricism and narrative among the six authors. This is logical, since over the period of two centuries, access to data was very different.

When talking about “Studies of Inequality during the Cold War”, it can be said that this is a period of greater availability of data (Chapter 7). Studies of income distribution after World War II pushed economists into the service of ruling ideologies due to the competition between communism and capitalism. Marxists argued that classes did not exist, but that people merely owned different properties. In socialism, both the state and party hierarchies played a role similar to that of the capitalist hierarchy. There were two reasons why inequality studies were weak in the period of advanced capitalism from 1960 to 1990. The first reason was the reduced interest in the study of inequality, and the second involved political pressures that made the subject of inequality “undesirable”. Studying the Chinese concept of inequality, the author identified the lack of income inequality studies in that model of socialism, as well as the lack of good methodological frameworks. “On the other hand, China, especially during the period of the Cultural Revolution, provided one of the most egalitarian examples ever: earnings of its manual and nonmanual workers were generally equalized, and in many cases, manual workers’ earnings exceeded nonmanual workers’.” (p. 237). Based on this, the author concludes that studies of inequality stagnated in capitalism, but also in socialism from the

time after World War II until the end of the 20th century. It was considered that inequalities were eradicated and that there was no need to study them. However, in the 21st century, due to the efforts of Piketty, Milanovic, and other economists, political scientists, as well as sociologists, studies of inequality have been becoming interesting again.

This book encourages a dialogue about inequalities in the modern concept, a discussion on the issues of global inequality, income inequality in a multipolar world, topics that Professor Milanovic also interprets masterfully. This approach to the study of inequality shows how economic thought on inequality has evolved. The only thing that seems to be missing is more detailed research related to the inequality of Asian countries, and that can certainly be one of the next research topics for Professor Milanovic.

Branko Milanovic is a professor and senior scholar at the Stone Center on Socio-Economic Inequality, at the Graduate Center New York. He held lectures by invitation at the London School of Economics, Paul H. Nitze School of Advanced International Studies of Johns Hopkins University, University of Maryland, and the Carnegie Endowment for International Peace in Washington. He is a visiting professor at the Faculty of Economics in Belgrade, All Souls College of the University of Oxford and the Carlos III University in Madrid. He worked as a leading economist at the World Bank in Washington. Branko Milanovic, together with Professor Mariana Mazzucato, received [The Leontief prize](#), the award for pushing the boundaries of economic thought in 2018.

He is the author of several books on inequality, and the book *Global Inequality* (2016) received two major awards, namely the Bruno Kreisky Award for the best political book in 2016; and the Hans Mathefer Prize for the best book in economics in 2018. His books have been translated into more than fifteen languages. His research works are published in the most prestigious scientific journals.

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- Autori su dužni da se pridržavaju uputstva za pripremu radova. Rukopisi u kojima ova uputstva nisu poštovana biće odbijeni bez recenzije.
- Radovi treba da budu napisani na engleskom (uz konzistentu upotrebu britanske ili američke varijante) ili latiničnom pismu srpskog jezika (uključujući sve književne varijante nekadašnjeg srpskohrvatskog).
- Rukopis treba da bude podnet kao datoteka tipa docx ili doc. Format teksta treba da bude što jednostavniji.
- Nakon prihvatanja rada za objavljivanje, autori će biti u obavezi da konačnu verziju rukopisa formatiraju koristeći zvanični Word šablon časopisa, koji će im biti blagovremeno dostavljen, u skladu sa propisanim smernicama.
- Koristiti jednostruki prored uz obostrano poravnanje. Gde god je podesno, treba koristiti kurziv, supskripte, superskripte, kao i pogodnosti tekst procesora za prikazivanje jednačina. Dozvoljena su dva nivoa podnaslova. Fusnote se obeležavaju sukcesivno arapskim brojevima. Reference citirane u tekstu nikako ne navoditi u fusnotama, već isključivo u spisku referenci.

- **Članak** može imati **najviše 8.000 reči**, što uključuje apstrakt na jeziku glavnog teksta, ali ne i spisak literature i apstrakt na engleskom (za radove na srpskom). U izuzetnim slučajevima, redakcija može odobriti i duže radove.
- Stil pisanja i jezička kompetencija mogu biti kratko komentarisani u procesu recenziranja; sitnije propuste koriguje lektor; međutim, članci koji obiluju slovničkim i gramatičkim greškama ne mogu se prihvatiti za objavljivanje. **Koristiti rodno neutralan jezik.**
- **Preporučujemo da članke dostavljate na engleskom jeziku**, jer su takvi radovi vidljiviji i imaju veće šanse da budu citirani. Neophodno je da kvalitet engleskog bude na visokom nivou, jer redakcija vrši samo korekturu teksta.

Članak treba da bude strukturiran na sledeći način: **naslov, apstrakt, ključne reči, glavni tekst (uvod, metodi, rezultati, diskusija i zaključak), spisak referenci.**

Naslov opisuje članak i/ili glavne odnose između varijabli; treba da bude jasan sam po sebi i ne preterano dugačak (do 115 karaktera). Ako je moguće, treba izbegavati upotrebu skraćenica u naslovu.

Apstrakt se dostavlja na istom jeziku na kojem je napisan rukopis. Radovi napisani na srpskom jeziku (uključujući sve standardne varijante nekadašnjeg srpsko-hrvatskog jezika) moraju dodatno sadržati **naslov, apstrakt i ključne reči na engleskom jeziku.** Apstrakt treba da ima između **250 i 300 reči**, odražavajući osnovnu strukturu rada (predmet i cilj, metodi, rezultati i zaključak), uz upotrebu termina koji se često koriste za indeksiranje i pretragu u referentnim periodičnim publikacijama i bazama podataka. U apstraktu ne treba navoditi reference.

Ključne reči (pojmovi, geografske lokacije, rezultati) navode se u posebnom redu ispod apstrakta i moraju biti relevantne za temu i sadržaj rada. Dobar izbor ključnih reči preduslov je za ispravno indeksiranje rada u referentnim periodičnim publikacijama i bazama podataka. Navesti **pet ključnih reči** odnosno deskriptora na jeziku rada.

Tekst članka bi trebalo da ima sledeću strukturu odeljaka: *uvod, metodi, rezultati, diskusija i zaključak* (ne nužno pod ovim nazivima). U zavisnosti od sadržaja i kategorije članka, moguće je izostaviti neke od odeljaka. Na primer, kod preglednog članka, moguće je izostaviti odeljke o metodima i rezultatima, dok naučna kritika ili polemika može uključiti samo odeljke o motivima rada, konkretnim istraživačkim problemima i diskusiju.

Reference se navode **isključivo na latiničnom pismu** kako bi se indeksnim bazama omogućilo brzo i tačno indeksiranje, a globalnom auditorijumu lako razumevanje. Spisak referenci treba da sadrži samo publikacije koje su citirane u tekstu. Navedene publikacije treba da budu poređane po abecednom redu, bez numeracije, i da uključuju imena (prezime i početno slovo imena) svih autora. Ukoliko citirana referenca ima osam ili više autora, u spisku se navode imena prvih šest autora, zatim (...) i ime poslednjeg autora. Poželjno je da većina referenci bude novijeg datuma, demonstrirajući aktuelni naučni značaj prikazanog istraživanja. U slučaju navođenja više radova istog autora, najpre se navodi najranije objavljeno delo. Autori bi trebalo da ograniče broj citiranih referenci tako što će se pozivati samo na najrelevantnije radove. **Ćirilичne reference obavezno transkribovati na latinicu.** *Gde god je dostupan, na kraju reference obavezno navesti njen DOI broj ili URL.*

Časopis primenjuje APA stil citiranja (7. izdanje, American Psychological Association). Radovi koji nisu u skladu sa APA 7 biće vraćeni autorima na tehničku doradu pre upućivanja na recenziju.

PRIMERI ZA NAVOĐENJE RAZLIČITIH VRSTA RADOVA:

Monografije, knjige:

Alho, J. M., & Spencer, B. D. (2005). *Statistical demography and forecasting*. Springer. <https://doi.org/10.1007/0-387-28392-7>

Monografije, knjige sa više izdanja:

Todaro, M. P., & Smith, S. C. (2012). *Economic development* (11th ed.). Pearson.

Delovi štampanih monografija ili zbornika radova:

De Abreu, B. S. (2001). The role of media literacy education within social networking and the library. In D. E. Agosto & J. Abbas (Eds.), *Teens, libraries, and social networking* (pp. 39–48). ABC-CLIO.

Delovi monografija ili zbornika radova pronađeni na internetu:

Nikitović, V. (2018). The end of demographic transition in Kosovo: Does the meaning of the population factor change? In D. Proroković (Ed.), *Kosovo: Sui generis or precedent in international relations* (pp. 299–320). Institute of International Politics and Economics. https://www.diplomacy.bg.ac.rs/wp-content/uploads/2018/11/2018_Kosovo_Dusan_Prorokovic.pdf

Članci iz časopisa:

Lutz, W., Sanderson, W., & Scherbov, S. (2001). The end of world population growth. *Nature*, 412(6846), 543–545. <https://doi.org/10.1038/35087589>

Radovi sa konferencija ili poster prezentacije:

Rašević, M. (2006). *Abortion problem in Serbia*. Paper presented at the European Population Conference (EPC 2006), Liverpool, United Kingdom. <http://epc2006.princeton.edu/papers/60355>

Istraživački izveštaji, radni dokumenti:

Dudel, C., & Schmied, J. (2019). *Pension adequacy standards: An empirical estimation strategy and results for the United States and Germany* (MPIDR Working Paper WP-2019-003). Max Planck Institute for Demographic Research. <https://www.demogr.mpg.de/papers/working/wp-2019-003.pdf>

Doktorske disertacije pronađene u bazama:

Galjak, M. (2022). *Premature mortality in Serbia* [Doctoral dissertation, University of Belgrade]. <https://nardus.mpn.gov.rs/handle/123456789/21191>

Sadržaj internet stranica:

Statistical Office of the Republic of Serbia. (2018). *Vital events: Data from 2011*. Statistical database. <http://data.stat.gov.rs/Home/Result/18030102?languageCode=en-US>

Dozvoljene su skraćenice u tekstu, ali ne u listi referenci, osim ako je skraćenica deo zvaničnog imena.

U tekstu (prvi put): (Statistical Office of the Republic of Serbia [SORS], 2018)

Kasnije u tekstu: (SORS, 2018).

Ali u spisku literature uvek ostaje: Statistical Office of the Republic of Serbia.

Zakonodavstvo (zakoni, uredbe, sporazumi, statuti itd.):

Citiranje domaćih izvora prava (ne treba prevoditi na engleski):

Zakon o radu. (2005). Službeni glasnik Republike Srbije, br. 24/2005, 61/2005, 54/2009, 32/2013, 75/2014, 13/2017, 113/2017 i 95/2018. https://www.paragraf.rs/propisi/zakon_o_radu.html

Kada je puni naziv zakona, međunarodnog ugovora ili drugog normativnog akta suviše dug za praktičnu upotrebu u tekstu, dozvoljeno je koristiti skraćeni naziv dokumenta (short title) i godinu u navodima u tekstu, u skladu sa APA 7 standardom. Isti skraćeni naziv mora se dosledno koristiti i kao autor reference u spisku literature, dok se puni zvanični naziv dokumenta navodi kao naslov reference.

Navod u tekstu: (Directive (EU) 2024/2831, 2024).

Spisak literature: Directive (EU) 2024/2831 of the European Parliament and of the Council of 23 October 2024 on improving working conditions in platform work. (2024). Official Journal of the European Union, L 2024/2831.

Navod u tekstu: (Winterwerp v. the Netherlands, 1979)

Spisak literature: European Court of Human Rights. (1979, October 24). *Winterwerp v. the Netherlands* (Application No. 6301/73). <https://hudoc.echr.coe.int/eng#%7B%22itemid%22:%5B%22001-57597%22%5D%7D>

Novinski članci iz štampanih izdanja:

Frost, L. (2006, September 14). First passengers ride monster jet. *The Salt Lake Tribune*, p. A2.

Novinski članci pronađeni na internetu:

Cohen, P. N. (2013, November 23). How can we jump-start the struggle for gender equality? *The New York Times*. <https://opinionator.blogs.nytimes.com/2013/11/23/how-can-we-jump-start-the-struggle-for-gender-equality/>

Citiranje referenci u okviru teksta podrazumeva navođenje prezimena autora i godine objavljivanja reference:

Direktan citat: Lee (1998);

Indirektan citat: (Rašević, 2009; Stanić & Matković, 2017).

Doslovno citiranje: "...economic growth" (Lutz, 2014, p. 530).

U slučaju *tri ili više autora:* (Alkema et al., 2011).

U slučaju citiranja *dva ili više radova istog autora:* (McDonald 2002, 2006).

U slučaju *više od jedne reference istog autora u istoj godini:* (Raftery et al., 2012a, 2012b).

Sekundarno citiranje (citiranje rada koji nije direktno konsultovan) treba izbegavati kad god je to moguće, a preporučuje se korišćenje originalnog rada radi tačnosti interpretacije. Ukoliko se sekundarno citiranje ne može izbeći, u tekstu je neophodno jasno navesti i originalnog autora i rad iz kojeg je podatak preuzet, kako bi se naznačilo da original nije neposredno korišćen (npr. Sauvy, 1954, prema Penev, 1997). U spisku literature navodi se isključivo rad koji je autor zaista koristio (u ovom primeru Penev, 1997).

Tabele ne treba da prelaze dimenzije jedne stranice i ne treba da budu preopterećene pomoćnim linijama. Tabele treba da imaju jasne, samoobjašnjavajuće naslove. Treba da budu obeležene arapskim brojevima po redosledu kojim se pojavljuju u tekstu. Uredništvo treba da ima potpunu kontrolu nad tabelama, odnosno da može klikom unutar tabele da uređuje fontove reči napisanih u tabelama kako bi se zadovoljio stil časopisa i ispravile pravopisne greške. **Sve tabele treba da budu uključene u sam tekst rukopisa.**

Grafikoni, kartogrami, slike, crteži i druge ilustracije treba da budu dostavljeni i kao **posebne datoteke u jpg formatu (300dpi)**. Autori bi trebalo da dostave svoje grafikone/kartograme/ilustracije u boji za elektronsku verziju članka. Ipak, treba imati u vidu da je štampano izdanje časopisa crno-belo. Sve ilustracije treba da budu označene kao "Grafikon" i numerisane arapskim brojevima po redosledu kojim se pojavljuju u tekstu (npr. Grafikon-1.jpg).

Podatke i/ili proračune korišćene za kreiranje grafikona i tabela, takođe, treba dostaviti kao posebne datoteke (bez obzira što nisu sastavni deo rukopisa). Npr. ukoliko su grafikoni napravljeni u MS Excel-u, pobrinuti se da dozvoljavaju pristup izvornim podacima na osnovu kojih su kreirani.

Naslovi tabela i grafičkih priloga stoje iznad tabela i grafičkih priloga. Legende tabela i grafičkih priloga se nalaze ispod njih, i treba da sadrže izvore podataka, a eventualne napomene u novom redu ispod izvora. Upućivanje na tabele i grafičke priloge u samom tekstu mora biti u skladu sa numeracijom (npr. u tabeli 1), a ne sa pozicijom priloga u tekstu (npr. u gore navedenoj tabeli). Konačna pozicija tabela i grafičkih priloga u tekstu može biti drugačija od izvorne zbog postizanja što boljeg preloma članka. Uredništvo neće objaviti sve priloge ako proceni da ih ima previše, kao ni one lošeg kvaliteta.

PRIKAZI knjiga, časopisa i drugih radova iz oblasti nauke o stanovništvu na početku treba da sadrže potpune bibliografske podatke prikazanog dela (ime i prezime autora dela, naslov, naziv izdavača, sedište izdavača, godinu izdanja, ukupan broj strana).

OSVRTI, takođe, na početku treba da sadrže sve relevantne informacije o naučnom skupu, konferenciji, publikaciji ili akciji na koju se odnose.

Format i tip slova u prikazima i osvrtima treba da bude identičan onom u člancima.

MANUSCRIPT SUBMISSION

Manuscripts should be exclusively submitted at the following web address: <http://stnv.idn.org.rs/about/submissions>

The new Instructions for Authors, including mandatory use of the APA 7th edition referencing style, apply to all manuscripts submitted on or after 10 January 2026.

- By submitting a manuscript, authors warrant that their contribution to the journal is their original work, that it has not been published before, that it is not under consideration for publication elsewhere, and that its publication has been approved by all co-authors (if any) and tacitly or explicitly by the responsible authorities at the institution where the work was carried out.
- Authors are exclusively responsible for the contents of their submissions and the validity of the experimental results therein. They must make sure that they have permission from all involved parties to make the data public.
- Authors wishing to include figures or text passages that have already been published elsewhere are required to obtain permission from the copyright holder(s) and to include evidence that such permission has been granted when submitting their papers. Any material received without such evidence will be assumed to originate from the authors.
- Manuscripts are pre-evaluated at the editorial office to check whether they meet basic publishing requirements and quality standards. They are also screened for plagiarism by iThenticate.
- Authors will be notified by email upon receiving their submission. Only those contributions that conform to the following instructions can be accepted for peer review. Otherwise, the manuscripts shall be returned to the authors with observations, comments, and annotations.

Only one document should be uploaded. The manuscript file (e.g. Main-text.docx), that contains the manuscript **with no information** about authors and supporting agencies should be uploaded as 'Article text' by choosing this option from the drop-down menu of article components in the 'Upload submission file' section. All the identifying information will be filled out directly on the platform, so there is no need for a separate document with identifying information.

MANUSCRIPT PREPARATION

- Authors must follow the instructions for authors strictly. If they fail to do so, their manuscript will be rejected without review.
- Manuscripts shall be submitted in English (with consistent British or American spelling) or Serbian (including all standard variants of the former Serbo-Croatian language).
- The manuscript should be prepared in Microsoft Word (.doc or .docx format). Authors are asked to avoid complex formatting, embedded text boxes, manual hyphenation, and extensive footnotes.
- Upon acceptance for publication, authors will be required to format the final version of the manuscript using the journal's official Word template, which will be provided to them in a timely manner, in accordance with the provided guidelines.
- The manuscript should be single-spaced, justified. The use of italic, superscript, and subscript is encouraged, as is the use of equation editors embedded in text processors. Two levels of sub-headings are allowed. Footnotes are numbered consecutively in Arabic numerals. References quoted in the text should not be included in the footnotes, but in the reference list.

- **The manuscript** can be **up to 8,000 words** long, not including the list of references and the abstract. In specific cases, the editorial board may accept longer papers.
- Writing style and language competencies should be briefly commented upon in the process of peer review; the journal's proofreader corrects minor glitches. However, manuscripts full of spelling and grammatical errors cannot be accepted for publication. **Authors should use gender-neutral language.**

The manuscript should be divided into the following ordered sections: **title, abstract, keywords, the text of the manuscript** (introduction, methodology, results, discussion, and conclusion), **and list of references**. Figures should also be submitted as separate files.

The title describes the manuscript and/or the main relations among variables; it should be clear, not too long, but explanatory (up to 115 characters). Abbreviations should be avoided in the title if possible.

The abstract should be provided in the same language as the manuscript. Manuscripts written in Serbian (including all standard variants of the former Serbo-Croatian language) must additionally include a title, abstract, and keywords in English. **The abstract** should be **between 250 and 300 words** long, concisely reflecting the structure of the manuscript (background, objective and aims, methods, results, conclusions and comments) so that its original text can be used in referential periodicals and databases. Do not include citations in the abstract.

Keywords (concepts, locations, results) are listed in a separate line at the end of the abstract. Keywords should be relevant to the topic and content of the paper. An accurate list of keywords will ensure the correct indexing of the paper in referential periodicals and databases. There should be **five keywords** provided in the same language as the manuscript.

The text of the manuscript should consist of the following sections: *introduction, methods, results, discussion, and conclusions* (not necessarily under these names). Depending on the type of the manuscript, it might be possible to omit some of the sections. For example, in a review article, it is possible to omit sections on methods and results, while scientific criticism or polemics may include only sections on the motives of the work, specific research problems, and discussion.

References shall be cited in Roman script to allow rapid, accurate indexing, and easy comprehension by the journal users. The list of references shall only include papers that are cited in the text. Place them in alphabetical order, and do not number them. Include all names of authors. When there are eight or more authors, include the first six authors' names and then use ellipsis points (...) before concluding with the last author's name. Authors are encouraged to cite recent and relevant literature in order to demonstrate the current scientific relevance of the research. In cases where more than one reference by the same author is cited, works should be listed chronologically, from the earliest to the most recent. If an article is submitted to a journal and publicly available as a pre-print, the pre-print may be cited. Authors should limit the number of cited references by referring to the most relevant papers. *Cyrillic references must be transliterated into Latin. Where available, indicate at the end of a reference its DOI or URL.*

The journal follows the APA 7th edition (American Psychological Association) referencing style. Submissions that do not comply with APA 7 will be returned to authors for technical revision prior to peer review.

EXAMPLES OF DIFFERENT TYPES OF REFERENCES:

Monographs, books

Alho, J. M., & Spencer, B. D. (2005). *Statistical demography and forecasting*. Springer. <https://doi.org/10.1007/0-387-28392-7>

Monographs, books with more editions

Todaro, M. P., & Smith, S. C. (2012). *Economic development* (11th ed.). Pearson.

Chapters in edited books / monographs or collections of papers (print)

De Abreu, B. S. (2001). The role of media literacy education within social networking and the library. In D. E. Agosto & J. Abbas (Eds.), *Teens, libraries, and social networking* (pp. 39–48). ABC-CLIO.

Chapters in edited books / monographs or collections of papers (online)

Nikitović, V. (2018). The end of demographic transition in Kosovo: Does the meaning of the population factor change? In D. Proroković (Ed.), *Kosovo: Sui generis or precedent in international relations* (pp. 299–320). Institute of International Politics and Economics. https://www.diplomacy.bg.ac.rs/wp-content/uploads/2018/11/2018_Kosovo_Dusan_Prorokovic.pdf

Journal articles

Lutz, W., Sanderson, W., & Scherbov, S. (2001). The end of world population growth. *Nature*, 412(6846), 543–545. <https://doi.org/10.1038/35087589>

Conference paper or poster presentation

Rašević, M. (2006). *Abortion problem in Serbia*. Paper presented at the European Population Conference (EPC 2006), Liverpool, United Kingdom. <http://epc2006.princeton.edu/papers/60355>

Research reports, working papers

Dudel, C., & Schmied, J. (2019). *Pension adequacy standards: An empirical estimation strategy and results for the United States and Germany* (MPIDR Working Paper WP-2019-003). Max Planck Institute for Demographic Research. <https://www.demogr.mpg.de/papers/working/wp-2019-003.pdf>

Doctoral dissertation found on a database

Galjak, M. (2022). *Premature mortality in Serbia* [Doctoral dissertation, University of Belgrade]. <https://nardus.mpn.gov.rs/handle/123456789/21191>

Website content

Statistical Office of the Republic of Serbia. (2018). *Vital events: Data from 2011*. Statistical database. <http://data.stat.gov.rs/Home/Result/18030102?languageCode=en-US>

Abbreviations may be used in in-text citations, but not in the reference list, unless the abbreviation is part of the official name.

In-text citation (first occurrence): (Statistical Office of the Republic of Serbia [SORS], 2018)

Subsequent in-text citations: (SORS, 2018)

In the reference list, always use: Statistical Office of the Republic of Serbia.

Act (statute / legislation)

Citation of domestic legal sources (original titles should be retained and not translated into English)

Zakon o radu. (2005). Službeni glasnik Republike Srbije, br. 24/2005, 61/2005, 54/2009, 32/2013, 75/2014, 13/2017, 113/2017 i 95/2018. https://www.paragraf.rs/propisi/zakon_o_radu.html

When the official title of a law, international treaty, or other normative act is excessively long for practical use in the text, a short title and year may be used in in-text citations, in accordance with APA 7. The same short title must be used consistently as the author of the reference in the reference list, while the full official title of the document is given as the title of the reference.

In-text citation: (Directive (EU) 2024/2831, 2024).

Reference list: Directive (EU) 2024/2831 of the European Parliament and of the Council of 23 October 2024 on improving working conditions in platform work. (2024). Official Journal of the European Union, L 2024/2831.

In-text citation: (Winterwerp v. the Netherlands, 1979)

In Reference list: European Court of Human Rights. (1979, October 24). *Winterwerp v. the Netherlands* (Application No. 6301/73). <https://hudoc.echr.coe.int/eng#%7B%22itemid%22:%5B%22001-57597%22%7D>

Newspaper articles in print

Frost, L. (2006, September 14). First passengers ride monster jet. *The Salt Lake Tribune*, p. A2.

Newspaper articles found online

Cohen, P. N. (2013, November 23). How can we jump-start the struggle for gender equality? *The New York Times*. <https://opinionator.blogs.nytimes.com/2013/11/23/how-can-we-jump-start-the-struggle-for-gender-equality/>

In-text citations (APA 7)

- Direct citation: Lee (1998)
- Indirect citation: (Rašević, 2009; Stanić & Matković, 2017)
- Direct quotation: "...economic growth" (Lutz, 2014, p. 530).
- Three or more authors: (Alkema et al., 2011)
- Same author, different years: (McDonald, 2002, 2006)
- Same author, same year: (Raftery et al., 2012a, 2012b)

Secondary citation (citing a work that has not been consulted directly) should be avoided whenever possible, and authors are encouraged to consult the original work to ensure accurate interpretation. If secondary citation cannot be avoided, both the original author and the source from which the information was taken must be clearly indicated in the text, in order to show that the original work was not consulted directly (e.g., Sauvy, 1954, as cited in Penev, 1997). Only the source actually consulted should be included in the reference list (in this example, Penev, 1997).

Tables should not exceed one page and should not be overloaded with auxiliary lines. Tables should have a clear, self-explanatory title. Tables should be numbered consecutively in Arabic numerals in the order in which they are referred to in the text. Editorial staff need to have full control over the tables, that is, to be able to click inside the tables to edit the font of the words written inside the tables to match the journal style and correct the spelling. **All tables should be incorporated in the text of the manuscript.**

Figures, cartograms, pictures, drawings, and other illustrations should also be **submitted as Figures (in jpg format 300dpi) and Tables (in editable textual format eg. docx, .csv) should also be submitted as separate files.** Authors are encouraged to submit colour versions of their figures/cartograms/illustrations for the electronic issue. However, it should not be forgotten that the printed issue is black and white. All illustrations should be **labelled as 'Figure' and numbered consecutively in Arabic numerals** in the order in which they are placed in the text (e.g. Figure-1.jpg).

The title of a table and figure should be placed above the table and figure. The table/figure legends should provide information on the applied statistical procedures. The legend of a table/figure including data source(s) should be placed beneath the table/figure, while notes, if they exist, should follow in the next line. Referencing to the figures/tables in the text of the manuscript should follow the numbering of the graphs/tables (for example, in Table 1) instead of their position in the text (for example, in the above table).

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