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Specijalni broj: ***Aktuelna populaciona pitanja u postjugoslovenskim zemljama***

Special issue: ***Current population issues in post-Yugoslav countries***

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Gostujući urednici | **Guest editors**
Vera Gligorijević & Ivan Marinković

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Uvodna reč urednika specijalnog broja

Guest editors' introduction

Časopis *Stanovništvo*, kao najstariji demografski časopis na Balkanu, nije do sada praktikovao objavljivanje više od dve sveske u jednoj godini. Ipak, povod za izuzetak je međunarodna naučna konferencija *Population in post-Yugoslav countries: (Dis)similarities and Perspectives*, održana u Velikoj sali Instituta društvenih nauka u Beogradu 19–20. aprila 2024. godine u organizaciji Društva demografa Srbije, Centra za demografska istraživanja Instituta društvenih nauka i Geografskog fakulteta Univerziteta u Beogradu. Uredništvo časopisa je odlučilo da objavi specijalni broj časopisa posvećen odabranim radovima sa konferencije pod nazivom: ***Aktuelna populaciona pitanja u postjugoslovenskim zemljama***. Pred gostujućim urednicima, koji su bili i članovi programskog odbora konferencije, bio je težak zadatak da od čak 50 predstavljenih radova, izaberu one koji će biti kandidati da, nakon redovnog recenzentskog postupka, budu objavljeni. Kriterijum za odabir tekstova je, pored želje da budu zastupljeni autori iz svih bivših republika Jugoslavije, bio da radovi obrađuju što aktuelniju demografsku problematiku uz komparaciju između postjugoslovenskih država. Po završetku postupka recenzije, šest radova je zadovoljilo standarde časopisa i oni se nalaze u ovom broju.

Specijalno izdanje časopisa, za razliku od tematskih sveski, nije fokusirano na određeni istraživački problem, stoga u uvodnoj reči gostujućih urednika neće biti uobičajenog upoznavanja sa temom. Nema potrebe naglašavati da su, nakon raspada Jugoslavije, postjugoslovenske zemlje u određenoj meri nastavile da dele zajedničku demografsku sudbinu. Ratovi tokom 1990-ih godina rezultirali su masovnim migracijama i raseljavanjem stanovništva u tri najmnogoljudnije republike bivše Jugoslavije. Ekonomske migracije su, takođe, bile i još uvek su značajne, s obzirom na to da mnogi traže bolje ekonomske prilike van regiona. Stope fertiliteta su niske u većini država sa prostora bivše Jugoslavije, dok su stope smrtnosti relativno visoke u poređenju sa zapadnoevropskim standardima, što je posledica starenja populacije i nedovoljno razvijenih sistema zdravstvene zaštite i javnog zdravlja. Posledično najveći populacioni problemi u postjugoslovenskim zemljama su intenzivno demografsko starenje i smanjenje stanovništva. Osim smanjenja ukupne radne snage, izazov za tržište rada postjugoslovenskih država je starenje zaposlenih lica, koji je povezan sa pitanjima produktivnosti rada i "skupljanja" radne snage, odnosno sada već hroničan nedostatak radnika u pojedinim zanimanjima.

Odabrani radovi upravo daju doprinos razumevanju pomenutih demografskih procesa, pokušavajući da rasvetle aktuelnu populacionu problematiku novim metodološkim rešenjima i konceptima.

Kontinuirano niske vrednosti fertiliteta su u osnovi gotovo svih demografskih izazova, pa je logično što je redosled članaka takav da se oni koji se bave rađanjima nalaze na početku specijalnog broja. Prvi rad istražuje rodne razlike u obrascima završenog kohortnog fertiliteta u Srbiji iz ugla obrazovnog gradijenta. Prvi put kod nas se analizira

muški fertilitet na osnovu posebne obrade podataka Popisa 2022. godine. Autori diskutuju o uticaju obrazovne ekspanzije, rodne neravnopravnosti u porodici, nedostacima institucionalne podrške roditeljima i posledično većim oportunitetnim troškovima roditeljstva na porast bezdetnosti i pad završenog fertiliteta u Srbiji. Sledeći rad proučava odnos između obrazovanja i vanbračnog fertiliteta u Hrvatskoj. Polemiše se da su šire demografske promene, posebno obrazovna ekspanzija tokom poslednjih decenija, igrale značajniju ulogu od retradicionalizacije same po sebi u porastu vanbračnog fertiliteta.

Sledi tekst koji se bavi posledicama demografskog starenja na prostoru bivše Jugoslavije. Uvodi se pojam *dubokog starenja*, koji se odnosi na gubitke fertilnog kontingenta i radno aktivnog stanovništva, ali i na ubrzavanje opadanja broja stanovnika.

Centralno pitanje u narednom članku je da li i kako se može poboljšati zaposlenost žena starosti 20–49 godina u postjugoslovenskim zemljama. Prihvatajući feminističke principe, početna premisa je da se rodna ravnopravnost ne ogleda samo u nižim stopama zaposlenosti žena, već i u višem udelu zaposlenja sa nepunim radnim vremenom. Roditeljstvo se pojavljuje kao ključni faktor koji utiče i na kvantitet i na kvalitet zaposlenja žena tokom ove životne faze. Autori u pretposlednjoj studiji imaju u fokusu mladu populaciju sa visokim obrazovanjem u Srbiji (na opštinskom nivou) i razmatraju stepen njene angažovanosti na tržištu rada.

U poslednjem radu, istraživanje je bazirano na popisnim podacima o etničkim Hrvatima u Republici Srbiji i etničkim Srbima u Republici Hrvatskoj sa ciljem procene njihove demografske održivosti u budućnosti.

Svakako da odabrani radovi nisu reprezent svih, pa čak ni ključnih, tema predstavljenih na konferenciji, ali svojim kvalitetom, po mišljenju urednika ovog broja, zaslužuju da budu izdvojeni i objavljeni u specijalnom broju *Stanovništva*.

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Gender differences in cohort fertility patterns in Serbia: the role of educational gradient

Vladimir Nikitović [1] **Ivana Magdalenić** [1]

ABSTRACT

This paper represents the first contribution to the research of gender differences in the cohort fertility patterns in Serbia. We used the specially processed results of the 2022 Census that include one-year cohorts of women and men born in the 1940–1982 and 1940–1977 periods, respectively. Using parity progression rates, we examined the changes and gender patterns of completed cohort fertility from the perspective of educational differentials given the role of educational expansion in fertility changes in recent decades. Decomposition analysis showed that a marked increase in childlessness and the declining progression to second birth across cohorts born after 1960 is the key reason of the decline in completed fertility of both sexes. The development of the relationship between the education and fertility led to the changes in the educational differentials in fertility of both sexes, but also to a very pronounced gender gap in the patterns of these differentials. Convergence in completed fertility across different educational groups in the older cohorts of men turned to a divergence between the low-educated and the highly educated in the younger generations, resulting in a positive educational gradient in recent completed fertility of men. Negative educational gradient in completed fertility was observed across all cohorts of women, with the gap between the low- and highly educated doubled among the younger compared to the older cohorts. The development of educational differentials in childlessness across cohorts led to a gender convergence among the highly educated and divergence among the low-educated in Serbia, contrary to the process that took place in more gender egalitarian societies. The lack of convergence in the progression to second and third birth across different educational groups of both sexes, which is particularly pronounced among women, suggests that the more educated a person is, the more difficult it is for them to expand their family due to the lack of both institutional support for

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parenthood and gender equity within the family. The identified patterns of completed cohort fertility in Serbia confirm theoretical assumptions and findings from other countries that in the societies with more pronounced gender inequality and family support policies that are not sufficiently gender and parentally sensitive, higher opportunity costs of parenthood lead to lower fertility, and vice versa.

KEYWORDS

cohort fertility, 2022 census, parity progression, education, gender

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1 INTRODUCTION

Serbia, along with Croatia and Slovenia, entered the post-transition phase of demographic development considerably earlier than other countries in the region of the former Yugoslavia (1945–1991). At the same time, Serbia was the first in the region, and among the first in Europe, to face both the period and cohort total fertility rate lower than the replacement level (Breznik 1976; Čipin, Zeman, and Međimurec 2020; Frejka 2017; Magdalenić and Vojković 2015; Nikitović 2016; Stropnik and Šircelj 2008). The development of female cohort fertility in Serbia was similar to the development of this indicator in Eastern Europe for the cohorts born in the 1940–1960 period, and to the Central European pattern for the cohorts born in the 1960–1980 period. The younger cohorts did not experience as much of a decline as those in Eastern European countries (Figure 1). Numerous drivers of this 'birth crisis' and the complexity of their relationships are recognized in the literature (Frejka 2017; Nikitović et al. 2019; Mirjana Rašević and Galjak 2022). Certain structural and cultural factors are similar to those in the post-socialist countries of Central and Eastern Europe, but there are also specificities of the fertility decline typical for this region. The openness to the West introduced into the Yugoslav society values that prioritized individual needs much earlier, which initiated the economic and psychological cost of childbearing to begin to rise in the 1970s. This was followed by the social crisis in Serbia during the 1990s, caused by the breakup of Yugoslavia and the subsequent slow socioeconomic transition, which produced new types of obstacles to the realization of the desired level of fertility (Bobić 2018; Mirjana Rašević and Vasić 2017; Stanojević 2022).

All these findings are based on analyses of female fertility. Research on male

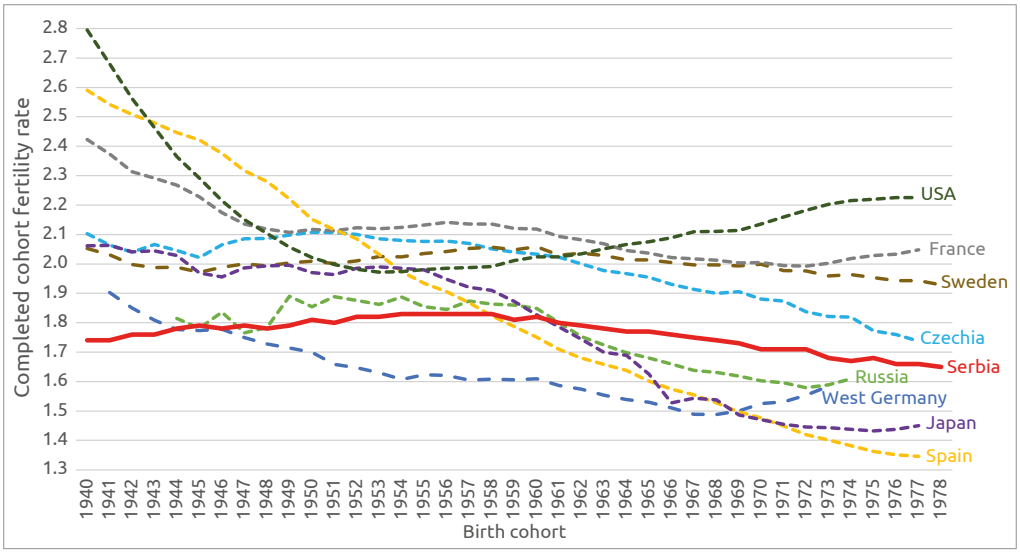

Figure 1 Cohort total fertility for one-year cohorts of women born 1940–1978 in the selected countries and Serbia

Sources: Human Fertility Database (Max Planck Institute for Demographic Research (Germany) and Vienna Institute of Demography (Austria) n.d.); authors' own calculations based on the data from the 2022 Census in Serbia

fertility is far less common in the global context, especially when it comes to cohort fertility, and has not been documented in the Yugoslav region. The main reason is the poor availability and quality of the data. Based on the available studies, it can be concluded that male fertility has declined faster than female fertility (Schoumaker 2019) and that it has been typically slightly lower than that of women in low-fertility countries (Dudel and Klüsener 2016; Keilman, Tymicki, and Skirbekk 2014).

Educational expansion after World War II has generally resulted in a minimization of the gender gap in education due to a large gender reversal in educational attainment in favour of women. Today, women are often more educated than men, unlike in earlier periods. Such a development allowed women to enter the public sphere and consequently led to a reduction of the gender gap in the economic and social positions of women and men. However, the new role has placed an additional burden on women, as parental and household responsibilities have not been reduced. Thus, the increase in education led to a decrease in births. Economic theories of fertility, which refer to this outcome as to the opportunity costs of motherhood, imply that the conflict between family obligations and paid work primarily affects women, which makes the educational gradient in men's fertility positive (Esping-Andersen and Billari 2015; Kravdal and Rindfuss 2008).

It is often considered that in many countries and regions of the world, the process of emancipation, according to the theory of the Second Demographic Transition (SDT) and related concepts about the diffusion of a new post-material or post-modern value system, has led to an increase in individualization and the need for self-realization of the individual at the expense of fertility, especially among the newer generations of the highly educated (Lesthaeghe 2010; Merz and Liefbroer 2018). This process seems to affect women more than men, given that mothers continue to be the primary caregivers of their children in many societies (Lakomý 2018).

However, in many countries, the negative educational gradient is weakening among the younger generations of women, due to a combination of different factors. In Western countries such as France and Belgium, this is considered to be the result of institutional support for reconciling work and parental responsibilities (Merz and Liefbroer 2018). In the Nordic countries, it is emphasized that this is mostly due to advances in terms of gender equity in both the private and public spheres. This is probably the reason why it was in this region that the younger cohorts experienced the most pronounced convergence in completed fertility between educational groups in the European context (Jalovaara et al. 2019). In general, this shift towards educational convergence can be well explained by theories on gender and fertility development, which suggest that an increase in gender equity within the family can have the greatest impact on the recovery of birth rates and the disappearance of the gender gap in the reconciliation of family and work obligations (Goldscheider, Bernhardt, and Lappegård 2015), but also by theoretical interpretations that emphasize the importance of strong institutional support for parenthood – from the availability of quality kindergartens to flexible forms of parental leave and benefits involving both parents (Esping-Andersen and Billari 2015). Some authors even recognize the connection between progress

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in gender equity and the spread of SDT trends, indicating that in societies with a high level of gender equity and relatively high fertility, such as the Nordic ones, SDT has progressed the most (Esping-Andersen and Billari 2015; Sobotka 2008).

On the other hand, the strongest negative educational gradient in female fertility characterizes post-socialist and Mediterranean countries (Merz and Liefbroer 2018). Moreover, in Serbia even "a widening of education-fertility differentials" was observed based on the results of the 2011 Census (Sobotka, Beaujouan, and Van Bavel 2017). This is not surprising, because present-day Serbian society is characterized by a mix of traditional and modern values as a result of the strengthening of patriarchal ideology in both the private and public spheres during the last three decades of socioeconomic transition (Bobić 2018), which creates challenges in reconciling family and work obligations, especially among the more educated population. Insufficient development of institutional family support mechanisms, selectivity of the labour market, insecurity at work and gender gap in values are recognized as the main factors of decreasing progressions to first and second births, to which the more educated are most sensitive (Stanojević 2022).

The beginnings of research on the changing relationship between education and fertility in the context of the below-replacement fertility in Serbia are related to the period of the rise of the Yugoslav demographic school (Breznik 1976; Rašević 1971; Sentić and Breznik 1978). Yet, the research contribution to this topic has grown especially in the 21st century. Considering the rapid increase in the educational level among women in Serbia, the research focus is especially on the changes in fertility among the highly educated and the reasons for the lack of convergence in the level of fertility between different educational groups (Bobić 2018; Miric 2018, 2019; Mirjana Rašević and Vasić 2017; Vasić, Gligorijević, and Devedžić 2014). Unfortunately, due to the limited sources of longitudinal data (absence of statistical registers and representative surveys, population census as a retrospective source), most research is based on periodical indicators burdened with numerous shortcomings – questionable quality of population estimates in the inter-census period, strong fluctuations in trends, or inability to capture the effect of childbearing postponement. On the other hand, some findings in the rare analyses of cohort fertility in Serbia, such as those based on the 2011 Census, are mutually contradictory when it comes to changes in the fertility trends of highly educated women (Miric 2018; Sobotka, Beaujouan, and Van Bavel 2017), and require additional analyses based on more recent data.

The results of the 2011 census indicated that, after a long period of stabilization, a decline in completed cohort fertility in Serbia is on the horizon (Mirjana Rašević and Galjak 2022). It was noted that the decline in completed fertility among cohorts born in the 1950s and 1960s was generated by an increase in childlessness and a decline in progression to a second birth, primarily in the countries of Southern, Central and Eastern Europe (Frejka 2008). The change towards a decrease in the share of the most common type of family with two or three children at the expense of an increase in the share of families with one or without children, was registered in Serbia during the Yugoslav period as a result of socio-economic changes and an increase in employment and the educational level of women (Sentić and Breznik 1978).

Institutional family support measures in the period covering the reproductive years of the cohorts of women who are the subject of the analysis in this paper were implemented in the form of cash transfers and parental leave. From 1960 until the breakup of Yugoslavia, direct financial incentives were weaker, and maternity leave was shorter and not covered in full earnings, compared to the measures implemented after 2002. During the crisis of the 1990s, measures were practically not implemented (Mirjana Rašević and Vasić 2017). The model of family support policy in Serbia implemented in the 21st century is marked as conventional, similar to the policies implemented in Croatia, Lithuania, Poland and Romania. A whole set of measures related to indirect financial incentives in the form of institutional support to parenthood, and incentives that affect the reduction of the psychological cost of a child within the 2008 Birth Promotion Strategy have not been implemented (Frejka and Gietel-Basten 2016). The situation has not changed even after the adoption of the updated Strategy from 2018, given that only the measures of direct financial support to the family have been applied, without the possibility of flexible forms of parental leave in accordance with the requirements of modern society. Although fathers are legally entitled to paid childcare leave, even when the mother is unemployed, this right is used by a negligible number of men, indicating that the gender gap in the understanding of parental roles is still pronounced (Stanojević 2022). Given that direct financial support to each birth order (from the first to the fourth) has increased many times over the first two decades of this century,[1] it can be stated that family support in Serbia in recent years has been much closer to the pronatalist model that Frejka and Gietel-Basten (2016) recognized in Russia, Belarus and Bulgaria. But there is no clear evidence that such a model, even in a financially extremely generous form such as in Russia, can have substantial effects on completed cohort fertility (Frejka and Zakharov 2013).

1.1 GOALS OF THE PAPER

In this article, we analysed the indicators of completed fertility in Serbia with the idea of improving the knowledge of cohort fertility patterns and their development in the last 60 years in terms of the gender dimension, educational factor and the impact of population policy. This was made possible by the results of the 2022 Census, in which, for the first time in the history of the Census in Serbia, questions about fertility were asked to men.

The main objective of this paper is to assess how changes in the educational structure of the population of Serbia, due to educational expansion after World War II, have affected the changes in trends in completed cohort fertility and whether there have been gender differences in the development of fertility patterns. Bearing in mind the current findings, summarized in the introductory part of the paper, we expect pronounced gender differences as a

[1] The one-off financial assistance for the first birth increased the most. When converted into euros, as many as 12 times between 2006 and 2022 – from 232 EUR (20,000 RSD) to 2,751 EUR (321,900 RSD). The total financial assistance for the third and fourth birth in the family, which is paid in monthly instalments during the first ten years of the child's life, has increased 9 and 10 times, respectively, reaching 14,643 euros for the third and 21,964 euros for the fourth child (Cekos in 2006; Ministarstvo za brigu o porodici i demografiju 2024).

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result of the re-traditionalisation of the society and inadequate institutional response to demographic changes caused by educational and socioeconomic transition. To this end, the main research questions were considered: What is the contribution of the changes in individual parity progression ratios to the change in the cohort total fertility rate? Is there a convergence or divergence in completed fertility and childlessness between different educational groups? Have the measures of financial support for the family applied in the 21st century had an effect on changes in the trends of completed fertility of the younger generations?

There are two key aspects of this paper in which, through a nationally specific context, the contribution to the existing knowledge about the relationship between demographic phenomena and social change is reflected: a) for the first time, trends in male cohort fertility in Serbia are analysed; b) the understanding of the relationship between education and fertility from the perspective of gender differences is improved. Both aspects are of particular importance for the evaluation of the existing and the creation of future family support policies.

2 DATA AND METHODS

The analyses presented in this paper are based on the detailed results of the 2022 Census, which were obtained from the Statistical Office of the Republic of Serbia upon request. The data were extracted from the Census database using specific queries designed by the authors according to the objectives of the paper. From the total population of Serbia, determined by the census definition of usual residence, the subject of the analysis was singled out – the segment of the population of both sexes that has completed or almost completed its reproduction. The goal was to include as many cohorts as possible. Therefore, the lower limit for women was the cohort born in 1982, and for men in 1977. The upper limit was set to the cohort born in 1940 due to the relatively small number of people over 82 years of age. Consequently, all one-year cohorts of women born in the period 1940–1982 and men born in the period 1940–1977 were analysed, i.e. women over 40 and men over 45 at the critical date of the 2022 Census.[2] If the lower age limits were set at older ages, we would lose the opportunity to analyse the youngest cohorts, i.e. the most recent trends in completed fertility at the cost of a negligible fraction of cohort total fertility.[3]

The census methodology in Serbia traditionally distinguishes between six levels of educational attainment. For the purposes of this study, we grouped the Census education-specific data into three broad classes in accordance with the International Standard Classification of Education (ISCED 2011): *low* (ISCED 0-2) – no school, incomplete primary and primary education; *medium* (ISCED 3-4) – secondary education; *high* (ISCED 5-8) – college and higher education. In this way, we obtained internationally comparable data and simplified the results and their interpretation.[4]

[2] Although male fertility generally covers a wider age range than female fertility, men's age-specific fertility rates are very low beyond the age of 45, primarily due to "social age deadlines for childbearing" (Billari et al. 2011).

[3] Raising the age limit for younger cohorts of women to 45 years and men to 50 years would add only 0.03 and 0.09 children per parent to the cohort total fertility rate, respectively.

[4] A preliminary analysis showed that indicators based on the three broad classes do not lead

Various methods of measuring cohort fertility are cited in the literature, and most of them are based on the reconstruction of this indicator from long series of periodic fertility. This is often a convenient indicator because it is based on current vital statistics and population estimates. However, in the case of Serbia, periodic indicators are mostly of questionable quality, especially in inter-census periods, due to unreliable estimates of the sex and age structure of the population. Therefore, retrospective methods, such as the census, impose themselves as a more reliable alternative. Using the census data, we include all children ever born to the women and men interviewed at the time of the census. The disadvantage of the census from the point of view of cohort fertility indicators, in turn, is the low frequency of its implementation. Another disadvantage of the census as a survey-type source, from the perspective of male fertility, is that children born in previous unions, especially out of wedlock, are often not reported (Rendall et al. 1999). It is generally a negligible factor in registry data (Jalovaara et al. 2019). However, since there is still no statistical population register in Serbia, the census turns to be the best source for assessing trends in cohort fertility.

The cohort total fertility rate (CTFR), which can be defined as the sum of parity-specific cohort total fertility rates ($CTFR_i$), was used as a measure of completed fertility:

$$CTFR_i = i * p_i \quad (1),$$

where i is the birth order or parity, and p_i is the proportion of women of a given parity in the total number of women in a given cohort. Thus, $CTFR_i$ represents the average number of children of birth order i born to women from a given cohort, and $CTFR$ the average number of children born in each cohort analysed:

$$CTFR = \sum_i CTFR_i \quad (2).$$

The parity progression ratio (PPR_i) expresses the probability that women of parity i-1 will reach parity i:

$PPR_{0,1} = CTFR_1$, parity progression ratio to first birth (3),

$PPR_{i-1,i} = \frac{CTFR_i}{CTFR_{i-1}}$ for $i > 1$, parity progression ratios to higher birth orders (4).

Given that the share of the birth orders higher than the fourth is negligible, we combined the data on the fourth and higher-order births together, calculating the progression ratio from the third and higher-order births to the fourth and higher-order births, analogous to a recent comprehensive analysis of the decline in cohort fertility in low-fertility countries (Zeman et al. 2018):

$$PPR_{3+,4+} = \frac{CTFR_{4+}}{CTFR_{3+}} \quad (5).$$

It should be noted that the cohort total fertility rate can also be obtained by the reverse procedure, that is, that the following applies:

$$CTFR_i = \prod_{j=1}^{i} PPR_{j-1,j} \quad (6),$$

$CTFR_{4+} = \prod_{j=1}^{3} PPR_{j-1,j} * \frac{PPR_{3+,4+}}{1-PPR_{3+,4+}}$, for the highest birth order (7),

$$CTFR = \sum_{j=1}^{imax} \prod_{j=1}^{i} PPR_{j-1,j} \quad (8).$$

to a loss of important information compared to the results reported for all six census education categories; moreover, they contribute to more stable and smoother rate trends than in the case of more modalities, especially in the case of the lowest levels of education, the share of which has declined sharply from older to younger cohorts.

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Cohort total fertility rates and parity-specific cohort total fertility rates were also calculated for all three educational categories.

The development of the cohort total fertility rate was analysed by the method of decomposition of changes according to the procedure shown in Zeman et al. (2018: 665–667). They decomposed changes in CTFR into the contribution of changes in the transition to first birth ($dPPR_{01}$), second birth ($dPPR_{12}$) and third and higher-order births ($dPPR_{23+}$). This method acknowledges the fact that changes in the progression rate to a certain parity affect not only the number of women of that parity, but also the distribution of women in all higher-order parities (Zeman et al. 2018). In this paper, we calculated changes in CTFR between three characteristic cohorts – the initial (born in 1940), the cohort from which the decline in CTFR began (born in 1960) and the final cohort (born in 1980). Given the small contribution of parity progression ratios after the third child to the change in CTFR, especially among the younger cohorts, the highest parity we analysed included the combined effects of changes in progression ratios to third birth and to fourth and higher-order births ($dPPR_{23+}$). The results of the analysis of changes in CTFR using this method served as a framework for the analysis of the development of completed cohort fertility by birth order and level of education.

3 RESULTS

3.1 DEVELOPMENT OF COMPLETED COHORT FERTILITY

Figure 2 shows the trends in the completed cohort fertility rate (CTFR) and the average age at childbirth for men and women in Serbia, born in the period 1940–1977 and 1940–1982, respectively.

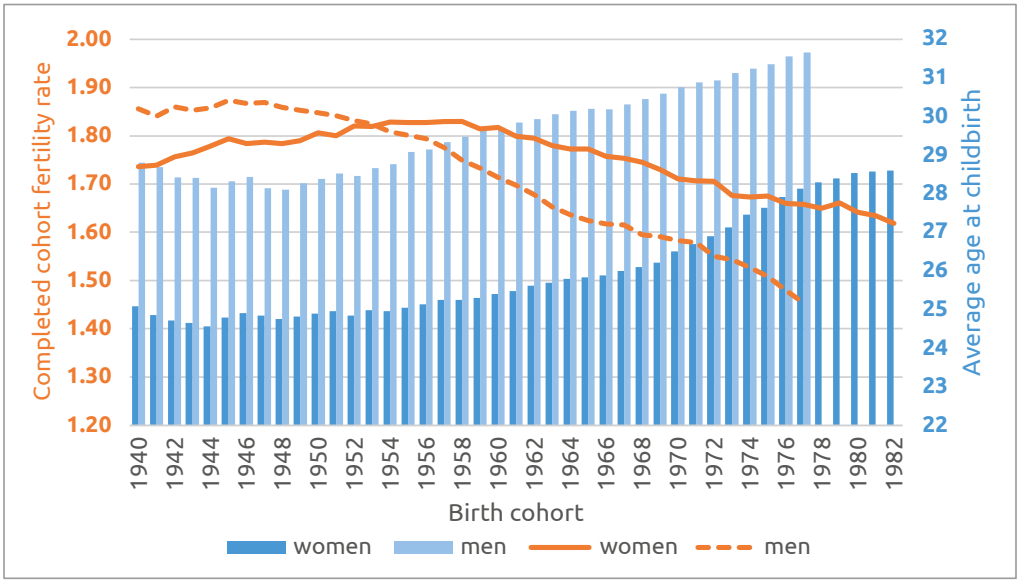

Figure 2 Cohort total fertility rate and average age at childbirth, one-year cohorts of women born 1940–1982 and men born 1940–1977

Source: authors' own calculations based on the data from the 2022 Census in Serbia

Women's CTFR grew slightly until the early 1950s, during which time it was stable, peaking at 1.83. From cohorts born in the early 1960s, CTFR began to decline slightly, reaching a level of about 1.60 in generations that are at the end of their fertile period. This trend coincides with the trend of average age at childbirth, which shows an upward trajectory starting with cohorts born in the late 1950s.[5] The increase in this indicator of fertility postponement is especially pronounced in the younger generations born in the 1970s. The decline in the period total fertility rate (TFR), which has been recorded since the mid-1960s, and has been particularly pronounced since the end of the 1980s (Nikitović 2011; Nikitović et al. 2019), apparently reflected in the decline in CTFR. This suggests that childbearing postponement had a negative impact on cohort fertility, i.e. that there was insufficient recuperation of fertility at older reproductive ages. A certain recovery in TFR of about 0.1 between the 2011 and 2022 censuses does not suggest a positive impact of fertility recuperation at older ages, given that the cohort fertility of women near the end of the reproductive period (aged 36–40 at the time of the 2022 Census) indicates a continued downward trend in CTFR.[6]

Compared to the female CTFR, the male CTFR was slightly higher in the oldest cohorts, and after a stable level of 1.85–1.87, it was in continuous decline. Starting with the generations born in the mid-1950s, the male CTFR is lower than the female, and in the youngest cohorts it falls below 1.5, with the gender range reaching 0.2. Male CTFR is typically lower than female CTFR in low-fertility populations with a negative or even slightly positive growth rate, such as the one analysed in Serbia, as a result of a strong correlation between the age difference between partners when having children and the type of population pyramid.[7] More specifically, the difference between male and female CTFR in these populations represents the product of three factors that determine the number of men in relation to the number of women at the ages they have their children – sex ratio at birth, survival probability to the average age at fatherhood/childbearing, and population growth rate (Schoumaker 2019).

Slightly higher CTFR among males than among females in cohorts born in the 1940s can be interpreted as a result of specific exogenous factors that distorted the sex ratio, by reducing the number of males due to war losses and pronounced sex-selective emigration from the mid-1960s to the mid-1980s (Lukić et al. 2013); also, to a certain extent, the effect has a sex-selective impact of mortality, which is most pronounced in the oldest cohorts.

[5] Pearson's correlation coefficient between the two variables of the study cohorts is -0.91 (women) and -0.97 (men).

[6] Additional caution applies when interpreting the TFR in the period 2011–2022 published by the Statistical Office of the Republic of Serbia, because the estimated number of women of childbearing age, as a denominator in this rate, was not updated with the results of the 2022 Census, i.e. it does not include the effect of the negative balance of external migration in this inter-census period.

[7] Certainly, the lower male than female CTFR may also be fuelled by an unknown level of underestimation of male fertility due to underreporting of illegitimate children among married men. However, we assumed that this effect could be of negligible importance.

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In this paper, we examined the differences between male and female CTFR in Serbia from the perspective of the educational gradient in fertility. We analysed childlessness and completed cohort fertility by birth order depending on the educational attainment of men and women.

3.2 CHANGES IN COMPLETED COHORT FERTILITY ACROSS PARITIES

The very low CTFR among the oldest cohorts of women in Serbia compared to most countries from different regions of the world shown in Figure 1 can be explained primarily by the very low transition rates to second and third birth, which were lower than the rates in the Eastern European region, convincingly the lowest in the European context. The progression ratio to third birth was only 0.13 among the cohorts born between 1946 and 1951 (Figure 3). The increase in this indicator starting from the mid-1950s cohorts has led to a higher progression to third birth than in the Eastern European region, and among the youngest cohorts similar to the level of Southern Europe. However, it is still half as much as that in Western Europe. On the other hand, the change in the transition rate to second birth followed a pattern similar to that in the Central European region, with a milder decline among cohorts born after 1960. The drop in CTFR among the younger cohorts born after 1960 was not only caused by the falling progression to second birth, but also by the declining progression to first birth, i.e. the increasing childlessness. The trend of increasing childlessness is very similar to the trend in the Central European region, which means that it was slower than in most of Europe (Zeman et al. 2018).

Compared to women, only the progression rate to second birth was slightly higher among older cohorts of men, while the progression rates to other parities were similar (Figure 3), resulting in higher CTFR among men in these cohorts (Figure 2). A key gender difference is observed among the cohorts born after the mid-1950s, where childlessness rate increased more among males than among females. Transition rates to first and second births levelled off among the youngest male cohorts.

By ***decomposing the changes in completed cohort fertility*** into the contribution of changes in the progression ratios to first birth ($dPPR_{01}$), second birth ($dPPR_{12}$), third and higher-order births ($dPPR_{23+}$), we can measure how much and in what direction each parity contributed to the change in the total cohort fertility.

The previous analysis of changes in CTFR and parity progression ratios suggests that two periods in the development of completed cohort fertility in Serbia can be distinguished – a period of slight increase and stable CTFR that characterized older cohorts born between 1940 and 1960 and a period of decline associated with cohorts born after 1960. Figure 4 shows the contribution of individual parity progression ratios to the change in completed cohort fertility of women and men born between 1940 and 1960 and between 1960 and 1980.

The slight increase in CTFR of 0.07 children per woman among the women born between 1940 and 1960 can be attributed solely to the increasing second-birth progression ratio, which was 0.12. Its effect was mitigated by a minimal decline in the transition to first birth, and to third and higher-order births.

The decrease in CTFR of 0.17 children per woman among the younger cohorts of women was predominantly caused by an increase in childlessness, while the decline in the transition rate to second birth was offset by an increase in the transition rate to higher-order births.

The decline in CTFR among both older and younger male cohorts was mainly driven by increasing childlessness. The increase in this rate was 0.20 children per man for the cohorts born between 1940 and 1960, and 0.31 for the cohorts born between 1960 and 1980. Among older generations, the decline in CTFR

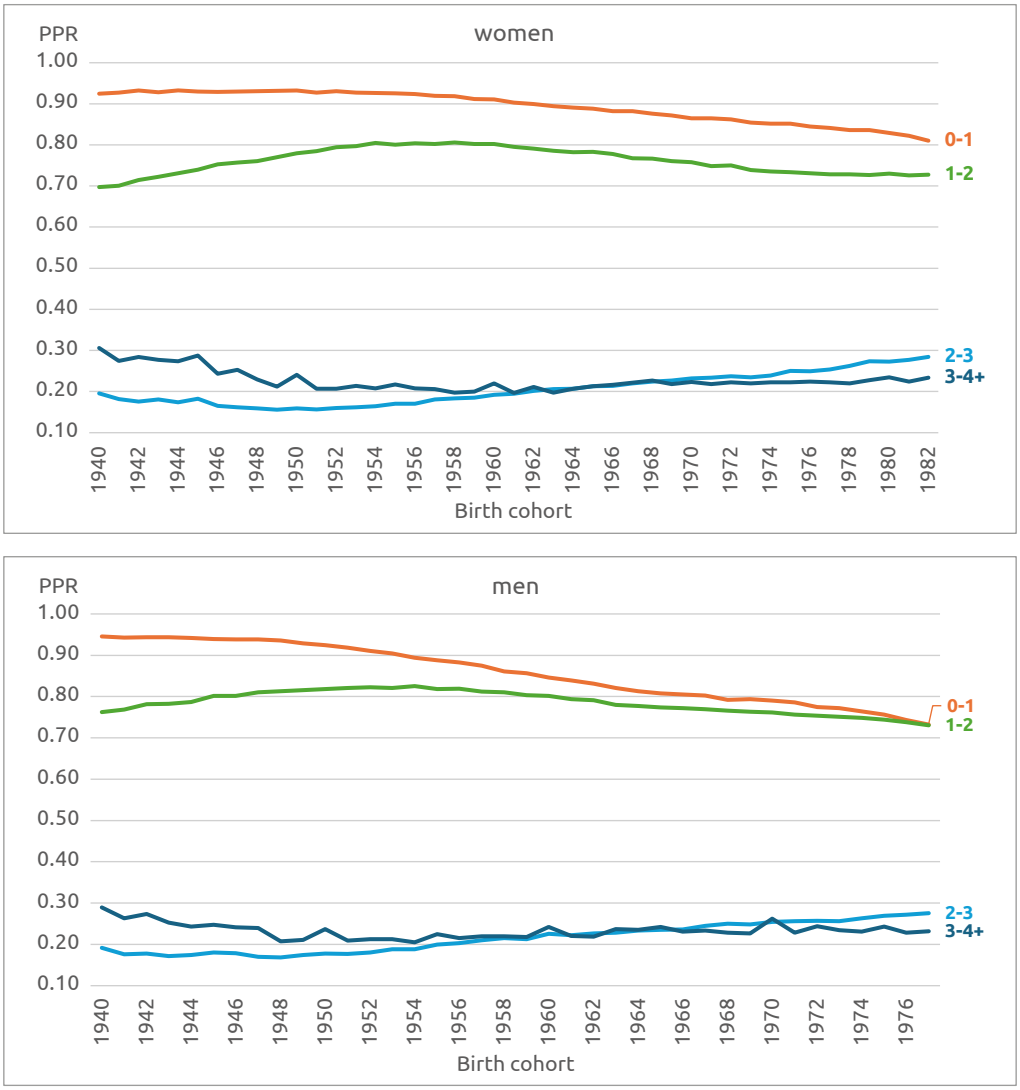

Figure 3 Parity progression ratios to first (PPR_{0-1}), second (PPR_{1-2}), third (PPR_{2-3}), fourth and higher birth orders (PPR_{3-4+}) for one-year cohorts of women born in 1940–1982 and men born in 1940–1977

Source: authors' own calculations based on the data from the 2022 Census in Serbia

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was lessened by a slight increase in the progression rates to second and third or higher-order births, and among younger generations only to higher parities.

Among older cohorts, the progression rate to second birth maintained a slight increase in female fertility and moderated the onset of male fertility decline. The decline in the progression rate to first birth among the cohorts of both sexes born after 1960 is a key reason for the recent decline in CTFR, while the decline in the progression to second birth has emerged as a new declining factor. A slight increase in the progression rate to third and higher-order births among younger cohorts of both sexes could not compensate for this decline.

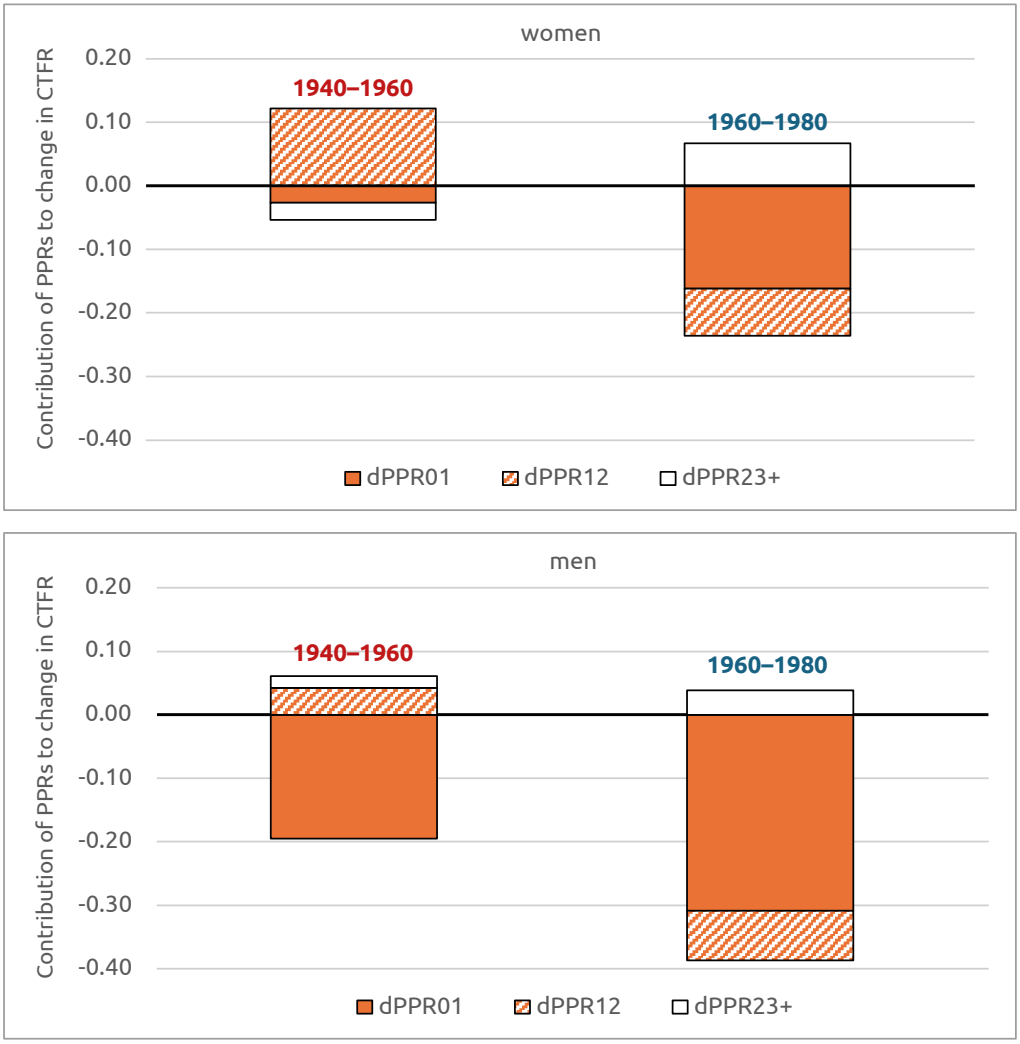

Figure 4 Contribution of changes in parity progression ratio to first ($dPPR_{01}$), second ($dPPR_{12}$) and higher-order ($dPPR_{23+}$) births to the change in completed cohort fertility among women and men born between 1940 and 1960 and between 1960 and 1980

Source: authors' own calculations based on the data from the 2022 Census in Serbia

3.3 CHANGES IN EDUCATIONAL ATTAINMENT ACROSS COHORTS

During the analysed period of cohort total fertility, significant changes took place in the educational composition of the reproductive age population. Figure 5 shows the percentage distribution of women and men by educational attainment across one-year cohorts using the ISCED 2011 classification – low, medium and high education (for more details see section 2 on data and methodology).

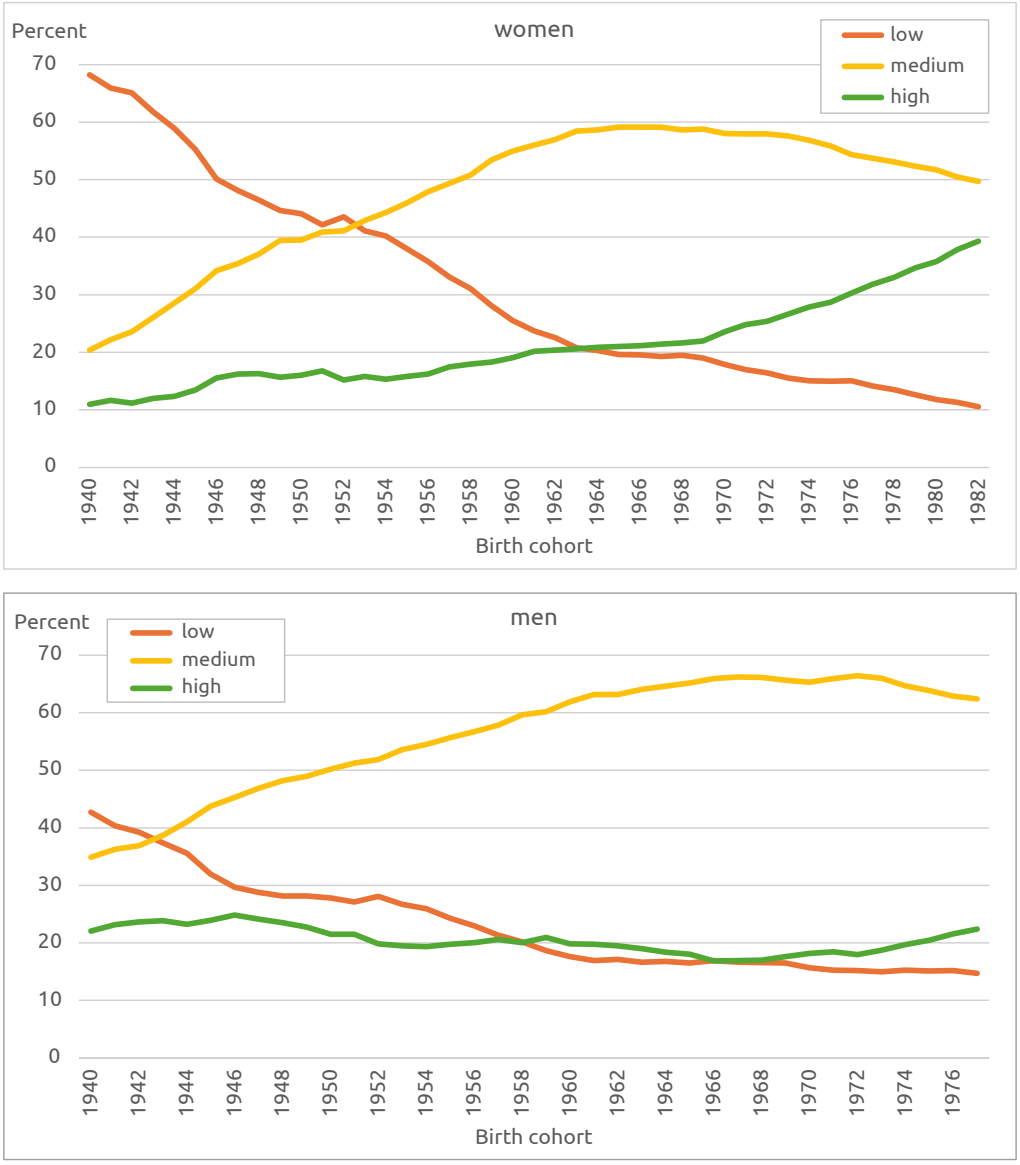

Figure 5 Educational level for one-year cohorts of women born 1940–1982 and men born 1940–1977
Source: authors' own calculations based on the data from the 2022 Census in Serbia

https://doi.org/10.59954/stnv.627

The most drastic change in the share for both sexes occurred among low-educated women. Their proportion in the cohort born in 1982 (10.0%) was almost seven times lower than in the cohort born in 1940 (68.2%). The largest decline occurred in the oldest cohorts, as the share was around 20% already among those born in the early 1960s. This decline was primarily due to an increase in the share of medium-educated women, which tripled from about 20% among the oldest to almost 60% among the mid-1960s birth cohorts. However, the biggest increase in the share refers to highly educated women. The share of this educational group almost quadrupled when comparing the oldest and youngest birth cohorts, from 11% to 41% between 1940 and 1982. However, this rise was the fastest among the youngest, as the share almost doubled after the cohort born in 1969, at the expense of the decline in the shares of the other two educational groups.

Among men, the share of low-educated, which was the highest of the three educational groups among the oldest generations, had already halved by the late 1950s birth cohorts. This proportion is almost unchanged – at the level of 15–17% across all younger cohorts. The largest increase occurred in the proportion of medium-educated, which almost doubled between the cohorts born in 1940 and 1967 – from one to two-thirds. In the youngest cohorts, the proportion stabilized at about 62%. The share of highly educated men experienced the least change, which did not deviate much from 20%. It was the highest in the oldest cohorts, and after a slight decline in the 1960s birth cohorts, it again approached the maximum level across the youngest generations. In general, in the younger cohorts, born after 1960, the shares of all three educational groups have changed little, compared to the older cohorts. A slight change can be noted among the youngest male cohorts, born in the 1970s, where there was a certain increase in the share of highly educated at the expense of a decrease in the share of medium-educated.

Among both sexes, the low-educated have gone from being the most represented to being the educational group with the smallest share. Although the medium-educated have become prevalent among both sexes over time, it has quickly become the most common level of education among men. On the other hand, the trend of increasing tertiary education among women was very pronounced, especially among the youngest generations, which brought the share of highly educated very close to the share of medium-educated. These changes have led to a reversal in the gender pattern of the educational profile of the population – women have become more educated than men in the youngest generations as opposed to the reverse ratio in the oldest generations.

In the educational transition that took place between the oldest and the youngest cohorts, two stages can be observed. Among the older cohorts, born before the early 1960s, the increase in educational level in both sexes was primarily induced by an increase in the share of the medium-educated at the expense of a decrease in the share of the low-educated. Among the younger cohorts, there is a noticeable gender difference – stagnation of the transition among men, and an increase in the share of tertiary educated at the expense of a decrease in the low- and medium-educated among women.

3.4 COHORT TOTAL FERTILITY AND EDUCATIONAL DIFFERENTIALS

We assumed that the observed educational transition across the study cohorts was also reflected in the completed cohort fertility by educational attainment. Figure 6 shows the changes in education-specific cohort total fertility rate for both sexes.

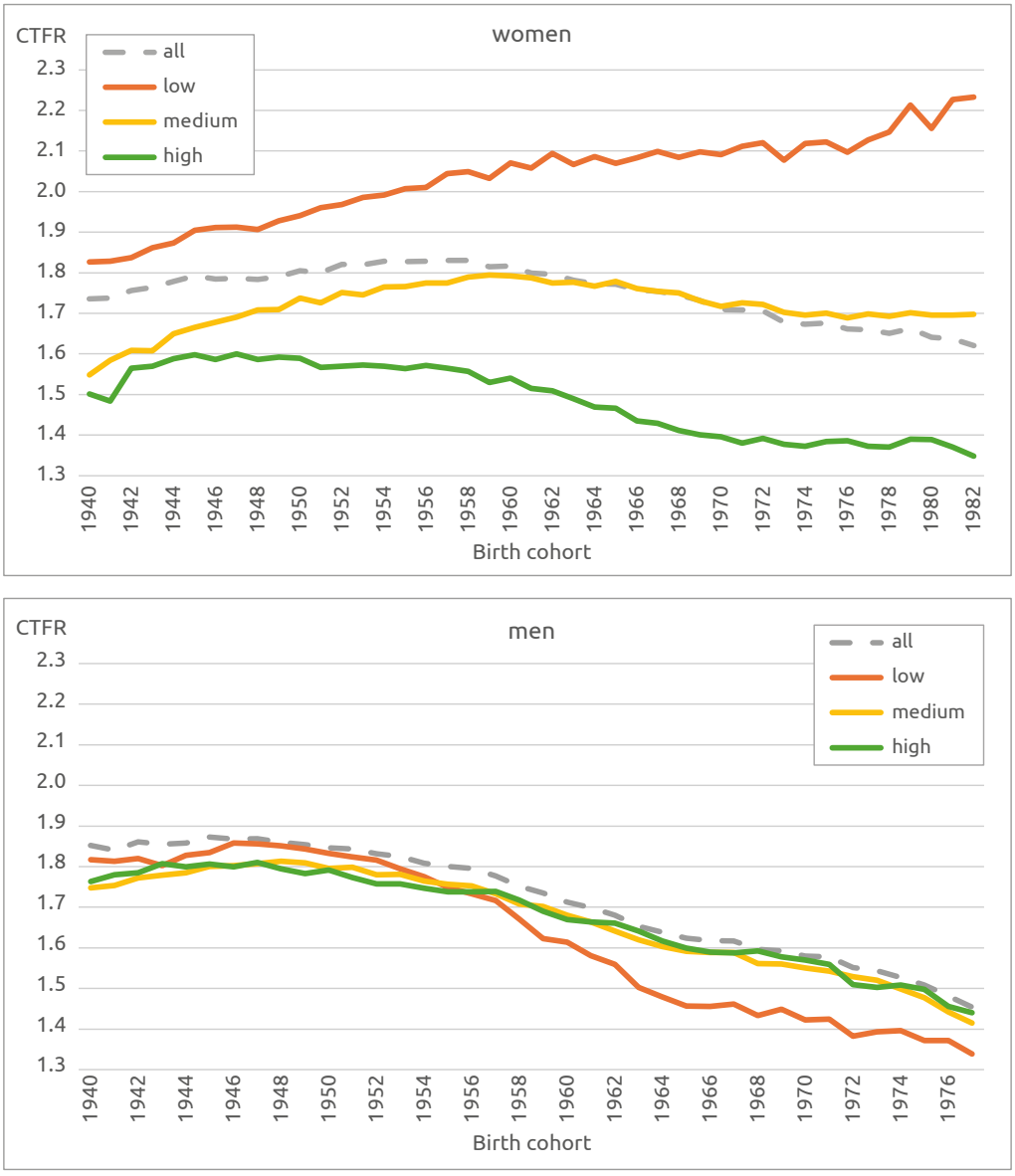

Figure 6 Completed cohort fertility rate by educational attainment for one-year cohorts of women born 1940–1982 and men born 1940–1977

Source: authors' own calculations based on the data from the 2022 Census in Serbia

https://doi.org/10.59954/stnv.627

The pattern of female cohort fertility by educational attainment is completely different from that of males across all cohorts. The differences in CTFR between all three education groups are pronounced, with the highest rate among the low- and the lowest among the highly educated. In older cohorts, this gap is 0.3–0.4, which is similar to the findings for a number of other countries. But starting with the cohorts born in the late 1950s, the gap widened steadily, until its value doubled (0.88) in the cohort born in 1982.

Among older cohorts of men, differences in CTFR between educational levels were negligible (up to 0.05 in favour of the low-educated) and CTFR was stable regardless of educational group. The continuous decline in CTFR began with cohorts born in the late 1950s across all three educational groups, but was the most intense among the low-educated men, whose CTFR was lower than that of the medium- and highly educated by 0.10–0.15 among the younger generations.

Educational transition across the analysed cohorts resulted in the increasing educational differentials in CTFR for both sexes, with these being far less pronounced among men. Compared to older cohorts of men, when the impact of educational differences on cohort fertility was negligible, in younger generations, the low-educated have lower fertility rates than the other two groups. Among women, the decrease in CTFR of the highly educated in the younger cohorts, along with an almost continuous increase in the CTFR of the low-educated across all cohorts, resulted in a huge gap between the two groups – of almost one child per woman in the youngest generations. However, the very low, declining share of low-educated women in the 1970s birth cohorts (Figure 5) could not have had a significant effect on the cohort fertility rate of all women (Figure 6).

3.5 CHANGES IN PARITY PROGRESSION RATIOS BY EDUCATIONAL GROUPS

In the previous section, we showed that the educational gradient produces a completely different pattern of cohort fertility in men compared to women in Serbia. In this section, we analyse the impact of educational gradient on the parity progression ratios in both sexes. We considered the trend of the progression rate to first birth, which we interpreted here from the opposite direction, as the percentage of childlessness, and the trends of the progression rates to second and third birth.

Childlessness first emerged as a significant factor in the decline of male CTFR. The increase in childlessness was observed among men born after 1950 and among women after 1960, but it was faster among men and reached a higher percentage than among women (Figure 7).

However, as in the case of CTFR, the educational gradient had a completely opposite effect on the development of childlessness when comparing the two sexes. In the oldest cohorts of men, childlessness was low and there was no difference between the educational groups. As it grew across the cohorts, the gap between the low-educated and the other two groups widened. Although the increase was evident across all levels of education, it was by far the fastest among the low-educated. In the youngest cohorts among the low-educated men, the level of childlessness is very high – as much as 35%.

Among women, educational differences in childlessness show a completely different pattern, with its development also differing across cohorts. There is a noticeable gap between educational groups across all cohorts, which among younger women, contrary to the male pattern, widened between the highly educated and the other two groups. As a result, the width of the gap between the highly and low-educated among the younger cohorts of

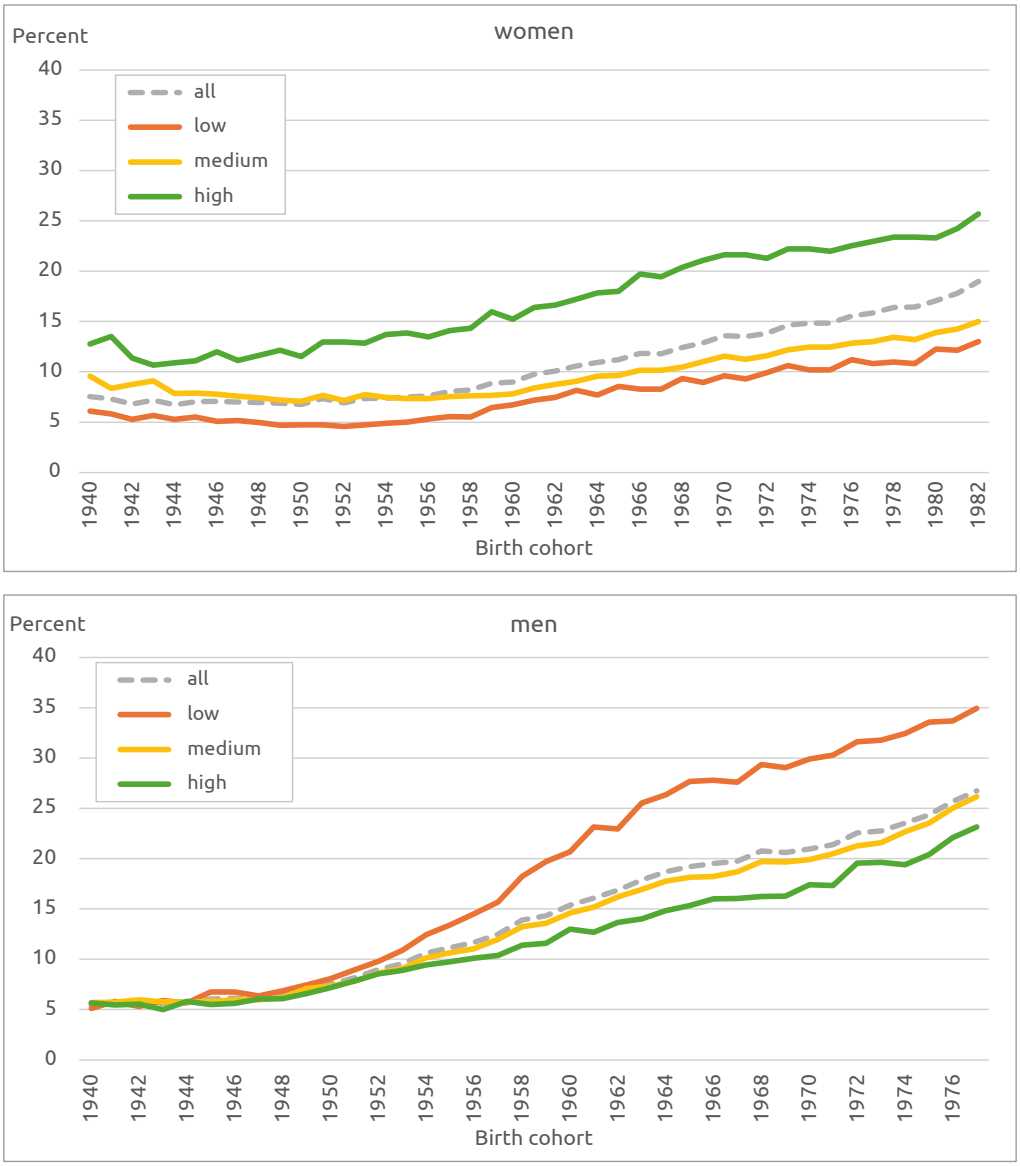

Figure 7 Childlessness (%) by educational attainment for one-year cohorts of women born 1940–1982 and men born 1940–1977

Source: authors' own calculations based on the data from the 2022 Census in Serbia

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both sexes is the same – 12 percentage points. Unlike men, the highest levels of childlessness are recorded among the most educated women.

The development of childlessness across cohorts born after 1960 has led to the disappearance of the gender gap in the youngest generations of highly educated. On the other hand, the gender gap in childlessness in the population without tertiary education has widened at the expense of younger

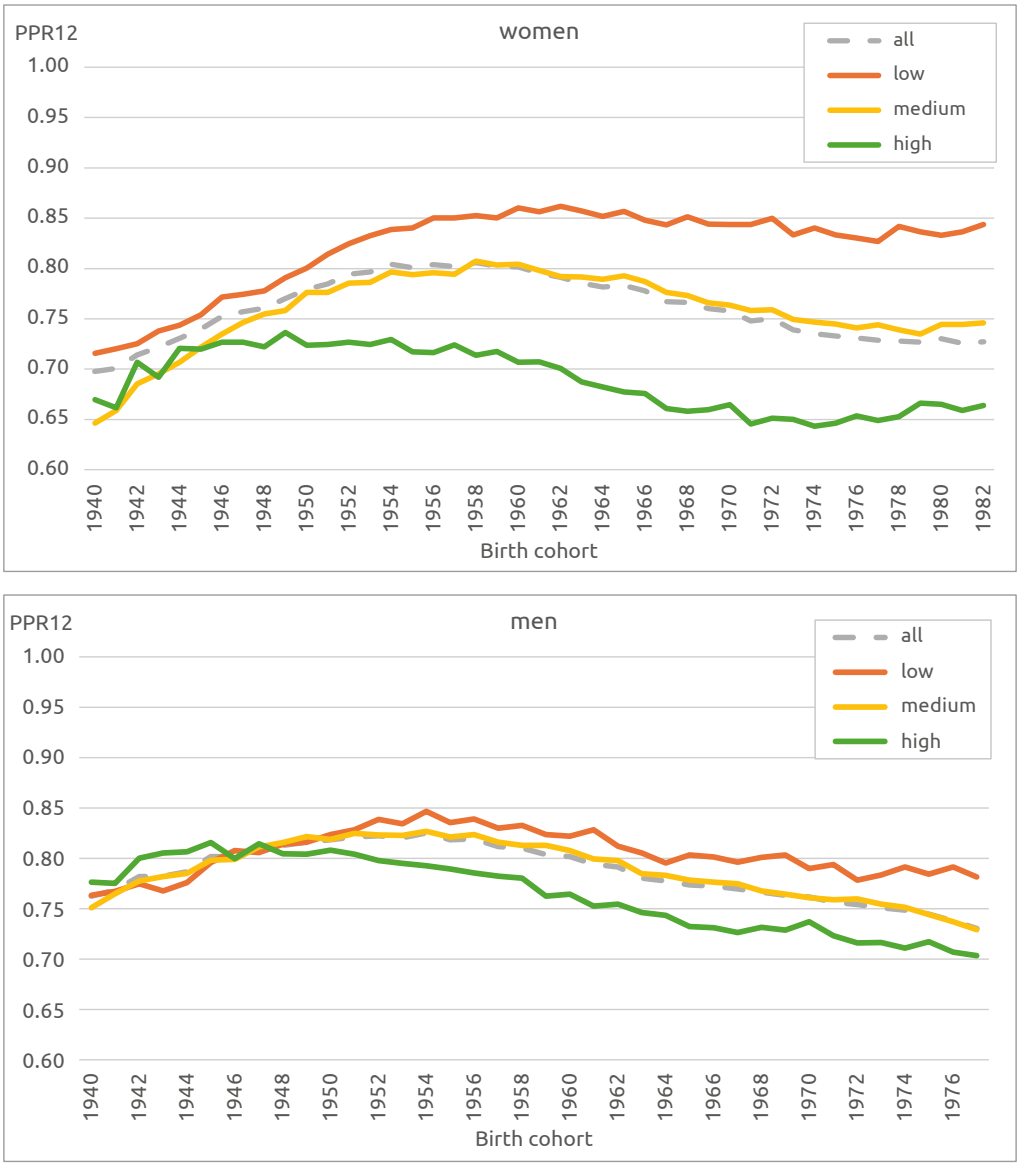

Figure 8 Parity progression ratio to second birth by educational attainment for one-year cohorts of women born 1940–1982 and men born 1940–1977

Source: authors' own calculations based on the data from the 2022 Census in Serbia

cohorts of men, being almost twice as high among the low- compared to the medium-educated. Among the medium-educated born between 1960 and 1977, the gap widened from 7 to 13 percentage points, and among the low-educated from 14 to 24 percentage points.

In contrast to the development of childlessness across the study cohorts, the development ***of the parity progression ratios to second and third birth***

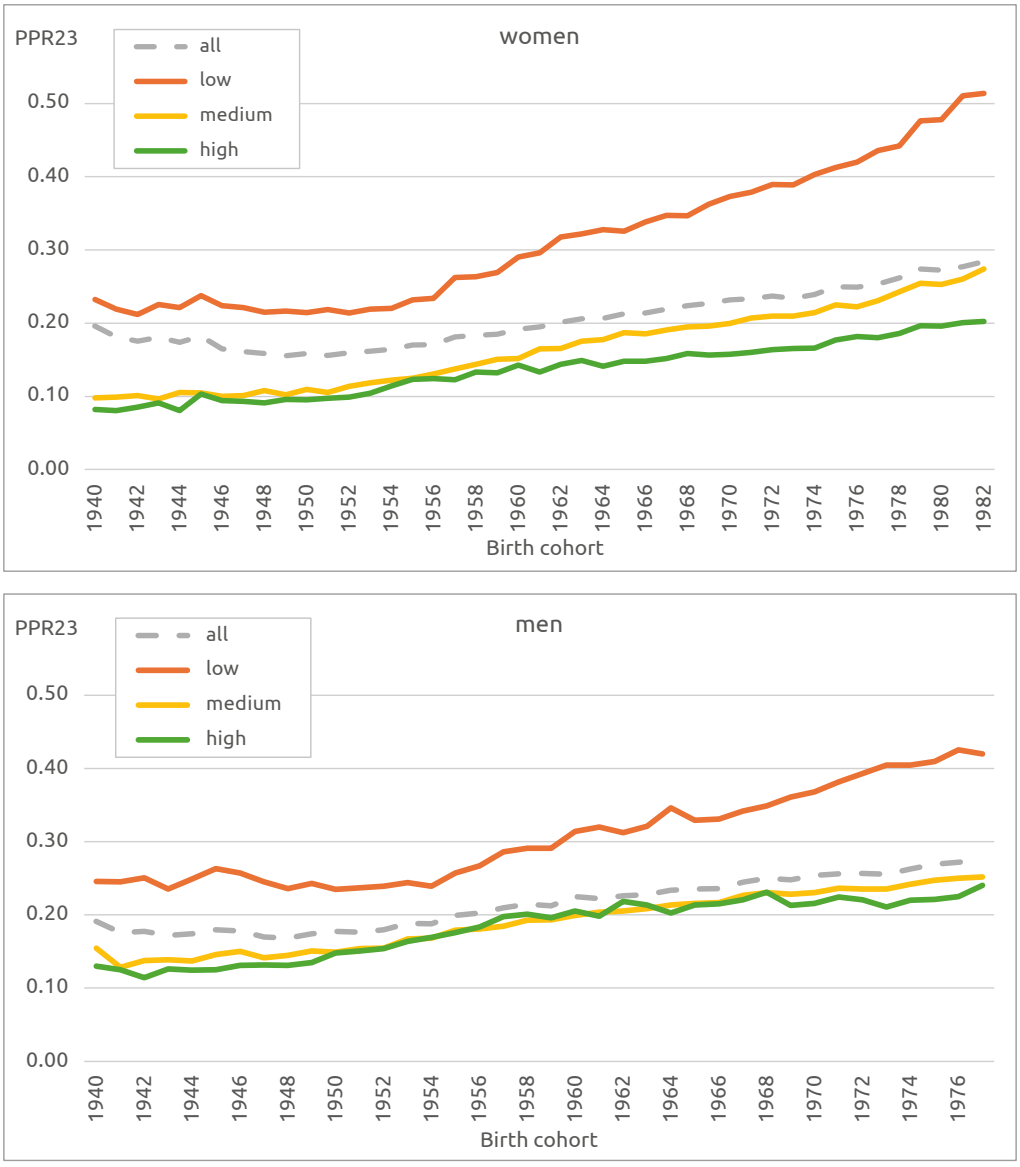

Figure 9 Parity progression ratio to third birth by educational attainment for one-year cohorts of women born 1940–1982 and men born 1940–1977

Source: authors' own calculations based on the data from the 2022 Census in Serbia

https://doi.org/10.59954/stnv.627

shows that the educational gradient in cohorts born after 1948 was of the same direction in both sexes.

Among the oldest cohorts in both sexes, educational differences were not particularly pronounced in the transition to second birth (PPR_{1-2}). Among men, the most educated had a slightly higher level of progression rate than the other two groups, and among women, the least educated. The widening gap between the low- and the highly educated in both sexes began with the cohorts born in the early 1950s, leading to a reversal in the education gap for men. However, the gap widened slowly and only minimally among men, reaching 0.08 PPR_{1-2} in the youngest cohorts. Among women, the educational gap already reached 0.18 PPR_{1-2} in the cohorts born in the mid-1960s, and it has been stable ever since (Figure 8).

After a similar upward trend in the progression rate to second birth in the oldest cohorts of the low-educated of both sexes, there was a decline and stabilization of PPR_{1-2} at the level of about 0.78 among men. Among women, the PPR_{1-2} reached in the cohorts born in the mid-1960s was kept relatively stable at about 0.85.

The increase in PPR_{1-2} in the oldest cohorts of the medium-educated of both sexes was significantly higher among women, given the significantly lower baseline. The decline in this progression rate in younger cohorts led to the disappearance of the gender gap.

The downward trend of PPR_{1-2} across cohorts is evident among the highly educated of both sexes, with the decline stopping at about 0.65 in the youngest female cohorts, which is 0.05 lower than the level among men.

The development of the transition trend to third birth (PPR_{2-3}) differs from the transition trend to second birth in two aspects (Figure 9). In all three educational groups of both sexes, there was an evident increase in progression ratios starting with the mid-1950s birth cohorts. The differences between educational groups in PPR_{2-3} are not as uniform as in PPR_{1-2}. On the one hand, the difference between the medium- and highly educated is almost non-existent among men, or is small in younger cohorts of women (0.04–0.05). On the other hand, the difference between the low- and medium-educated is strikingly larger than in the case of PPR_{1-2}, reaching 0.17 among males and 0.21 among females in younger cohorts.

4 DISCUSSION AND CONCLUSIONS

Based on the analysis of the detailed results of the 2022 Census, we examined the changes and gender patterns of the completed cohort fertility in Serbia from the perspective of educational differentials across the cohorts born after 1940.

Among the oldest cohorts of women, fertility was already low in the global context. This can be explained by the very low transition rates to second and third birth, which were even lower than the rates in the Eastern European region. Two phases in the development of CTFR can be clearly distinguished – a period of slight growth and stabilization among the cohorts born before 1960, and a period of continuous decline across the cohorts born after 1960. However, this decline has not led to very low fertility rates in the youngest cohorts, such as the case in Southern European and Far Eastern countries. It can be noted that in older cohorts, fertility development was more similar to the Eastern European pattern, and in younger cohorts to the

Central European pattern. The development of parity progression ratios was somewhat more complex.

The decline in fertility among younger cohorts is highly correlated with an increase in the mean age at childbirth. This suggests that the childbearing postponement among younger generations affected not only the decline in the period total fertility rate, but also the decline in the completed cohort fertility rate. In other words, there was no recuperation of fertility at older reproductive ages, as in the Nordic countries (Andersson et al. 2009; Jalovaara et al. 2019).

The decline in male CTFR began slightly earlier than that of female, and among younger generations the gender gap was similar to that of low-fertility countries with a negative population growth rate, as a result of a strong correlation between the age difference between partners when having children and the type of age pyramid (Schoumaker 2019).

The decline in the progression ratio to first birth among the cohorts of both sexes born after 1960 is the key reason for the recent decline in CTFR, while the decline in the progression to second birth has emerged as a new factor. A slight increase in the progression towards higher-order births insufficiently compensates for this decline across the younger cohorts of both sexes.

In the educational transition that took place across the analysed cohorts, two phases can be observed. In the older cohorts, born before the early 1960s, the increase in educational attainment among both sexes was primarily induced by the increasing share of medium-educated at the expense of the decreasing share of low-educated. In the younger cohorts, there is a noticeable gender difference – stagnation of the transition among men, and an increase in the share of tertiary educated at the expense of a decrease in low- and medium-educated among women. This development of the educational transition in Serbia – very similar to that in Sweden (Jalovaara et al. 2019), has led to a reversal of the gender gap in educational attainment – women have become more educated than men, analogously to the change observed in many European countries.

The development of the relationship between the educational factor and fertility has led to changes in educational differentials in the fertility of both sexes, but also to a very pronounced gender gap in the patterns of these differentials. Among men, a path from convergence in CTFR between the three educational levels in older cohorts to divergence in CTFR between the low-educated and other two educational groups in younger generations and the formation of a positive educational gradient in CTFR is observable.

On the other hand, a negative educational gradient in CTFR was expressed across all cohorts of women, with the gap between the low- and highly educated doubling in younger generations compared to older ones. Merz and Liefbroer (2018) found that the strongest negative educational gradient in CTFR is in the Mediterranean and post-socialist countries of Central Europe, which are characterized by poor opportunities for balancing work and parenting. Sobotka, Beaujouan, and Van Bavel (2018: 11), interpreting the marked cross-country variation among the women born between 1940 and 1970, find that the Serbian pattern of "widening of education-fertility differentials" is typical for a small number of countries. In the countries with the lowest cohort fertility, two models can be observed – convergence

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across educational groups to a very low CTFR (South Korea) and stable educational differentials (Spain) (Sobotka, Beaujouan, and Van Bavel 2018: 12). In the Nordic countries, which are characterized by relatively high cohort fertility, there was a convergence in CTFR across "educational lines" in younger cohorts (Jalovaara et al. 2019).

The development of educational differentials in childlessness was the same for both sexes, as observed in CTFR, but the gender gap in the educational gradient was even more pronounced. The negative educational gradient in women's childlessness has led to the largest increase in childlessness among the most educated in younger cohorts. At the same time, the positive educational gradient in the childlessness of men has led to a marked exclusion of the low-educated from reproduction. As a result, the gender gap in childlessness has disappeared in the youngest cohorts of the highly educated, while the width of the gap has increased among the medium-educated, and especially among the low-educated – almost three times more men than women were excluded from reproduction.

Unlike in the Nordic countries, there has not been a reversal of the educational gap in childlessness among women, but the gap in younger cohorts has increased at the expense of the highly educated. On the other hand, starting with the cohorts born in the mid-1950s, the pattern of educational differentials in male childlessness in Serbia is similar to that of Finland. Although the percentage of childlessness is very high among the low-educated, their share is not large and is declining. However, the percentage of childlessness is very high among the medium-educated, who are by far the most represented. We can conclude that there has been a gender convergence in childlessness among the highly educated in Serbia, contrary to the process that took place in the Scandinavian region (Jalovaara et al. 2019). The literature suggests that family support policies that are intrinsically based on gender equity may lead to the disappearance of educational differentials in fertility (Andersson et al. 2009; Wood, Neels, and Kil 2014).

Both theoretical concepts of post-transition fertility – economic and cultural we referred to in the introductory part, which emphasize the importance of the relationship between education and fertility for understanding changes in fertility patterns, provide a general framework for the interpretation of the presented results. The type of analysis we conducted could not distinguish the individual factors and the complexity of their interrelationships that drive together the changes in cohort fertility. Nevertheless, it seems to have provided enough elements to identify the key impacts of socio-economic changes associated with the educational transition on the development of fertility patterns in Serbia in both sexes.

The decline in CTFR among the medium- and highly educated in younger cohorts of both sexes may suggest that the impact of values associated with the Second Demographic Transition is at work in Serbia. However, a prominent negative educational gradient in CTFR among women, the highest childlessness and a more pronounced decline in fertility among highly educated women than among men indicate that highly educated women are under greater pressure than men to realize their reproductive goals. The reason can be arguably sought in the still pronounced gender inequity in both the private and

public spheres. This means that the 'gender revolution' in Serbia has not yet entered the second phase, which implies that male partners are actively involved in the division of parental responsibilities and that there is substantial institutional support for parents to balance family and work obligations. This confirms the findings of recent studies that society in Serbia is 'stuck' in a transitional phase between traditional and modern (Stanojević 2022). Our analysis found a continuation of the "widening of educational differentials" observed in the 2011 Census cohort fertility analysis (Sobotka, Beaujouan, and Van Bavel 2017), which can be explained by the high sociopsychological cost of parenthood for mothers due to the re-patriarchalisation of society that followed the fall of communism (Bobić 2018).

The opposite process is taking place in the Scandinavian countries, where the issue of work-family balance is no longer a limiting factor in the fertility of highly educated women. Institutional support to parents, primarily when it comes to the availability of kindergartens and support for mothers to stay in the labour market, but also the reduction of gender inequity in parenting in both spheres, has clearly yielded results in these welfare states of social-democratic type (Merz and Liefbroer 2018). There, parenting has become a challenge for the low-educated of both sexes (Jalovaara et al. 2019).

Our analysis of the development of CTFR and childlessness has shown that socioeconomic status has become a decisive factor for starting a family only for men in Serbia, because the trajectory of the low-educated in both indicators diverges noticeably from the other two educational groups, which denotes an increasing exclusion from reproduction. It is interesting to note that in the Scandinavian countries, the same pattern applies to men, despite the gender convergence in terms of economic and family roles in parenting (Jalovaara et al. 2019; Kravdal and Rindfuss 2008). This suggests that the economic status of men is still decisive in starting a family, regardless of the socio-cultural level of development of society, and that theories about gender roles within the family do not offer the best explanations.

The decline in the progression to second birth, as a factor of the declining completed fertility, has joined the increasing childlessness among younger cohorts of both sexes. At the same time, a slight increase in the progression to third birth in both sexes proved insufficient to halt the decline in the cohort total fertility rate, given that the share of mothers and fathers with three children is only about 12% among those born after 1960.

In contrast to the development of CTFR and progression to the first birth, the educational gradient in the progression to the second and third birth is negative in both sexes, with it being more pronounced among women. The lack of convergence in the progression to second and third births among the different educational groups of both sexes suggests that the more educated a person is, the more difficult it is for them to expand their family. This is most likely due to higher opportunity costs and a more pronounced conflict between parental and work responsibilities than for the less educated, which is consistent with recent findings for European post-socialist countries (Wood, Neels, and Kil 2014). Also, the reverse educational gradient in the progression to the first compared to the progression to the second and third births among

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men shows that the low-educated men who have managed to start a family are more likely to have the second and especially the third child, than more educated ones. Among women, on the other hand, educational differentials have the same effect on all birth orders – the less educated a woman is, the more children of all birth orders she will have. This pattern confirms theoretical assumptions and findings from other countries that in the societies with more pronounced gender inequity and family support policies that are not sufficiently gender- and parent-sensitive, higher opportunity costs of parenthood lead to lower fertility and vice versa.

4.1 ON THE EFFECTS OF THE FAMILY SUPPORT POLICY FROM THE VIEWPOINT OF PARITY PROGRESSION RATIOS

The results of our analysis related to parity progression ratios suggest that the policy measures applied may have yielded some results, yet limited in range. The youngest cohorts of women in the second part of their reproductive period could be exposed to the effects of the measures. Given the growing trend of childbearing postponement, manifested through the average age at childbirth, we can assume that this is exactly the period in which the effects of the measures should be seen.

Although one-off financial assistance for the first birth rapidly increased in the period 2006–2022 (from 232 to 2,751 euros), it apparently had no effect, given the growing childlessness among both sexes, regardless of educational level. This finding suggests that the factors of family formation associated with finding a suitable partner, which are explained by ideational changes in norms and values typical of the Second Demographic Transition, are becoming increasingly important in Serbia as well. To these should be added the recognized structural obstacles – increasing insecurity in the labour market and underdevelopment of organizational culture, the inability to solve the housing issue and inadequate institutional support for parenthood, as well as cultural barriers in the form of the lack of gender convergence in values on gender roles in the public and private spheres (Stanojević 2022). This particularly affects highly educated women, in whose case the increase in the opportunity costs of parenthood due to the absence from the labour market should be added. On the other hand, a more pronounced increase in childlessness among low-educated men indicates that one-off assistance is certainly not enough to change the perception of their unfavourable socioeconomic status in the eyes of potential partners. The results of our analysis show that stimulating first birth through one-off financial assistance had no demographic effect, suggesting that the mix of factors influencing the transition to parenthood is extremely complex. Not only does it include socio-psychological and cultural determinants that have a decisive impact on prolonging the transition to adulthood in younger generations (Tomanovic 2012), but the economic and structural prerequisites for starting a family are significantly beyond the reach of one-off assistance.

A recent study on a sample of highly educated mothers with one child in Serbia confirmed the existence of a positive relationship between the feeling of subjective satisfaction with life and the intention to have a second child, known in literature, but also that the economic status of the family, although positively

associated with the feeling of happiness, has no impact on this relationship (Nikitovic, Buturovic, and Ignjatovic 2018). However, based on the results presented here, stopping the decline in the transition to second birth and the slight increase in the transition to third birth among women regardless of educational level, could be explained by the positive impact of continuous monthly payments during the first two years of the child's life for the second-born and for the first ten years for the third-born, as well as paid maternity leave during the first two and three years, respectively. Therefore, it can be concluded that direct financial incentives are more important for the enlargement of than for starting a family in Serbia.

On the other hand, there was no convergence in the progression to the second and third births among different educational groups. Moreover, in the progression ratio to the third birth, there was a marked divergence in both sexes between the low-educated and the other two groups. This is particularly worrying, as it has been shown that the long absence of low-educated women from the labour market, combined with as many as ten years of direct financial incentives, significantly reduces the possibility of their return to the labour market (Stanojević 2022).

The presented findings suggest that family support measures should be more sensitive to the social status of parents, offer more flexible forms of parental leave combined with financial incentives, and include more effective mechanisms of institutional support for parenting and protection of women's position in the labour market. The observed increase in the progression to third birth does not have a significant impact on the change in completed cohort fertility, due to the very low initial level of this indicator, but also the decreasing share of the low-educated among whom this increase is the highest. It seems that in the domain of financial incentives, flexibility and modernization of family support can contribute the most to the progression to second birth, while their impact on the progression to first birth is rather limited.

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Data Availability Statement

This study was based on the data provided on a special request by the Statistical Office of the Republic of Serbia. As such, the data cannot be shared publicly. However, all intermediate results in their aggregated form can be obtained from the authors upon request.

Coauthor Contributions

Vladimir Nikitović: Conceptualization, Data curation, Formal Analysis, Funding Acquisition, Investigation, Methodology, Supervision, Validation, Visualization, Writing – Original Draft. **Ivana Magdalenić**: Conceptualization, Data curation, Formal Analysis, Writing – Review & Editing.

APPENDIX

Table A1 Completed cohort fertility rate by educational attainment for the selected one-year cohorts of women born 1942–1982 and men born 1942–1977 in Serbia

Gender	Women			Men		
Birth cohort	Education low	medium	high	low	Education medium	high
1942	1.84	1.61	1.56	1.82	1.77	1.79
1947	1.91	1.69	1.60	1.86	1.81	1.81
1952	1.97	1.75	1.57	1.82	1.78	1.76
1957	2.04	1.77	1.56	1.72	1.73	1.74
1962	2.09	1.77	1.51	1.56	1.64	1.66
1967	2.10	1.75	1.43	1.46	1.59	1.59
1972	2.12	1.72	1.39	1.38	1.53	1.51
1977	2.13	1.70	1.37	1.34	1.41	1.44
1982	2.23	1.70	1.35			

Table A2 Childlessness (%) by educational attainment for the selected one-year cohorts of women born 1940–1982 and men born 1940–1977 in Serbia

Gender	Women			Men		
Birth cohort	Education low	medium	high	low	Education medium	high
1942	5.28	8.75	11.37	5.32	5.99	5.55
1947	5.17	7.58	11.12	6.36	5.98	6.07
1952	4.57	7.16	12.97	9.81	8.62	8.53
1957	5.56	7.54	14.09	15.69	12.00	10.37
1962	7.46	8.76	16.63	22.95	16.19	13.66
1967	8.26	10.14	19.43	27.61	18.71	16.05
1972	9.91	11.61	21.29	31.63	21.29	19.56
1977	10.82	12.98	22.94	34.95	26.15	23.15
1982	13.00	14.97	25.67			

Source: authors' own calculations based on the data from the 2022 Census in Serbia

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Rodne razlike u obrascima kohortnog fertiliteta u Srbiji: uloga obrazovnog gradijenta

SAŽETAK

Ovaj rad predstavlja prvi doprinos istraživanju rodnih razlika u obrascima kohortnog fertiliteta u Srbiji. Koristili smo posebno obrađene rezultate Popisa 2022. koji obuhvataju jednogodišnje kohorte žena rođenih 1940–1982. i muškaraca rođenih 1940–1977. godine. Koristeći stope progresije ka redovima rađanja (paritetima), ispitali smo promene i rodne obrasce završenog kohortnog fertiliteta iz perspektive obrazovnih razlika s obzirom na ulogu obrazovne ekspanzije u promenama fertiliteta poslednjih decenija. Analiza metodom dekompozicije pokazala je da je značajan porast bezdetnosti i pad progresije ka drugom detetu među kohortama rođenim posle 1960. godine ključni razlog pada završenog fertiliteta oba pola. Razvoj odnosa obrazovanja i fertiliteta doveo je do promena u obrazovnim diferencijalima fertiliteta kod oba pola, ali i do veoma izraženog rodnog jaza u obrascima ovih razlika. Konvergencija u završenom fertilitetu među različitim obrazovnim grupama u starijim kohortama muškaraca pretvorila se u divergenciju između niskoobrazovanih i više obrazovanih u mlađim generacijama, što je rezultiralo pozitivnim obrazovnim gradijentom u skorijem završenom fertilitetu muškaraca. Negativan obrazovni gradijent u završenom fertilitetu zabeležen je u svim kohortama žena, pri čemu se jaz između nisko i visokoobrazovanih udvostručio među mlađim u poređenju sa starijim kohortama. Razvoj obrazovnih razlika u bezdetnosti među kohortama doveo je do rodne konvergencije među visokoobrazovanim i divergencije među niskoobrazovanim u Srbiji, za razliku od procesa koji se odvijao u rodno egalitarnijim društvima. Nedostatak konvergencije u tranziciji ka drugom i trećem detetu među različitim obrazovnim grupama oba pola, što je posebno izraženo kod žena, sugeriše da što je osoba obrazovanija, to joj je teže da proširuje porodicu zbog nedostatka institucionalne podrške roditeljstvu i rodne jednakosti unutar porodice. Identifikovani obrasci završenog kohortnog fertiliteta u Srbiji potvrđuju teorijske pretpostavke i nalaze iz drugih država da u društvima sa izraženijom rodnom nejednakošću i politikama podrške porodici koje nisu dovoljno rodno i roditeljski senzitivne veći oportuni troškovi roditeljstva dovode do nižeg fertiliteta i obrnuto.

KLJUČNE REČI

kohortni fertilitet, popis stanovništva 2022, progresija ka redovima rađanja, obrazovanje, rod

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Examining the link: educational expansion and non-marital fertility in Croatia

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ABSTRACT

This paper studies the macro-level relationship between education and non-marital fertility in Croatia. Using vital statistics on first births from 1984 to 2021, we explored non-marital fertility trends by mothers' education and assessed the influence of women's educational expansion. We observed a significant increase in the proportion of non-marital births, from under 10% in the mid-1980s to over 30% by 2021. Decomposition analysis showed that behavioural changes, particularly among medium-educated women, significantly influenced the increase in non-marital fertility. This group increasingly opted for childbearing outside of marriage. High-educated women also contributed to the trend, with the behavioural changes more modest in comparison to those of medium-educated women, but amplified by an increase in their group size. Direct standardization showed that higher educational attainment among first-time mothers moderated the proportion of non-marital births, suggesting that the proportion of non-marital births could have been even higher had the educational composition remained constant at 1984 levels. The study confirmed a persistent negative educational gradient, where lower educational attainment was associated with a higher likelihood of non-marital childbearing. The results have important implications for policymakers, as discussed in the paper.

KEYWORDS

non-marital fertility, education, demographic analysis, Croatia, decomposition methods

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1 INTRODUCTION

Recent decades have witnessed a marked increase in non-marital fertility across Europe (Eurostat 2024), a trend recognised as one of the most significant aspects of family change (Sobotka and Toulemon 2008; Perelli-Harris et al. 2010). This increase is closely linked to broader shifts towards more informal partnerships and is largely attributed to the proliferation of childbearing within cohabitation (Kiernan 2001, 2004). Many demographers view non-marital childbearing as a fundamental feature of the 'second demographic transition' (Van de Kaa 1987, 2001; Lesthaeghe 1995, 2010, 2014), the dominant theoretical framework used to understand changes in family formation, which posits a decoupling of marriage and childbearing, influenced by later marriages and rising cohabitation rates. This phenomenon is underpinned by broader economic and ideational shifts, including improving economic conditions and educational expansion, which foster changing attitudes towards premarital sex, non-marital relationships, and separation. As societies become wealthier and more educated, individuals increasingly value personal freedom, challenge traditional authorities, and seek personal fulfilment and self-actualization. The second demographic transition (hereinafter SDT) posits that these trends indicate a shift in societal attitudes towards family and relationships. The shifts in family behaviour are also tied to broader cultural changes. Education, particularly, is seen as a driving force behind these ideational changes, with more educated individuals often leading the way in adopting new family formation patterns. They are more likely to engage in behaviours like cohabiting and having children outside marriage. Additionally, education provides women with greater economic independence, enabling them to make choices about having children without relying financially on a partner (Klesment and Van Bavel 2017).

Other explanations focus on economic arguments and patterns of disadvantage (POD). Economic constraints and insecurities, coupled with changing job markets, might have made marriage less attainable or desirable, particularly among those who are less educated or economically disadvantaged (Perelli-Harris et al. 2010; Perelli-Harris and Gerber 2011). The POD theory suggests that non-marital family arrangements are often a reaction to economic uncertainty, rather than lifestyle choices. As economic uncertainties have increased globally due to factors like globalization, the job market has become less stable, particularly affecting young people. This instability prompts them to delay marriage and family formation, opting instead for less committed relationship forms. As discussed by Perelli-Harris and colleagues, within the POD framework, individuals still value marriage highly and see it as a symbol of life stability. However, they choose to delay marriage until they feel their economic and life situations are stable enough to support a traditional family structure. Economic risks, including unemployment and precarious employment, have become more stratified by education and social status, and people with lower education levels, facing higher risks of poverty and unemployment, are more likely to delay or avoid marriage, leading to an increase in non-marital childbearing (Buchholz et al. 2009; Lesthaeghe 2020; McLanahan and Percheski 2008; Perelli-Harris et al. 2010; Štípková 2015).

Contrasting perspectives from the SDT and POD theories thus present

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different expectations about which educational groups are more prone to non-marital births: according to the SDT view, the highly educated should be the ones more likely to have children outside marriage, while according to the POD view, it should be the low-educated group (Perelli-Harris et al. 2010; Perelli-Harris and Gerber 2011). Lappegård et al. (2018) demonstrated that, while the SDT theory can be helpful in explaining the differences in non-marital childbearing between countries, the POD approach more effectively explains variations among individuals and, to some extent, differences within a country. In line with the POD arguments, many micro-level studies have found evidence of a negative educational gradient in non-marital fertility for a number of European countries (e.g., Konietzka and Kreyenfeld 2002; Perelli-Harris et al. 2010; Ní Bhrolcháin and Beaujouan 2013; Vitali, Aassve and Lappegård 2015; Jalovaara and Andersson 2018), including Central and Eastern European countries (e.g., Sobotka 2008; Hoem, Mureşan and Hărăguş 2013; Štípková 2015) and Croatia in particular (Pavić 2014). However, the rise of non-marital fertility in Europe has coincided with educational expansion – especially prominent among women (Van Bavel 2012) – and sharply declining proportions of the low-educated group. This prompted research (Schnor and Jalovaara 2020) that would reconcile the two seemingly paradoxical trends – an increase in the average level of education coupled with an increase in non-marital fertility, despite the low-educated being especially likely to have their children outside marriage.

Schnor and Jalovaara (2020) explore the relationship between non-marital childbearing and educational expansion among the Finnish first-time parents from 1970 to 2009. They identify a significant rise in non-marital childbearing primarily attributed to medium-educated and lower tertiary-educated women, despite the highest prevalence of non-marital births among the low-educated population. As educational levels rose, the influence of the low-educated group reduced due to their smaller size, even though they had the highest rates of non-marital births. Conversely, the medium-educated played a crucial role in driving the observed changes due to their substantial numbers and evolving behaviours over the analysed period. The study by Schnor and Jalovaara (2020) underscores the complex interplay between increased educational attainment, evolving societal norms, and economic factors, which collectively influence marital decisions and childbearing patterns. Their findings suggest that changes in societal acceptance of non-marital childbearing and economic pressures particularly impacted medium and lower tertiary-educated individuals, prompting them to delay marriage or choose cohabitation, thus contributing to the rise in non-marital births in Finland.

This paper applies the approach used by Schnor and Jalovaara (2020) to explore a vastly different context. We examine the macro-level relationship between education and non-marital fertility in Croatia, attempting to assess how changes in women's educational structure have influenced their childbearing behaviour. Historically, non-marital childbearing was less common in Croatia during the latter half of the 20th century compared to many other European countries, with notable increases only in recent years (Mrđen 1997; Eurostat 2024). This trend is akin

to what Northern and Western Europe experienced two decades earlier (e.g., Sobotka 2008). Accompanying the rise in non-marital childbearing, there has been a significant educational expansion in Croatia (Croatian Bureau of Statistics 2023a), with highly educated women now forming the largest educational group among younger cohorts, as indicated by the Croatian Census of 2021 (Croatian Bureau of Statistics 2023b). Pavić (2014) analyses individual-level factors affecting non-marital childbearing, indicating that non-marital births are more likely among the lower-educated and economically weaker groups in Croatia. Despite these insights into individual behaviours, a significant gap remains in the research integrating these observations with broader societal trends. While studies such as that by Schnor and Jalovaara (2020) have explored similar phenomena in the Nordic context, the European forerunner in SDT (e.g., Sobotka 2008), the research examining the mechanisms behind the rise of non-marital fertility (Štípková 2015), or linking the micro-level negative educational gradient with the macro-level rise in non-marital childbearing, remains scarce for former socialist countries such as Croatia. This paper aims to address this gap by examining the relationship between education and non-marital fertility among Croatian women, focusing on the first births from 1984 to 2021.

We seek to assess how changes in the educational structure of women have impacted the proportion of children born out of wedlock, describing non-marital fertility trends by mothers' education, and quantifying the effects of female educational expansion on these trends. While we have insights into individual behaviours, our primary interest lies in societal rather than individual outcomes, focusing on how educational expansion at the population level has shaped the proportion of non-marital births among first-time mothers. Accordingly, this study addresses two central research questions: *What portion of the rise in non-marital childbearing can be attributed to shifts in the educational composition of first-time mothers, as opposed to changes in education-specific fertility behaviour? How would the trend in non-marital fertility differ had the educational composition of first-time mothers remained constant?* The paper advances our understanding of the relationship between education and non-marital childbearing by providing context-specific information from Croatia, contributing to the existing knowledge about demographic trends and societal changes.

2 METHODS

To tackle our research questions, we utilised birth-level vital statistics data provided by the Croatian Bureau of Statistics for the period from 1984 to 2021.[1] The dataset includes information about all live births in Croatia, incorporating demographic and socioeconomic characteristics of parents, where available.

To address potential biases, our analysis focused on first births – a restriction also adopted by other researchers (e.g., Schnor and Jalovaara 2020) to account for the fact that union status at the time of higher-order births often reflects patterns of separation and re-partnering, particularly among unmarried parents who are more likely to separate before a second child is born. This approach has

[1] Note that since 1998, the data collection method has shifted from the mother's permanent residence to the concept of usual resident population.

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yielded a total of 785,035 first births for analysis. The educational background of the mother was documented for 755,987 of these births, representing 93.7% of non-marital births and 96.7% of marital births. Information on fathers was less complete, with educational attainment data missing for 35.9% of non-marital births. Due to this limitation, we confined our analysis to first-time mothers.

We carried out the analysis using three educational categories, which correspond to the following ISCED (2011) levels: low (ISCED 0–2), medium (ISCED 3), and high (ISCED 5–8). Educational data refer to the highest level attained by the mother at the birth of her first child, as available in vital records. During the period analysed, the classification of education in the vital records underwent several changes, complicating the further segmentation of medium and high education into finer, directly comparable categories. Despite these challenges, our robustness checks expanded the number of educational categories and assumed consistent correspondence between them over time, aiming to identify potential differences in non-marital childbearing within the medium and high educational strata.

The first step of our analysis involved describing trends in the proportion of the first children born out of wedlock, which included an examination of the overall trends and a breakdown according to mothers' educational levels. We also explored the educational composition of the first-time mothers, assessing how their educational backgrounds have changed over the study period.

We next performed a decomposition of the changes in the proportion of non-marital first births across six carefully chosen multiple-year intervals between 1984 and 2021: 1984–90 (Croatia as part of Yugoslavia), 1991–95 (wartime), 1996–99 (post-war recovery), 2000–07 (economic upswing), 2008–13 (economic downturn), 2014–21 (post-EU accession). To assess how the educational expansion among first-time mothers shaped non-marital fertility in Croatia, we compared each pair of neighbouring intervals applying the following decomposition formula (Kitagawa 1955; Preston, Heuveline and Guillot 2001: 28–30)

$$\Delta = P^{t_2} - P^{t_1} = \sum_i (C_i^{t_2} - C_i^{t_1}) \times \left(\frac{P_i^{t_2} + P_i^{t_1}}{2}\right) + \sum_i (P_i^{t_2} - P_i^{t_1}) \times \left(\frac{C_i^{t_2} + C_i^{t_1}}{2}\right).$$

Here, Δ represents the total change in the proportion of first children born out of wedlock. It is defined as the difference in the proportion of non-marital first births, P, between the pairs of neighbouring intervals, t_2 and t_1, as previously outlined. The proportion of first-time mothers that falls into the ith educational category is represented by C_i, where i denotes the educational levels: low, medium, high.

The formula breaks down Δ into two components, the compositional effect, and the behavioural effect, detailing how these effects contribute to the total change observed. The first summation in the formula,

$$\sum_i (C_i^{t_2} - C_i^{t_1}) \times \left(\frac{P_i^{t_2} + P_i^{t_1}}{2}\right),$$

represents the *compositional* effect: the difference in educational composition ($C_i^{t_2} - C_i^{t_1}$) weighted by average education-specific non-marital first childbearing for the corresponding t_1 and t_2. It quantifies the part of the total change in the proportion of non-marital first births that is driven by changes in the educational structure of first-time mothers.

The second summation in the formula,

$$\sum_i (P_i^{t_2} - P_i^{t_1}) \times \left(\frac{C_i^{t_2} + C_i^{t_1}}{2} \right),$$

represents the *behavioural* effect: the difference in education-specific proportions of children born outside marriage ($P_i^{t_2} - P_i^{t_1}$) weighted by the average educational composition of first-time mothers for the corresponding t_1 and t_2. It quantifies the part of the total change in the proportion of non-marital first births that is driven by the changes in childbearing behaviour of low-, medium-, and high-educated first-time mothers.

In the final step of our analysis, we employed direct standardisation to examine the role that the changes in the educational structure of first-time mothers played in the observed trends in non-marital fertility. We used the educational composition of first-time mothers from 1984 as the standard and compared the actual trend with a directly standardised one, i.e., the trend that would have been observed if the educational distribution of first-time mothers had not changed.

3 RESULTS

3.1 TRENDS IN NON-MARITAL FIRST CHILDBEARING AND THE EDUCATIONAL EXPANSION AMONG FIRST-TIME MOTHERS IN CROATIA 1984–2021

The trend in non-marital first childbearing from 1984 to 2021 offers insights into the changing patterns of family formation in Croatia. There has been a notable increase in the proportion of first children born outside marriage, as depicted in Figure 1. Beginning at less than 10% in the mid-1980s, this proportion has risen significantly, surpassing 30% by the end of the period under study. Figure 1 traces this trend with two lines: the solid line indicates the

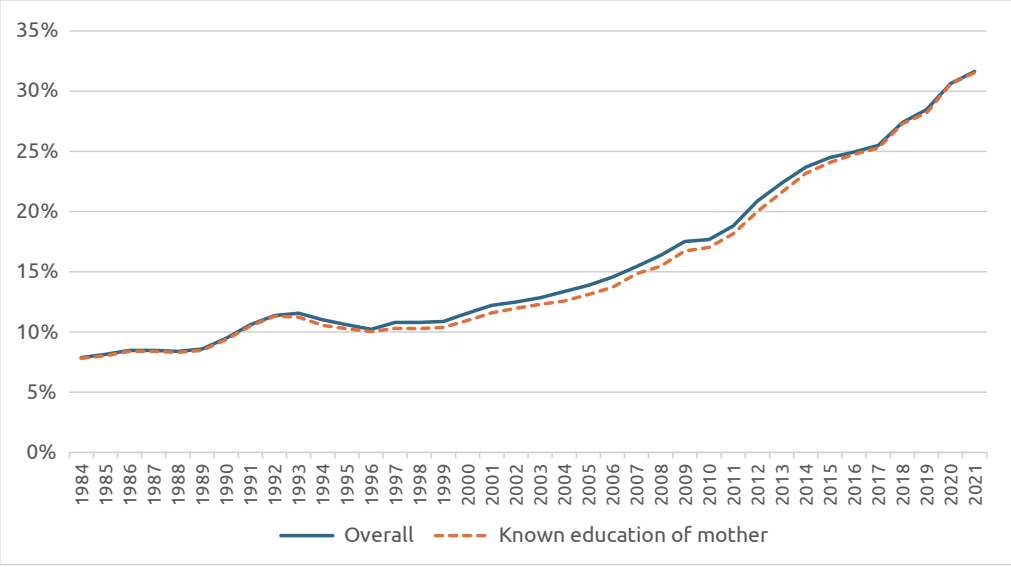

Figure 1 The rising proportion of non-marital first births in Croatia (1984–2021)
Source: vital statistics data provided by the Croatian Bureau of Statistics; authors' own calculations.

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overall proportion of non-marital first births, while the dashed line represents births for which the educational backgrounds of mothers are available in the vital records. The position of the dashed line below the solid line suggests that educational information is less complete for unmarried mothers. Nonetheless, the relatively small gap between the two lines indicates that the incomplete registration of mothers' educational backgrounds is unlikely to substantially alter our main findings.

Figure 2 displays the trend in non-marital first childbearing broken down by the educational levels of mothers. The figure illustrates a significant increase across all educational strata, yet it also reveals differing patterns of growth among these groups. In the mid-1980s, less than 15% of the first-born children of the mothers with low education were born out of wedlock, a proportion which grew to almost 80% by the end of the period in question. The trend for mothers with medium education began to rise steadily in the early 1990s, while the proportion for those with high education saw a more gradual but consistent increase. Throughout the period, mothers with lower educational levels consistently had higher proportions of non-marital first births compared to those with higher education, yet all groups experienced growth in non-marital fertility.

Figure 3 shows the changing educational composition of the first-time mothers in Croatia from 1984 to 2021, with a clear shift towards higher education. In 1984, more than half of new mothers had medium level of education, while 30.6% had low education, and just 11.7% had high level of education. By 2021, the proportion of mothers with low level of education had fallen to a mere 2.6%, while those with medium level accounted for 46.2%. Remarkably, the percentage of mothers with high level of education more than quadrupled, representing 51.2% of the total.

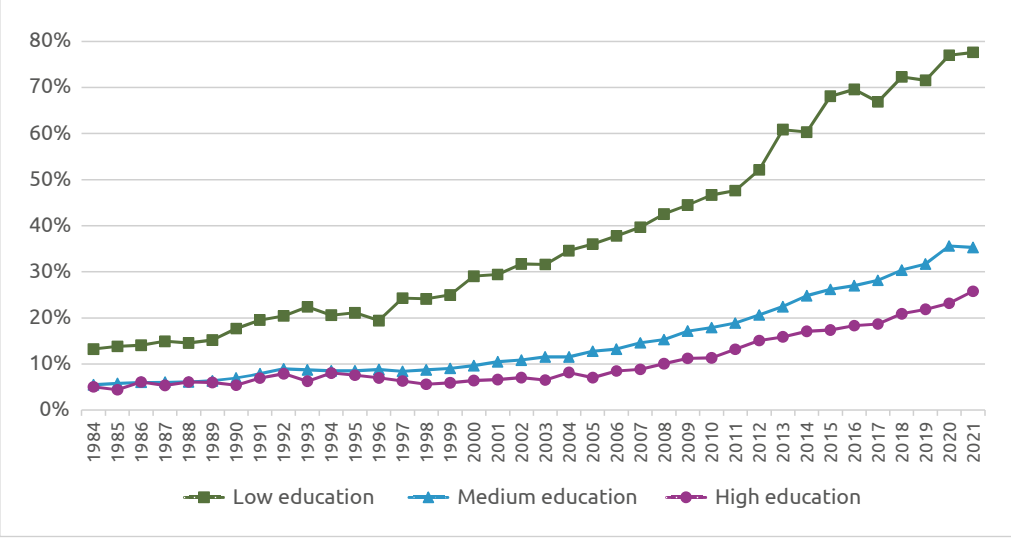

Figure 2 Comparison of non-marital first birth proportions among mothers with different educational levels (1984–2021)

Source: vital statistics data provided by the Croatian Bureau of Statistics; authors' own calculations.

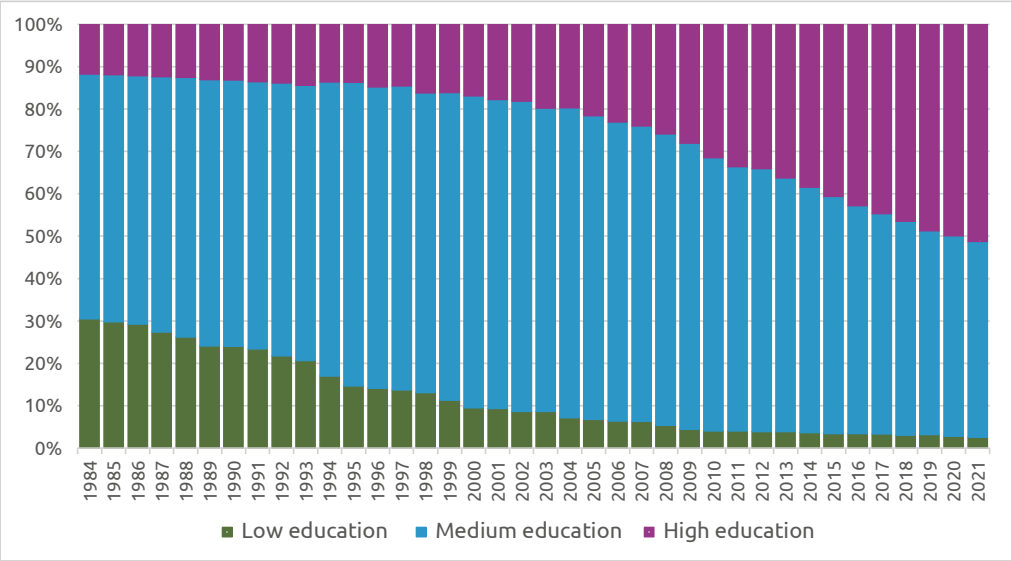

Figure 3 Educational composition of first-time mothers in Croatia (1984–2021)
Source: vital statistics data provided by the Croatian Bureau of Statistics; own calculations.

Throughout the analysed period, the negative educational gradient in non-marital first childbearing persisted. Simultaneously, there was an educational expansion among first-time mothers. Moving forward, we explored these trends using multiple-year intervals within a decomposition framework, to gain a deeper understanding of the underlying changes in non-marital first childbearing.

3.2 COMPONENTS OF CHANGE IN NON-MARITAL FIRST CHILDBEARING

Table 1 presents the impact of changes in non-marital fertility among first-time mothers, categorized by their educational levels. It outlines the behavioural effects reflecting shifts in non-marital first childbearing, the compositional effects caused by the changes in the relative size of each educational group, and the total effect, which combines the two. In the following interpretation, we refer to the results as shown in Table 1, with the sums that in some instances might not match due to rounding.

Between 1984–90 and 1991–95, the proportion of first children born outside marriage rose by 2.39 percentage points, from 8.37% to 10.76%. There was an increase in non-marital fertility across all educational categories, but it was the largest among the medium-educated first-time mothers. Low-educated women had a behavioural effect of 1.44 percentage points. However, the decline in the share of low-educated women resulted in the negative compositional effect of –1.37. These effects combined to the small total impact of 0.07 on the overall increase in non-marital childbearing for low-educated women. First-time mothers with medium education displayed the more substantial contribution of 1.99 percentage points, driven by both behavioural effects (1.53)

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Table 1 Results of the decomposition analysis

Time (from → to)	Education	Effect		
		Behavioural	Compositional	Total
1984–90 → 1991–95	Low	1.44	−1.37	**0.07**
	Medium	1.53	0.46	**1.99**
	High	0.24	0.09	**0.33**
	Total	**3.20**	**−0.81**	***2.39***
1991–95 → 1996–99	Low	0.38	−1.45	**−1.07**
	Medium	0.16	0.43	**0.59**
	High	−0.16	0.11	**−0.05**
	Total	**0.38**	**−0.91**	***−0.53***
1996–99 → 2000–07	Low	1.07	−1.48	**−0.41**
	Medium	2.21	0.05	**2.26**
	High	0.23	0.33	**0.55**
	Total	**3.51**	**−1.10**	***2.41***
2000–07 → 2008–13	Low	0.92	−1.44	**−0.52**
	Medium	4.57	−1.17	**3.39**
	High	1.40	1.15	**2.55**
	Total	**6.89**	**−1.46**	***5.42***
2008–13 → 2014–21	Low	0.81	−0.65	**0.16**
	Medium	6.31	−3.02	**3.29**
	High	2.90	2.29	**5.19**
	Total	**10.01**	**−1.38**	***8.63***

Source: vital statistics data provided by the Croatian Bureau of Statistics; authors' own calculations.
Note: the sums might not match due to rounding.

and compositional effects (0.46), which indicates that their propensity to have children outside of marriage grew alongside their relative group size. The contribution of 0.33 percentage points by the high-educated first-time mothers was driven more by behavioural shifts in non-marital childbearing (0.24) than by their increasing group size (0.09).

The proportion of non-marital first births dropped to 10.24% by 1996–99, the decrease of −0.53 percentage points relative to the previous five-year interval. This decline is mostly attributable to low-educated mothers: while they increasingly had children out of wedlock (a positive behavioural effect), their group size shrank (a negative compositional effect), resulting in the total effect of −1.07. High-educated women contributed another −0.05 percentage points, stemming entirely from their declining tendency to have children outside marriage, in contrast to their low-educated peers. For the medium-educated first-time mothers, both behavioural and compositional effects were positive.

Between 1996–99 and 2000–07, the proportion of first children born outside marriage rose again, this time by 2.41 percentage points. Low-educated mothers, despite exhibiting the positive behavioural effect of 1.07, saw their contribution to the overall increase in non-marital first childbearing, largely offset by the more substantial negative

compositional effect of −1.48. For medium-educated mothers, behavioural (2.21) and compositional (0.05) effects both drove the considerable total contribution of 2.26 percentage points, indicating a greater tendency for non-marital childbearing and a relatively stable group size. High-educated mothers showed the moderate total contribution of 0.55 percentage points, with both behavioural (0.23) and compositional (0.33) effects playing a significant role, suggesting that while their propensity for non-marital childbearing increased, their growing group size was a more pronounced factor.

The trend from 2000–07 to 2008–13 indicates an overall substantial increase in non-marital first childbearing of 5.42 percentage points. For low-educated mothers, the behavioural effect of 0.92 was more than offset by the stronger negative compositional effect of -1.44, leading to the total contribution of −0.52 percentage points. This reflects a continued pattern where, despite an increase in non-marital fertility within this group, the significant reduction in their relative size slows the increase in the overall proportion of non-marital first births. Medium-educated mothers experienced the pronounced total increase of 3.39 percentage points, propelled by the large behavioural effect of 4.57, while the negative compositional effect of -1.17 suggests that their size shrank. High-educated mothers accounted for the increase of 2.55 percentage points, with behavioural changes adding 1.40 points and compositional changes adding 1.15 points. This reveals that highly educated mothers were not only increasingly having children outside marriage, but their segment was also growing.

From 2008–13 to 2014–21, the rise in the proportion of non-marital first births reached 8.63 percentage points, the highest observed within the period analysed. Low-educated mothers made a modest addition of 0.16 percentage points, with their growing inclination to have children outside marriage (0.81) lessened by negative compositional change (−0.65). Medium-educated mothers contributed to the total increase with 3.29 percentage points, predominantly due to a sizeable behavioural change (6.31), although this was counterbalanced by a considerable reduction in their group size (−3.02). High-educated mothers led with the total contribution of 5.19 percentage points, where the behavioural change (2.90) was amplified by an increase in their group size (2.29), underscoring not only an increasing tendency for non-marital childbearing, but also an expansion in their representation among first-time mothers.

In summary, throughout the study period, there has been an increase in non-marital fertility across all educational strata. However, the medium- and high-education groups have been particularly notable, displaying both behavioural and compositional changes. Among medium-educated mothers, the most substantial behavioural shifts were observed, indicating a significant transformation in their attitudes and practices regarding non-marital childbearing, even as their numbers declined. In contrast, the contribution of highly educated mothers was primarily driven by the growth in their group size, rather than striking changes in fertility behaviour. Clearly, while behavioural changes were more pronounced in general, the compositional changes among highly educated mothers played an important role, significantly influencing the overall rise in non-marital births. Building on these findings, the final step of our

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analysis used direct standardization to further dissect the impact of changes in the educational distribution of first-time mothers on the trend of non-marital fertility, employing the educational structure from 1984 as the baseline to isolate the effects stemming purely from compositional shifts.

3.3 THE ROLE OF EDUCATIONAL EXPANSION IN THE RISE OF NON-MARITAL FIRST CHILDBEARING

Figure 4 depicts the results of direct standardisation of the non-marital first childbearing in Croatia from 1984 to 2021, comparing the actual observed proportion of non-marital first births to the standardised trend which assumes an unchanging educational structure of first-time mothers from 1984. The standardised proportions are consistently higher than both sets of actual proportions. This discrepancy suggests that if the educational composition of first-time mothers had not changed from that of 1984, the proportion of non-marital first births would have been higher than what was actually observed.

The standardisation procedure used the educational structure of the first-time mothers in 1984 as the constant reference point to calculate what the proportion of non-marital first births would have been if the educational composition had not changed over time (as in fact it had). Since the standardised proportions are higher than the actual ones, it indicates that the increasing educational levels of the first-time mothers over the period have acted as a moderating factor against the trend of non-marital fertility.

This means that while there was indeed an increase in the overall proportion of non-marital first births, this increase could have been even more

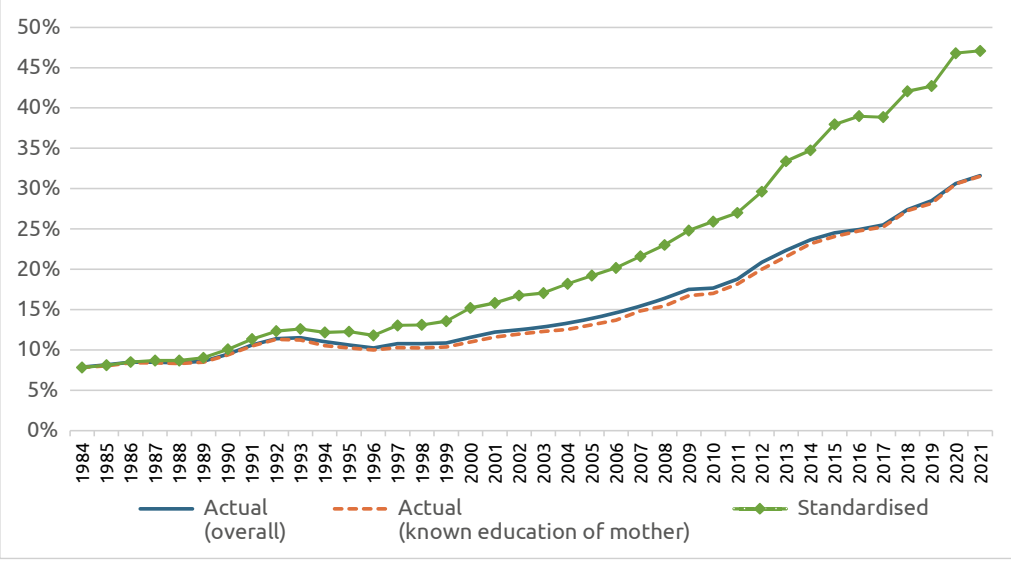

Figure 4 A comparison of actual and educational-structure standardised proportions of non-marital first births in Croatia (1984–2021)

Source: vital statistics data provided by the Croatian Bureau of Statistics; authors' own calculations.

pronounced if the educational levels of mothers had remained as they were in 1984. The findings suggest that as education levels increased, the proportion of non-marital first births did not increase as much as it would have if the educational distribution had remained constant.

Therefore, the analysis shows that the educational expansion among first-time mothers had a dampening effect on the rise of non-marital first births in Croatia. Had the educational composition of mothers stayed at lower levels (i.e., the 1984 levels), our results suggest we would have seen a higher proportion of non-marital births, implying that higher education is associated with lower proportions of children being born out of wedlock. From the mid-1980s until around 2000, the gap between the actual and standardised proportions was relatively minor, suggesting that during this period, changes in the educational composition of first-time mothers had less impact on the rise in non-marital births. However, after 2000, this gap widens significantly, reflecting a more substantial influence of educational composition on non-marital fertility trends.

4 DISCUSSION

Throughout the analysed period, non-marital fertility in Croatia followed a dynamic pattern – initially increasing, then showing a slight decrease from 1991–95 to 1996–99, followed by significant increases thereafter. The early rise mirrors broader European trends, where non-marital births have become increasingly common amid educational expansion and shifting social norms (Schnor and Jalovaara 2020). The decline in the mid-1990s may have been influenced by 'retraditionalisation', a phenomenon observed across several post-socialist countries during the times of significant socio-political upheaval, characterised by a temporary reversion to more traditional marital and family norms (Petrović 2011). This decline was primarily driven by a decrease in the group size of low-educated mothers, more likely to have children outside of marriage (e.g., Sobotka 2008; Perelli-Harris et al. 2010; Pavić 2014). This suggests that broader demographic shifts, particularly educational expansion, played a more significant role than retraditionalisation per se. Nonetheless, the observed negative behavioural effects among highly educated mothers during this period align with the retraditionalisation narrative, possibly reflecting a temporary return to conservative values amid the national tumult. Generally speaking, the 1990s were a period of significant social and economic transformation across former socialist countries, including Croatia, where shifts in societal norms and economic conditions influenced family formation and fertility trends in many and diverse ways (Frejka 2008; Sobotka 2008; Sobotka and Toulemon 2008), with varying responses among different educational strata (Štípková 2015).

Subsequent increases in non-marital fertility have notably been driven by behavioural changes among the medium-educated, who have become the most significant contributors to this trend. Such shifts in behaviour among the medium educated, observed in other countries as well, have been attributed to their navigation through shifting economic conditions and partnership dynamics, which have lessened the traditional emphasis on marriage before childbearing (Schnor and Jal-

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ovaara 2020). More recently, the largest contributions to the rise in non-marital births have come from highly educated mothers. This trend aligns with findings from Cherlin (2021), indicating a growing acceptance of non-marital childbearing among the highly educated, driven by broader societal acceptance and changes in personal values regarding family formation. However, behavioural shifts among the highly educated were less pronounced compared to those among the medium-educated. In the case of the highly educated, the increase in non-marital childbearing was reinforced by the compositional effect – the relative size of this group rose significantly – while for the medium-educated, the compositional effect has started to work in the opposite direction, thus working to slow down the increase in non-marital fertility in Croatia.

We performed additional analyses using a larger number of educational categories. Specifically, we divided medium education into two categories (lower and upper medium education), and high education into two categories (lower and upper high education) to examine how the results change and whether there was heterogeneity within these educational strata, as suggested by other studies. Unlike Schnor and Jalovaara (2020), who observed diversity within the tertiary education category – with family patterns among lower-tertiary educated individuals differing from those of the upper-tertiary educated, and lower-tertiary educated becoming more similar to the medium-educated – we found no evidence of such differences. Our findings (not shown, but available upon request) indicate negligible differences in the proportions of first children born outside marriage between the lower and upper levels of highly educated mothers (or fathers). The proportions of non-marital first births for the two categories of highly educated mothers closely align. The most educated group of first-time mothers continued to make the largest contribution to the increase in non-marital fertility during the most recent period of our study (from 2007–13 to 2014–21). Additionally, we observed emerging differences within the medium-educated category, which have only begun to grow in magnitude in recent years. For both groups of medium-educated first-time mothers, the behavioural effects were positive throughout the analysis, with varying compositional effects that turned negative in more recent periods, aligning well with the presented findings.

Due to data limitations on fathers, we opted to show only the results for mothers. However, we also performed the analysis for fathers. The findings correspond well to the existing literature (Schnor and Jalovaara 2020). The educational expansion was less pronounced among first-time fathers compared to first-time mothers. The medium-educated still comprise the majority of first-time fathers even in the most recent years in our dataset, and this group contributed most to the increase in non-marital childbearing. However, it is important to remember that our data does not cover the fertility behaviour of fathers as thoroughly as that of mothers, with a substantial proportion of births missing information on the father's educational background, especially in the cases of non-marital births.

Our results reveal a persistently negative educational gradient in non-marital first childbearing in Croatia (see Pavić 2014), which is becoming more pronounced, as indicated by the expanding percentage-point difference in the

proportions of children born outside of marriage between the lower and higher educational levels. This gradient might significantly impact the life trajectories of children born to unmarried mothers, resonating with McLanahan's concept of 'diverging destinies', where children face diverse social and economic challenges based on their parents' education, leading to varying life outcomes (McLanahan 2004; McLanahan and Percheski 2008; McLanahan and Jacobsen 2015). Nonetheless, the observed rise in the non-marital fertility among the medium- and high-education categories should not be disregarded. As Schnor and Jalovaara (2020) show for Finland, and as our study corroborates for Croatia, non-marital childbearing has increased during the times of educational expansion across all educational groups. These shifts underscore the need for policymakers to consider the complex realities of family structures today. The broadening prevalence of non-marital births implies that the risks associated with family instability and economic insecurity now affect a larger segment of the population, potentially shaping the development and future prospects of an increasing number of children born out of wedlock.

One limitation of this study is the inability to differentiate between non-marital births to cohabiting couples as opposed to non-marital births to single mothers. Unfortunately, vital statistics data do not contain information about the union context of the mother (except for whether the child was born in or out of wedlock). Exploring the educational differences in childbearing among married, cohabiting, and single mothers presents a valuable avenue for future research, potentially uncovering significant trends and policy implications.

Additionally, our study did not explore the extent to which first-time mothers marry after having their first child outside of marriage. This aspect of family dynamics is significant because the transition from cohabitation or single parenthood to marriage among first-time mothers could provide insights into the changes in family stability and child well-being across educational strata. Schnor and Jalovaara (2020) highlight the importance of understanding such transitions, particularly as they relate to the educational expansion and its influence on non-marital childbearing trends. Moreover, Cherlin (2021) suggests a growing trend among college-educated women to have their first child outside of marriage, often within cohabiting unions that later transition into marriage. This change indicates a shift in the role of marriage in family formation among the highly educated, possibly influenced by economic factors, as well as the growing societal acceptance of cohabitation and non-marital childbearing.

Our study used a descriptive approach to better understand the dynamics behind non-marital fertility changes in Croatia and the demographic groups driving them. However, it did not explore the underlying causes of these changes. We used decomposition methods to analyse how different educational groups influenced the proportion of first children being born outside of marriage. Despite its strengths, this approach did not explain why educational expansion brought about changes in non-marital childbearing, a significant drawback given the importance of understanding causal factors for scholars and policymakers developing theories and crafting policies from solid empirical evidence. Nonetheless, identifying the primary drivers of these trends remains crucial

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for effective policy formulation. While decomposition alone does not reveal the causes behind the observed shifts, it is essential in measuring how behavioural changes within different educational groups of first-time mothers contribute to the overall increase in non-marital fertility.

5 CONCLUSION

This study has examined the interrelationship between educational expansion and the evolution of non-marital fertility patterns in Croatia over the period from 1984 to 2021. The findings elucidate a significant transformation in both the educational attainment of the first-time mothers and their fertility decisions, underscored by a substantial increase in the proportion of first births occurring outside of marriage – from under 10% in the mid-1980s to over 30% by the end of the study period. The increase of non-marital fertility coincided with a pronounced educational expansion among women. The educational profile of first-time mothers shifted dramatically, with a decrease in the proportion of those with low educational attainment and an increase among those with higher education. By 2021, the majority of first-time mothers had achieved a high level of education.

Through decomposition analysis, this paper distinguished between the compositional and behavioural effects contributing to the observed trends. It was found that behavioural changes – particularly within the medium-educated group – dominantly influenced the increase in non-marital fertility. This group exhibited significant shifts in fertility behaviour, increasingly opting for childbearing outside marriage. Meanwhile, the growing proportion of highly educated mothers also contributed to the trend, although their impact was more pronounced through compositional shifts. Further insights were gained through the application of direct standardization, revealing that the increased educational attainment acted as a moderating factor on non-marital fertility rates. The analysis suggested that had the educational composition of first-time mothers remained constant at 1984 levels, the proportion of non-marital births could have been higher, indicating that higher educational levels generally correlate with lower non-marital fertility rates.

Moreover, the study confirmed a persistent negative educational gradient in non-marital fertility, where lower educational attainment was associated with a higher likelihood of non-marital childbearing. This gradient presents significant implications for social policy, particularly the need for enhanced support and resources for lower-educated mothers, who face not only higher probabilities of non-marital childbearing, but also greater socioeconomic challenges. In sum, the dynamics of educational expansion and non-marital fertility in Croatia offer a compelling lens for viewing broader societal changes. This study contributes to the demographic literature by detailing how the shifts in educational attainment among women shape familial and reproductive behaviours in the Croatian context. The findings underscore the importance of considering educational backgrounds in the formulation of policies aimed at addressing family formation and child welfare in contemporary society.

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Data Availability Statement

The data supporting the findings of this study were provided by the Croatian Bureau of Statistics and were available to the authors only in a secure data safe-room, due to confidentiality requirements for working with individual-level birth data. As such, the data cannot be shared publicly. However, all derived analyses and intermediate results in their aggregated form can be obtained from the authors upon request.

Coauthor Contributions

Petra Međimurec: Conceptualization, Methodology, Formal Analysis, Visualization, Writing – Original Draft. **Ivan Čipin:** Conceptualization, Investigation, Supervision, Writing – Review & Editing. **Dario Mustač:** Conceptualization, Validation, Writing – Review & Editing.

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Kakva je povezanost: obrazovna ekspanzija i izvanbračni fertilitet u Hrvatskoj

PROŠIRENI SAŽETAK

Istraživanja pokazuju da niže obrazovani češće imaju djecu izvan braka. Međutim, usporedno s porastom udjela djece rođene izvan braka, odvijala se obrazovna ekspanzija. Postojeća literatura sugerira da, iako je među nisko obrazovanima udio djece rođene izvan braka i dalje najveći, njihov sve manji udio u populaciji ograničava doprinos koji imaju zabilježenom rastu izvanbračnog fertiliteta. Na tom temelju, ovaj rad na primjeru Hrvatske istražuje izvanbračni fertilitet među ženama koje su rodile svoje prvo dijete, s ciljem da se odgovori na sljedeća istraživačka pitanja: Koliko se porasta u izvanbračnom fertilitetu može pripisati promjenama u obrazovnoj strukturi majki u usporedbi s promjenama u fertilitetnom ponašanju pojedinih obrazovnih skupina? Kakav bi bio trend u izvanbračnom fertilitetu da je obrazovna struktura majki ostala nepromijenjena? Koristeći se podacima iz vitalne statistike od sredine 1980-ih nadalje, ovaj rad istražuje udio prve djece rođene izvan braka među nisko, srednje i visoko obrazovanim ženama. Primjenom dekompozicijske analize, raščlanili smo na komponente ukupne promjene u izvanbračnom fertilitetu tijekom šest uzastopnih razdoblja: 1984.–90., 1991.–95., 1996.–99., 2000.–07., 2008.–13. i 2014.–21. Metodom direktne standardizacije istražili smo ulogu koju su promjene u obrazovnoj strukturi majki odigrale vezano uz zabilježene trendove u izvanbračnom fertilitetu. Nalazi otkrivaju znatan porast u udjelu prve djece rođene izvan braka, s ispod 10 % sredinom 1980-ih na više od 30% do 2021. U skladu s trendovima u drugim zemljama, rezultati pokazuju da je izvanbračni fertilitet porastao u svim obrazovnim skupinama. Dekompozicijska analiza pokazala je da su recentnom porastu izvanbračnog fertiliteta u najvećoj mjeri doprinijele promjene u ponašanju među srednje obrazovanima: kod te se skupina žena rađanje izvan braka intenziviralo. Trendu su doprinijele i visoko obrazovane žene; iako su bihevioralni učinci bili manje izraženi u usporedbi sa srednje obrazovanim ženama, njihov doprinos pojačali su strukturni učinci, odnosno rastuća veličina te obrazovne skupine. Direktna standardizacija pokazala je da je obrazovna ekspanzija usporila rast izvanbračnog fertiliteta: da je obrazovna struktura majki ostala nepromijenjena, naši rezultati sugeriraju da bi udio djece rođene izvan braka bio veći. Rezultati potvrđuju postojano negativan obrazovni gradijent u izvanbračnom fertilitetu u Hrvatskoj. Naši nalazi imaju važne implikacije za kreatore politike, o čemu se u radu raspravlja, i pomažu unaprijediti razumijevanje odnosa između obrazovanja i izvanbračnog fertiliteta spoznajama specifičnim za hrvatski kontekst.

KLJUČNE RIJEČI

izvanbračni fertilitet, obrazovanje, demografska analiza, Hrvatska, metode dekompozicije

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Depopulation and deep aging: the former Yugoslav and Western Balkans space between the second demographic transition and emigration

Damir Josipovič [1]

ABSTRACT

The article introduces the tentative concept of deep aging – a label used for a situation when the overall ageing effects of the second demographic transition, due to fertility below replacement level, are topped by the excessive emigration of the fertile contingent (additional loss of active population). Deep ageing thus accelerates population decline. But the loss of fertile contingent may affect the total fertility rates and its apparent rise (TFR). Here, the tempo effect of fertility plays the decisive role. The article first assesses the demographic change in the European macroregions in the period after the fall of the Iron Curtain (1990–2020). It then analyses the changes in the area of former Yugoslavia to assess the extent of population change in the last intercensal period, 2011–2022. Building on the previous research of population loss and migration flows after the break-up of Yugoslavia, the overall population change in the region is being assessed. It is also shown that tempo distortion of fertility rates considerably affects the realistic level of fertility and that approximate completed fertility rates fell less dramatically. Since the migration data are less reliable, the analysis of intercensal change was applied to assess the migration losses across the ex-Yugoslav space. To assess the extent of deep ageing, the intercensal projection of fertile contingent was introduced. The stage of deep ageing is the most pronounced in Croatia and Serbia, especially at the younger fertile group, while the overall loss of fertile population is profound and will certainly affect the further future decrease in population. Similarly difficult demographic situation is in other post-Yugoslav countries, where only Slovenia has not yet slid into the stage of deep ageing.

KEYWORDS

population ageing, emigration, low fertility, depopulation, second demographic transition

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1 INTRODUCTION

Two concepts are being discussed and reformulated within this research: the concept of demographic transition and the concept of ageing of population. Both have been traditionally disputed, yet the value of both comes to the forefront of the demographic research when dealing with the positioning of a certain population within broader demographic developments. Longstanding low fertility in the so-called economically developed countries uncovered the fears of shrinking population. Low fertility combined with longevity and an increasing life expectancy sparked the debates about how to deal with the changing age structure, whereby larger older age-groups outnumbered the smaller younger age-groups and threatened destabilization.

A characteristic feature of any population is its movement in time and space. It is characteristic of the global population that its number is directly influenced only by natural movement, i.e. the relationship between fertility and mortality. The relationship between the two is complicated at the regional and local levels, where the relationship between immigration and emigration in an area, i.e. its spatial component, becomes possibly a crucial factor of population growth. The area of former Yugoslavia is one such place where comparative research on population change and its destabilization may importantly contribute to the understanding of general demographic picture of Europe (Table 1).

Table 1 Population change in Europe 1990–2020

	1990	2000	2010	2020	2020–1990	2010–1990	2020–2010
Eastern Europe (with RF, KZK)	348,865,471	340,846,124	331,253,028	331,627,406	-17,238,065	-17,612,443	374,378
Southern Europe	117,013,260	120,064,663	129,227,338	129,697,471	12,684,211	12,214,078	470,133
Western Europe	237,751,243	247,413,956	258,059,355	269,580,520	31,829,277	20,308,112	11,521,165
Northern Europe	23,229,983	24,205,766	25,544,864	27,512,742	4,282,759	2,314,881	1,967,878
Southeastern Europe (ex-YU with ALB)	26,654,927	25,573,250	24,809,667	23,689,451	-2,965,476	-1,845,260	-1,120,216
FORMER SOCIALIST COUNTRIES	375,520,398	366,419,374	356,062,695	355,316,857	-20,203,541	-19,457,703	-745,838
CAPITALIST COUNTRIES	377,994,486	391,684,385	412,831,557	426,790,733	48,796,247	34,837,071	13,959,176
EUROPE TOTAL (with RF, KZK)	753,514,884	758,103,759	768,894,252	782,107,590	28,592,706	15,379,368	13,213,338
EUROPE* (European parts of RF, KZK, TUR)	693,514,884	704,103,759	718,894,252	735,107,590	41,592,706	25,379,368	17,213,338

Source: World Bank 2024; * author's recalculations for the European parts of Russia, Kazakhstan, and Turkey

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Since the low fertility areas were ascribed mainly to the western type of welfare states, where the lowering number of births were compensated through net immigration, the situation in Southeastern Europe stood out significantly. Europe, however, has not just been a playground of the longstanding lower fertility and compensating overseas immigration, but was also cut by the deep internal rifts and regional tendencies. While the Mediterranean traditionally contributed population to the industrially developed countries of Western and Northern Europe, the Central and Eastern Europe did so after the fall of the Iron Curtain (Table 1). As an effect of the new redistribution of population in Europe, a new divide emerged between east and west, where the east faced a lasting depopulation far beyond a sufficient compensation of population. Thus, the conditions of deep ageing were established, where the diminishing active population is emigrating and thus affecting both the prospective fertility and the contingencies of mortality.

The major population shift after the fall of the Iron Curtain (notwithstanding East Germany) was directed from Eastern to the western Europe whereby the East replaced the South. Southern Europe ceased to represent a major basin to the industrialized hub of Western Europe by 1990 and was completely replaced by east to west migration (Table 1). With the accession of the central and eastern European countries to the EU in 2004 and the outbreak of the Russian–Ukrainian conflict in 2014, the transfer of population from Eastern Europe was blocked unexpectedly and it has not yet recovered. From the loss of 17.6 mill. in the 1990–2010 period, the population growth in Eastern Europe was thereon positive (+0.374 mill. after 2010). Southeastern Europe (former socialist Yugoslavia and Albania) represents another type of emigration oriented macroregion. Despite the wars in the 1990's, the biggest emigration happened after the outbreak of the financial crisis in 2008. Its negative balance (–1.85 mill. until 2010) was extended by another –1.12 mill. population loss until 2020 (Table 1). Western (+31.2 mill.), Northern (+4.3 mill.), and Southern (+12.7 mill.) Europe, on the other hand gained some 48.8 million people, while the former socialist countries lost 19.5 million inhabitants. Overall population gain for the capitalist European countries in the 1990–2020 amounted to 69 million inhabitants against that in the former socialist Europe (Table 1).

1.1 THEORETICAL APPROACHES TO LOWERING FERTILITY AND THE TRANSITION THEORY

When a population begins to reproduce itself below the simple replacement level at 2.1 child per woman in fertile period, a second transition begins (Lesthaeghe and van de Kaa 1986, van de Kaa 1987: 5). The second demographic transition (SDT) in the former Yugoslavia first began in northern and western parts (Vojvodina, Croatia, Slovenia, Serbia proper), and then in the rest of the republics (Statistical Yearbooks of Yugoslavia, various volumes Wertheimer-Baletić 1999: 230; Malačič 2000: 86). In a relatively short period after Yugoslavia accomplished the first demographic transition in 1965 (Vogelnik 1965), the country entered the SDT (Černič Istenič 1994).

The fertility decline below the level of simple reproduction of population is a continuation of the process that began in Europe as early as the first half of the 19th century, first in France, yet under

different conditions and circumstances (Wertheimer-Baletić 1999: 132; Malačič 2000: 234; Šircelj 1991: 82–83). The complex multi-factorial theories tried to answer the question of why the former dynamic equilibrium of stable high fertility and fluctuating high mortality occurred. Thus the central demographic theory – the theory of demographic transition – was developed. According to Woods (1979: 4), its origin can be sought in the works of Thompson (1929), Davis (1945), and Notestein (1945). The term "demographic transition" itself was first used by Notestein (Malačič 2000: 240–241). Yet before Thompson, first in 1909 and again in 1934, Landry had put forward three fundamental theories of population that correspond to the three phases of demographic transition. In the theory of demographic transition, according to Notestein (1945), the role of mortality is reduced to the theoretical beginning of the demographic transition, since the transition commences when mortality begins to decline from relatively stable highs (ibid.). While the factors for mortality decline were quickly deciphered, its relation to fertility remained entangled in primordial explanations. Nevertheless, in its most succinct version, the demographic transition was defined by Paul Demeny: "... In traditional societies, fertility and mortality are high, and in modern ones both are low. In between, there is a demographic transition..." (Demeny 1972 in Malačič 1985: 42).

The fall of fertility rates prior to mortality rates poses an unbridgeable obstacle if the transition is to be conditioned with the fertility decline. Rather, the relationship between fertility and mortality seems to be more indirect in character. Yet other factors of this reversal need to be examined, such as the effect of higher mortality and postponed fertility, due to wars and the revolution of 1789.

Theory and demographic analysis show that mortality variations at high and stable fertility rates have little impact on the age structure (Breznik 1988: 423, 430). Yet, within the low-fertility countries, age-specific mortality needs to be evaluated. Applying the modelled starting points (abridged lifetables, fixed structure within five-year age-groups, probability and life expectancy across groups), data for post-Yugoslav countries prove the minimal loss through morbidity across the female fertile contingent ranging from 0.02 per cent in 20–29 age group to 2.72 per cent in 40–49 group. Hypothetically, if the modelled population (stationary, stable, and quasi-stable populations) possesses a constant zero typical natural increase, with long-term stable fertility and mortality rates, such type of stable population is labelled stationery (Breznik 1988: 400–405). Here, the quasi-stable model (Breznik 1988: 423, 430) was used for calculating the future number of population (projections, a-posteriori events, fertility rates, mean life-span), as well as for calculating demographic indicators in populations for which there is insufficient data, as was the case for countries without regular censuses (e.g. Bosnia-Herzegovina).

1.2 THE SECOND DEMOGRAPHIC TRANSITION IN EUROPE AND THE UNDERLYING CAUSES

Large excess of births over the number of deaths were the most prominent outcome of the demographic transition in the long run. Yet, on the other hand, the problem of disparate developments in different parts of the world remains. Henceforth, the theory of demographic transition (DTT) is valid rather only

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for Europe and few other westernised countries. Thus, it has been losing its universality and globality, yet the assumption of the first demographic transition is necessary to employ the hypothesis of the second demographic transition (SDT) which is of central interest to this debate.

However the decline in mortality has not directly resulted in a decline in fertility globally, still mortality represents a syncretic process of its own (Friganović 1978: 76, 81).

An important difference between the theory of demographic transition and that of the second demographic transition is the way that fertility indicators are applied. While general fertility and mortality rates were sufficient to explain the theory of demographic transition, they are proving insufficient for the past half a century. The weak points of the demographic transition theory (DTT) prompted researchers to try to either supplement an existing theory, or set up a new one. There were three main theories that have dealt with the problem of falling fertility rates and finding the causes of decline: Caldwell's theory of intergenerational flow of well-being (Caldwell 1981), Becker's microeconomic fertility theory (Becker 1981), and the aforementioned theory of the second demographic transition in Europe (van de Kaa 1987). While Caldwell and Becker often look back on history and break down long periods in search of the causes of destabilization (Caldwell 1976, 1978), van de Kaa focused on the last three decades prior to his work. This phase of demographic development in Europe was dubbed the SDT. It began in the 1960's and, similarly to Breznik and Vogelnik, arbitrarily takes 1965 as its starting point, although the enclosed statistics show that such a strict limit cannot be set (see van de Kaa 1987, Table 5). According to van de Kaa, the classical DTT ended in 1930's, while the interim period until 1965 was marked by WWII consequences and the subsequent baby-boom as a response of the population to war losses (Friganović 1980). Van de Kaa sees the causes for the SDT in the major changes in norms and behaviour, individualism as opposed to altruism, mainly of socio-psychological nature. The first demographic transition was marked by caring for the family and offspring, while the second emphasizes the rights and self-fulfilment (self-realization) of the individual. If industrialization, urbanization, and secularization are indirect determinants of the first demographic transition, as Lesthaeghe and Wilson (1986) convincingly claim, the determinants of the second are significantly harder to define, but strongly linked to the functioning of individuals in the rapidly changing post-war and post-industrial societies (van de Kaa 1987).

Although van de Kaa makes no explicit mention of it, the explanation behind the second demographic transition shows Becker's microeconomic influence: for example, in the case of a shift from family production to paid work that has reduced the economic usefulness of children, and in the case of birth control in a family that has prioritised quality over the quantity of children. Van de Kaa also considers Caldwell's theoretical findings when he says that the net flow of well-being favoured children over their parents.

According to van de Kaa, a further decline in fertility was marked by social and cultural changes in addition to economic benefits. For example, people's emotional needs for a child can be met or satisfied with just one, or at most two children, by reducing their "freedom" in

terms of self-fulfilment as little as possible. There is a clear tendency towards praising the individual with little attention to the collective interest and stable functioning of intergenerational flow of wealth and solidarity among generations (see Caldwell 1978). It is a kind of duality of progressiveness and conservatism, except that more and more people behave progressively. Importantly, the transition to progressivism and post-materialism was strong in Western Europe, and quite independent of economic recessions. The sequence of events in the formation of a family was an important criterion for assessing changes in fertility behaviour. Despite the differences in timing and tempo of fertility between Eastern and Western Europe, the transition to individualism and progressivism according to van de Kaa follows: (1) transition from marriage to cohabitation, (2) transition from children to parents as a focal point of the family, (3) transition from contraception as a tool to prevent unwanted pregnancies to "conception" and family planning, and (4) transition from unity to diversity of families and households (van de Kaa 1987).

Van de Kaa's contribution is of huge importance also in demo-geographic terms. He defined the position in the sequence of SDT. The first group includes the countries of Northern and Western Europe, except Ireland, Iceland, and Italy (as a Southern European country). The second group includes the countries of Southern Europe, excluding Albania and Turkey, as well as Italy. The third group includes the countries of Eastern Europe without the Soviet Union. In the fourth group are all other unmentioned countries. This demographic regionalisation shows an interesting geopolitical picture of the restructuring Europe yet to come a couple of years later. To substantiate his claims, van de Kaa (1987) also examines changes in partnerships and household composition, compares fertility rates between countries, with the order of birth of children, with extramarital fertility and fertility below the level of simple reproduction as a final consequence of the drift into the SDT. He pays special attention to the impact of birth control and abortion as a serious problem, especially for Eastern European countries, and also for Yugoslavia. In Romania, the number of abortions at its peak reached 4000 per 1000 births. In Yugoslavia, abortions also exceeded the number of births at the annual level (around 1300 per 1000 births). An important exception among Eastern European countries is Poland with one of the lowest rates of abortion, which can be explained by the influence of the Polish Roman Catholic Church, an important moral and political force in Poland during socialism. Instead of the correlation between the declining mortality and subsequent decline in fertility, van de Kaa rather reflects and highlights the sharp dividing line between Eastern Europe and the rest of the continent in terms of mortality rates and life expectations. The latter is still considerably shorter in Eastern Europe, as was corroborated by Šircelj (1998). The difference between eastern and western Slovenia was about 2.5 years, but it is difficult to say whether this is the dominant pattern in other countries. Due to its transitional geographical position along the Hajnal's line, Slovenia may therefore be in transition from the point of view of life expectation, yet the pattern of nuptiality and extra-marital fertility in north-eastern Slovenia match the developments in eastern Serbia (Arsenović et al. 2018) and posits Slovenia within the western framework.

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In the perspective of depopulation and the imminent further imbalance in age structure, van de Kaa saw immigration as a possible instrument of demographic policy to mitigate the effects of adverse demographic developments (van de Kaa 1987). This was called into a question by Coleman (2006) in his "third demographic transition". On the other hand, van de Kaa also mentions the examples of countries that have introduced more or less successful pronatalist actions such as Sweden and France, or Romania of the 1980's.

1.3 SECOND DEMOGRAPHIC TRANSITION IN THE POST-YUGOSLAV SPACE

Supplementary to van de Kaa's SDT, the general demographic transition theory (DTT) may be periodized as followed: (1) from mid-18th century France to 20th century SE Europe, (2) shrunken reproduction and below replacement fertility, and (3) oscillation around low levels of fertility (Easterlin 1978). Applying Caldwell's destabilization paradigm (Caldwell 1978), six major disruptions may be distinguished in the case of post-Yugoslav space:

1. 1989–1991 The fall of the Iron Curtain and the dissolution of the Soviet Union and break-up of Yugoslavia
2. Yugoslav wars 1991–1999 – Huge demographic impact (population resettlement, ethnic cleansing, forced migration, war crimes, economic disaster)
3. 2008 outbreak of the global financial crisis
4. 2012–2013 reverb of the financial and debt crisis
5. 2020–2022 The CoViD-19 pandemic and the excess deaths
6. 2022–2024 Wars in Ukraine and Gaza and the global geopolitical and geoeconomic realigning

As shown by the previous research on demographic effect of the Yugoslav break-up after 25 years, the Yugoslav space experienced some 5 million net demographic loss (Josipovič 2016). Except for the war losses in the 1990's and the forced resettlement as a result of combat activities, terror, and ethnic cleansing, the major change was provoked by the financial and debt crises which closed many businesses and profoundly reformulated the economic activity (ibid.). With moving of the production, especially towards Asia and the Global South, the population of post-Yugoslav states traditionally oriented towards the guest-work, suffered new waves of emigration (Josipovič 2018). As in many other European countries, whole range of over-indebted companies ended-up defaulted, foreclosed, or moved abroad and shrank their production. The resources of the former socialist countries, generally higher than those in the Western Europe according to the purchase power parity (Josipovič 2011), slowly diminished and forced population towards a pronounced migration to the economic centres, mainly to the countries' capitals. Such a centralization had manifold demographic effects. First and foremost, it affected rural areas which suffered pronounced depopulation and underwent the process of deep aging (discussed in a separate chapter). And secondly, it affected the tempo of fertility with postponing the childbearing and increased the share of childlessness, both typical for heavily urbanized areas.

As a result, the generational reproduction was incomplete and further narrowed (Josipovič 2016). Adding new disturbances after 2016, such as the global CoViD-19 pandemic, the demographic effects were again negatively palpable: first with the excess deaths and then with the effect of lockdowns and lowered fertility (Josipovič 2021). The demographic effect epitomized in the excessive deaths, once again, struck Eastern Europe and especially South-East Europe (Mostert et al. 2024). As regards the effects upon the mortality patterns, each and every year affected the countries differently. For example, the pandemic struck Slovenia more than Croatia in 2020, but in 2021 Slovenia compensated the gap of higher mortality against Croatia (Graovac Matassi and Josipovič 2023).

To understand the full effect of the excess deaths upon the total population number, a proper way of employing the projected values as expected without external effects (CoViD-19 related measures) is needed. Here we refer to a comprehensive study across 47 states of the Western world where the Karlinsky and Kobak's estimate model was used (Mostert et al. 2024). This estimation model rendered close results compared to the developed method for the excess deaths in Slovenia (Josipovič 2021), and all-cause mortality comparison between Slovenia and Croatia (Graovac Matassi and Josipovič 2023). While the study across 47 Western countries (including the European countries and the USA, Canada, Australia, and New Zealand) shows overall 8.8 per cent of excess deaths, this percentage for the former

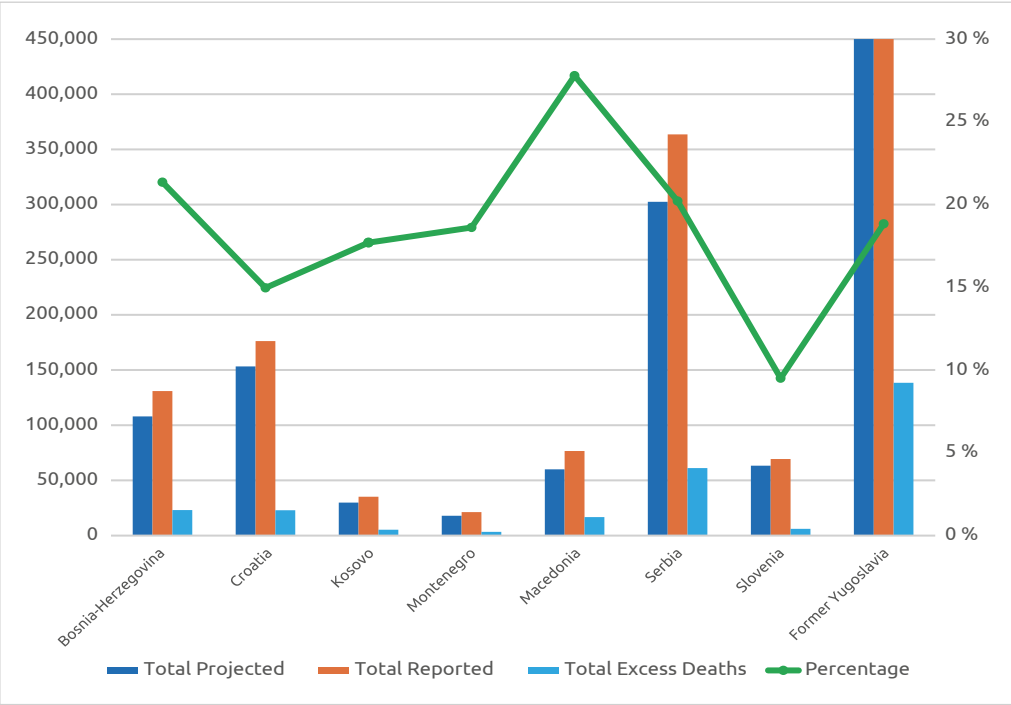

Figure 1 Projected and reported deaths in the region of former Yugoslavia
Source: rearranged after Mostert et al. 2024.

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Yugoslavia amounted to 18.8 per cent (Figure 1). The highest absolute number of excess deaths was recorded in Serbia (+61,125), while the highest share relative to the projected (expected) number of deaths was recorded in Bosnia-Herzegovina (+21.4 per cent). The lowest difference between the projected and recorded number of deaths was in Slovenia, where 9.5 percent was slightly above the "western" average (Figure 1). The overall Covid-19 death toll for the former Yugoslav space increased the negative natural balance by 138,402 additional deaths over the three-year period (2020–2022).

2 ESTIMATING THE TOTAL NUMBER OF POPULATIONS FOR THE FORMER YUGOSLAV AREA

To assess the population changes in the post-Yugoslav space, one first had to establish a common denominator for comparison. All countries except Bosnia-Herzegovina carried out classical or register-based censuses (Slovenia) in the 2011–2022 period which allowed for the estimation and re-evaluation of the total population. Thus, it was possible to assess the changes in the last decade, as well as to make the comparison with the changes after the break-up of Yugoslavia until 2011. As to the period prior to 2011, the direct demographic losses amounted to 2.5 million people and the indirect to up to 5 million (Josipovič 2016). With a wave of new censuses around 2022, after or during the Covid-19 crisis, it was possible to further analyse the changes in population structure in the post-Yugoslav space, and to upgrade the findings from the previous research.

The lack of data or any recent official and reasonable estimations for Bosnia-Herzegovina has made it necessary to find a solution to overcome that gap. Making use of the total excess deaths and its effect to natural change, and the migration statistics of the main immigrant destination countries (Slovenia, Croatia, Serbia, Austria, Germany, Sweden), it was possible to assess the net population change in Bosnia-Herzegovina after 2013. In the 2013–2022 period, Bosnia-Herzegovina lost 50,000 inhabitants to Slovenia (Statistical Office of the Republic of Slovenia 2024), 21,000 to Croatia (Croatian Bureau of Statistics 2024), 20,000 to Serbia (Statistical Office of the Republic of Serbia 2024), 8,000 to Austria (Statistics Austria 2024), 92,000 to Germany (Statistical Office of Germany 2024), 7,000 to Sweden (Swedish Central Bureau for Statistics 2024), and so on. The mass emigration is ongoing and predominantly terminal. Only in the 2018–2023 period, 7,770 citizens of Bosnia-Herzegovina acquired the German citizenship (Statistical Office of Germany 2024). The couple of European countries make for a loss of 192,000 Bosnian citizens, yet many of the emigrants will have entered the schemes of acquiring pertinent citizenships. Considering the emigration to other countries like Italy, Switzerland, France, and the Netherlands, around 15 per cent should be added to the overall assessment – altogether some 220,000. Considering that migration data undergo a certain time gap between the de facto and de iure migration, the contemporary data is certainly underestimated by up to 5 per cent, which brings us to the estimation of 232,000 net migration loss for Bosnia-Herzegovina in the period 2013¬–2022. Adding the negative natural balance of 107,000 for the same period, including some 23,000 excess deaths in the 2020–2022 period which harshened the natural balance

sheet and deepened the natural loss, the overall net loss amounted to 339,000 inhabitants. So, the total population of Bosnia-Herzegovina is estimated at only 3,192 million by the end of 2022. It is worthwhile mentioning that the Agency of Statistics of Bosnia-Herzegovina assessed the total population at 3,434 million in 2022 (Agency for Statistics of Bosnia and Herzegovina 2024), yet the Agency did lower the mid-year 2023 estimate to 3,346 million. Thus, it approached the estimation reduced for the people that have left Bosnia-Herzegovina after the 2013 census had been carried out, i.e. 3,335 million (see Josipovič 2016: 27, cf. Nikitović 2017). Seemingly, the national agency has not corrected the figures coming from the three sources: Bosniak-Croat Federation (FBiH), Republic of Srpska (RS), and the Brčko District (BD). There are striking differences between the two entities. While the FBiH with 2.1 million exercised only 40,000 negative natural balance, the RS entity with 1.1 million suffered a natural decrease of as many as 60,000 people. This points to a further decrease of population of the entity and depopulation of the vast, sparsely populated areas in Eastern Herzegovina, the Drina Valley, and the southern mountainous part of Bosnian Krajina, which already suffered from the consequences of the war and resettlement of population (Marinković and Majić 2018: 57). The rest of negative natural balance in the studied period (–7,000) pertains to the Brčko District, which exercised unexpectedly high negative natural balance of –8.6 per cent of its total population (Agency for Statistics of Bosnia and Herzegovina 2024).

Other countries also have problems with reliability of their statistics, especially those on migration. Yet the censuses carried out every decade are a way of addressing this issue. Since the censuses were not carried out simultaneously, the data were assembled according to the real date of the census with the sole exception of Bosnia-Herzegovina, where the pertinent data was acquired through extrapolation. Methodologically, it does not contribute significantly to the quality results of the assessed direct demographic losses. If all the data were to be extrapolated to the same critical date in 2011 and 2022, the difference would amount to less than five per cent (4.6 per cent or +67,000 in 2022). This is in line with the previous research, where the demographic losses were assessed for a much longer and turbulent period of 1990–2015 (Josipovič 2016).

The general conclusion for the territory of former Yugoslavia based on the Table 2 data for 2022 implies further demographic losses in the last intercensal period amounting to between 1,391 and 1,458 million, and the overall decrease to 19,884 million (cf. Nikitović 2017). Only two countries registered an increase of population (Slovenia +3 per cent; Montenegro +2 per cent). The highest losses were recorded in Kosovo (–11 per cent), and Croatia (–10 per cent). Serbia and Bosnia-Herzegovina experienced similar losses (–8 per cent), while Macedonia lost 5 per cent of its population when compared to the last census (Table 2). Among the regions, the most dramatic situation is in the entity of Republic of Srpska in Bosnia-Herzegovina (–12 per cent loss), which evidently lacks demographic resources to repopulate the war-torn areas, and in the autonomous province of Vojvodina in Serbia (–10 per cent), where the highest emigration could be ascribed to minority populations, predominantly Hungarians and Croats along with the subpopulations of Bunjevatz–Shokacz, but other minorities

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as well. The same process was observed in Macedonia, where smaller minorities lost more (SSO 2024). The changes and the overall losses would be even bigger had the countries not acquired new population from the third countries. Serbia replenished the present population with up to 60,000 foreign citizens by 2022, a doubling of the previous year's figure (34,000). Most of them are coming from China (9,900), Russia (8,000), and Turkey (5,700) (Nikolić and Maksimović 2024). The losses would amount to 600,000 in the last intercensal period. Croatia witnesses the same process of the "third citizens" immigration (Klempić Bogadi et al. 2018; Čipin and Ilieva 2017).

Slovenia, the most demographically successful successor state of Yugoslavia despite low fertility, is a standout case when it comes to migration patterns in the former Yugoslav space. As the migration register is being a relatively reliable source, the register-based censuses may be carried out every three to four years (2011, 2015, 2018, 2021). The harmonization of the definition of population in Slovenia with the EU and the transition towards the usual residence allowed for comparable interannual datasets from 2008 onwards. Thus Slovenia is one of the statistical forerunners in the former Yugoslav space. As to the migration statistics, yet with some delay and shortcomings stemming from it, the specific selectiveness pattern is discernible from the distribution of net migration to Slovenia in the 2008–2022 period. Slovenia has the highest share of foreign population (about 9 per cent) in the region, most of which (85 per cent) migrated from the former Yugoslav space (Josipovič 2018). With the onset of the 2008 crisis and the outbreak of pandemic in 2020,

Table 2 Intercensal changes (in 000) in the period 2011–2022

	2022	2011	absolute difference	index
Montenegro**	0,633	0,620	+13	102 %
Macedonia	1,837	1,930	–93	95 %
Slovenia	2,109	2,050	+59	103 %
Bosnia-Herzegovina*	3,192	3,484	–292	92 %
FB&H	2,051	2,198	–147	93 %
RS	1,063	1,202	–139	88 %
BD	0,078	0,084	–6	93 %
Croatia	3,872	4,285	–413	90 %
Serbia	6,647	7,187	–540	92 %
Central Serbia	4,907	5,255	–348	93 %
Vojvodina	1,740	1,932	–192	90 %
Kosovo**	1,595	1,786	–191	89 %
Former Yugoslavia	19,884	21,342	–1,458	93 %

Source: Kosovo Agency of statistics 2024; Agency for Statistics of Bosnia and Herzegovina 2024; Croatian Bureau of Statistics 2024; State Statistical Office of North Macedonia 2024; Statistical Office of Montenegro 2024; Statistical Office of the Republic of Serbia 2024; Statistical Office of the Republic of Slovenia 2024; author's calculations; *based on estimations; ** preliminary census results from 2024.

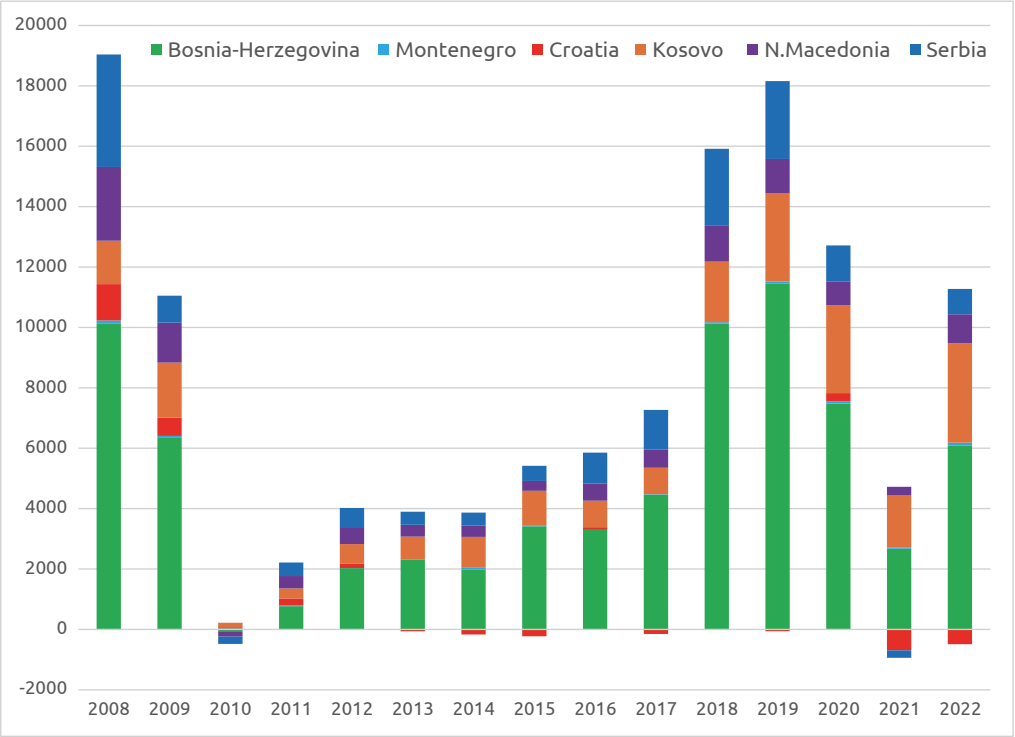

Figure 2 Net migration flows to Slovenia from other ex-Yugoslav countries, 2008–2022
Source: Statistical Office of the Republic of Slovenia 2024; author's calculations

which both heavily influenced economy, together with the ageing of population and mounting needs for labour force, a certain shift in migratory pattern has been underway (Figure 2).

Traditionally, the strongest donor country from the Yugoslav space is Bosnia-Herzegovina with 59 per cent of the net migration to Slovenia (totalling to 123,052 in 2008–2022 period). Contrary to the traditionally high mutual migration between Slovenia and Croatia, the latter turned out to be insignificant, especially after its EU succession (Valenta et al. 2023). Due to its small population and reviving traditionalisation and patriarchalisation (Rakonjac 2020), Montenegro is being gradually excluded from significant migration exchange with Slovenia and becoming increasingly peripheral in terms of migration (Nikolić and Maksimović 2024). The rest of the former Yugoslav areas (Kosovo, Serbia, Macedonia) show statistically significant convergence. While Macedonia and Serbia share high correlation (r=0.96) of migration flows to Slovenia after 2008, Kosovo is a complete contrast. Its correlation is negative with both Serbia (r=–0.98) and Macedonia (r=–0.92). This means that Kosovo substituted both the Serbian and Macedonian immigration to Slovenia in the analysed period, especially after the Covid-19 crisis (Figure 2). This is in line with the projected migration trend for Serbia and Kosovo calculated by V. Nikitović (2018). According to his analysis, Kosovo will remain an emigration area par excellence while Serbia will neutralize its net emigration by 2030

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and become a net immigrant destination (Nikitović 2018). Some indications (see Nikolić and Maksimović 2024) confirm these expectations.

When considering the period after 2013, when Croatia joined the EU and Bosnia-Herzegovina carried out its only census after 1991, the net migration to Slovenia amounted to 83,153 (2013–2022) where 50,969 or 61.3 per cent was contributed by Bosnia-Herzegovina. The second biggest population donor to Slovenia became Kosovo with 16,756 or 20.2 per cent in the migration balance with Slovenia. Serbia contributed with 10,158 or 12.2 per cent of migrants, and Macedonia with 6,247 or 7.5 per cent. A small net migration (455 persons or 0.5 per cent) was also contributed by Montenegro (Statistical Office of the Republic of Slovenia 2024; Figure 2). Only the net migration with Croatia was negative (–1432) which on one hand indicates a return migration of former migrants from Croatia, while on the other suggests the migration of ethnic Croats and Slovenes, possibly with real estate in Croatia, due to the Croatian EU membership. With the accession of Croatia to the Schengen protocol the trend is expected to continue. According to the Croatian statistical office, the number of Slovenian citizens that immigrated to Croatia amounted to 4,025 in the 2018–2022 period, while at the same time only 1,069 left Croatia (Croatian Bureau of Statistics 2024). On the other hand, the last available data for 2022 show that the net migration with Slovenia amounted to 505 persons (ibid.) while the Slovenian office reported the net loss of 489 people with Croatia (Statistical Office of the Republic of Slovenia 2024). The difference of 3.2 per cent is not negligible, yet it is much smaller than it used to be in previous years. Namely, the migration data published by the Croatian statistical office were regularly questioned for its reliability (Klempić Bogadi et al 2018).

Considering other data on emigration from the Western Balkans, it is worthwhile observing that emigration soared after 2018. The highest being the emigration from Albania and Bosnia-Herzegovina reaching the EU immigration rate of around 10 per 1,000 inhabitants in the last five years (Nikolić and Maksimović 2024). North Macedonia (5 per 1,000), Serbia (3 per 1,000), and Montenegro (2 per 1,000) also increased the immigration to the EU (ibid.).

3 ANALYSIS AND THE RESULTS

3.1 A MISMATCH BETWEEN TOTAL FERTILITY RATE AND COMPLETED FERTILITY RATE

After the overall population change was elaborated and the extent of migration flows established and assessed, the deeper insight into the main component of natural change is needed. Theoretically we closely examined the changes in the fertility behaviour which led not only to a profound demographic change, but was triggered by vast societal changes (cf. Čipin and Ilieva 2017). The major demographically observed change in the SDT was postponement of childbearing marked by a rising age at childbearing. Thus was affected the generational fertility measure – the TFR. While the TFR is the measure of transversal changes in the main population contingents, CFR measures the end effect of the childbearing period. From this methodological cleavage stem many misinterpretations of the changes in fertility behaviour. Indeed, it can be observed from the data that less women participate in

childbearing due to postponement and rising childlessness. The methodological-interpretational mismatch between the TFR and CFR, not only confined to the tempo effect or tempo distortions, creates several issues. Principally it represents the problem of generational gap, unbalanced age structure, fertility mainly affected by the societal (socio-economic and geopolitical) disruptions, longer continuing education, postponed childbearing, presumable decrease, and recuperation (Josipovič 2004). The use of the TFR indicator shows different paths to below-replacement fertility levels in post-Yugoslav state and the neighbouring Albania (Figure 3). Albania as politically Western Balkans state is added for the comparative view in understanding of ethnic minorities' effect to fertility rates, especially in Kosovo-Metohija. Despite similar, though not the same, ethnic populations, and Albanian ethnic majority in both these entities, the reproductive behaviour was significantly different. While Albania, though economically underdeveloped, was independent and had lower fertility, Kosovo-Metohija was underdeveloped autonomous part of Serbia with the highest fertility rates. Such a high fertility received a pejorative geopolitical label of an "aggressive breeding" (Stanton 2003), similar to some other areas (Gaza in Palestine).

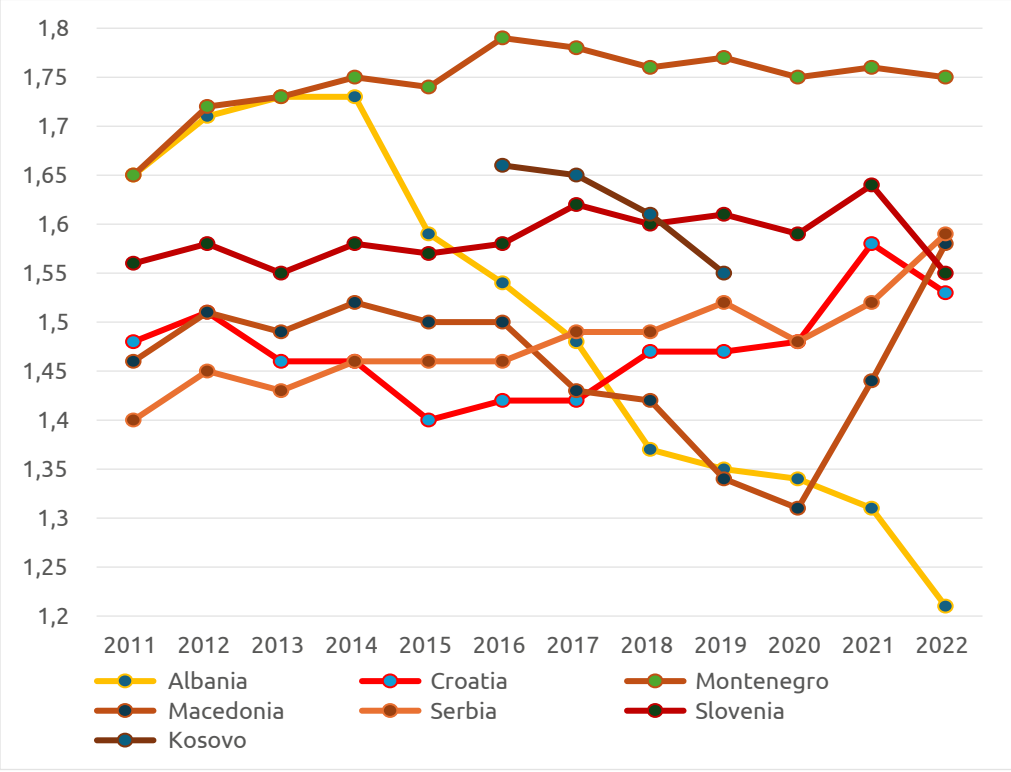

Figure 3 Total fertility rate (TFR) in the Western Balkans (Ex-Yugoslav countries and Albania) in the 2011–2022 period

Source: Eurostat, 2024; *note that Bosnia-Herzegovina was not included due to unreliable data according to Eurostat.

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Figure 3 shows that particularly Albania was the last to enter the SDT. The steep decline in the TFR does not mean that in such a short period the reproductive goals were changed, but rather that the postponement came due to social and economic disruptions (Figure 3). The lack of data prevents us from claiming the same for Kosovo-Metohija, yet the same trend is observable with a slight delay. Montenegro exhibits the quick route to recuperation to 1.8 child per woman in childbearing age, or perhaps some repatriarchalisation as well (Rakonjac 2020). Macedonian case is interesting, since it demonstrates the problem of misjudgement of the size of the fertile contingent. Given that emigration from Macedonia is high, as being shown, the recuperation of fertility is merely fictitious. Slovenia shows stabilizing values of the TFR, while the last two years show protruding effects of Covid-19 crisis to the fertility as well – only Albania and Croatia had a significant drop (Figure 3).

Using the TFR indicator, two groups of countries emerge from the second demographic transition in SE Europe. The low-fertility countries with earlier transition fell beneath the simple reproduction level around 1980 (Figure 4) with the sole exception of Romania where Ceausescu regime imposed harsh measures to fight high abortion rates as a drastic tool of family planning (cf. van de Kaa 1987). Hence the spike in the 1980's. With the latest developments, all SE countries lie well below the replacement levels, including Kosovo-Metohija and Albania (Figure 3).

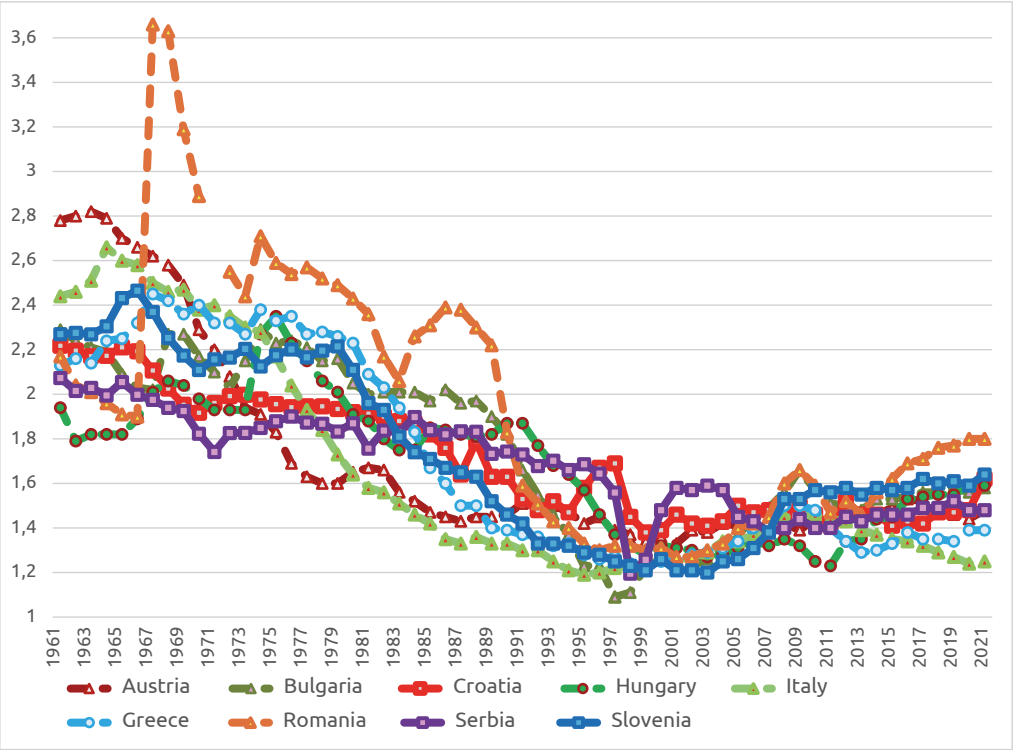

Figure 4 Low-fertility countries of South-Eastern Europe and its vicinity, TFR, 1961–2021
Source: World development indicators, 2024.

The transition to low fertility levels was rapid in the rest of the SEE countries. Macedonia, Montenegro and Bosnia-Herzegovina as mid-fertility countries entered the SDT in the 1980's, yet with some oscillations ("swings") as expected by Easterlin (1978). During the 1990's, Bosnia-Herzegovina saw a rapid decrease of the TFR, whereby its generational transition began already in the 1970's, similarly to Slovenia (Figures 5 and 6).

has been decreasing. From the record on 1 January 2012 and 1.97 million citizens, in ten years the number decreased to 1.923 mil. (i.e. –47,000). Given the positive natural balance in the last decade, these citizens moved abroad (Figure 7). In the same period (2012Q1–2023Q4) the number of foreign citizens rose from 86,000 to 199,000 (+213,000). According to the 2021 census, people born abroad accounted for 293,000, whereby only about a third (105,000)

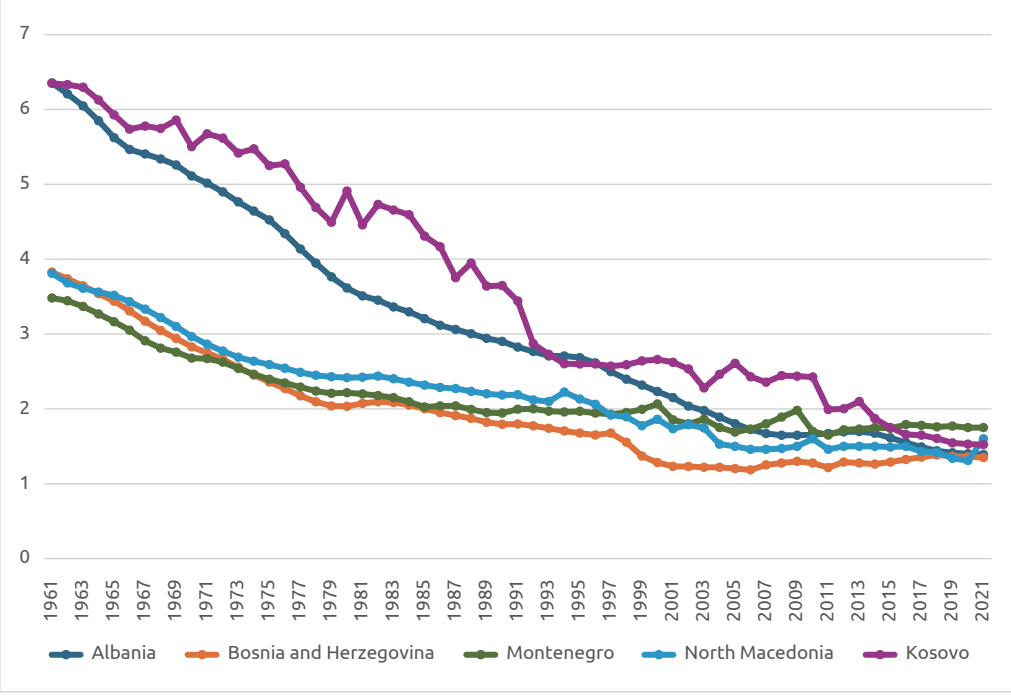

Figure 5 High- and mid- fertility countries of South-Eastern Europe and the vicinity, TFR, 1961–2021
Source: World development indicators, 2024.

The Slovenian case is very instructive for understanding the relationship between the TFR and CFR indicators. It will show how total population change – citizens vs foreign population – affect the indicators. From 2012, the number of Slovenian citizens living in Slovenia

moved to Slovenia prior to the break-up of Yugoslavia. Considering the number at the 2002 census (157,000), the mortality process reduced that population by a third (–52,000) as well (cf. Josipovič 2006). By the census of 2011 their number was still around 129,000.

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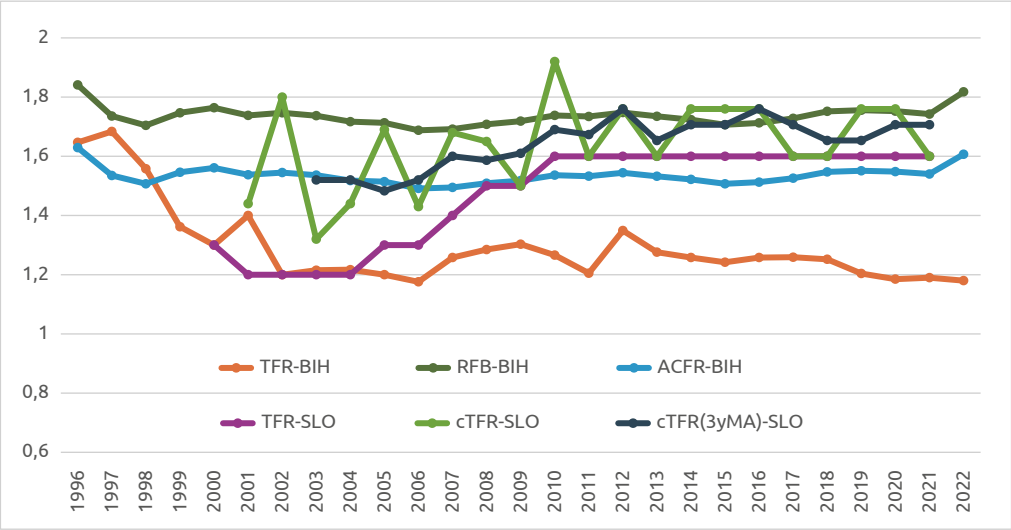

Figure 6 Comparison of Slovenia and Bosnia-Herzegovina, TFR, CFR, tempo distortions, 1996–2022
Source: Author's calculations; Statistical Office of the Republic of Slovenia 2024; Agency for Statistics of Bosnia and Herzegovina 2024.

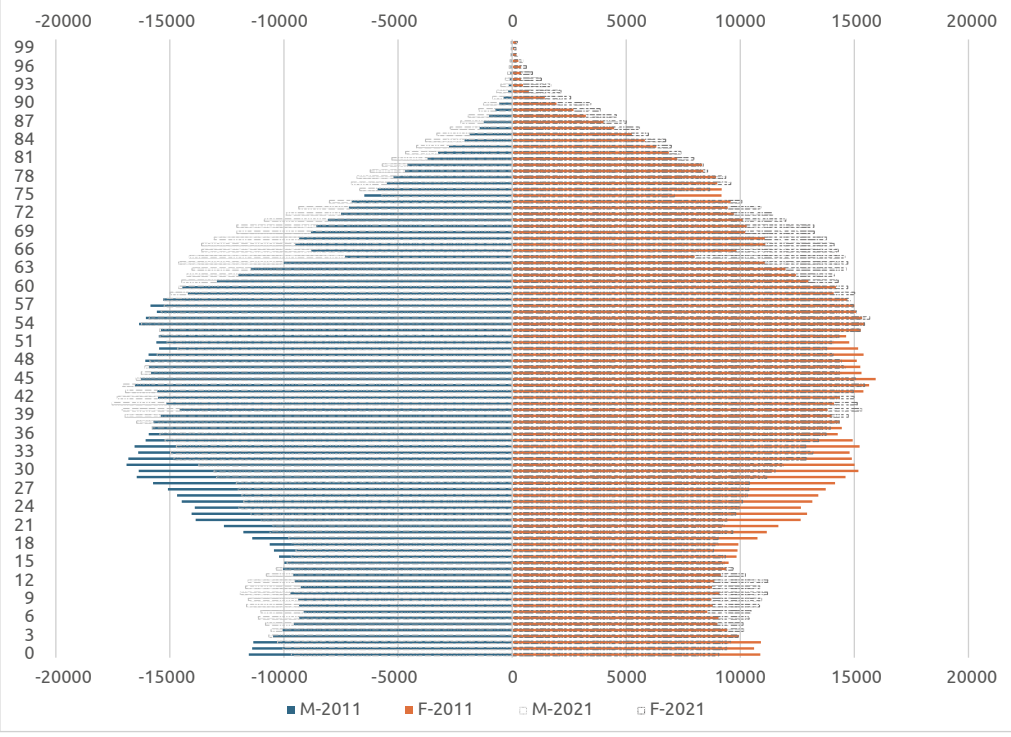

Figure 7 Intercensal changes in age structure in Slovenia, 2011–2021
Source: Author's calculations based on the official statistical data; Statistical Office of the Republic of Slovenia 2024.

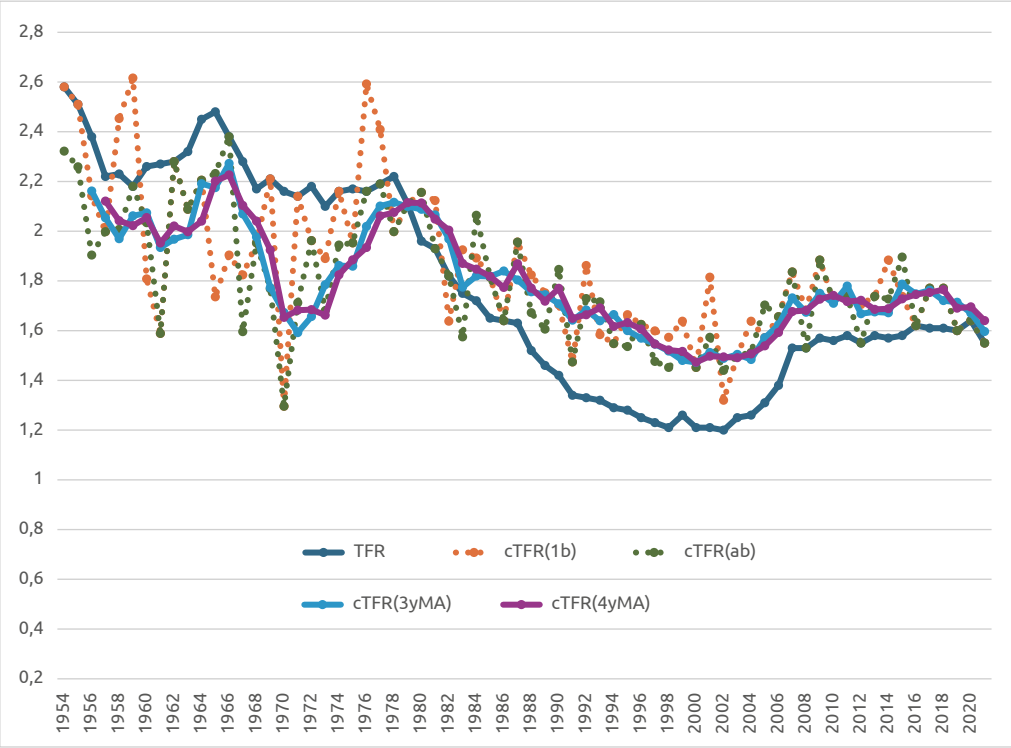

Figure 8 Comparison and the mismatch of various CFR indicators with the TFR, Slovenia, 1954–2021

Source: Statistical Office of the Republic of Slovenia 2024; additional calculations according to the author's method.

Generationally, the effective replacement lies at 1.51 child per woman in a childbearing age. Thus, the shortfall is at about 25 per cent, which is being gradually replaced through later age-groups. Given that the TFR is lower than the CFR by 0.3, the expected completed fertility still mounts up to 1.8 children per women. So, the main issue is the accommodation of the changed pattern of delayed tempo in fertility behaviour (Figure 8).

4 POPULATION AGEING – THE CONCEPT AND METHODOLOGY APPLIED

Having elaborated the tempo effects at lowering fertility, the generational gap is being established. Such a gap affects the relationship between a larger contingent of the population and skewing towards older age-groups. But how does further emigration of fertile contingent affect the ageing of population? Population ageing in demography is a quasi-process described by the rising mean population age. Contrary to the fundamental biological progression of becoming older, at population ageing

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the share of elderly against the share of young was of primary analytical objective (Robine and Michel 2004). It is most typically described as the age index expressed as a quotient between the share of elderly population (65 years and above) and the share of young (below 15 years of age). Yet, theoretically, the ageing of young adults starts after about 40 years. Following the Robine-Michel's framework, the theory of population ageing is based on three assumptions: (1) rising life-expectancy, (2) rising debilitating processes and disabilities, and (3) tendency toward the rectangular morbidity (ibid.). Since many populations exceeded the turning point at 100 age-index points (i.e. more elderly than young in a given population), a combined usage of index with the 80+ or 85+ age groups should be considered. Yet, with such an index little can be explained, except the rising share of elderly population comparable only if the life-expectancy does not exceed 80 years. Khan (2018) demonstrated the rising mean age at death, where the trend analysis shows that the 80+ populations follow an exponential growth rate, and will grow "beyond imagination" (Khan 2018). Hence, some suggest the inclusion of novenaries and centenaries as the life-expectancy is prolonging although the values are being overestimated (Bongaarts and Feeney 2010). This confirms the two decades-old Vallin's observation that longevity is one of the most intriguing and unpredictable demographic phenomena. Neither can it be predicted for how long can life expectancy increase, nor how far can population aging go (Vallin 2004). Moreover, the rising education period, especially at the tertiary level, calls for rethinking of the use of 15 years of age as a margin. Indeed, the age-dependency ratio seems to be more logical if set to 25 years for the duration of schooling (i.e. up to 24 years of age). Thus, we get another form of temporal dependency ratio based on the EU average expected retirement age after 40 years of working period with the tendency of prolonging. This brings forth completely different ratios, which, again, obscure or divert the attention towards the active population. Given that active population, according to the proposed scheme of non-young (24+) and non-retired (65–), represents roughly one half of the population, a more meaningful scheme of defining the active population and a pertinent ageing relationship should be considered (i.e. the quotient between those older than 64 and those younger than 25). In Slovenia, for example, the initial age-index amounted to 145.3 in 2023. On the contrary, incorporating the new age-dependency quotient, it would amount to only 81.4 in 2023 (Statistical Office of the Republic of Slovenia 2024). After decades, such marginal ages need to be reconsidered to allow for a meaningful planning perspective.

Apart from adjusting the structure of indicators of the ever ageing population, attention needs to be paid to both extremities of the process. The population ageing is seen as a process representing a relationship between the effects of fertility and mortality decline (Robine and Michel 2004). Here, fertility is seen as an extension of generational reproduction, and it is represented by a variety of transversal indicators (i.e. total fertility rate – TFR). Mortality, on the other end, designates a temporal capacity of human beings to endure for a certain but varying amount of time. Therefore, the differing temporal odds complicate the relationship with fertility and involves certain probabilities.

There is normally an expected discrepancy between the indicators of life expectancy and the mean age of death (i.e. the real length of the lifespan), an idea put forward by Bongaarts and Feeney (2010). At this point the relationship between mortality and fertility gets blurred since countries exhibit varying differences. Adding the effects of the net migration into the equation of an age-dependent population change, the demographic picture gets more complicated, therefore the concept of deep ageing is being introduced.

4.1 CAN THERE BE A PROCESS OF DEEP AGEING IN THE AGEING POPULATION?

Let us assume a population where total fertility rates are below the reproduction level and technically within the SDT. In addition, the proportion of young is diminishing while the share of elderly is rising. Temporarily, the active population outnumbers both the young and the old, but after some time, the active contingent starts to shrink. The first direct consequence is an artificial increase of the TFR through the diminishing fertile contingent, yet the realistic birth rates have not increased. Assume that the shrinking fertile contingent is increasingly participating in the net emigration for whatever reason. Consequently, the dependency ratio is disturbed and skewed more and more towards the elderly population. When the three conditions are satisfied, it is justifiable to speak of a state of deep aging resulting from the compound process of accelerated ageing. Such a process tends to accelerate the wholesome population loss and accumulate the generational loss by lowered fertility below the replacement level, while the share of elderly population rises. At the same time, the country becomes or remains a net emigration area with the additional loss of the most propulsive active population's age-groups which in turn renders the situation of the so-called deep ageing with profound structural changes within the country's diminishing population. Deep aging is thus not just a process of an ever-increasing share of elderly population, but also involves an additional and fundamental loss of fertile contingent through excess emigration. For illustrating the meaning and purpose of deep ageing, the tentative indices are introduced. The indices are based on the quotient of the expected (projected) and factual change (growth or decline) in the fertile age-groups 20–29, 30–39, and 40–49 from within the intercensal periods.

Since the general direction of migrations in Europe considerably changed (formerly from East and South towards West and North of Europe), the role of South-Eastern Europe in deep ageing is critical. Although a comparably smaller European macroregion, the South-Eastern Europe exerts migration pressure on Western Europe. It has been shown earlier that the overseas migrations to Europe add up to the disproportionate increase of population in Western and Northern Europe, while the Western Balkans' states face profound depopulation. Based on the 1990 borders, Yugoslavia was supposed to have the projected population of 26 million in 2015 (Josipovič 2016). Today (the beginning of 2024), the projected figure is dramatically lower, i.e. 18.9 mill., or –7 mill. compared to 1990. Additionally lowered fertility due to pandemics, as well as higher mortality topped with pronounced emigration, created the conditions and compounded the effect of deep ageing.

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Assuming that stable TFRs require minimal age-structure skewness, the uneven age-structure (as shown in the case of Slovenia and Bosnia-Herzegovina) renders even greater tempo effect of fertility and its distortion. By comparing the two reproductively most active age-groups of the female fertile population: 20–29 and 30–39 across a ten-year (intercensal) period, it is possible to infer how the main component of deep ageing was affected. For the analysis of the sequence within or outside the deep ageing, we compared four ex-Yugoslav countries with the biggest populations (above 2 mill). Slovenia, for example, over the last decade (2011–2022), added about 4000 women in the 30–39 age-group, which represents the rise of 3.3 per cent (Figures 9 and 10).

Since all four states compared exercised below-replacement fertility and natural decrease of population over the last twenty years, the intercensal changes in fertile subpopulations play a decisive role in determining the position within the deep ageing process. Methodologically, the position is determined upon the actual progression (or retraction) of the 20–29 to 30–39 and 30–39 to 40–49 age-groups against the projected size across the two intercensal periods standardised to the ten-year periods of 2001–2011 and 2011–2021. Slovenia was the only country with a positive change in both age-groups in both periods. While the actual size of the 20–29 age-group transitioned to 30–39 age-group in the first ten-year period (2001–2011) exceeded the

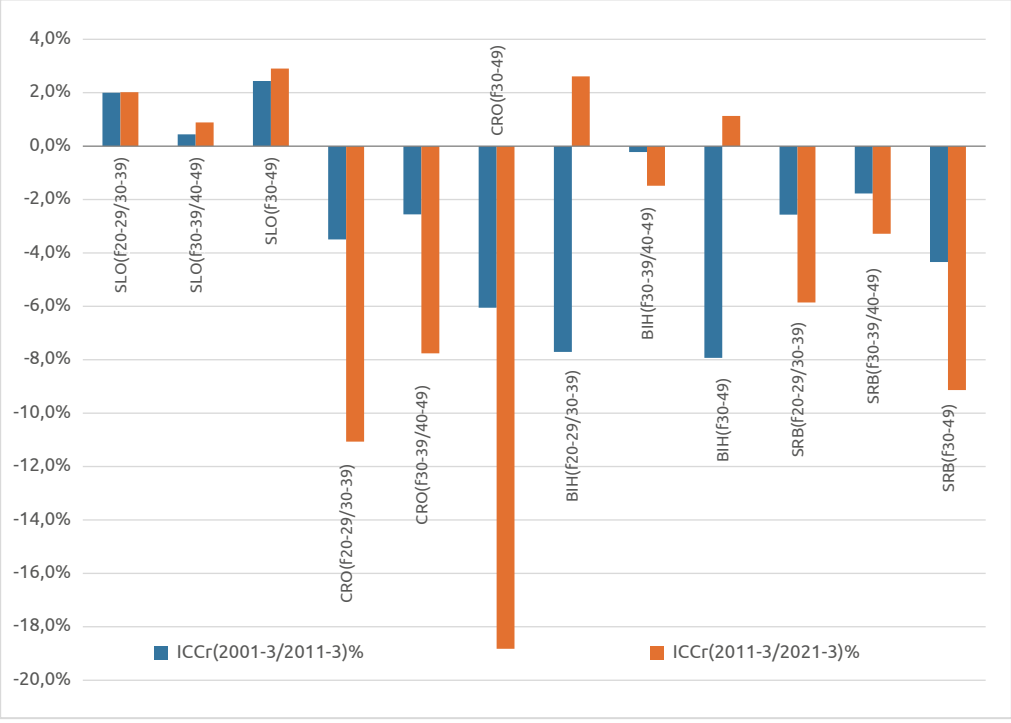

Figure 9 Relative intercensal change (ICCr) in Slovenia, Croatia, Bosnia-Herzegovina, and Serbia, 2001–2022

Source: national statistical offices of Slovenia, Croatia, Bosnia-Herzegovina, Serbia; author's calculations.

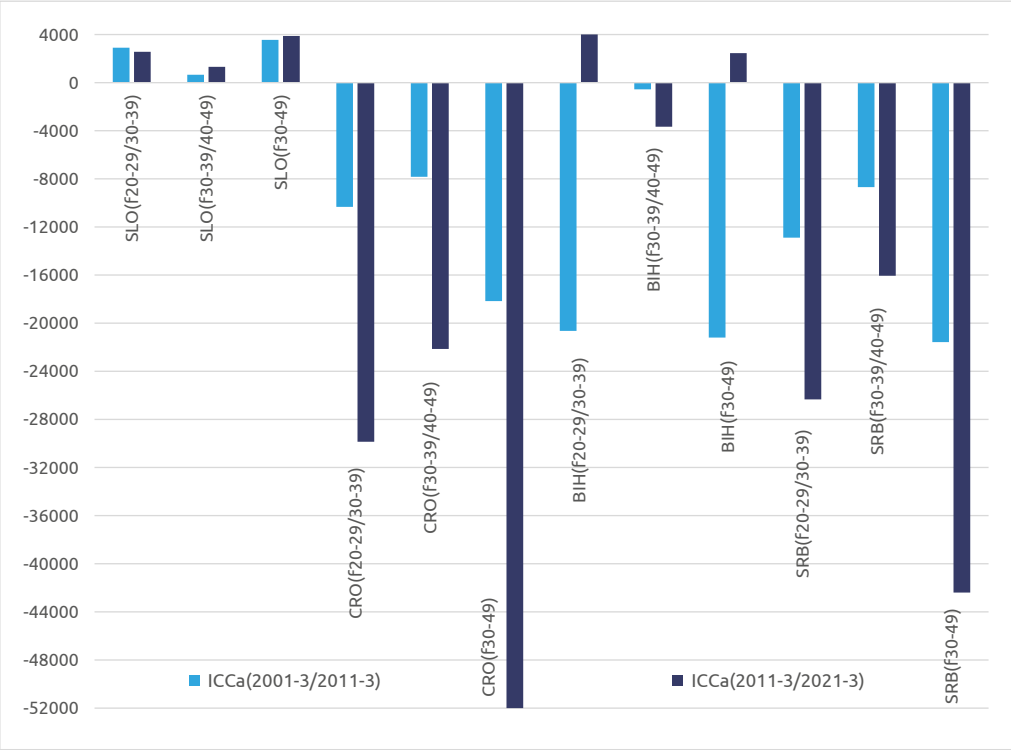

Figure 10 Absolute intercensal change (ICCa) in Slovenia, Croatia, Bosnia-Herzegovina, and Serbia, 2001–2022
Source: national statistical offices of Slovenia, Croatia, Bosnia-Herzegovina, Serbia; author's calculations.

projected size by 2 per cent, the same contingent augmented for another 2 per cent in the second ten-year period (2011–2021). The population gain at the older 30–39 age-group transitioning to 40–49 age-groups was smaller (about 0.5 per cent in 2001–2011 and 1.0 per cent in 2011–2021). The absolute change in both periods amounted to +8,000 (Figures 9 and 10). Croatia is the country which lost the most in both periods in terms of relative (–6 and –19 per cent respectively) and absolute (–18,000 and –52,000 respectively) change. Second to Croatia is Serbia with a very similar temporal losses of the fertile age-groups (–4.3 and –9 per cent respectively), but to a lesser absolute extent (–22,000 and 42,000 respectively). Bosnia-Herzegovina is a different case, also due to its unreliable statistics. Having the data from the 2013 census, the results are more reliable for the first period (–8 per cent or –21,000 in 2001–2011). With the estimated values for 2021, it appears that Bosnia-Herzegovina ceased to figure as an overwhelming source of population. The estimated actual value for the second period (2011–2021) shows a surplus of +2.6 per cent over the projected value for the younger age-group, while the age-group now in its forties exerted a deficit of –1.6 per cent or –4,000. Thus, the overall surplus in 30–49 age-group amounts to 2,500 (Figures 9 and 10). Bosnian case is perhaps heralding a new

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era of slow decrease in emigration with many possible repercussions in geographical and socio-economic sense.

Summing it up, the stage of deep ageing is the most pronounced in Croatia and Serbia, especially at the younger fertile group, while the overall loss of fertile population is profound and will certainly affect the further future decrease of population. Drawing from the presented findings and the overall loss of population and fertility below replacement level, it is possible to infer the same for Macedonia, Kosovo-Metohija, and Montenegro. In the area of former Yugoslavia, only Slovenia appears to be demographically better off, yet the danger of sliding into the stage of deep ageing has not been overcome.

5 CONCLUSION

Twenty-five years after the break-up of Yugoslavia, the demographic analysis shows that except for the three smaller post-Yugoslav nations (Slovenia, Macedonia, Montenegro), other bigger former republics have dramatically underperformed. The direct demographic loss accumulated by Bosnia-Herzegovina, Serbia and Croatia amounted to 2.5 mill., compared to 1990 (Josipovič 2016). While the demographic losses mainly accumulated due to the devastating results of the wars and consequent ethnic cleansing predominantly in Bosnia-Herzegovina and Croatia, the forced and pseudo-voluntary resettlement of population, including the failure of return migration and thorough reconciliation, resulted in structurally unstable populations left to precarious socio-economic conditions (ibid.). In addition, the second swing of the financial and debt crisis in 2012/2013 crushed many of small businesses which used to render some decentralized employments and had prevented excessive centralization (Josipovič 2018). Henceforth, the pronounced demographic centralization of all post-Yugoslav states has only accelerated. By the next crisis (COVID-19 pandemic), the shaken and disturbed population age-structure further suffered under a myriad of factors caused by lockdowns and other restrictions (Josipovič 2021). Such a development saw its inevitable demographic consequences in the national censuses carried out during or after the main wave of the pandemic.

With the overall changes in value-system, growing demands for working population, tense political situation and less general enthusiasm, within the second demographic transition women have still managed to hold their fertility goals close to two children. With the completed fertility rate (CFR) and the corrected total fertility rate (cTFR) indicators around 1.8 children per women in the childbearing period, an important delay in tempo of fertility is obvious. This delay causes major problems, since the intergenerational solidarity is based on the size of generations and not the size of families. In addition, many couples and individuals decide to limit their offspring to zero, thus there is growing share of childlessness.

The analysis confirmed the deep-aging hypothesis, where the post-Yugoslav countries could neither recuperate from the demographic losses of the war and the resettlement of population, nor could they prevent the constant shrinking of the fertile contingent of the populations. The only regional exception is Slovenia, where in spite of low transversal fertility (1.6 children per woman in child-bearing age), growing childlessness (up to 25 per cent) and

pronounced emigration of its citizens, the immigration from abroad (predominantly foreign citizens from post-Yugoslav countries) compensated for the net losses and revitalized the total population. No such case is apparent elsewhere across the post-Yugoslav space. Such a recuperation of the Slovenian national population will not be possible for very much longer, due to the state of deep aging in the rest of the post-Yugoslav space, especially in Croatia and Serbia. There, the capacity for emigration-oriented population (20–39 years) is rapidly diminishing, while other destination countries also taking their share.

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Depopulacija i duboko starenje: prostor bivše Jugoslavije i Zapadnog Balkana između druge demografske tranzicije i emigracije

SAŽETAK

U članku se razrađuje koncept dubokog starenja gde su ukupni efekti starenja druge demografske tranzicije, usled niskog fertiliteta ispod proste reprodukcije stanovništva, pojačani povećanom emigracijom fertilnog kontingenta, što znači dodatni gubitak aktivnog stanovništva. Proces dubokog starenja stoga ubrzava opadanje ukupne populacije. S druge strane gubitak fertilnog kontingenta može postići prividan porast ukupne stope fertiliteta pri čemu tempo efekt fertiliteta igra odlučujuću ulogu. Članak se najpre bavi pitanjem demografskih promena u evropskim makroregionima nakon pada Gvozdene zavese (1990–2020). Najznačajnija je preorientacija tradicionalne neto emigracije od južno- i istočno- evropskog ka jugoistočno-evropskom bazenu. Zatim se analiziraju demografske promene na teritoriji bivše Jugoslavije kako bi se procenile razmere ovih promena u poslednjem međupopisnom periodu (2011–2022). Nadovezujući se na nalaze ranijih istraživanja gde se ističe gubitak stanovništva i negativan razvoj migracija, ovde se pristupa dubljoj strukturi problema populacionih gubitaka u većini zemalja nastalih posle raspada Jugoslavije. S druge strane, treba napomenuti da postoje značajne fluktuacije i varijacije u inače niskom fertilitetu u regionu Zapadnog Balkana. Istovremeno, nizak nivo ukupne stope fertiliteta ne mora da znači i smanjenje ukupnog rodnog ponašanja, što postaje vidljivo kroz primenu aproksimativne stope završnog fertiliteta. Migraciona komponenta promene stanovništva zbog delimično nepostojećih, nesigurnih ili oskudnih podataka procenjena je indirektno kroz međupopisno poređenje. Primenjene su međupopisne projekcije fertilnog kontingenta da bi se procenio stepen starenja i odredio položaj u procesu dubokog starenja stanovništva. Rezultati pokazuju da su Hrvatska i Srbija najizraženije u procesu dubokog starenja, posebno u mlađim skupinama fertilnog kontingenta, dok je većina ostalih zemalja, osim Slovenije, pogođena gubitkom celokupnog fertilnog kontingenta koji će bez sumnje uticati na dalji demografski gubitak ovih prostora u budućnosti.

KLJUČNE REČI

starenje stanovništva, emigracija, nizak fertilitet, depopulacija, druga demografska tranzicija

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Employment, gender equality and family policies: post-Yugoslav countries and the European Union

Ankica Šobot [1]

EXTENDED ABSTRACT

The central question driving this study is whether and how the employment situation of women aged 20 to 49 in post-Yugoslav countries can be improved. Embracing feminist principles, the initial premise posits that gender equality is not only reflected in lower rates of women's employment, but also in a higher share of part-time employment. Parenthood emerges as a pivotal factor influencing both the quantity and quality of women's employment during this life stage. The analysis encompasses gender disparities, as well as variations in employment between the women with at least one child under the age of six and those without children. Data from the Labor Force Survey, from the database of the Statistical Office of the European Union are used.

In the socialist era of the former Yugoslavia, women's full-time employment was relatively high, and the societal norm of both parents being employed was widely embraced. However, the transition to the capitalist system in the late 20th century posed challenges for all former socialist countries, including labor market instability and a decline in women's employment. Our examination of current employment involves a comparative approach. Slovenia stands out for its remarkably high employment rates among the younger middle-aged women with children under six (exceeding 80%). Notably, Slovenia is the only European Union member state to maintain high employment rates, while simultaneously keeping part-time employment levels relatively low. Nonetheless, gender disparity in employment among women and men without children persists, as observed in Croatia and Serbia. Additionally, the gender gap in part-time employment between these women and men, recorded in Slovenia, is one of the largest. In Serbia, the employment rate of women aged 20–49 is below the EU average, with less than two-thirds employed in 2021, irrespective of parental status. Although part-time employment is not prevalent in

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post-Yugoslav countries, Slovenia exhibits a higher rate compared to Croatia and Serbia. While some of the most developed European countries have shown that this model can increase the employment rates of mothers with young children, feminist literature argues against it due to its adverse effects on women's socio-economic status. A potential approach to mitigating the gender gap in employment involves facilitating more flexible working arrangements, ensuring equal access and utilization, particularly where job's nature permits. Additionally, enhancing employment opportunities for younger middle-aged women without children is imperative.

KEYWORDS

gender roles, women's employment, part-time employment, work-family balance, flexible work arrangement

Zaposlenost, rodna ravnopravnost i porodične politike: postjugoslovenske države i Evropska unija

SAŽETAK

Predmet analize jeste zaposlenost ženskog stanovništva starosti 20–49 godina, uključujući roditeljstvo kao važnu determinantu nivoa i kvaliteta zaposlenosti žena u ovom životnom dobu. Cilj je da se sagleda u kom smeru treba poboljšavati politike u vezi sa zaposlenošću mlađe sredovečnih žena u postjugoslovenskim državama. U fokusu su razlike između žena i muškaraca koji nisu roditelji i razlike između žena koje imaju bar jedno dete mlađe od šest godina i žena bez dece. Komparativna analiza pokazala je da je jedna od najvećih stopa zaposlenosti žena koje imaju decu mlađu od šest godina na nivou Evropske unije u Sloveniji (iznad 80%), a da je model nepunog radnog vremena manje zastupljen nego u većini skandinavskih i zapadno evropskih država. Zaposlenost mlađe sredovečnih žena u Srbiji je ispod proseka za Evropsku uniju, a u 2021. bilo je zaposleno manje od dve trećine žena starosti 20–49 godina, kako onih koje nisu imale decu, tako i onih koje su imale bar jedno dete uzrasta do šest godina. Potrebne su politike koje impliciraju rodnu ravnopravnost i u pogledu nivoa i u pogledu kvaliteta zaposlenosti, što znači i rodnu ravnotežu u usklađivanju rada i roditeljstva, uključivanje fleksibilnih radnih aranžmana, ali i poboljšanje zaposlenosti žena koje nemaju decu.

KLJUČNE REČI

rodne uloge, zaposlenost žena, nepuno radno vreme, ravnoteža između posla i porodice, fleksibilni radni aranžmani

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1 UVOD

Analize i istraživanja ekonomske strukture stanovništva pripadaju grupi osnovnih demografskih pitanja. Poznavanje ekonomske aktivnosti i zaposlenosti smatra se važnim iz ugla održivosti ekonomskog i društvenog razvoja, a osim analiza trendova u definisanim vremenskim okvirima, uključuje i definisanje pretpostavki za budući period, uz uvažavanje fluktuacija na tržištu rada (Radivojević 2015). U demografiji se koriste dva primarna izvora ovih podataka. Jedan je tradicionalni Popis stanovništva, a drugi Anketa o radnoj snazi (ARS), kao statističko istraživanje kojim se podaci prikupljaju na nacionalnom nivou. Pogodnosti Ankete jesu sagledavanje ukupne zaposlenosti (uključujući i neformalnu), uvid u kvalitet zaposlenosti i u strukturu zaposlenih prema obrazovanju i zanimanjima, kao i mogućnost međunarodnog poređenja (Republički Zavod za statistiku 2019). Otuda ARS predstavlja pogodan istraživački instrument putem kojeg se može doći do određenih saznanja vezanih za poznavanje trendova i aktuelnih stanja u vezi sa zaposlenošću, kao jednom od osnovnih ekonomskih karakteristika stanovništva.

Pored toga, širenje interdisciplinarne povezanosti i multidisciplinarnog karaktera demografije, označilo je da se primarni statistički izvori vezani za poznavanje osnovnih karakteristika stanovništva, koriste i iz perspektive saznavanja nekih drugih bitnih pitanja društvenog razvoja. Jedno od njih jeste rodna ravnopravnost unutar kojeg je među važnijim aspektima onaj koji se tiče ekonomskih nejednakosti između žena i muškaraca, koje opstaju i u postindustrijskim društvima kroz nove forme rodne neravnopravnosti na tržištu rada i rodne razlike u zaposlenosti, koje savremena demografija ne može da zanemari (Šobot 2014a, 2014b). Uvođenje rodnog aspekta u demografska istraživanja intenzivno se odvija od početka 2000-ih, na temeljima inovativnih epistemoloških i metodoloških pristupa koji su pored deskriptivne funkcije akcenat stavili i na razumevanje demografskih fenomena u njihovoj složenosti. Osnaživanje antropološkog karaktera saznajnog okvira demografije (Tabutin 2007; Heady 2007; Hobcraft 2007; Caselli i Egidi 2007; Johnson-Hanks 2007; Coast, Hampshire i Randall 2007), vodilo je ka jasnom izdvajanju rodnog aspekta kao saznajno-metodološkog sredstva u saznavanju i tumačenjima populacionih struktura, procesa, trendova i stanja u definisanim vremenskim i prostornim okvirima, kao i određenim populacionim grupama i starosnim podgrupama. Bitan segment u tome predstavljale su intencije koje su se odvijale u okviru prikupljanja i diseminacije relevantnih podataka. Primena rodno senzitivne statistike podrazumeva da se predstave karakteristike i ženskog i muškog stanovništva i da se uključe relevantni indikatori koji omogućavaju sagledavanje položaja stanovnika oba pola, što se smatra potrebnim ne samo kao sredstvo razotkrivanja neravnopravnosti, već i kao način potpunog „prepoznavanja problema u društvu, davanja odgovora i rešenja" (Balon 2007:80).

Uvođenje rodne perspektive u sagledavanje zaposlenosti stanovništva kao demografskog fenomena vodi nas i ka saznanjima koja dolaze iz feminističke literature. Sa tog stanovišta nedvosmisleno se ukazuje na negativne efekte rodnih stereotipa i asimetrične podele rodnih uloga u privatnoj sferi. U evropskim državama blagostanja postoje čvrste institucionalne prepreke, pa kao posledica neravnopravnosti koja opstaje unutar porodice opstaju i rodne razlike i

nejednakosti u javnoj sferi (Orloff 1993; Fraser 1994; Kolin i Čičkarić 2010). Mada je na kraju 20. i početkom 21. veka široko rasprostranjen model "univerzalnog hranioca" (Universal Breadwinner) koji podrazumeva punu integrisanost žena na tržištu rada (Fraser 1994; Ciccia i Bleijenbergh 2014), podela rodnih uloga u privatnoj sferi i dalje predstavlja značajan faktor rodnih ekonomskih nejednakosti (Babović 2010). Položaj žene u vezi sa brigom o članovima porodice i obavljanjem kućnih poslova utiče na njen položaj koji se tiče zaposlenosti. Model podele „neplaćenog" rada smatra se ključnim faktorom za to na koji način će se žena angažovati u vezi sa plaćenim radom i koje opcije zaposlenosti će prihvatiti (Hofäcker, Stoilova i Riebling 2013). Pri tome, naglašava se da je rodna razlika u obavljanju plaćenog rada utoliko veća ukoliko je izraženija rodna podela uloga i poslova u porodici, a da u osnovi toga stoje institucionalni okviri i politike konkretnih država. Mada Saraceno (2011) ukazuje da je razlika između žena i muškaraca veća u pogledu tzv. neplaćenog rada, ona ističe da je razlika u zaposlenosti žena u evropskim državama pre svega posledica razlika u zaposlenosti majki. Takođe, ona potencira da u svim državama očevi rade više od onih koji nisu očevi a da je kod žena situacija drugačija, da su razlike između država u pogledu uticaja roditeljstva na zaposlenost veće kod žena nego kod muškaraca i da je varijacija u zaposlenosti veća između majki i žena koje nemaju decu, nego između muškaraca i žena bez dece.

Na nivou EU u 2021. zaposlenost žena je bila za blizu 11 procentnih poena niža u poređenju sa muškarcima, a blizu 30% žena starosti 25–49 godina bilo je van tržišta rada i to pretežno usled brige o deci ili nekom odraslom članu domaćinstva (European Commission 2022). Procenti zaposlenih s nepunim radnim vremenom kod žena starosti 20–49 godina kretali su se između 30% i blizu 60%, iste godine.

Rodne razlike i specifičnosti položaja žena u pogledu zaposlenosti jesu jedno od centralnih pitanja politika Evropske unije. Rodna ravnopravnost je Agendom 2030 postavljena za jedan od ciljeva održivog razvoja, a u okviru Strategije za rodnu ravnopravnost 2020–2025, definisani su ciljevi i mere koji su, pored ostalog, usmereni na veću podršku ravnoteži između porodice i posla (European Commission 2020). Nedavno su revidirani ciljevi postavljeni u Barseloni 2002. godine, kako bi se stvorili povoljniji uslovi za položaj žena kada je reč o zaposlenosti (European Commission 2022).

Imajući sve to u vidu, centralno pitanje koje je podstaklo ideju za ovaj rad jeste da li je i na koji način u postjugoslovenskim državama potrebno unaprediti položaj žena kada je reč o zaposlenosti. Prihvatajući feministički koncept, u ovom radu se polazi od stava da se rodna neravnopravnost manifestuje ne samo kroz niže stope zaposlenosti žena u poređenju sa muškarcima, nego i kroz veću raširenost zaposlenosti s nepunim radnim vremenom, kao jednog od najčešćih modela usklađenosti porodičnog života i rada, prisutnijih u ženskoj populaciji, a posledica je rodni jaz u zaradama na štetu žena. Predmet analize jeste zaposlenost ženske populacije starosti 20–49 godina, uključivanjem roditeljstva kao bitne determinante nivoa i karakteristika zaposlenosti žena koje imaju malu decu. Na temelju saznanja iz literature, analiza u ovom radu usmerena je stavom da je roditeljstvo faktor rodnih razlika u zaposlenosti, kao i razlika između žena koje imaju malu decu i onih koje nemaju decu. Takođe, analiza

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obuhvata i zaposlenost s nepunim radnim vremenom[1] kao najprisutniji rodno specifični model zaposlenosti.

Fokus na tri postjugoslovenske države (Sloveniju, Hrvatsku i Srbiju) nije određen samo tematskom usmerenošću časopisa *Stanovništvo* i dostupnošću relevantnih pokazatelja. Postoje i istraživačka i praktična važnost. Tokom socijalističkog perioda, u državama sa prostora bivše Jugoslavije zaposlenost žena s punim radnim vremenom je bila relativno visoka i obrazac zaposlenosti oba roditelja je bio opšte prihvaćen. Međutim, sve države koje su krajem 20. veka ušle u period tranzicije ka kapitalističkom društvenom sistemu, pored ostalih teškoća, suočavale su se sa nestabilnostima na tržištu rada i padom zaposlenosti žena (Scharle 2007). Takođe, države sa prostora bivše Jugoslavije imale su ne samo specifične puteve tranzicije ka kapitalizmu u odnosu na ostale socijalističke države, već se i međusobno razlikuju u tom pogledu, a na drugoj strani su osobenosti društvenog i ekonomskog razvoja u poređenju sa najrazvijenijim evropskim državama. Otuda ovde primenjujemo komparativnu analizu, te aktuelno stanje u pogledu nivoa i kvaliteta zaposlenosti žena starosti 20–49 godina u postjugoslovenskim državama, posmatramo u odnosu na bivše socijalističke, skandinavske i zapadno evropske države, uključujući i međusobne sličnosti i razlike. Cilj je da se sagleda u kom smeru treba poboljšavati politike u vezi sa zaposlenošću žena u postjugoslovenskim državama, uzimajući u obzir roditeljstvo kao bitan faktor njihovog položaja. Ovaj rad daje doprinos istraživanjima ekonomske strukture stanovništva skretanjem pažnje na rodnu dimenziju zaposlenosti. Pored toga, potkrepljuje sliku o bitnom aspektu rodne ravnopravnosti čime se izlazi iz okvira usko demografskog doprinosa.

[1] Zaposlenost s nepunim radnim vremenom ili zaposlenost s pola radnog vremena (part-time employment) se odnosi na one zaposlene koji rade manje od 30 sati nedeljno, obavljajući svoj glavni posao za koji primaju platu. Stopa zaposlenosti predstavlja udeo lica zaposlenih s nepunim radnim vremenom među svim zaposlenim licima i znači učestalost zaposlenja s nepunim radnim vremenom. (OECD 2024).

2 METOD

Glavno metodološko oruđe u ovom radu jeste perspektiva različitosti rodnih uloga, kao relevantnih faktora demografskog ponašanja. Ovde je reč o zaposlenosti kao centralnoj demografskoj temi. Usvajajući stav o negativnim implikacijama roditeljstva u pogledu zaposlenosti žena, glavnu ciljnu grupu čine žene starosti 20–49 godina koje imaju bar jedno dete mlađe od šest godina. Primena rodne perspektive u ovom radu označava da se sagledavaju rodne razlike u nivou i kvalitetu zaposlenosti, kao i razlike između žena koje imaju decu mlađu od šest godina i onih koje nemaju decu, posebno analizirajući zastupljenost modaliteta nepunog radnog vremena. Analiza rodne razlike u zaposlenosti odnosi se na žene i muškarce starosti 20–49 godina koji nemaju decu, kako bi se one sagledale izvan konteksta uticaja roditeljstva.

Bitnu odrednicu u našoj analizi ima i prostorna komponenta. Fokus je na državama proistekle iz bivše Jugoslavije, a izbor Slovenije, Hrvatske i Srbije, određen je raspoloživošću podataka za potrebe ovog rada. Da bi se dobio celovitiji uvid, primenjuje se komparativni metod koji uključuje dva nivoa poređenja. Jedan se tiče poređenja u odnosu na Evropsku uniju, sa posebnim osvrtom na bivše socijalističke države, kao i na ekonomski najrazvijenije države zapadne i severne

Evrope, a drugi podrazumeva međusobno poređenje izabrane tri postjugoslovenske države.

Izvor podataka čini baza statističkog zavoda Evropske unije (Eurostat), koja se formira iz nacionalnih statističkih zavoda. Osnovni instrument prikupljanja podataka o zaposlenosti jeste Anketa o radnoj snazi (Labour Force Survey – LFS), koja se sprovodi prema standardizovanom metodološkom uputstvu,[2] u svakoj državi pojedinačno. U analizi se koriste dva pokazatelja: stope zaposlenosti i udeo zaposlenih s nepunim radnim vremenom. U pogledu vremenskog okvira, podaci će biti predstavljeni za poslednjih pet godina (period 2018–2022), ali komparativna analiza se završava sa 2021. godinom, s obzirom da za Srbiju nisu raspoloživi podaci za 2022.

2.1 HIPOTEZE

Hipotetički okvir je utemeljen na prihvatanju feminističkog koncepta. Polazni stav je da se rodna neravnopravnost manifestuje ne samo kroz niže stope zaposlenosti žena starosti 20–49 godina, već i kroz veću zaposlenost s nepunim radnim vremenom, a da je roditeljstvo važna ograničavajuća determinanta nivoa i kvaliteta zaposlenosti žena u ovom životnom dobu. Pored toga formulisanje osnovne hipoteze određeno je i time da je u bivšoj Jugoslaviji bio opšte prihvaćen model porodica u kojima su i žena i muškarac zaposleni s punim radnim vremenom. Osnovna pretpostavka je da nivo i kvalitet zaposlenosti žena starosti 20–49 godina u postjugoslovenskim državama nisu nepovoljniji, te da analiza tih pokazatelja ne ukazuje da je rodna neravnopravnost u značajnijoj meri izražena, u poređenju sa bivšim socijalističkim, skandinavskim i zapadno evropskim državama.

U pogledu poređenja stanja u tri postjugoslovenske države, pretpostavljeno je da je nivo zaposlenosti veći u Sloveniji nego u Hrvatskoj i u Srbiji, kao i to da je rodna razlika manja. Takođe, pretpostavljeno je da je u Sloveniji, po uzoru na skandinavske i zapadno evropske države, veća zastupljenost modela nepunog radnog vremena, kao opcije koja je u funkciji bolje ravnoteže između porodice i posla.

3 REZULTATI

3.1 RAZLIKA U ZAPOSLENOSTI ŽENA I MUŠKARACA BEZ DECE

Posmatrajući populaciju žena i muškaraca starosti 20–49 godina koji nemaju decu, u većini evropskih država niže su stope zaposlenosti žena (tabela 1). Izdvajaju se Litvanija i Finska u kojima je tokom većeg dela perioda 2018–2022, neznatno veća zaposlenost žena nego muškaraca, a ovakva rodna razlika zabeležena je i u Letoniji u 2018. i 2020, kao i u Estoniji, u 2020. i 2021. godini. Takođe, i u Nemačkoj 2018. i u Austriji 2022. godine, uočena razlika koja govori o nižoj zaposlenosti žena je gotovo zanemarljiva.

Jasno je da je u tri postjugoslovenske države niža zaposlenost mlađe sredovečnih žena nego muškaraca koji nemaju decu (grafikon 1). Rodna razlika je nešto manja u Sloveniji, u poređenju sa Hrvatskom i Srbijom. Takođe, gledajući ove tri države, stopa zaposlenosti je najveća u Sloveniji tokom posmatranog petogodišnjeg perioda. U istoj zemlji u 2021. godini gotovo tri četvrtine žena starosti 20–49 godina koje nisu imale

[2] U bazi podataka Statističkog zavoda Evropske unije (Eurostat) dostupni su podaci prikupljeni na bazi nacionalnih Anketa o radnoj snazi uz referentne metapodatke (Eurostat 2024).

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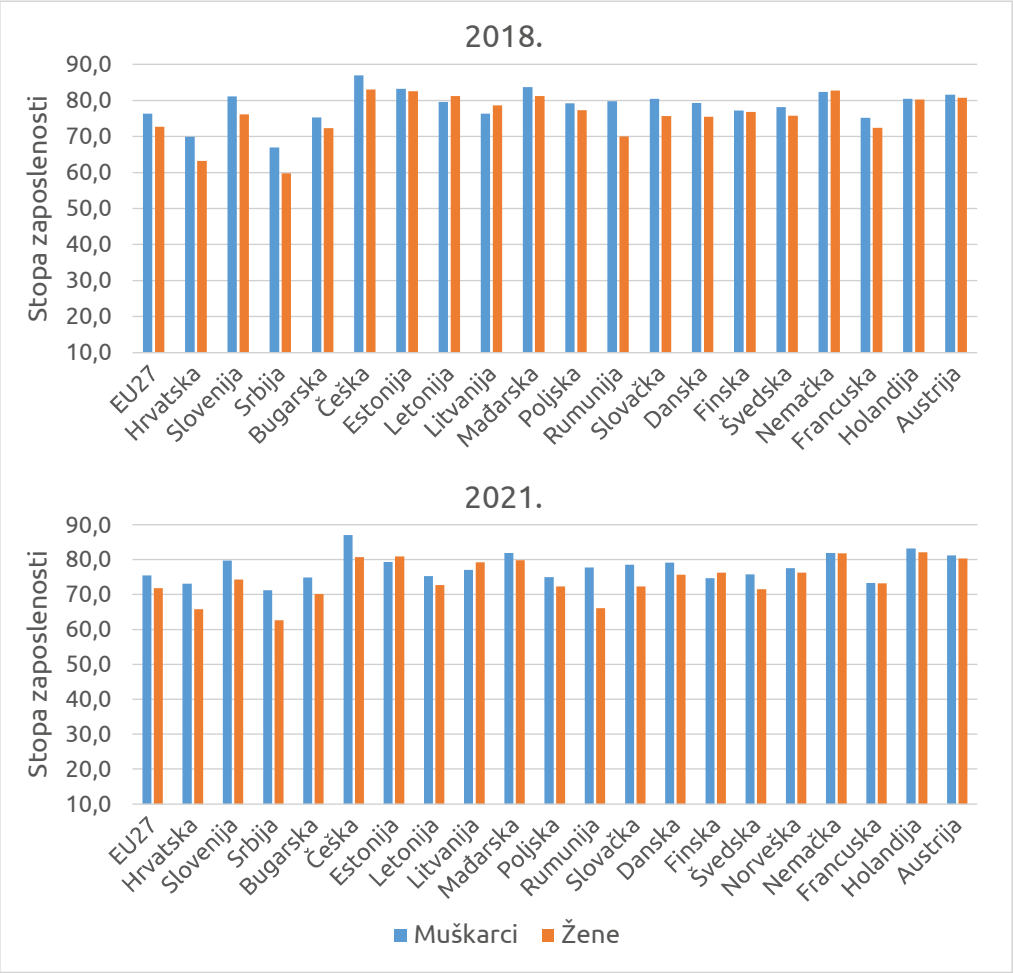
decu bilo je zaposleno, što je bilo iznad proseka za Evropsku uniju i oko nivoa u skandinavskim državama. Na drugoj strani, u Hrvatskoj i u Srbiji bilo je zaposleno manje od dve trećine žena koje su pripadale ovoj grupi. To je bilo niže ne samo u odnosu na razvijene evropske države, nego i na sve bivše socijalističke države. Najsličnije stanje je bilo u Rumuniji gde je 2021. stopa zaposlenosti iznosila 66,1%. U Holandiji, Nemačkoj, Češkoj, Estoniji i Austriji 2021. je bilo zaposleno više od 80% žena starosti 20–49 godina koje nisu imale decu.

Tabela 1 Stope zaposlenosti žena i muškaraca starosti 20–49 godina koji nisu roditelji, 2018–2022. (u %).

	Muškarci					Žene				
	2018	**2019**	**2020**	**2021**	**2022**	**2018**	**2019**	**2020**	**2021**	**2022**
Evropska unija – 27 država (od 2020)	76,3	76,9	75,3	75,5	77,7	72,7	73,2	71,2	71,8	74,0
Hrvatska	69,9	71,9	72,1	73,1	75,6	63,2	65,3	63,7	65,8	69,0
Slovenija	81,1	82,6	79,2	79,7	82,3	76,2	77,3	77,1	74,3	75,9
Srbija	67,0	67,6	69,1	71,2	:	59,8	61,2	60,9	62,6	:
Bugarska	75,3	78,3	76,5	74,9	77,8	72,3	74,7	71,7	70,1	72,4
Češka	87,0	87,1	85,9	87,0	87,3	83,1	82,9	80,2	80,7	81,2
Estonija	83,2	83,5	79,4	79,3	82,2	82,6	80,3	80,6	80,9	81,8
Letonija	79,6	78,0	76,6	75,3	80,4	81,2	77,3	79,9	72,7	77,3
Litvanija	76,3	76,4	75,4	77,1	79,2	78,6	80,3	77,6	79,2	80,7
Mađarska	83,7	83,3	82,1	81,9	83,8	81,2	81,2	79,4	79,8	81,0
Poljska	79,2	80,7	80,7	75,0	75,0	77,3	77,7	76,5	72,3	72,6
Rumunija	79,8	80,9	80,5	77,8	77,3	70,0	69,8	69,2	66,1	66,9
Slovačka	80,5	81,2	79,8	78,5	79,6	75,7	76,3	74,1	72,3	75,4
Danska	79,3	77,3	76,4	79,1	79,2	75,5	75,7	74,2	75,7	75,2
Finska	77,2	77,0	74,2	74,7	74,8	76,8	77,6	74,9	76,3	76,7
Švedska	78,2	77,9	76,9	75,8	80,4	75,8	72,6	73,8	71,5	75,8
Norveška	:	:	:	77,6	79,3	:	:	:	76,3	76,2
Nemačka	82,4	83,4	81,9	81,9	84,0	82,8	83,2	81,4	81,8	83,2
Francuska	75,2	72,9	72,4	73,3	76,5	72,4	72,5	71,6	73,2	75,8
Holandija	80,5	81,5	80,7	83,2	85,4	80,3	80,4	79,2	82,1	82,7
Austrija	81,6	82,4	79,6	81,2	82,6	80,8	81,5	79,6	80,3	83,5

Izvor: Eurostat 2023a.



Grafikon 1 Razlika u zaposlenosti između žena i muškaraca starosti 20–49 godina koji nisu roditelji, 2018. i 2021. (u %).
Izvor: Eurostat 2023a.

3.2 RAZLIKA IZMEĐU ŽENA KOJE IMAJU MALU DECU I ŽENA KOJE NEMAJU DECU

Tokom 2018–2022, Slovenija ima jednu od najvećih stopa zaposlenosti žena koje imaju bar jedno dete mlađe od šest godina (tabela 2). U 2021. 82,7% žena je bilo zaposleno, što je bilo za gotovo jednu petinu veći udeo nego u Srbiji (63,0%), dok je u odnosu sa Hrvatskom razlika bila deset procentnih poena (70,2%). Zaposlenost ove grupe žena u Srbiji je ispod proseka za Evropsku uniju (2021. – 65,5%). Neznatno manje stope su u Bugarskoj i Estoniji (62,0% i 61,2%), dok su najniže u Rumuniji (51,7%) i Češkoj (41,9%). U 2022, pored Slovenije, stopa zaposlenosti je bila iznad 80% u Norveškoj, Švedskoj i Holandiji. U Sloveniji je zabeležen blagi porast zaposlenosti žena sa malom decom, ali ni u jednoj postjugoslovenskoj državi nije bilo značajnijih promena. One se nisu desile ni u pogledu

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Tabela 2 Stope zaposlenosti žena starosti 20–49 godina koje imaju bar jedno dete mlađe od 6 godina, 2018–2022. (u %).

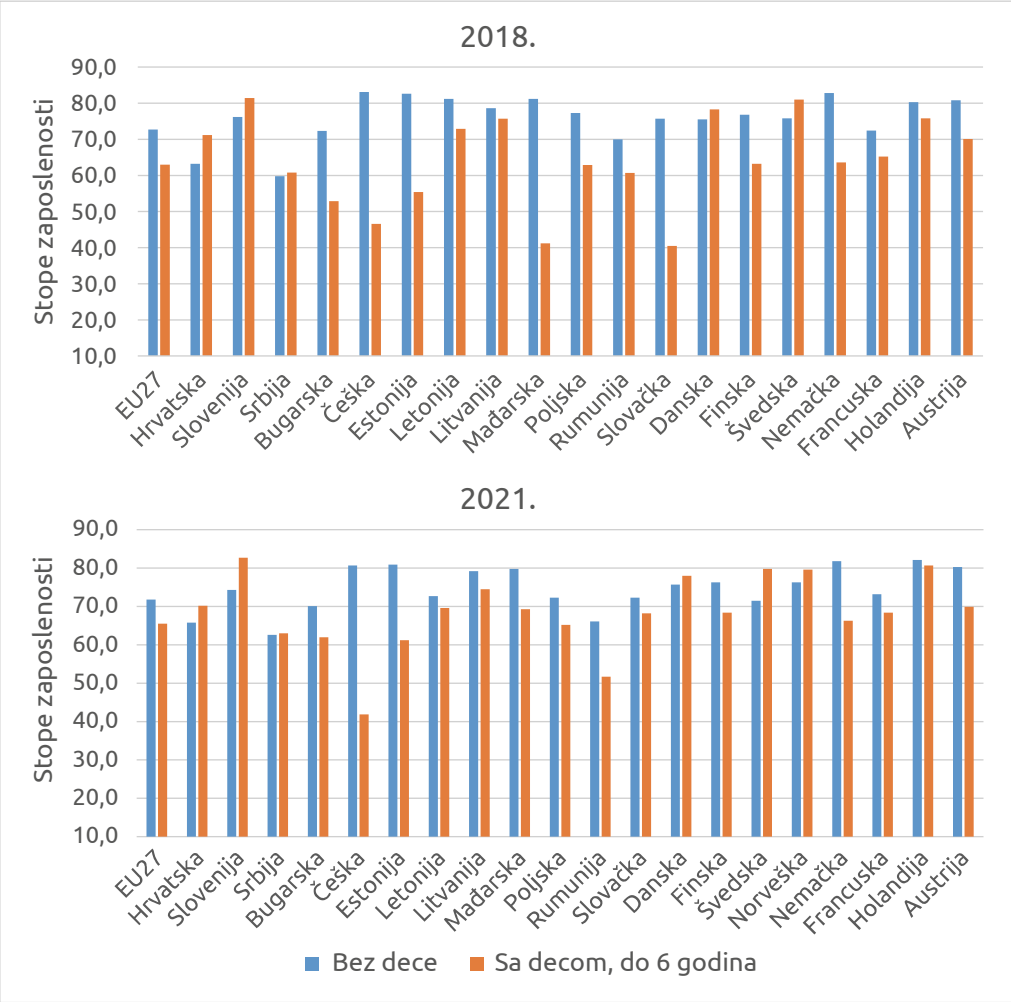
	2018	2019	2020	2021	2022
Evropska unija – 27 država (od 2020)	63,0	63,6	62,8	65,5	66,4
Hrvatska	71,2	72,4	72,6	70,2	73,8
Slovenija	81,4	82,5	80,0	82,7	84,1
Srbija	60,8	61,3	60,2	63,0	:
Bugarska	52,9	57,3	56,9	62,0	62,9
Češka	46,6	43,2	40,7	41,9	42,7
Estonija	55,4	54,4	51,3	61,2	72,9
Letonija	72,9	73,1	67,5	69,6	71,8
Litvanija	75,7	77,1	76,2	74,5	78,3
Mađarska	41,2	41,8	38,0	69,3	72,2
Poljska	62,9	62,8	63,1	65,2	66,1
Rumunija	60,7	61,1	59,3	51,7	53,4
Slovačka	40,5	40,7	39,9	68,2	68,8
Danska	78,3	77,9	75,2	78,0	79,9
Finska	63,2	65,1	65,8	68,4	69,9
Švedska	81,0	83,5	78,8	79,8	82,0
Norveška	:	:	:	79,6	84,5
Nemačka	63,6	64,4	64,1	66,3	66,8
Francuska	65,2	66,0	66,2	68,4	69,6
Holandija	75,8	77,5	80,0	80,7	81,8
Austrija	70,1	72,6	73,5	69,9	72,9

Izvor: Eurostat 2023a.

zaposlenosti žena koje nisu imale decu, mada su u Hrvatskoj i Srbiji 2021. stope bile nešto veće nego 2018, dok su u Sloveniji bile neznatno niže.

Stope zaposlenosti žena koje imaju decu mlađu od šest godina u postjugoslovenskim državama, kao i u Danskoj, Švedskoj i Norveškoj su ili nešto veće ili su ujednačene u poređenju sa ženama koje nemaju decu, dok je odnos drugačiji u bivšim socijalističkim i razvijenim zapadno evropskim državama (grafikon 2). U Srbiji ta razlika gotovo da ne postoji, ali u Sloveniji je u 2021. i 2022. za blizu deset procentnih poena niža zaposlenost žena koje nisu imale decu, što je izraženije nego u Hrvatskoj.

Suprotno od ovog, na nivou Evropske unije tokom 2018–2022. godine, stope zaposlenosti žena koje su imale dete/decu uzrasta do šest godina bile su manje za od oko deset do oko osam procentnih, u odnosu na žene koje nisu imale decu. Najintenzivnija razlika, koja u posmatranom periodu postoji u kontinuitetu jeste u Češkoj. U toj zemlji, u 2022. godini zaposlenost žena starosti 20–49 godina koje su imale bar jedno dete mlađe od šest godina bila je gotovo dvostruko niža u poređenju sa ženama koje nisu imale decu (42,7% u odnosu na 81,2%). Gledajući bivše socijalističke države, u 2018. godini značajno veća zaposlenost žena koje nisu imale malu decu postojala je i



Grafikon 2 Razlika u zaposlenosti žena starosti 20–49 godina koje nemaju decu i onih koje imaju bar jedno dete mlađe od 6 godina 2018. i 2021. (u %).
Izvor: Eurostat 2023a.

u Mađarskoj i u Slovačkoj, gde je bila naglašenija od razlike u Estoniji, Bugarskoj i Poljskoj (grafikon 2). Usled značajnijeg porasta stopa zaposlenosti žena sa malom decom, razlika je u 2022. smanjena u ovim državama. Jedino je u Rumuniji razlika povećana, usled izraženijeg pada stopa zaposlenosti žena koje su imale malu decu u odnosu na pad zaposlenosti žena bez dece. Kada je reč o zapadno evropskim državama, tokom 2018–2022. razlika izražena kroz niže stope zaposlenosti žena koje imaju malu decu veća je u Nemačkoj nego u Austriji i Francuskoj. Razlika je najmanja u Holandiji.

3.3 ZAPOSLENE I ZAPOSLENI KOJI RADE NEPUNO RADNO VREME

Razlika izražena kroz to da žene češće od muškarca obavljaju poslove s nepunim radnim vremenom, prisutna je i

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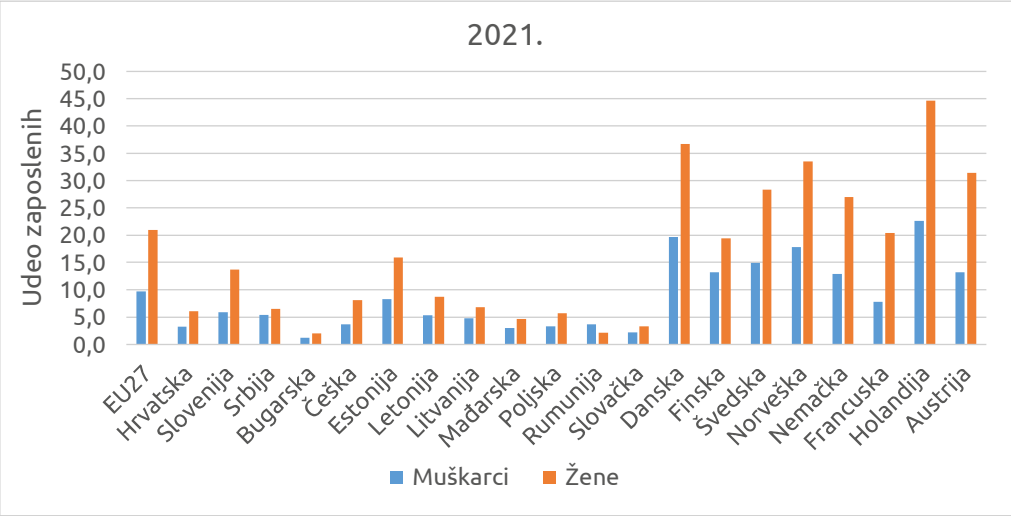

Grafikon 3 Zaposleni s nepunim radnim vremenom, muškarci i žene starosti 20–49 godina koji nisu roditelji (u %), 2021.
Izvor: Eurostat 2023b.

onda kada oni nisu roditelji (grafikon 3). Međutim, zaposlenost s nepunim radnim vremenom nije karakteristična za postjugoslovenske države u meri u kojoj je ovaj model prisutan u skandinavskim i zapadno evropskim državama. Ipak, on je zastupljeniji u Sloveniji gde je 2021. 13,7% zaposlenih žena starosti 20–49 godina koje nisu imale decu, obavljalo plaćeni posao s nepunim radnim vremenom. U Hrvatskoj i Srbiji zastupljenost je bila više nego dvostruko manja (6,5% i 6,1%). Rodna razlika u Srbiji je bila mala i gotovo beznačajna. U Sloveniji je više od dva puta češća zaposlenost s nepunim radnim vremenom kod žena nego kod muškaraca, dok je u Hrvatskoj razlika nešto blaža, ali su i procenti manji.

Na nivou Evropske unije u periodu 2018–2022. jedna petina zaposlenih žena starosti 20–49 godina koje nisu imale decu, obavljala je poslove s nepunim radnim vremenom, što je dva puta veći udeo nego u muškoj populaciji. Ova rodna razlika prisutna je i u skandinavskim i u zapadno evropskim državama. U Sloveniji udeli jesu niži, ali je 2021. više nego dva puta veća zastupljenost kod žena, što je uz Francusku (dva i po puta) i Austriju najveća rodna razlika (grafikon 3).

Najveća učestalost ovog modaliteta zaposlenosti beleži se među zaposlenim ženama u Holandiji. U 2021. 44,6% zaposlenih žena starosti 20–49 godina koje nisu imale decu radilo je nepuno radno vreme, što je bio tri puta veći udeo nego u Sloveniji. Veoma mala zastupljenost bila je u Bugarskoj, Rumuniji i Slovačkoj, gde su u 2021. udeli iznosili između 2% i nešto više od 3%. Rumunija je jedina država u kojoj je ovaj modalitet nešto prisutniji u muškoj nego u ženskoj populaciji, ali je zastupljenost veoma niska (grafikon 3).

Upoređujući žene starosti 20–49 godina koje imaju dete mlađe od šest godina i žene ove starosti koje nemaju decu, na nivou Evropske unije vidi se da se razlika u učestalosti poslova s nepunim radnim vremenom povećava sa brojem dece

(tabela 3). U poređenju sa ženama koje nisu imale decu, kod žena koje su imale jedno dete zastupljenost je bila veća za blizu deset procentnih poena, gledajući 2021. godinu, kod žena sa dvoje dece za nešto iznad petnaest procentnih poena, a kod žena koje su imale troje dece bila je gotovo dvostruko veća.

Nasuprot tome, u Sloveniji i Hrvatskoj žene starosti 20–49 godina koje nisu imale decu, nešto češće su bile zaposlene s nepunim radnim vremenom od žena koje su imale jedno dete, dok u Srbiji gotovo da ne postoji razlika ni u odnosu na žene koje su imale dvoje dece mlađe od šest godina (tabela 3). Međutim, zaposlenost s nepunim radnim vremenom oko dva puta je češća kod žena koje imaju troje dece, u odnosu na žene koje nisu imale decu. Udeo je najveći u Sloveniji. U 2021, s nepunim radnim vremenom radila je svaka četvrta zaposlena žena starosti 20–49 godina koja je imala troje dece mlađe od šest godina. Ta zastupljenost zabeležena je i u Češkoj, Estoniji i Danskoj (grafikon 4).

Tabela 3 Zaposlenost s nepunim radnim vremenom, žene starosti 20–49 godina bez dece i žene sa decom, 2021. (u %).

	Bez dece	Jedno dete	Dvoje dece	Troje dece
Evropska unija – prosek za 27 država (od 2020.)	21,0	29,6	36,6	40,7
Hrvatska	6,1	4,7	6,0	12,1
Slovenija	13,7	11,5	19,7	25,3
Srbija	6,5	6,0	6,9	10,9
Bugarska	2,0	:	:	:
Češka	8,1	25,5	24,8	25,9
Estonija	15,9	22,3	14,5	24,1
Letonija	8,7	:	:	:
Litvanija	6,8	4,7	6,7	8,8
Mađarska	4,6	6,8	8,5	13,1
Poljska	5,7	6,0	8,4	10,9
Rumunija	2,1	:	:	:
Slovačka	3,3	:	:	:
Danska	36,7	20,3	24,0	26,3
Finska	19,4	17,7	21,5	31,7
Švedska	28,3	29,5	36,3	32,8
Norveška	33,5	22,0	26,9	30,5
Nemačka	27,0	54,2	73,1	75,8
Francuska	20,4	25,9	33,1	41,7
Holandija	44,6	67,8	75,4	80,7
Austrija	31,4	61,7	76,8	78,9

Izvor: Eurostat 2023b.

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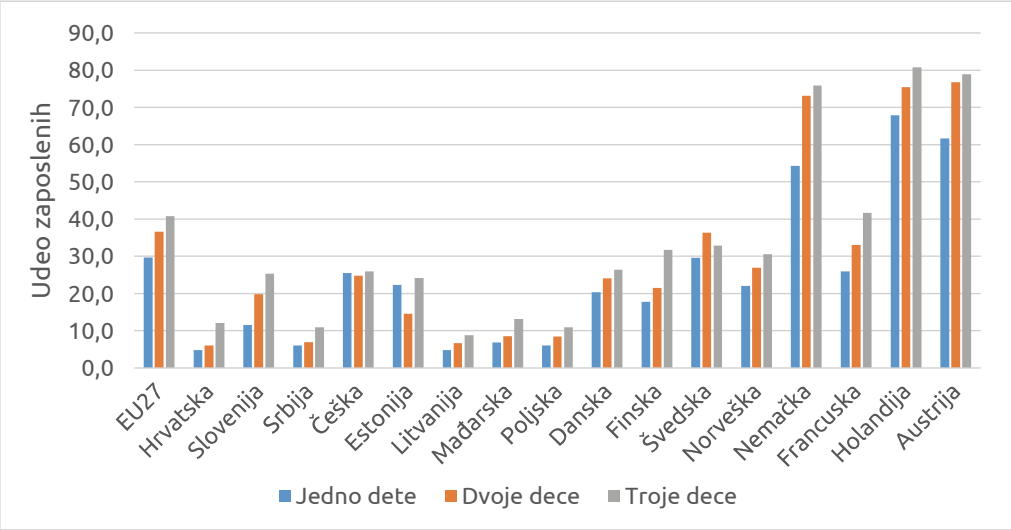

Grafikon 4 Žene starosti 20–49 godina koje rade nepuno radno vreme, prema broju dece 2021. (u %).
Izvor: Eurostat 2023b.

U Hrvatskoj i Srbiji, evidentna je niska učestalost zaposlenosti s nepunim radnim vremenom. Jedino je kod žena koje su imale troje dece mlađe od šest godina udeo bio veći od 10%. One su u tom pogledu bile izjednačene sa Poljskom. U Mađarskoj je udeo bio nešto veći, a u Litvaniji nešto manji (grafikon 4). Ovaj modalitet najrašireniji je u Holandiji. U 2021. blizu 70% zaposlenih žena koje su imale jedno dete, tri četvrtine onih koje su imale dvoje i više od 80% zaposlenih žena koje su imale troje dece ovog uzrasta bilo je zaposleno s nepunim radnim vremenom. U Austriji je bila vrlo slična situacija. U Nemačkoj je kod žena koje su imale jedno dete učestalost bila nešto manja nego u Holandiji i Austriji, mada je više od polovine radilo s nepunim radnim vremenom. U Francuskoj su udeli bili na nivou koji je bliži skandinavskim državama, osim što je kod žena koje su imale troje dece mlađe od šest godina zastupljenost od 41,7% bila veća nego u Švedskoj, Norveškoj i Finskoj (nešto više od 30%).

4 DISKUSIJA

Zaposlenost, kao predmet istraživanja u ovom tekstu, posmatramo na relaciji rodna ravnopravnost – politike prema porodici. Na jednoj strani je pitanje rodne ravnopravnosti, kao deo političke agende na nivou Evropske unije koja implicira poboljšanje položaja žena u vezi sa ekonomskom aktivnošću i zaposlenošću, usmeravajući se na otklanjanje barijera. Na drugoj strani su politike vezane za odluke o roditeljstvu i rađanju, gde zaposlenost žene jeste bitan segment, ali je centralna važnost balansa između porodice i posla. Otuda, uprkos političkoj agendi rodne ravnopravnosti da se podigne nivo zaposlenosti i da se poboljša položaj zaposlenih žena, postoje i nove forme rodne neravnopravnosti kada je reč o zaposlenosti.

Na temelju predstavljene analize ne može se reći da je polazna pretpostavka u potpunosti potvrđena, niti da je potpuno opovrgnuta. Možemo konstatovati povoljniji položaj žena u Sloveniji,

uzimajući u obzir visoku zaposlenost onih koje imaju decu mlađu od šest godina na nivou Evropske unije, kao i veću zaposlenost žena koje nemaju decu, u poređenju sa Hrvatskom i Srbijom. Gledajući nivo zaposlenosti žena starosti 20–49 godina koje imaju bar jedno dete mlađe od šest godina, Slovenija je, uz Norvešku, država sa najvišim stopama zaposlenosti. Pored toga, ona je pozitivan primer jer se visoka zaposlenost ove grupe žena ostvaruje u uslovima relativno niske zastupljenosti rada s nepunim radnim vremenom. Ona je jedina država sa takvim karakteristikama. Nasuprot tome, zaposlenost žena starosti 20–49 godina u Srbiji je ispod proseka za Evropsku uniju, i ta razlika je naglašenija za žene koje nemaju decu, uz stope koje su niže nego u svim drugim posmatranim državama. Kada je reč o ženama koje imaju decu uzrasta do šest godina, stopa zabeležena u Srbiji je bliža proseku Evropske unije, ali je jedna od najnižih. Gotovo ista je u Bugarskoj, a jedino još dve države imaju niže stope (Češka i Rumunija). U Srbiji je u 2021. godini bilo zaposleno manje od dve trećine žena starosti 20–49 godina, kako onih koje su imale decu mlađu od šest godina, tako i onih koje nisu imale decu.

Sudeći prema saznanjima iz literature koja ističu da razlike u zaposlenosti žena u evropskim državama, a pre svega onih koje imaju malu decu, jesu posledica politika i institucionalnih rešenja (Scharle 2007; Saraceno 2011; Hofäcker, Stoilova & Riebling 2013; Avlijaš 2019), i ovde uočene razlike bi se mogle protumačiti na taj način. Međutim, treba imati uvidu i razlike u ekonomskim politikama i u nivou ekonomskog razvoja kao karakteristike društvenog konteksta u kojem se ostvaruje uticaj definisanih politika. Kada je reč o bivšim socijalističkim državama, u literaturi se kao pozitivni primeri izdvajaju baltičke države u kojima su nakon negativnih trendova, uspostavljeni uslovi koji su podstakli zaposlenost žena. Polazeći od toga da su nepovoljni uslovi na tržištu rada nakon kraha socijalizma, uslovili pad zaposlenosti i ponude ženske radne snage, Scharle (2007) ukazuje da su se Letonija i Litvanija odvojile od bivših socijalističkih država istočne i centralne Evrope, višim nivoom zaposlenosti žena, zahvaljujući politikama prema porodici kojima je napravljen pozitivan balans između podsticaja na rad i novčanih davanja majkama. Međutim, Avlijaš (2016, 2017, 2019) na temelju svojih istraživanja, podvlači da su baltičke države uspostavile model privrednog rasta koji je imao pozitivan efekat na zaposlenost žena. Pored toga, specifičnost ekonomskih uslova i društvenog razvoja bivših socijalističkih država bitna je i sa stanovišta uticaja fleksibilizacije radnog vremena na položaj žena. Komparativna analiza institucionalnog konteksta pokazala je da fleksibilnije forme zaposlenosti u Bugarskoj nisu ispunile svoju funkciju bolje ravnoteže između posla i porodice, već da su u većoj meri imale negativne efekte, kroz nestabilnu zaposlenost i nesigurnost na tržištu rada (Hofäcker, Stoilova i Riebling 2013).

Kada su u pitanju Hrvatska, i posebno Srbija, jasno je da je potrebno unaprediti relativno nisku zaposlenost žena starosti 20–49 godina. Ukoliko se pozovemo na nalaze naše analize, vidimo da zaposlenost s nepunim radnim vremenom može da bude način da se dostigne veći nivo zaposlenosti majki male dece, što nam pokazuju zapadno evropske i skandinavske države. To je zapravo potvrđeno i u slučaju Italije i Velike Britanije, koje su se, u nastojanjima da podstaknu ekonomsku aktivnost

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ženske populacije u reproduktivnom periodu, odlučile na širenje modaliteta nepunog radnog vremena (Del Boca, Pasqua i Pronzato 2005). Međutim, tu su i ona saznanja koja nas upozoravaju da je ovaj modalitet zaposlenosti snažno rodno obojen jer je intenzivnije prisutan kod žena nego kod muškaraca, i da on u konačnom ishodu reprodukuje rodnu neravnopravnost u ekonomskom položaju, pa kao rešenje za postizanje suštinske rodne ravnopravnosti vide u politikama koje podstiču ravnomerniju podelu brige o deci, što se smatra preduslovom za ravnopravniji položaj u zaposlenosti (Fraser 1994; Ciccia i Bleijenbergh 2014).

U postjugoslovenskim državama, zaposlenost s nepunim radnim vremenom nije prisutna u meri u kojoj je u skandinavskim i zapadno evropskim, ali u Sloveniji je zastupljenost nešto veća kod žena koje nisu majke nego kod žena koje imaju bar jedno dete mlađe od šest godina. I u tom pogledu ona je bliska skandinavskim državama, mada je u njima zastupljenost ovog modaliteta veća. Imajući to u vidu, zaposlenost s nepunim radnim vremenom se ne može povezati samo sa potrebama majki da se uspostavi bolja ravnoteža između porodice i posla. U Nemačkoj, Francuskoj, Austriji i Holandiji, pored visokog udela nepunog radnog vremena kod žena koje nemaju decu, raširenost je još veća kod majki male dece, pri čemu se jasno vidi uticaj broja dece mlađe od šest godina. I dok se rodna razlika u zastupljenosti ovog modaliteta među zaposlenim roditeljima može pripisivati stereotipima o podeli rodnih uloga i urodnjenosti politika usmerenim ka porodicama i usklađivanju rada i roditeljstva, postavlja se pitanje koji su razlozi veće prisutnosti nepunog radnog vremena kod žena nego kod muškaraca i onda kada nisu roditelji male dece.

Kada je u pitanju Slovenija, visok nivo zaposlenosti žena koje imaju decu mlađu od šest godina s punim radnim vremenom, dovodi nas do pitanja njihovog položaja usled tzv. dvostruke opterećenosti. Tu nam se nameće i pitanje politika koje bi doprinele da se uspostave uslovi koji omogućavaju rodnu ravnotežu u pogledu usklađenosti posla i porodice. Ono što je iz perspektive rodne ravnopravnosti važno, jeste feministička kritika ovih politika jer i pored određenih specifičnosti, one u svim evropskim državama podržavaju manje ili više urodnjene roditeljske modele i prakse (Saraceno 2011). Otuda se ističe da je njihov uticaj na zaposlenost žena posredovan time da li je odgovornost o brizi podeljena ili ne, da li je i koliko ona rodno određena, na koji način su usklađeni angažovanje na plaćenom poslu i obaveze prema porodici. Tu se kao centralno nameće pitanje na koji način je moguće obezbediti to da forme usklađivanja rada i roditeljstva ne proizvode neravnopravnosti ni u pogledu zaposlenosti, niti u pogledu brige o deci. Idealan model bi bio onaj koji se, kako ukazuje Saraceno (2011) pozivajući se na Jacobs i Gornick, odlikuje visokom fleksibilizacijom radnog vremena i visokom rodnom ravnopravnošću, navodeći da su početkom 2000-ih tom modelu bile najbliže Holandija, Švedska i Nemačka. Na kraju druge decenije 21. veka, na nivou Evropske unije prepoznata je važnost pravnih regulativa za uspostavljanje balansa između porodice i posla, a kao jedno od individualnih prava zaposlenih izdvojeno je pravo na fleksibilne radne aranžmane, kao način da se uspostavi što bolja ravnoteža između porodice i posla (Ristovski, Kalamatiev 2023).

Mada je centralna tema ovog rada zaposlenost žena koje su majke dece uzrasta do šest godina, uporedna analiza je pokazala da u postjugoslovenskim državama postoji relativno niska zaposlenost žena starosti 20–49 godina koje nemaju decu. Nepovoljnost u pogledu ove grupe žena manifestuje se kroz izraženiju rodnu razliku nego u većini drugih posmatranih država, kao i kroz najnižu zaposlenost u Hrvatskoj i u Srbiji. U Sloveniji je nivo zaposlenosti nešto veći nego u Švedskoj i blizak je onima koji postoje u Danskoj, Finskoj i Norveškoj (oko 75%). Međutim, ako se ima u vidu da je u Sloveniji jedna od najvećih stopa zaposlenosti žena starosti 20–49 godina koje imaju dete mlađe od šest godina (84% u 2022. godini), opravdanim se čini pitanje o razlozima niže zaposlenosti žena koje nemaju decu, posebno uzimajući u obzir i jednu od većih rodnih razlika. Statistike ukazuju da u muškoj populaciji postoji pravilnost veće zaposlenosti onih koji su očevi u poređenju sa onima koji nemaju decu (Saraceno 2011; Sobot 2014), pa bi se možda deo odgovora moga tražiti i u tom smeru. Međutim, sa stanovišta položaja žena i rodne ravnopravnosti centralno mesto imaju razlozi niže zaposlenosti. Kada se u slučaju zaposlenosti majki male dece govori o uticaju politika prema porodici i usklađivanja rada i roditeljstva, u ovom drugom slučaju postavlja se pitanje položaja na tržištu rada i izvesnosti zapošljavanja žena starosti 20–49 godina koje nemaju decu. Za razliku od proseka za Evropsku uniju, kao i u odnosu na bivše socijalističke i zapadno evropske države, u postjugoslovenskim i skandinavskim državama, niža je zaposlenost žena starosti 20–49 godina koje nemaju decu, u odnosu na žene ove starosti koje imaju decu mlađu od šest godina.

5 ZAKLJUČAK

Uprkos tome što je tokom socijalističkog perioda u državama sa prostora bivše Jugoslavije postojala relativno visoka zaposlenost žena s punim radnim vremenom i bio opšte prihvaćen obrazac zaposlenosti oba roditelja, aktuelno stanje je takvo da se jedino Slovenija izdvaja visokom zaposlenošću žena starosti 20–49 godina. Suprotno od toga, Srbija pripada državama sa nižom zaposlenošću, ne samo u slučaju onih koje su majke dece mlađe od šest godina, već i žena koje nemaju decu. Zaposlenost s nepunim radnim vremenom nije značajnije prisutan model u postjugoslovenskim državama, mada je prisutniji u Sloveniji nego u Hrvatskoj i Srbiji. Slovenija je jedina država u Evropskoj uniji u kojoj je postignut visok nivo zaposlenosti žena starosti 20–49 godina, uz relativno nisku učestalost rada s nepunim radnim vremenom. Međutim, ono što nije pozitivno jeste jedna od većih rodnih razlika u pogledu nepunog radnog vremena, kada je reč o zaposlenim ženama koje nemaju decu. Niža zaposlenost žena bez dece u odnosu na žene koje imaju bar jedno dete mlađe od šest godina, nije karakteristična za većinu država Evropske unije, ali osim u postjugoslovenskim postoji i u većini skandinavskih država.

Politike prema porodici, kao nosioci mera u prilog ravnoteže između porodice i posla, mogu da podstaknu zaposlenost žena starosti 20–49 godina, ali one takođe produkuju i nove rodne razlike u kvalitetu zaposlenosti. Jedna od najočiglednijih jeste zaposlenost s nepunim radnim vremenom kao evidentno više „ženski" obrazac zaposlenosti. Taj model produkuje rodni jaz u zaradama i čini nepovoljnijim socioekonomski položaj žena, što se prenosi i na period nakon odlaska u penziju, pa iz perspektive

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rodne ravnopravnosti to nije poželjna opcija. Potrebno je revidirati politike u smeru uravnoteženije zastupljenosti svih modela usklađivanja rada i roditeljstva među majkama i očevima, uključujući i nepuno radno vreme. Moguće rešenje bi moglo da bude širenje fleksibilnijih radnih aranžmana, gde god je to moguće usled prirode posla, omogućavajući ravnopravnost u njihovom korišćenju. Međutim, za poboljšanje položaja žena u pogledu zaposlenosti, politike prema porodici jesu bitne, ali nisu jedine koje su potrebne. Ne može se prenebregnuti da ova analiza ukazuje i na to da bitan segment politika treba da bude i poboljšanje zaposlenosti žena starosti 20–49 godina koje nemaju decu.

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Value of people – human capital in Serbia through the prism of educational attainment of young population

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ABSTRACT

Human capital is an important determinant of individual and overall socio-economic development. In addition to economic parameters, human capital is significantly influenced by the level of formal and informal education attained. Previous research in this area has focused on formal education and the skills acquired concerning better positioning in the labor market. Accordingly, the main objective of the conducted research is to determine the state and level of educational attainment as prerequisite for the development of human capital in Serbia. This analysis is based on a set of indicators that represent the achieved educational attainment with special focus on the young population. It is conducted for the territory of Serbia, on municipal level, which enabled the categorization of municipalities according to educational attainment. Most municipalities in Serbia are characterized by insufficient educational attainment in the local context, or in general. For the purpose of the regional disparities identification, the coefficient of human capital utilization was created, in order to identify the mismatch between education attainment and labor market demand. The research shows that it is crucial to change the general perception of demographic problems and challenges, which will allow the development of applicable and more realistic public policies in the future.

KEYWORDS

human capital, education attainment, labor market, coefficient of human capital utilization, Serbia

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1 INTRODUCTION

Human capital represents a result of complementary and interconnected components of health, education, and training (Psacharopoulos 1996). Some authors pointed out that demographic components, such as migration, fertility, and aging, are essential for human capital building (Lutz and Sanderson 2001; Lutz and Goujon 2001; OECD 2001). Lutz and Sanderson (2001) point out that human capital formation has become another essential force that is affected by rapid population growth and aging, as they are directly related to changes in productivity and age structure.

Gary Becker in Human Capital (Becker 1964) defines human capital as various activities that increase business opportunities while developing the most critical resource – people. Human capital is often defined as the combination of education and health of a population. In economic literature, it is analyzed through the aspect of the achieved level of education (Lutz and Kc 2010), the aspect of investment and return investments (Dae-Bong 2009; Laskowska and Borsiak 2016), and the aspect of the labor force projections (Lutz et al. 2007; Lutz et al. 2018).

Considering these aspects, in 1998, the OECD expanded the definition of human capital: "knowledge, skills, competencies and other characteristics possessed by an individual" (OECD 1998). After that, the definition was upgraded, referring not only to economic but also to social well-being (OECD 2001). The OECD has continued with the further improvement of the definition, including skills and knowledge acquired through learning and experience and characteristics acquired at birth (Liu 2011). The most widely accepted OECD definition proposes that "Human capital represents the knowledge, skills, and competencies that an individual acquires during formal and informal education and which enable him to create personal, social and economic well-being" (OECD 1998: 10).

The achieved educational level of the population is an indicator of the available population potential recognized as the bearer of future development. Education is considered a crucial driver of socio-economic development and a source of diversity, which significantly affects the pace of growth and development (Pecelj 1963). Education could be reflected in better health quality and economic opportunities and as a prerequisite for prosperity, both for the individual and for society (Lutz and Goujon 2001). More precisely, people with better education have lower risk of unemployment and poverty and economies which are characterized by a high quality labor force are considered more competitive (Đekić 2015).

In today's scientific and professional literature, education is widely represented as a decisive factor of demographic development in the twenty-first century (Lutz et al. 2019). Indicators for education assessment are a mandatory part of the analysis of demographic and economic development, as well as the quality of human capital. Observing changes in educational attainment is an important part of monitoring demographic changes, considering the influence on the natural and migratory movement of the population (Đurđev 1999). A particular focus should be on harmonizing the education and the labor market demand, which is considered necessary for a balanced development.

Serbia is characterized by educational attainment that is not fundamentally

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satisfying, which is reflected through the mismatch between the offer of educational opportunities and the real demand of the labor market. In general, there is a partial approach to solving educational issues in Serbia, which indicates that education is not the primary focus, although there are some efforts to overcome these shortcomings. In Serbia, from the period of the first modern population census in 1948 until today, there are few studies related to educational structure analysis. An important segment presents the quality of the acquired education, as well, and therefore, the qualification of the individual on the labor market. The discrepancy between the offer of educational profiles and the needs of the economy becomes a problematic issue in Serbia since the majority of the labor force lacks the knowledge and competencies that would meet the needs of the labor market (Kokotović Kanazir, Panić and Drobnjaković 2024). During the last twenty years, in the context of human capital analysis, a highly educated labor force, in total and for the young population, has been an indispensable part of the various methods and models. According to the "Europe 2030" Strategy guidelines, networking between stakeholders and the economy on the one hand and Universities on the other was required, with the aim of increasing employment and productivity. This would contribute to the profiling of realistic labor market demands, and more narrowly, the development of tertiary education (Andrejević Panić, Ješić and Vukadinović 2014).

Strategy for the development of education and upbringing in the Republic of Serbia until 2030 (2021), indicates that the education system in Serbia has recently been more significantly focused on the development of competencies, however the quality of the evaluation system still does not prioritize the competencies' evaluation. The general conclusion could be that in Serbia, the assessment and evaluation of education is fragmented as well as the reform of the educational system, which means that primary and secondary education is seen separately from the reform in tertiary education. One of the key reasons for the low quality of the tertiary education in Serbia is recognized in the funding system, based on the number of enrolled students, which leads these institutions to strive toward quantity instead of quality (Đekić 2015). Also, the reduction of the 'brain drain' i.e. emigration of the young, educated population, requires special attention (Andrejević Panić, Ješić and Vukadinović 2014).

The scope of this research is related to educational attainment in Serbia, which is recognized as a crucial determinant of human capital. The main premise of the research is that the young population with tertiary education in a certain territory represents a potential for human capital building, and its degree of utilization is measured through further positioning on the labor market. In this regard, research is divided into two parts. The first one is related to the creation of educational profiles in Serbia, which implies the educational attainment assessment conducted at the municipality level for the period 1981–2022, and regional disparities identification. The second part is focused on the young population through educational attainment and economic structure. The utilization of the human capital in Serbia was observed through the Coefficient of the utilization, with determination of the mismatch between the job offers and job demand on the local labor market.

1.1 THEORETICAL BACKGROUND

Education as a determinant of human capital. Today, education, or more precisely, the strengthening of human capital, has become the main priority of national strategies (social and economic). This issue has been highly processed in international literature and, to a somewhat lesser extent, in domestic scientific and professional literature. Nevertheless, this issue is still considered insufficiently processed, which could be explained by the lack of adequate data or the problem of their comparability, as well as the differences in educational systems between countries. Quality education has various positive impacts, e.g., on economic development, better health, lower fertility and maternal mortality, and greater life expectancy (Bella and Belkachla 2010). Introducing education as a significant factor for future demographic development enables a more comprehensive view of possible future scenarios than the conventional demographic projections could present. The relationship between education and demographic development could be recognized as a 'two-way', where education affects various population patterns, however education will be influenced by them in a longer period (Bella and Belkachla 2010). In the Lisbon Strategy (European Parliament 2000), education is recognized as one of the most important drivers for achieving the defined goals. The European Union supports the fact that increased competitiveness and productivity are based on knowledge. Also, in the Europe 2020 strategy, formal education and training represent the basis of the strategy and stand out as the main resources of development and progress (out of seven initiatives, three are directly related to education). Also, the education level has become one of the important factors for determining the social position of an individual. First of all, it determines the quality of the labor force, and consequently, it affects the socio-economic development of a certain area (Avramović 2005). The future labor force will probably be smaller but better educated, which could contribute to economic growth (Lutz et al. 2019).

In the latest research, human capital is seen through the achieved educational level because it can be measured more easily and consistently, which provides comparability, as well. The OECD report defined three approaches for measuring capital: (i) costs of acquiring formal education (schooling and training costs); (ii) human competence testing; (iii) productivity based on indicators such as wages, job security, workplace status, etc.

The most common indicators used to monitor and measure human capital are: (i) educational structure of the workforce aged 25 and more; (ii) number of students per 1000 inhabitants; (iii) share of the population (25–64); (iv) working population (25–64); (v) the share of employees in the Research & Development sector of innovative technologies. The basic instrument for human capital measuring is the Human Capital Index, directed toward increasing the labor force productivity in the future based on human capital, however, with limited usage in less developed countries where a significant part of the labor force is not actively employed (World Bank 2020a). In 2020, the Utilization-Adjusted Human Capital Indices (UHCIs) were designed as a supplement to the HCI index toward a more accurate picture on the human capital utilization (World Bank 2020b).

The question, which is recognized as essential for human development research, refers to the importance and

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degree of involvement of the human capital theory in educational policy creation. Most policies refer to the knowledge and the importance of education for personal and collective prosperity. At the global level, the economic importance of education became one of the most important questions for OECD research. In their annual reports (Education at a Glance), they indicate trends in education, quality of education, investments, and returns on investments (OECD 2018). In this regard, it is important to take a look back to the 18th century when Adam Smith (Smith 1937) emphasized that the education of the "ordinary" population deserves public attention, rather than that of the category of higher-status population. In that way, with small investments, education, and the acquisition of basic literacy through reading, writing, and arithmetic, the state can facilitate its population to later find easier employment and positioning on the labor market. Due to technological development, education has become necessary in all areas of work. Differences in education are largely influenced by social and economic development (Galeković 2011).

Education represents an aspect of socialization and implies the acquisition of knowledge, skills, and competencies through the process of formal and informal schooling. Education has a direct impact on increasing the productivity of each individual and thus on his personal income (Vukašinović 2017). It can be concluded that the development of human capital implies a cost in the present and, at the same time, a benefit in the future. Accordingly, the current situation in the educational structure of a population represents the result of education during the past decades and, at the same time, determines what the human capital will be like in the future. Since education is acquired chiefly at a young age, changes in the human capital of the adult population have enormous momentum.

Recent data indicate that the labor force in Europe has a higher educational level and that this trend will probably continue. The labor force will be more educated, more qualified, and, therefore, more adaptable to changes in the labor market. As Lutz et al. (2019) point out, regardless of changes in the population age structure and the size of the labor force, it can be expected that the human capital of future workers will be higher than it is today.

Is human capital more than learning? As indicated in the previous text, education is one of the key components of human capital. However, it is not the only component. In addition to education, health is also an important part of human capital. Quality health care, as well as the good health of an individual, represent a significant contribution to the quality of human capital. All the elements that make up human capital are interconnected and overlapping, so an increase in the quality of one component usually affects the increase in the quality of another, which ultimately affects the quality of human capital quality and, indirectly, the prosperity of the entire economy (OECD 2007).

Education in the context of economic potential. The educational structure of the population is a good indicator for studying and determining the economic and social "strength" of a country. In this context, researchers talk about human capital as the element that most clearly and directly determines the economic potential of the state (Goujon 2003; Lutz, Sanderson and Sherbov 2004; Kc et al. 2010; Dondur, 2014). Economists

believe that investing in early education is a prerequisite for economic savings in later educational cycles and provides a basis for the overall development of an individual (Šuković 2013). The importance of education for individual and collective social growth and development is significant. However, some authors point out that it can be useless if the education of the population on a territory (municipality, region, or state) does not meet the needs of the labor market of the given area. In that case, even the most qualified workforce cannot be included in the labor market if it does not meet the requirements of the labor market, which results in an increase in the unemployment rate (Speringer 2012). The effects of education are significant in the long run, and the level of education achieved for each individual means better opportunities for higher standards, productivity, and easier integration into the society. A higher level of education achieved for the individual, as well as for society, creates the possibility of improving the standard of living, improving the state of health and quality of life, and facilitating easier employment.

Although the time duration of formal education is shortened, lifelong learning and improvement gain importance (Karaman Aksentijević 2012). In order to enable the prosperity of economic development, there are several segments that the educational system must fulfill: providing quantitative and qualitative knowledge that contributes to the ability for further work; following changes in the modern economy; organizing education that is aligned with rapid economic changes, primarily in the labor market. In the last few years, European countries have been striving to find ways to quickly adapt to new working conditions. The population is increasing in mobility in terms of daily circulation and retraining as a result of inadequate education.

In 2000, the European Union set the strategic goal that by 2010, Europe would become the most competitive and dominant world economy based on knowledge, capability of sustainable economic growth, and offering better jobs (Sundać and Krmpotić 2009). The Europe 2020 strategy confirmed this goal, according to which the European Union must ensure economic growth based on knowledge, which includes all social groups. The previously mentioned definition of human capital, according to the OECD, precisely includes all the mentioned components that influence its formation and development. In today's knowledge economy, one of the indicators of the quality of human capital is the acquired level of education (Sundać and Krmpotić 2009). The authors Barro and Sala Martin (1995) proved that the level of education of the labor force (measured by years of schooling) and the allocation of the public sector to education directly affect and determine the growth rate of income per capita.

2 METHODOLOGICAL FRAMEWORK

2.1 SPATIAL AND TEMPORAL DIMENSION

This research was performed at the municipality level to identify spatial disparities. To simplify the interpretation of the results, the authors summarized them and presented them at a regional level. Evaluation, mapping, and visualization of human capital and existing spatial disparities were conducted in the software package QGIS 3.16.5.

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Table 1 Indicators of educational structure of population in Census, 1948–2022

	Population Census								
	1948	1953	1961	1971	1981	1991	2002	2011	2022
Completed schooling	+	+	+	+	+	+	+	+	+
Number of completed grades	-	+	+	+	+	+	+	+	+
Literacy	+	+	+	+	+	+	+	+	+
Degree of school education	-	-	-	+	+	+	+	+	+

Source: Statistical Office of the Republic of Serbia 2023.

The temporal dimension of the conducted research implies long-term trend analysis, encompassing the 1981–2022 period. The educational change index was calculated, and comparative analysis was conducted for two census years of 1981 and 2022. This provides continuity in observing the trends and changes in educational attainment over a more extended period, detecting structural changes and the impact of various social processes on the genesis and development of the human capital in Serbia.

2.2 DATA AND DATA SOURCES

Recently, educational attainment data have become increasingly involved in demographic research. These features have been continually present in the Census of Population from 1948 to 2022 (Table 1). However, some features have undergone methodological changes and adjustments that have produced certain limitations regarding the analysis of educational attainment. In the context of the educational structure, there were no significant methodological changes. Issues related to the acquired level of education, or completed schooling, were included in the Census for the first time in 1971 and have been retained until today (2023) (Table 1).

The research is based on the implementation and cross-referencing of different data and various data sources for thorough analysis and deeper understanding of the researched phenomenon.[1] The used data sets encompassed:

- Data on educational attainment (Sources: Statistical Office of the Republic of Serbia 1981, 2023, the 2022 census database);
- Data regarding the unemployment issue (Sources: databases of the Statistical Office of the Republic of Serbia and the National Employment Service);
- Data on job offers (Sources: databases of the National Employment Service and Infostud).

2.3 METHODS

In order to gain a complete insight into the trends and the changes in the educational structure, absolute and relative indicators were used, while educational change index and coefficient of utilization of human capital were derived.

[1] The data used are not publicly available. They were provided by the Statistical Office of the Republic of Serbia, the National Employment Service and Infostud based upon specially created requests by the authors.

The trend analysis was conducted for different levels of education by calculating the *Index of change* as an indicator for the observation of inter-census changes. For an overview of structural changes according to educational attainment, an analysis of education by age (five-year age groups) was made for the 1981 and 2022 censuses at the municipality level in Serbia, and a descriptive analysis of the results was made. This served to establish educational profiles.

The research focus is on the young population. The age threshold is determined in accordance with the Eurostat official statistics, where the category of the young population, aged 25–34, is especially distinguished in the field of educational structure and economic activity (Eurostat 2024). A new approach in official European policy is that the attained level of education is analyzed according to the age of 25 and over, which is largely a consequence of the longer period of education (Bobić, Vesković Anđelković and Kokotović Kanazir 2016). According to the National Youth Strategy (2023), in Serbia, young people are considered to be persons aged 15 to 30. The category defined in this way can be considered inadequate (Bobić, Vesković Anđelković and Kokotović Kanazir 2016), and it was modified in this research. The analysis of the potential in the context of human capital is aimed at the young population that has left formal education, but has tertiary education and is competitive in the labor market.

An analysis of the basic characteristics of the young population (25–34) determined their scope, structure, and potential 'surplus' in relation to the local labor market demand. Determining the degree of utilization of human capital was carried out by applying the coefficient of utilization. It is derived from a specific employment rate, which includes three dimensions: age, education, and economic activity. The coefficient is created in order to assess the current human capital of a certain municipality and its position in the labor market. The coefficient represents the relation between the employed young population aged 25–34 with tertiary education and the total number of young population with tertiary education of the same age. It was calculated based on a special data processing for 2011 as the last available data set.

$$K_{ILjk} = \frac{P_{A25-34TER}}{P_{25-34TER}} \times 100$$

After that, toward a more granulated picture of the coefficient and deeper insight into caused spatial disparities, the additional calculation was performed for two groups of municipalities:

- municipalities with more than 1,000 young people with tertiary education who are working and
- municipalities with less than 100 young people with higher education who are employed.

Descriptive statistics were used to assess the degree of human capital utilization. In order to provide deeper insight into the human capital utilization, a mismatch assessment was carried out between job offers and job demand. It is expressed through the relation between the unemployed population (total and young) and total job offers among regions and municipalities. For this purpose, two data sources have been used. Unemployment data (total and age-structured) was derived from the National Employment Service for 2019. This year was observed as relevant for representing the labor market

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before the economic stagnation and the pandemic crisis. The data regarding job offers for 2019 were obtained from the National Employment Service, which is an official national statistic derived from the local level. As an additional source that is more visible and familiar to the young population, the Infostud database has been used.

3 RESULTS

The population's educational structure, as viewed through the census data, represents the most comprehensive analysis. The development of education is expressed through the state and tendencies in the educational structure of the population, which during the second half of the twentieth century resulted in positive effects in Serbia, captured in the 2011 and 2022 censuses. It served as an educational profile assessment.

3.1 EDUCATIONAL PROFILE OF THE POPULATION IN SERBIA

The analysis of the educational profile in Serbia includes the analysis of educational attainment (Table 2). The basic characteristics of the educational structure throughout the observed period (1981–2022) indicate two basic trends in the two final categories of education. Over the years, there has been a significant decrease in the share of the population without educational attainment, or with incomplete primary education, and the population with tertiary education has increased several times, especially in the last two decades. The share of the population without educational attainment decreased by 95%, and the share of the population with tertiary education increased four times (Table 2).

The Census 2022 recorded a significant improvement in the quality of education in all categories (Table 3). The share of the population without educational attainment was 1.1%, and the population with incomplete primary education was 5.2%. This pointed out that both categories make up 6.3% of the total, which is approximately 7% less than in the 2011 Census. Also, the share of the population with primary education is lower by almost 4%, while the share of the population with secondary education is 53.08%. There is an evident increase in the number of people who have completed high and higher education (22%), approximately +6% compared to the Census 2011.

Analysis conducted on the regional level showed that the South and East Serbia Region (SESR) is distinguished by

Table 2 Index of population change according to educational attainment, 1981–2022.

	Without educational attainment	Incomplete primary education	Primary education	Secondary education	High education	Higher education
1991/1981	73.7	80.0	114.0	136.0	159.0	179.0
2002/1991	69.0	76.0	114.0	147.0	134.0	155.0
2011/2002	43.8	62.0	82.0	112.0	112.0	159.0
2022/2011	34.9	44.2	79.2	100.9	98.7	143.0
2022/1981	5.4	14.2	58.5	174.0	197.2	406.0

Source: Authors' own calculations based on the data from the Statistical Office of the Republic of Serbia 2023.

Table 3 Educational attainment according to the 2022 Census

Area	Without educational attainment (%)	Incomplete primary education (%)	Primary education (%)	Secondary education (%)	High education (%)	Higher education (%)
Republic of Serbia	1.0	5.3	17.8	53.1	6.0	16.4
Belgrade Region	0.5	1.5	10.6	51.0	8.1	27.4
Vojvodina Region	1.2	4.9	18.8	55.0	5.4	14.3
South and East Serbia Region	1.4	7.7	21.4	51.6	5.5	12.0
Šumadija and West Serbia Region	1.0	7.1	20.6	54.3	5.1	11.6

Source: Statistical Office of the Republic of Serbia 2023.

a slightly higher share of the population with incomplete primary education, while on the other hand, the Belgrade Region (BR) and Vojvodina Region (VR) have a significantly higher share of high or higher education (Table 3). The BR recorded the highest values in all categories of educational attainment in Serbia (Table 3). The most significant differences were recorded in two categories: a decrease in the population without educational attainment and incomplete primary education (6.4%) and an increase in the highly educated population (35.5%). The VR is also characterized by a smaller share of the population with incomplete education (4.9%) and a relatively high share of the population with tertiary education (19.7%). The values for all education categories are similar in the SESR and the Šumadija and West Serbia Region (ŠWSR); however, they are slightly less favorable.

Without educational attainment – In the overall educational structure, this category represents the extreme one. In Serbia, from the first post-war census in 1948 until the last one in 2022, this category has been decreasing. The educational change index for this category in the period 1981–2022 is 21, which indicates a reduction of this category of 94.6% (from 874,216 to 57,667 people) (Table 2). This is predominantly recorded in the traditionally underdeveloped municipalities in the SESR (Đorđević and Panić 2007; Drobnjaković, Panić and Đorđević 2015). In 1981, 76 municipalities recorded values above the average for this education category, most pronounced in Tutin (30.2%), Kuršumlija (30.7%), Merošina (30.9%), Crna Trava (32.9%), Bojnik (36.5%). In 2022, all municipalities in Serbia recorded a decrease. The highest share of this category is in the municipalities Kostolac (5.5%), Bojnik (3.8%), Nova Crnja (3.3%), and Žabalj (2.7%). In 71 municipalities, the share is below 1%, while the lowest values are recorded in the BR (Novi Beograd, Vračar, Stari Grad).

Incomplete primary school – In the period 1981–2022, this category decreased by 85% to 299,739 persons (Table 2). This is most pronounced in all municipalities in the BR (up to 90%), while the highest educational change

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index was recorded in the municipalities of Kladovo (65%) and Kostolac (63%). In more than 50 municipalities in Serbia, the share of the population with incomplete primary is above 10%, e.g., Osečina (20.2%), Žagubica (20.2%), Ražanj (19.2%), which are characterized by unfavorable age structure and dominance of the elderly.

Primary education – For the category of population with the completed primary school, the educational change index in the period 1981–2022 is 66.6, which means that the decrease in the share of this category is approximately 3% on average (Table 2). According to the data for 1981, almost 50 municipalities recorded values above the average, mostly in the Vojvodina region: Opovo (36%), Kovačica (40.9%), and Bački Petrovac (42.7%). The decrease in the share of the population with primary education in 2022 occurred in most municipalities in Serbia. The highest share values were recorded in the municipalities of Malo Crniće (46%), Žabari (42.2%), and Tutin (34.2%). In most Belgrade municipalities, the share decreased below 10%. The educational change index showed the largest decrease in the municipalities of Loznica and Mionica (decrease of over 90%), while the smallest decrease was recorded in the municipalities of Lučani and Ada (2%).

Secondary education – This is the most common category of educational attainment in Serbia. The educational change index 1981–2022 is 170; more precisely, the number of persons with secondary education in 1981 was 1,771,028 (24.6%), while in 2022 was 3,020,958 (53.08%). The municipalities in the BR recorded the lowest values of the educational change index (70). More than 150 municipalities recorded an increase in this category, e.g., Novi Pazar and Tutin. In 1981, 72 municipalities had an above-average share of the population with secondary education; the largest was recorded in BR (Rakovica 44.9%, Novi Beograd 44.1%), Novi Sad (42.3%), Niš (36.4%), and the smallest in municipalities in the SESR. In 2022, more than half of the municipalities in Serbia (70) recorded a share of this category above the national average (53.1%). The greatest regional heterogeneity is detected in the BR, with municipalities with the highest values (Barajevo 64.6%, Grocka 62.9%) and the municipalities with the lowest values (Vračar 32.2%, Stari Grad 33.5%).

Higher and high education (tertiary education) – The most important level of education that determines the human capital quality is tertiary education, that is, higher and high education. In the period 1981–2022, a significant increase in this category was recorded. It is most pronounced in the municipalities Barajevo and Sombor. The increase is continuously present. In 1981, the share of the population with tertiary education was 5.7%, and in 2022, it was 22.4%, which is approximately four times more. The spatial distribution of this category showed that the BR stands out in all censuses, especially the central city municipalities (Figures 1 and 2). The lowest values, below 1%, were recorded in some municipalities of the SESR. In more than 30 municipalities, the values were below 2%. In 2022, there was 22.4% of people with tertiary education in Serbia, predominantly in the BR (35.5%), then in VR (19.8%), SESR (17.6%), and ŠWSR (16.7%). The regional distribution is partly caused by the strength of regional and university centers, such as Belgrade, Novi Sad, Niš, Kragujevac, Novi Pazar, etc. (Figure 2).

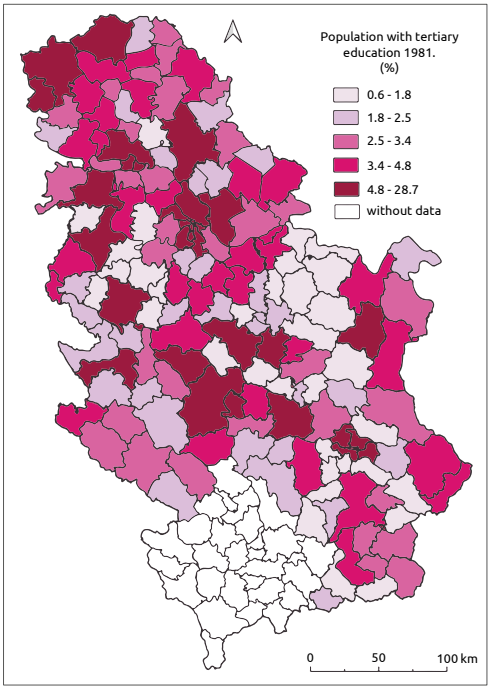

Figure 1 Population with tertiary education, 1981.
Source: Statistical Office of the Republic of Serbia 1981.

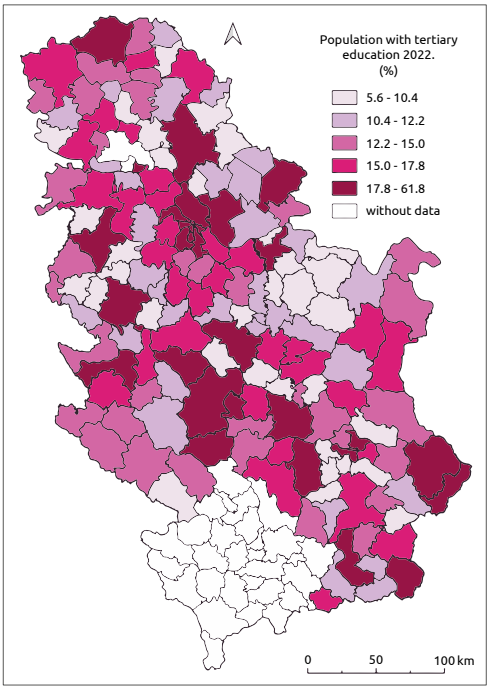

Figure 2 Population with tertiary education 2022.
Source: Statistical Office of the Republic of Serbia 2023.

3.2 YOUNG POPULATION IN THE CONTEXT OF HUMAN CAPITAL DEVELOPMENT

In the demographic discourse, the emphasis is shifted from the quantity to the quality of a population. In countries that are characterized by emigration, such as Serbia, it is impossible to stop the negative processes of depopulation, aging, and emigration (Panić et al. 2022). Therefore, the focus should be shifted to the qualitative characteristics of the population (Lutz and Gailey 2020). Human capital strengthening is seen as one of the driving mechanisms for further sustainable demographic development, especially through the prism of investment in education (Nikitović 2018).

Modern migration processes have a great influence on the formation of the "capacity" of municipalities in terms of the quality of education, and thus, it is a prerequisite for determining the level of human capital in the observed area. More precisely, a young, highly educated population is a key element of the human capital. Therefore, areas with high shares of young, educated population have significant potential for future socio-economic growth and development. Certain experts in the field of demography (Lutz and Gailey 2020) point out that the most pressing problem for Serbia is the large emigration of young, highly educated persons. The migration of young people to large cities, which are university centers as

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well, affects the emptying of smaller and less developed municipalities. This is identified through the results of the 2022 Census. The most pronounced tendency of young people is to stay in the place of education and try to position themselves in the labor market. This results in a small or sometimes negligible return migration (Đukić Dejanović et al. 2018). Recent research indicates that urban centers no longer represent points of attraction for the young population, but are just a step toward further education or employment abroad (Šantić and Antić 2019).

According to Eurostat (Eurostat 2024), the share of young people with higher education in 2022 was 40%, which is the path toward achieving the European Union target of 45%. Serbia is among the lowest-ranked countries in Europe according to the share of the young with tertiary education (32.6%). Also, compared with the countries in its surroundings, Serbia is among the lowest-ranked countries. According to the data of the 2022 Census, the share of young people with tertiary education increased by 10% in the last ten years.

Young population without educational attainment – The average value for this category in Serbia is 0.9%. In 53 municipalities, the values above average were registered. The highest was registered in the municipalities of Kostolac (6.9%), Nova Crnja (4.7%), and Aleksinac (4%), while the lowest was recorded in the central municipalities of the BR (1%), Topola (0.1%), and Čajetina (0.2%).

Young population with incomplete primary education – The average value in this category is 1.8%; above-average values were recorded in 55 municipalities. The highest values of this category were registered in the municipalities of Vlasotince (11.6%), Kostolac (11.5%), Nova Crnja (8.2%), and Kanjiža (7.7%). In comparison, municipalities in the BR (0.1%), Čačak (0.2%), and Gornji Milanovac (0.2%) recorded the lowest values.

Young population with primary education – The share of the young population with primary education is 9.8% in Serbia. Seventy-two municipalities were recorded above the national average. The highest share was registered in the municipalities of Malo Crniće (26%), Žabari (22.4%), and Osečina (21.5%). Despite the fact that Tutin has been recognized as the municipality with the highest percentage of the young population, the educational attainment is unfavorable, with almost 20% of the young population having primary education. The lowest values (below 1%) are recorded in the inner-city municipalities in the cities of Belgrade and Niš.

Young population with secondary education – The share of the young population with secondary education is the highest of all educational categories (58.4%) in Serbia. According to the 2022 Census, 92 municipalities recorded values above average. The highest share of young people with secondary education is in Čajetina (76.1%), Gadžin Han (71.7%), and Majdanpek (70.2%). The lowest values were recorded in the municipalities in Belgrade (30%), Novi Sad (44.9%), and Niš (50.7%).

Young population with tertiary education – Regional disparities of this category in Serbia are highly pronounced. The share of the young population with tertiary education ranges from 15.8% to 71.5%. In 37 municipalities, values are above the national average. The largest are recorded in the municipalities of the BR and city of Niš (Medijana, Pantelej) (Figure 3).

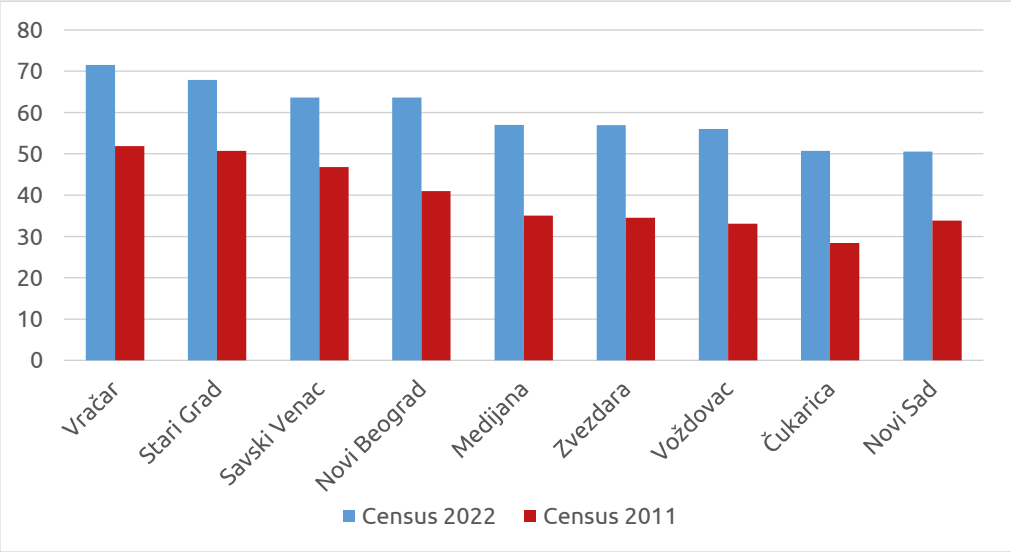

Figure 3 Municipalities with the highest share of young (25–34) with tertiary education
Sources: Data based upon specially created requests by the authors.

3.3 COEFFICIENT OF UTILIZATION OF THE HUMAN CAPITAL (CUHC)

Based on the established characteristics of the young population (25–34) highly educated in Serbia and their spatial disparities, the next challenge was to determine the degree of utilization of human capital. Starting from the previously stated premise that the young population with a tertiary level of education in a certain territory represents a potential, its degree of utilization is measured through further positioning on the labor market. The obtained results were determined by the scope and size of the contingent of the young population, which required an additional classification of municipalities according to the population size, with the aim of accurately assessing utilization.

The average value of the CUHC for the Republic of Serbia is 69.9%. The lowest value is registered in Sjenica (53.3%), where out of 548 people, 292 are actively employed; in Doljevac (52.2%) out of 163, only 90 are actively employed; in Priboj (58.2%) out of 641 persons, 373 are actively employed; in Aleksinac (58.8%) out of 893 persons, 525 are actively employed. The BR is characterized by high values of the coefficient (Novi Beograd – 76.5%, where of 17,281 young people, 13,220 are actively employed; Zemun – 75.3%; Zvezdara – 75%). Also, high values are recorded in Subotica (76.1%) and Novi Sad (74%), but also in less populated municipalities such as Čoka (79.8%), Senta (78.5%), and Bečej (78%).

The CUCH was calculated for two different municipality groups. The population size showed that there are 41 municipalities with more than 1,000 employed young people with higher education and 20 municipalities with less than 100 employed young people with higher education. In the group of municipalities with more than 1,000 employed and highly educated youth, the average

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Table 4 Municipalities with a high coefficient of utilization of the human capital, 2022.

Municipality	Young population with tertiary education (%)	CUCH	Ranking according to the CUCH
Vračar (Belgrade)	61.8	72.8	50
Medijana (Niš)	43.4	67.7	112
Novi Sad	50.5	74.3	29
Užice	41.2	69.6	98
Kragujevac	38.2	70.4	92

Source: Authors' own calculations based on the data from the Statistical Office of the Republic of Serbia 2023.

value of the coefficient is 70.6%, of which the highest is in the municipality of Novi Beograd (76.5%) and the lowest in the city of Vranje (60.2%). The average value of the coefficient in the group of municipalities with less than 100 young persons employed and highly educated is 68.1%, of which the highest is in the municipality of Osečina (75%) and the lowest in Doljevac (55%).

3.4 UNEMPLOYMENT AND LABOR MARKET

Areas with a larger participation of young and qualified labor are a precondition for achieving economic prosperity (OECD 2020). A skilled labor force usually determines the economic potential of a country (Bartlett and Aranderenko 2012; Lutz, Sanderson, and Scherbov 2004). Areas with low labor utilization are characterized by working-age population emigration, which is reflected through the lack of labor force, or the mismatch of the education system with the development of the labor market (Bartlett and Aranderenko 2012; Bartlett, Johansen, and Gatelli 2012; Pantelić, Stojanović, and Stojsavljević 2014).

In Serbia, the average employment rate of young people aged 25–34 is 69% according to the data from the national databases obtained from specially created requests by the authors, which is significantly lower than in Europe (85%) (Eurostat, 2024). The employment of young people in the world differs from country to country. However, certain studies have shown that the employment of young people who have gained some work experience during their studies is higher (OECD 2020). Although unemployment among young people with tertiary education in Serbia is lower compared to other education levels, however, it is four times higher than the European average (Eurostat 2024).

One of the factors that determines the utilization of the labor force is the compliance of the job offer with the demand on the labor market, expressed through the structure and qualifications of the population (Kokotović Kanazir, Panić and Drobnjaković, 2024). The results of analyses underpins the significant uneven spatial distribution in youth unemployment, long-term unemployment, highly educated unemployed labor force, etc. The labor market is not in accordance with the changes in the economic structure and educational capacities, which cause a mismatch between a labor force and labor market demand (Drobnjaković et al., 2022). In Serbia, it is noticeable that municipalities with the largest labor force potential have the most job offers (Table 5) and vice versa.

The municipalities of Zemun, Novi Beograd, and Novi Sad stand out with the most extensive job offer, as well as other larger centers (Prokuplje, Kruševac, Kraljevo, Čačak, Kragujevac, Zrenjanin, Subotica) (National Employment Service 2019a, 2019b). However, it is necessary to catch job offers at a local level. By comparing the number of employees by municipality with the number of the jobs offered, a more complete picture is obtained (Kokotović Kanazir, Panić and Drobnjaković, 2024). In this regard, two sources of data were used.

A mismatch between job offers and job demand is significant in Serbia, with more than five unemployed per one offered job (Table 5). However, an imbalanced distribution of job offers among regions is noticeable. The highest mismatch is registered in the SESR (11.1) and ŠWSR (10), while in the BR, the mismatch is indistinguishable. The relationship between the job offers and demand in VR is at the national level. These facts imply a high polarization of job offers, where jobs are concentrated in the most developed municipalities and towns of the BR and VR (Table 5). In 2019, according to the data by the National Employment Service, the municipalities of Stari Grad, Novi Beograd, Zemun, Senta, and Obrenovac had a balanced supply and demand for work, while in 34 municipalities 2–5 unemployed per one offered job were registered, which could be considered moderately favorable. The most pronounced difference between the job offers and the demand was registered in the municipalities of Bela Crkva (309), Medveđa (268), Kovačica (124), and Bojnik (123). On the other hand, more than 20 unemployed per one offered job were recorded in 35 municipalities (Kokotović Kanazir, Panić and Drobnjaković, 2024).

A broad Infostud's base for job offers implies a less pronounced mismatch at the national level (2.9) as well as among regions (Table 5). The most pronounced mismatch is registered in the ŠWSR (4.2) despite the high job offers. The highest discrepancies were identified in the municipalities of this Region (Novi Pazar – 25.8; Tutin – 13.4) as well as in the SESR (Leskovac – 12.8; Aleksinac – 9). The most favorable conditions in the labor market characterized the VR, where the most job offers have been registered, and in this regard, low to undistinguished mismatch (Table 5).

Table 5 Mismatch between the job offers and the demand on the labor market, 2020.

		Republic of Serbia	Belgrade Region	SES Region	ŠWS Region	Vojvodina Region
Unemployed population (UP)		476467	66301	128935	179276	101955
Job offer	**NES**	90263	40814	11635	17987	19827
	Infostud	166489	33450	34245	43034	55760
UP mismatch	**NES**	5.3	1.6	11.1	10.0	5.1
	Infostud	2.9	2.0	3.8	4.2	1.8
Young unemployed (YU)		105315	15220	28385	39987	21723
YU mismatch	**NES**	1.2	0.4	2.4	2.2	1.1
	Infostud	0.6	0.5	0.8	0.9	0.4

Sources: Data based upon specially created requests by the authors.

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A positive to balanced relationship between the job offers on the Infostud and the demand in the labor market has been identified in municipalities that are small in population size, or have underdeveloped local labor markets.

In order to determine the position of the young population in the labor market, the relation of the young unemployed per job offer has been observed. According to the NES data on job offers, significant disparities among regions are noticed (Table 5). The demand for unemployed youth is equal to job offers. The most favorable relation is identified in the BR, where four young unemployed persons could choose between ten offered jobs, or each young unemployed could apply to 2–3 offered jobs. Balanced labor market and job offers in favor of the young unemployed population characterized the VR. Municipalities in these regions (Savski Venac, Obrenovac, Senta, Stara Pazova, Zrenjanin, etc.) registered two or three young unemployed per ten offered jobs. It induces youth in these two regions to have more opportunities to get a job and be included in the work process. On the other hand, youth of the SESR (2.2) and ŠWSR (2.4) are limited in gaining jobs. In this regard, the most endangered are small in population size and underdeveloped municipalities with more than ten young unemployed persons per one offered job (Medveđa – 58.8; Bojnik – 23.2; Tutin – 14.5; Osečina – 14.4; Trgovište – 13.4; etc.). Infostud's data on job offers provide a less pronounced mismatch at the national level and among regions (Table 5). However, the distribution of the job offers is still in favor of the BR and VR. The labor market is unfavorable in the other two regions, where the mismatch is higher (0.8 or 0.9).

4 DISCUSSION

Population viewed through the human capital prism is one of the most applicable approaches today, and it intrigues all subjects in the human society. For this reason, it is understandable why the issue of human capital represents the central theme of almost all strategic development documents in Europe (European Union, 2010). Its identification and assessment are highlighted as a primary task, which is largely guided by political and economic norms. More precisely, it implies its quantification and mapping of spatial disparities, i.e., measurement, which is difficult due to the complexity of the problem and the diversity of different approaches. Educational attainment directly affects the formation of a contingent of future labor force qualified to perform better-paid jobs; more precisely, a greater number of years spent in school offers the possibility of adequate employment and thus enables the individual to realize their full potential (Keeley, 2007).

A positive trend in education is characteristic of most European countries, and the younger cohorts are more educated than the older population. On the age pyramid, the number of highly educated people is increasing, and the older, less educated population is dying – the so-called process of demographic metabolism (UNDP 2020). However, besides primary education, which is mandatory in Serbia, an increase in the population with secondary and tertiary education is a significant improvement in the educational structure (Šobot 2015). The new tendencies are heading toward the reform of the education system, which should rename secondary education as mandatory as well (Nikitović 2015).

The conducted analysis of the human capital in Serbia, viewed through trends in the educational structure, indicated heterogeneity and spatial disparities in terms of the level of educational attainment in terms of overall and young population (25–34) (Kokotović Kanazir, Panić and Drobnjaković, 2024). There has been an increase in educational attainment, especially in the period 2011–2022. From a regional point of view, the BR and the VR have a more favorable educational structure than other regions in Serbia. Within the framework of tertiary education, municipalities in the Belgrade Region (Stari Grad, Savski Venac, Vračar) and municipalities in the immediate vicinity of large cities (Petrovaradin) stand out.

Municipalities with a large proportion of the elderly were characterized by a lower level of education, especially sparsely populated municipalities in the SESR (Crna Trava, Gadžin Han, Bojnik, etc.). In general, Serbia is one of the ten countries in the world with the most intensive population decline (Lutz and Gailey 2020; UNDP 2020), negative reproductive norms (total fertility rate 1.4 equal to the European countries level) (Statistical Office of the Republic of Serbia, 2021), negative trends of natural growth and it is one of the oldest countries in the world (Stojilković Gnjatović and Devedžić 2016). The aging and other aforementioned processes have caused continuous shrinkage of the labor force and have an unfavorable effect on the education of the population (Drobnjaković et al. 2022). These processes particularly tackle the SESR, which is characterized by low educational attainment as a direct consequence of the distinct aging process (Jokić, Dželebdžićand and Petovar 2015) and high mortality. Therefore, municipalities that still record relatively high shares of the population without educational attainment are municipalities with a high share of elderly (65+). The only exception in this Region is the city of Niš, where the municipalities have a high level of educational attainment. On the other hand, in the ŠWSR, the city of Užice, as a regional center, stands out, as well as its immediate surroundings (Čajetina). In this Region, municipalities with a good demographic base, in terms of a high share of young population, such as the municipalities Novi Pazar, Tutin, and Sjenica, do not stand out as municipalities with good educational characteristics. On the contrary, in these municipalities, there is a high share of the population that has primary education.

The results obtained in the cohort of the young population (25–34) indicate slightly more favorable trends in relation to the total observed population. From a regional point of view, the BR and VR recorded more favorable values, although certain municipalities in the VR stand out with slightly less favorable values, especially when it comes to young people with tertiary education (Čoka, Bač, Novi Bečej). It implies that demographically, small municipalities and underdeveloped areas are characterized by a less developed labor market. An unfavorable demographic base and deteriorated age structure do not offer a significant contingent of youth, while in underdeveloped areas, there is a strong emigration of educated young people (Drobnjaković, Panić and Kokotović Kanazir 2023; Šantić and Antić 2019). Also, many employers in Serbia, despite the high unemployment, have difficulties in finding adequate labor force (Đekić 2015). According to the 2022 Census, all municipalities recorded a significant decrease in the young population

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without or with incomplete primary education, which indicated a decrease in those who leave school early, or are not involved in formal education. Further analysis in the context of human capital utilization was conducted to determine the young population that is employed. As Dauda (2021) pointed out, it is not enough to observe the performance of a country only according to the human capital scope or structure, its true value is reflected through its actual utilization, seen in the "efficient" use of skilled labor force. The authors tried to find the answer to this question through the building of the coefficient of utilization of human capital.

The results of the obtained coefficient confirmed that municipalities with high shares of young population with tertiary education have a relatively high level of utilization of human capital, more than 70% (Novi Beograd (BR), Novi Sad (VR), Kragujevac (ŠWSR). However, the mismatch between supply and demand can be noted in the larger city centers (Kruševac, Kragujevac, Kraljevo, Leskovac, Čačak) where surpluses of young people who are not employed are approximately 40%, which indicates that their human capital is not sufficiently utilized.

Further analysis relies on examining the relationship between education and the labor market demand on the local level, which became a question of great importance. The findings regarding unemployment indicate a significant mismatch between job offers and job demand in Serbia, with more than five unemployed per one offered jobs. The mismatch between the offer of education and the needs of the labor market has created high rates of unemployment – a surplus of labor and thus significantly determined its underutilization with high regional misbalance (Šuković 2013; Drobnjaković, Panić and Kokotović Kanazir 2023). The most favorable relation is identified in the Belgrade Region, where each young unemployed person could apply for 2–3 jobs offered. Balanced relations are detected in the Vojvodina Region and in those municipalities that are functionally and infrastructurally well connected to large cities (Drobnjaković, Panić and Kokotović Kanazir 2023). However, the young population in the municipalities of the SESR and ŠWSR, which are characterized by weak labor force potential (Drobnjaković, Panić, Kokotović Kanazir and Javor 2022), are limited in gaining jobs. Most endangered are municipalities that are small in terms of population size and underdeveloped, with more than ten young unemployed persons per one offered jobs (Medveđa – 58.8; Tutin – 14.5; Osečina – 14.4; etc.).

5 CONCLUSION

The number of indicators used to analyze the educational structure and examine the level of human capital is increasing, and some of the most commonly used are the distribution of the population according to a certain level of education, level of education according to age, and average duration of schooling. When examining the potential of human capital, the level of education according to age is an extremely important indicator; specifically, in many studies, the number or share of highly educated people aged 25–34 is used. In this context, the creation of the coefficient of utilization of human capital arose from the need to approximately determine the degree of utilization of the established potential in human capital in Serbia. The problems of depopulation in Serbia are most often related to the labor market, family

planning, and education system. The state should simultaneously direct its policy towards slowing down negative demographic trends in the direction of investing in "quantity," i.e., maintaining the total number of inhabitants, as well as the "quality" of the population, i.e., human capital. Measures that could mitigate negative trends relate to the areas of education, health, and population policy (UNDP 2020).

Education is an important segment of progress in human development. Strengthening education through investments, raising the quality of education, and creating adequate educational profiles, which would be harmonized with the needs of the labor market, would significantly contribute to the strengthening of human capital in the territory of the Republic of Serbia. If there are no significant changes in the number of births in Serbia, the trend of reducing the volume of the labor contingent will continue, which is a consequence of negative demographic trends in the past. Therefore, the focus of the policy that deals with demographic "recovery" or development should also be directed toward the balanced development of human capital. Development policies emphasize not only the population but also the human capital that lives in the given area (Speringer 2012). More and more often, it is pointed out that countries like Serbia, which are witnessing a continuous and intensive decrease in the number of inhabitants, can mitigate the negative effects through education and training of the existing population, which will ensure economic growth and development, which would in turn bring a better quality of life, better health care and a better standard of living.

Most often, human capital is measured through the level of education achieved; however, this approach brings reduced results and incomplete insight into the context of the level of human development achieved. To broaden the understanding of human development, the approach to quantifying human capital should include other dimensions, such as demographic, social, health, economic, technological (innovation), etc. Human capital cannot be viewed only through educational attainment because it is obvious that many countries with a similar degree of educational attainment have different levels of social and economic development. Therefore, the breadth of human capital research is crucial in order to determine its real potential and development perspective.

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Data Availability Statement

Data are available from the authors upon request.

Coauthor contributions

Vlasta Kokotović Kanazir: Conceptualization, Investigation, Methodology, Data Curation, Formal Analysis, Writing – Original Draft). **Milena Panić**: Conceptualization,Visualization, Writing – Review & Editing, Validation. **Marija Drobnjaković**: Conceptualization, Data Curation, Formal Analysis, Writing – Review & Editing, Validation.

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Ljudski kapital u Srbiji sagledan kroz prizmu dostignutog nivoa obrazovanja mladih

PROŠIRENI SAŽETAK

Dostignuti nivo obrazovanja stanovništva je pokazatelj ljudskog kapitala prepoznatog kao nosioca i jednog od presudnih pokretača društveno-ekonomskog razvoja, kao i izvora raznolikosti, što značajno utiče na tempo rasta. Srbiju karakteriše nivo obrazovanja opterećen brojnim problemima i nedostacima, koji se ogledaju kroz neusklađenost između obrazovanja i potražnje na tržištu rada. Većini radne snage nedostaju kompetencije koje bi bile u skladu sa tržištem rada. Ovo istraživanje je sprovedeno na nivou opština za period 1981-2022. Utvrđeni su obrazovni profili i urađena je analiza trenda za obrazovna postignuća izračunavanjem indeksa promene obrazovnih karakteristika. Utvrđivanje stepena iskorišćenosti ljudskog kapitala sprovedeno je primenom koeficijenta iskorišćenosti za mladu populaciju od 25-34 godine.

Tokom godina došlo je do značajnog smanjenja udela stanovništva bez obrazovanja ili sa nepotpunim osnovnim obrazovanjem, ali stanovništvo sa visokim obrazovanjem beleži višestruko povećanje, posebno u poslednje dve decenije. Popis stanovništva 2022. godine pokazao je značajno poboljšanje kvaliteta obrazovanja. Udeo stanovništva sa srednjim obrazovanjem iznosio je 53,08%, a evidentan je porast stanovništva sa visokim obrazovanjem (22%). Mlada visokoobrazovana populacija prepoznata je kao ključni element ljudskog kapitala. Udeo mladog stanovništva sa visokim obrazovanjem kreće se od 15,8% -71,5%, koje je pretežno locirano u Beogradskom regionu i Regionu Vojvodine. Mlada populacija sa tercijarnim stepenom obrazovanja na određenoj teritoriji predstavlja svojevrstan potencijal, a stepen njegove iskorišćenosti je rezultat pozicioniranja na tržištu rada. Prosečna vrednost koeficijenta iskorišćenja za Republiku Srbiju iznosi 69,9%. Najniže vrednosti registrovane su u Sjenici (53,3%), Doljevcu (52,2%), Priboju (58,2%), itd, dok Beogradski region karakterišu visoke vrednosti koeficijenta. Podaci o nezaposlenosti ukazuju na značajnu neusklađenost ponude poslova i potražnje u Srbiji, sa više od pet nezaposlenih na jedan ponuđeni posao. Najpovoljniji odnos je identifikovan u Beogradskom regionu, gde je svaki mladi nezaposleni mogao da konkuriše na 2-3 ponuđena posla. Uravnoteženi odnosi se detektuju i u Regionu Vojvodine, dok je mlada populacija u Regionu Južne i Istočne Srbije i Regionu Šumadije i Zapadne Srbije ograničena u zapošljavanju. Najugroženije su demografski male i nerazvijene opštine sa više od deset mladih nezaposlenih lica po jednom ponuđenom radnom mestu (Medveđa – 58,8; Tutin – 14,5; Osečina – 14,4; itd.).

U cilju temeljnog sagledavanja ljudskog razvoja, pristup kvantifikaciji ljudskog kapitala treba da obuhvati i druge dimenzije, kao što su demografska, društvena, zdravstvena, ekonomska, tehnološka (inovacija) itd. Stoga je širina istraživanja ljudskog kapitala ključna, kako bi se odredili njen stvarni potencijal i perspektiva razvoja.

KLJUČNE REČI

ljudski kapital, obrazovanje, tržište rada, koeficijent iskorišćenosti ljudskog kapitala, Srbija

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Ethnic Croats in Serbia and ethnic Serbs in Croatia: demographic similarities and differences – selected aspects

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ABSTRACT

The subject of research in this paper are the populations of declared ethnic Croats in the Republic of Serbia and ethnic Serbs in the Republic of Croatia in the population censuses between 2001/2002.–2021/2022. The purpose of the research is to determine the reached level of similarities and differences in the selected dynamic and structural demographic indicators between these two minority communities, as well as in their relation to the total and majority population of the Republic of Croatia and the Republic of Serbia, with the aim of assessing their demographic sustainability in the future. The research is based on the official results of general population censuses held in Croatia in 2001, 2011 and 2021, and in Serbia in 2002, 2011 and 2022. The descriptive and comparative method will be applied in the research, and the results will be presented in aggregated analytical tables and graphs. The mentioned subject will be observed in the general dynamic demographic framework, which is extremely depopulated for both these countries and both minority populations, i.e. it is extremely unfavourable. Thus, without going into the issue of the obvious changes in the census methodologies, in the period 2001–2021 the number of the total population of Croatia was reduced by 12.7%, and the number of the total population of Serbia in the period 2002–2022 was reduced by 11.3 %. At the same time, the number of declared Croats in Serbia decreased by 44.6%, while the number of declared Serbs in Croatia decreased by 38.6%. Consequently, the relative share of Croats in Serbia decreased from 0.9% to 0.6% (by 0.3 percentage points), and of Serbs in Croatia from 4.5% to 3.2% (by 1.3 percentage points). In addition to the negative demographic dynamics of both populations (both minority and total), the observed period is also characterized by unfavourable processes in the formation of partial demographic structures, especially biological (age and gender),

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which, thanks to the accelerated aging of the population, is increasingly becoming a limiting factor in their long-term demographic sustainability.

KEYWORDS

ethnic Croats in Serbia, ethnic Serbs in Croatia, demographic changes, educational structure, demographic sustainability

Hrvati u Srbiji i Srbi u Hrvatskoj: demografske sličnosti i razlike – odabrani aspekti

SAŽETAK

Predmet istraživanja u ovom radu su populacije koje su se u popisima stanovništva održanih u razdoblju 2001./2002.–2021./2022. nacionalno izjasnili kao Hrvati u Srbiji i Srbi u Hrvatskoj. Svrha istraživanja je utvrditi sličnosti i razlike u odabranim dinamičkim i strukturnim demografskim pokazateljima između ove dvije manjinske zajednice, kao i u njihovom odnosu na ukupno i većinsko stanovništvo Srbije i Hrvatske, s ciljem procjene njihove demografske održivosti u budućnosti. U istraživanju je primijenjena deskriptivna i komparativna metoda, a brojčani rezultati su prikazani u agregiranim analitičkim tablicama. Navedena tema promatrana je u općem dinamičkom demografskom okviru koji je za obje zemlje i za obje manjinske populacije izrazito depopulacijski. Uz negativnu demografsku dinamiku obje populacije u promatranom razdoblju karakteriziraju i nepovoljni procesi u formiranju parcijalnih demografskih struktura, napose biološkoj (dob i spol), koja zahvaljujući ubrzanom starenju stanovništva, sve više postaje ograničavajućim čimbenikom njihove dugoročne demografske održivosti.

KLJUČNE REČI

Hrvati u Srbiji, Srbi u Hrvatskoj, demografske promjene, obrazovna struktura, demografska održivost

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1 UVOD

S obzirom na duge i duboke povijesne veze te kompleksne aktualne društvene i političke odnose između Hrvatske i Srbije, odnosno između Hrvata u Srbiji u odnosu na srbijansko i Srba u Hrvatskoj u odnosu na hrvatsko društvo i politike, znanstveno je relevantno razmotriti i usporediti odabrana demografska obilježja hrvatskog manjinskog stanovništva u Srbiji i srpskog manjinskog stanovništva u Hrvatskoj kako bi se utvrdile, s jedne strane, međusobne demografske sličnosti i razlike te, s druge strane, ukazalo na potencijale njihove demografske održivosti kao manjinskih zajednica u Hrvatskoj, odnosno u Srbiji. Tim više što u recentnoj znanstvenoj literaturi, osim radova koji problematiziraju promjene broja, relativnog udjela i razmještaja, ima tek manji broj radova koji tematiziraju usporedbu nekih demografskih strukturnih obilježja između Hrvata i Srba. Tako, primjerice, Đurđev, Livada i Arsenović (2014) vrlo sažeto, prema rezultatima popisa 2011., uspoređuju dobnu i spolnu strukturu Hrvata i Srba u Hrvatskoj te utvrđuju da je medijalna dob Srba (ukupno, muškarci i žene) viša od medijalne dobi ukupnog i većinskog (hrvatskog) stanovništva Hrvatske. Na temelju rezultata istog popisa stanovništva, Kovjanić (2014), također, sažeto upozorava na razlike u dobnoj strukturi između ukupnog stanovništva Hrvatske i srpske manjinske zajednice u Hrvatskoj te upozorava da je u srpskoj populaciji 2011. starih bilo 4,8 puta više nego mladih, odnosno da je prosječna starost Srba bila 53,1 godinu, dok je prosječna starost ukupnog stanovništva Hrvatske iznosila 41,7 godina. S druge strane, Živić (2015) na marginama svojega istraživanja o biološkoj strukturi Hrvata u Srbiji, donosi osnovne indikatore dobnog sastava i drugog etnički izjašnjenog stanovništva te ističe da su prema popisu 2011. godine višu prosječnu starost od Hrvata imali samo Vlasi (51,3), Makedonci (51,6), Nijemci (53,5) i Slovenci (57,8).

Demografska održivost snažna je pretpostavka unaprjeđenja društvenog, ekonomskog, kulturnog i političkog položaja srpske manjinske zajednice u suvremenom hrvatskom, odnosno hrvatske manjinske zajednice u suvremenom srbijanskom društvu. Naime, kako to navodi Dejan Jović, „na temelju brojnosti, i više nego na temelju povijesne ili tradicionalne pozicije, stječe se status, a etnički status određuje prava na kolektivnoj, a često i na individualnoj razini". U tom kontekstu „popis stanovništva ostaje jedan od instrumenata u borbi za etnički status" (Jović 2011: 36, 43). Premda se pojam i koncept demografske održivosti uglavnom razmatra iz motrišta njezinih prostornih i ekonomskih dimenzija (Roca i Oliveira Roca 2014; Nepytaliuk 2018), ipak se on može primijeniti i na druge parametre naseljenosti, pa tako i na razvoj etničkog sastava neke populacije. U tom se kontekstu sve kvantitativne (kretanje broja stanovnika, prirodno i mehaničko kretanje stanovništva) i kvalitativne dimenzije (struktura stanovništva po dobi i spolu, ekonomska i obrazovna struktura stanovništva) demografske održivosti mogu promatrati i analizirati iz aspekta etničkog sastava stanovništva, osobito u onim slučajevima kada u perspektivi postoji realna mogućnost da pojedine manjinske zajednice dođu u izrazito nepovoljan demografski položaj što može rezultirati i promjenom njihova ukupnog društvenog, političkog i ekonomskog statusa i položaja, kao i smanjenim mogućnostima očuvanja kulturnog i nacionalnog identiteta.

Drugim riječima, demografska održivost s obzirom na etnička obilježja stanovništva, pojednostavljeno rečeno, može se definirati kao zadržavanje konstantne ili optimalne veličine pojedine etničke kategorije stanovništva koja joj dugoročno osigurava barem jednostavnu opću reprodukciju, a to se, među ostalim, postiže uravnoteženim odnosom između velikih dobnih skupina stanovništva, kao i uravnoteženom spolnom zastupljenošću u strukturi populacije s obzirom na etničku pripadnost.

Polazeći od prethodnog, demografska je analiza u ovom radu obuhvatila tri važna parametra demografskog razvoja Hrvata u Srbiji i Srba u Hrvatskoj: (1) demografsku dinamiku izraženu kroz međupopisnu apsolutnu i relativnu promjenu broja stanovnika; (2) razvoj dobnog i spolnog sastava stanovništva kroz analizu procesa demografskog starenja te (3) promjene u razini obrazovanosti kroz analizu strukture stanovništva prema školskoj spremi, odnosno najvišem stupnju završene škole. Dakako, time se ne iscrpljuju sve mogućnosti analize povezanosti etničkog sastava stanovništva i koncepta demografske održivosti kroz kvantitativne i kvalitativne dimenzije, ali se ovim istraživanjem nastoji dati osnovni znanstveni uvid u trenutno demografsko stanje analiziranih populacija.

Prema popisima stanovništva koji su održani nakon 1991. godine, ali i povijesno gledano, Hrvatska i Srbija ulaze u red država sa složenim etničkim sastavom svojega stanovništva različitog stupnja etničke homogenosti, što je posljedica djelovanja prošlih, ali i recentnih „endogenih" i „eksternih" odrednica demografskoga razvoja. Najvažnija „endogena" odrednica aktualnih promjena u etničkom sastavu Hrvatske i Srbije demografski su procesi depopulacije, pa ukupna depopulacija ili međupopisni pad broja ukupnog stanovništva predstavlja opći okvir razmatranja brojčanog kretanja i odabranih strukturnih obilježja kako Hrvata u Srbiji tako i Srba u Hrvatskoj. Među najvažnije „eksterne" odrednice suvremenih etnodemografskih promjena ističe se društveno-političkih kontekst u najširem smislu riječi, koji uključuje i političke krize, ratove, prisilne migracije, procese asimilacije, promjene u načinu popisnoga izjašnjavanja s obzirom na etničku pripadnost i dr.

Demografska je analiza u ovom radu obavljena u četiri komparativna konteksta. Prvi kontekst obuhvaća usporedbu odabranih aspekata demografskih promjena između Hrvata u Srbiji i Srba u Hrvatskoj. Drugi kontekst podrazumijeva usporedbu demografskih promjena Hrvata u Srbiji u odnosu na ukupnu populaciju Srbije kao i Srba u Hrvatskoj u odnosu na ukupnu populaciju Hrvatske. Treći kontekst odnosi se na usporedbu demografskih promjena Hrvata u Srbiji u odnosu na Srbe u Srbiji te Srba u Hrvatskoj u odnosu na Hrvate u Hrvatskoj. Četvrti kontekst odnosi se na usporedbu demografskih promjena Hrvata u Srbiji u odnosu na Hrvate u Hrvatskoj te Srba u Hrvatskoj u odnosu na Srbe u Srbiji.

Cilj istraživanja je utvrditi postoje li i u kojoj mjeri demografske sličnosti i razlike s obzirom na navedena četiri komparativna konteksta analize te ukazati u kojoj mjeri aktualni odabrani dinamički i strukturni demografski trendovi u perspektivi omogućuju demografsku održivost hrvatske manjinske zajednice u Srbiji, odnosno srpske manjinske zajednice u Hrvatskoj, kao preduvjet osiguranja ili unaprjeđenja njihova manjinskog položaja i statusa u tim državama.

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2 METODOLOŠKE NAPOMENE

Polazeći od četiri u uvodu naznačena komparativna konteksta istraživanja formirane su i četiri hipoteze koje se u nastavku rada nastojalo potvrditi ili opovrgnuti. Riječ je o sljedećim hipotezama:

H1 – Hrvate u Srbiji i Srbe u Hrvatskoj karakteriziraju vrlo slični demografski trendovi i procesi u kretanju broja pripadnika i odabranim obilježjima demografskih struktura;

H2 – Hrvate u Srbiji i Srbe u Hrvatskoj karakteriziraju nepovoljniji demografski trendovi i procesi u odnosu na ukupno stanovništvo Srbije i Hrvatske;

H3 – Hrvate u Srbiji i Srbe u Hrvatskoj karakteriziraju nepovoljniji demografski trendovi i procesi u odnosu na većinsko srpsko stanovništvo u Srbiji, odnosno većinsko hrvatsko stanovništvo u Hrvatskoj.

H4 – Hrvate u Srbiji karakteriziraju nepovoljniji demografski trendovi i procesi u odnosu na Hrvate u Hrvatskoj, odnosno Srbe u Hrvatskoj karakteriziraju nepovoljni demografski procesi i trendovi u odnosu na Srbe u Srbiji.

Istraživanje se temelji na službenim rezultatima općih popisa stanovništva održanih u Hrvatskoj 2001., 2011. i 2021., a u Srbiji 2002., 2011. i 2022., a koje su u tiskanom ili elektroničkom obliku publicirali Državni zavod za statistiku Republike Hrvatske (DZSRH) i Republički zavod za statistiku Republike Srbije, uz napomenu da je dio podataka o strukturi stanovništva prema školskoj spremi po narodnosti u Hrvatskoj prema rezultatima popisa 2001. i 2021. dobiven nakon posebne obrade podataka DZSRH. Statistička osnova istraživanja isključivo su populacije koje su se u navedenim popisima nacionalno izjasnile kao Hrvati i Srbi.

Za komparativnu analizu i pravilno tumačenje rezultata popisa, najvažnije su, metodološke gledano, promjene u definiranju i klasificiranju stanovništva kao najvažnije popisne jedinice, odnosno promjene u definiciji ukupnog stanovništva prema naselju u kojemu se vrši popis (Pokos 2003). Budući da je etnički sastav stanovništva u svim popisima službeno javno objavljen za ukupno stanovništvo prema metodologiji pojedinog popisa potrebno je ukratko opisati najvažnije promjene u metodologiji popisa provedenih u Hrvatskoj i Srbiji nakon Drugoga svjetskog rata (1948., 1953., 1961., 1971., 1981., 1991., 2001/2002., 2011. i 2021/2022.).

Popisi stanovništva između 1948. i 1991. provedeni su prema načelu stalnog stanovništva što znači da su u ukupan broj stanovnika ulazile sve osobe koje su imale prijavljeno prebivalište u zemlji bez obzira jesu li u trenutku popisa bile prisutne ili odsutne u naselju popisa. Time se u ukupan broj stanovnika uvrštavalo i mnogobrojno stanovništvo koje je godinama pa i desetljećima boravilo tj. živjelo u inozemstvu. Kako bi se izbjeglo dvostruko popisivanje istih osoba u zemljama rada/boravka i zemljama prebivališta u hrvatskom popisu 2001. i srbijanskom popisu 2002. dolazi do primjene nove definicije ukupnog stanovništva. Prema međunarodnim metodološkim preporukama ukupno stanovništvo počinje se definirati kao uobičajeno boraveće stanovništvo (*usual resident population*), a mjesto stvarnog boravka kao mjesto uobičajenog boravka (*place of usual residence*). Također je prvi put uvedeno razdoblje od jedne godine i dulje kao osnovni kriterij za uključivanje ili isključivanje osoba iz ukupnog stanovništva. To je značilo da se osim osoba s prebivalištem u matičnoj državi te prisutnih u kritičnom trenutku popisa, u ukupno stanovništvo uključilo i osobe s prebivalištem u Hrvatskoj odnosno Srbiji, ali koje su bile odsutne iz tih država

manje od jedne godine. S druge strane, u ukupno stanovništvo obje države uključene su i osobe koje su u njima boravile godinu i duže, ali nisu imale prijavljeno prebivalište (Penev 2006). Osim toga, ukupno stanovništvo činili su i djelatnici diplomatskih službi i članovi njihovih obitelji iako su bili odsutni iz zemlje dulje od godinu dana, zatim nomadi, vojno osoblje izvan zemlje, izbjeglice u zemlji itd. Premda se stanovnici odsutni iz zemlje dulje od godinu dana nisu trebali uključiti u ukupno stanovništvo, u hrvatskom popisu 2001. u ukupan broj stanovnika uključene su i osobe koje „imaju tijesnu gospodarsku, prometnu i učestalu vezu s kućanstvom i obitelji u Republici Hrvatskoj (češći ili rjeđi posjeti, uzdržavanje članova obitelji, stalna komunikacija itd.)" (Državni Zavod za statistiku 2001). Budući da je takvih osoba bilo oko 160 tisuća, službeni broj ukupnog stanovništva Hrvatske 2001. ne može se smatrati uobičajenim boravećim stanovništvom odnosno rezidencijalnim stanovništvom Hrvatske. Drugim riječima, pri utvrđivanju broja ukupnog stanovništva Hrvatske u popisu 2001. metodološke preporuke nisu dosljedno provedene (Gelo, Akrap i Čipin 2005). U srbijanskom popisu 2002. nigdje se ne spominje da su u ukupno stanovništvo uključene osobe s boravkom u inozemstvu dužim od godine dana.

Popis 2011. u obje države definirao je ukupno stanovništvo prema konceptu „uobičajenog mjesta stanovanja" za koje se smatra ono mjesto u kojem osoba provodi većinu svoga dnevnog odmora bez obzira na kratkotrajnu odsutnost iz tog mjesta npr. zbog odlaska na odmor, putovanje, liječenje, u posjet i sl. (Državni Zavod za statistiku 2011). Ukupan broj stanovnika obuhvatio je osobe koje su uoči kritičnog trenutka popisa živjele neprekidno u svome uobičajenom mjestu stanovanja barem 12 mjeseci te osobe koje su tijekom 12 mjeseci uoči kritičnog trenutka popisa došle u svoje uobičajeno mjesto stanovanja s namjerom da u njemu ostanu barem godinu dana (Republički Zavod za statistiku Republike Srbije 2011). U odnosu na prethodne popise (2001/2002.), jedina je razlika u uvođenju pojma „namjera za ostajanjem" što je uz razdoblje od jedne godine predstavljalo najvažniji kriterij hoće li neka osoba s prebivalištem u inozemstvu, a koje je u Hrvatskoj ili Srbiji kraće od godinu dana, biti uključeno u ukupno stanovništvo Hrvatske, odnosno Srbije ili ne (Penev i Marinković 2012). Iako se popisi 2001/2002. i 2011. temelje na konceptu „uobičajenog mjesta stanovanja" oni nisu sasvim usporedivi ponajprije zbog namjere odsutnosti/prisutnosti koja se prikupljala u popisu 2011., dok hrvatski popis 2011. više nije u ukupan broj stanovnika uključivao i osobe odsutne godinu i dulje koje su se u mjesto stalnog stanovanja vraćale sezonski i mjesečno. U tom je kontekstu bitno naglasiti da, primjerice, interno raseljene osobe s Kosova i Metohije (a riječ je uglavnom o etničkim Srbima) u popisu 2002. nisu, a u popisu 2011. godine jesu bile uključene u ukupno stanovništvo Srbije.

U hrvatskom popisu 2021. te srbijanskom popisu 2022. primijenjena je ista metodologija kao i u popisima 2011. (Državni Zavod za statistiku 2022a), ali s tom razlikom što je u srbijanskom popisu nakon završetka terenskog prikupljanja podataka izvršeno dopunjavanje baze podataka iz administrativnih evidencija, i to, ponajprije iz Centralnog registra stanovništva. Na taj način identificirane su osobe koje nisu popisane, a živjele su u Srbiji u vrijeme provođenja popisa 2022. i kao takvi odgovaraju definiciji uobičajenog stanovništva. Ti podatci dobiveni su iz evidencije o zaposlenima,

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nezaposlenima, učenicima i studentima, umirovljenicima, korisnicima socijalne pomoći itd. (Republički Zavod za statistiku Republike Srbije 2023a). No, za te kategorije stanovništva etnička struktura nije poznata, ali je upravo iz tih razloga ta činjenica utjecala na smanjeni udio i Srba i Hrvata u ukupnom stanovništvu Srbije prema službeno objavljenim konačnim rezultatima popisa (Raduški 2024).

Premda ni rezultati posljednja tri popisa u Hrvatskoj i Srbiji (2001/2002., 2011. i 2021/2022.) nisu posve usporedivi ipak oni imaju puno više metodološke sličnosti u odnosu na ranije popise stanovništva održanih nakon Drugoga svjetskog rata, zaključno s popisom 1991. godine. Stoga vremenski okvir ove analize upravo obuhvaća posljednja dva međupopisna razdoblja u Hrvatskoj (2001–2021.) i Srbiji (2002–2022.). Dodatan razlog za ovako definiranje vremenskog okvira analize jest i činjenica da su u razdoblju 1991–2001. u Hrvatskoj, odnosno 1991–2002. u Srbiji, uslijed složenih društvenih, političkih, ekonomskih i drugih razloga vezanih uz političku krizu i raspad socijalističke Jugoslavije, osamostaljenje bivših jugoslavenskih republika, ratova i velikih ljudskih stradanja i demografskih gubitaka, na snazi dominantno bili „neregularni" uvjeti demografskih promjena. Razdoblje od 2001. u Hrvatskoj, odnosno od 2002. u Srbiji može se, uz određen oprez, ipak definirati kao desetljeća mirnodopskih, tj. relativno normaliziranih općih uvjeta demografskog razvoja. No, ta činjenica, kao što će se u nastavku rada vidjeti, nije utjecala na jačanje pozitivnih demografskih trendova i procesa, štoviše, ojačali su procesi depopulacije u svim njezinim vidovima (ukupna, prirodna, migracijska).

Prostorni okvir demografske analize predstavlja državni teritorij Hrvatske i Srbije u cjelini, bez uvida u stanje na nižim prostornim ili administrativnim razinama. Prema rezultatima popisa stanovništva 2002., 2011. i 2022. stanovništvo Srbije promatra se bez Kosova i Metohije.

Na temelju objavljenih rezultata popisa stanovništva 2001./2002., 2011. i 2021./2022. izračunati su apsolutni i relativni indikatori promjene broja stanovnika, dobnog i spolnog sastava stanovništva i sastava stanovništva prema školskoj spremi za tri osnovne kategorije: (1) ukupno stanovništvo Srbije i Hrvatske; (2) u popisima nacionalno izjašnjene populacije Hrvata u Srbiji i Srba u Hrvatskoj te (3) u popisima izjašnjene Hrvate u Hrvatskoj i Srbe u Srbiji.

3 REZULTATI

3.1 PROMJENA BROJA I RELATIVNOG UDJELA HRVATA U SRBIJI I SRBA U HRVATSKOJ

Premda je osnovni vremenski okvir provedene demografske analize odabranih dinamičkih i strukturnih obilježja Hrvata u Srbiji i Srba u Hrvatskoj determiniran popisima stanovništva 2001/2002., 2011. i 2021/2022., korisno je sažeto ukazati na njihovo brojčano (popisno) kretanje u posljednjih sedamdesetak i nešto godina, odnosno od prvog („kratkog") popisa nakon Drugoga svjetskog rata (1948.) do posljednjih popisa provedenih u Hrvatskoj 2021., a u Srbiji 2022. godine. Na poteškoće u usporedivosti poslijeratnih popisa stanovništva zbog promjena u metodologiji popisa i na njihov dijelom orijentacijski karakter, ukazano je u prethodnom odjeljku, pa se to na ovom mjestu neće ponavljati. No, potrebno je zadržati stanovitu dozu opreza pri interpretaciji rezultata popisa.

Osnovna obilježja brojčanog kretanja Hrvata u Srbiji i Srba u Hrvatskoj nakon

Drugoga svjetskog rata strukturirana su u nekoliko točaka:

1. Generalno uzevši, i Hrvati u Srbiji i Srbi u Hrvatskoj zabilježili su smanjenje broja pripadnika u razdoblju 1948.–2021./2022.– Hrvati za 76,2%, a Srbi za 77,2%, što upućuje na činjenicu da je njihova demografska dinamika kroz drugu polovicu 20. i prva dva desetljeća 21. stoljeća dominantno bila određena „endogenim" i „eksternim" destabilizacijskim čimbenicima demografskoga razvoja. Kao najvažnije čimbenike etnodemografskih promjena u Hrvatskoj i Srbiji od Drugoga svjetskog rata naovamo potrebno je istaknuti sljedeće: izravni ljudski i ukupni demografski gubitci tijekom svjetskih ratova, sve nepovoljniji trendovi u demoreprodukciji, tj. prirodni pad stanovništva, negativan saldo vanjske migracije, ubrzano demografsko starenje, prisilne, etnički uvjetovane migracije i demografski gubitci zbog ratnih sukoba na bivšem jugoslavenskom prostoru 90-ih, društveni procesi asimilacije kao i politički motivirani izravni i neizravni pritisci koji su rezultirali promjenama u načinu etničke samoidentifikacije, tj. popisnoga izjašnjavanja.[1]

2. Brojčano kretanje Hrvata u Srbiji ima dva karakteristična podrazdoblja potpuno različitog predznaka demografske promjene (Tablica 1). Prvo ili demografski ekspanzivno podrazdoblje omeđeno je 1948. i 1961. godinom. U tom je podrazdoblju demografski porast Hrvata u Srbiji iznosio 14,9%. Upravo je 1961. zabilježen najveći broj Hrvata u Srbiji – 189 160 stanovnika. Drugo ili demografski regresivno podrazdoblje omeđeno je 1961. i 2022., tijekom kojega je broj Hrvata u Srbiji smanjen za 79,3%, pa su 2022. zabilježili najmanji broj pripadnika (39 107) od sredine prošloga stoljeća. U tom kontinuiranom regresivnom podrazdoblju izrazite ukupne depopulacije, stopa prosječne relativne godišnje promjene u svakom je međupopisju, sa izuzetkom razdoblja 1961.–1971. godine (-0,68%) bila veća od -2,20%; najviša je bila u međupopisnim razdobljima: 2011.–2022. (-3,52%) i 1981.–1991. (-3,63%).

3. Za razliku od brojčanog kretanja Hrvata u Srbiji koje ima dva vrlo jasno omeđena podrazdoblja, Srbe u Hrvatskoj nakon Drugoga svjetskog rata karakterizira kolebljivije kretanje broja pripadnika (Tablica 2). Tako se mogu izdvojiti dva ekspanzivna i dva regresivna podrazdoblja brojčane dinamike različitog vremenskog trajanja te različitog predznaka i intenziteta promjene. Prvo podrazdoblje demografske ekspanzije omeđeno je 1948. i 1971. godinom. U tom je podrazdoblju broj Srba u Hrvatskoj povećan za 15,3%, pa su oni 1971. zabilježili najveći broj pripadnika u Hrvatskoj (626 789). U sljedećem međupopisnom razdoblju (1971–1981.) broj Srba u Hrvatskoj je smanjen (-15,2%), pa je riječ o prvom demografski regresivnom podrazdoblju. Drugo demografski ekspanzivno podrazdoblje obuhvaća međupopisno desetljeće omeđeno 1981. i 1991. godinom. U tom je podrazdoblju broj Srba u Hrvatskoj povećan za 9,4%. Konačno, nakon 1991. počinje drugo kontinuirano demografski regresivno podrazdoblje (1991–2021.) tijekom kojega je broj Srba u Hrvatskoj smanjen za 78,7%, pa su 2021. zabilježili najmanji broj pripadnika (123 892) od sredine prošloga stoljeća. U odnosu na maksimum naseljenosti 1971. (626 789) do 2021. broj Srba u Hrvatskoj smanjen je za 80,2%.

[1] Detaljnije o različitim odrednicama i obilježjima etnodemografskih promjena u Hrvatskoj i Srbiji, vidjeti u: Akrap i Grizelj 1995; Berber, Grbić i Pavkov 2008; Crkvenčić 1998; Đurđev, Livada i Arsenović 2014; Kovjanić 2014; Raduški 2010; Stojšin 2023; Živić 2004; Živić i Turk 2020; Živić, Cvikić i Žigmanov 2022; Žuljić 1996).

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Tablica 1 Kretanje broja i pokazatelj promjene stanovništva hrvatske nacionalne pripadnosti u Srbiji (bez Kosova i Metohije) 1948–2022. godine

Godina popisa	Broj stanovnika	Apsolutna promjena	Indeks međupopisne promjene	Stopa prosječne relativne godišnje promjene (%)
1948.	164 574	-	-	-
1953.	167 045	2471	101,5	0,30
1961.	189 160	22 115	113,2	1,55
1971.	176 649	-12 509	93,4	-0,68
1981.	140 650	-35 999	79,6	-2,27
1991.	97 344	-43 306	69,2	-3,63
2002.	70 602	-26 742	72,5	-2,90
2011.	57 900	-12 702	82,0	-2,08
2022.	39 107	-18 793	67,5	-3,52

Izvor: Savezni Zavod za statistiku 1967, 1980, 1983; Republički zavod za statistiku Republike Srbije 2023a.

Tablica 2 Kretanje broja i pokazatelj promjene stanovništva srpske nacionalne pripadnosti u Hrvatskoj 1948–2021. godine

Godina popisa	Broj stanovnika	Apsolutna promjena	Indeks međupopisne promjene	Stopa prosječne relativne godišnje promjene (%)
1948.	543 795	-	-	-
1953.	588 756	44 961	108,3	1,59
1961.	624 991	36 235	106,2	0,75
1971.	626 789	1798	100,3	0,03
1981.	531 502	-95 287	84,8	-1,65
1991.	581 663	50 161	109,4	0,90
2001.	201 631	-380 032	34,7	-9,70
2011.	186 633	-14 998	92,6	-0,77
2021.	123 892	-62 741	66,4	-4,04

Izvor: Republički zavod za statistiku Republike Hrvatske 1992; Državni zavod za statistiku 2002., 2013. I 2022b.

U uvodu je već istaknuto kako demografske promjene u hrvatskoj manjinskoj zajednici u Srbiji i srpskoj manjinskoj zajednici u Hrvatskoj treba vrednovati u općem demografskom kontekstu koji je izrazito depopulacijski u obje države. Tako su indeksi međupopisne promjene u Hrvatskoj za međupopisna razdoblja 2001–2011. i 2011–2021. iznosili 96,6, odnosno 90,4, ukupno za razdoblje 2001 – 2021. 87,3, što znači da je u tih dvadeset godina broj ukupnog stanovništva Hrvatske smanjen za 12,7% (Tablica 3). S obzirom na tip intenziteta međupopisne promjene (Nejašmić 2005) prvo je međupo-

pisno razdoblje karakterizirala *osrednja depopulacija*, a drugo međupopisno razdoblje *jaka depopulacija*. Slični trendovi u vezi promjene ukupnog stanovništva zabilježeni su i u Srbiji (Tablica 4). Indeksi međupopisne promjene u razdoblju 2002.–2011. i 2011.–2022. iznosili su 95,9, odnosno 92,5, a ukupno za razdoblje 2002.–2022. 88,7, što znači da je u tih dvadeset godina broj ukupnog stanovništva Srbije smanjen za 11,3%. S obzirom na tip intenziteta međupopisne promjene prvo je međupopisno razdoblje također karakterizirala *osrednja depopulacija*, a drugo međupopisno razdoblje *jaka depopulacija*.

U izrazito depopulacijskom dinamičkom okviru za očekivati je bilo da i većinsko hrvatsko stanovništvo u Hrvatskoj i većinsko srpsko stanovništvo u Srbiji u posljednja dva međupopisna razdoblja slijedi trend, predznak i intenzitet brojčanog kretanja ukupnog stanovništva (tablice 3 i 4), s tim da Hrvati u Hrvatskoj bilježe nešto slabiju, a Srbi u Srbiji nešto jaču ukupnu depopulaciju u odnosu na ukupno stanovništvo Hrvatske, odnosno ukupno stanovništvo Srbije. Tako je za razdoblje 2001–2021. stopa međupopisne promjene Hrvata u Hrvatskoj iznosila -10,8% (Hrvatska -12,7%), dok je za razdoblje 2002.–2022. stopa međupopisne promjene Srba u Srbiji iznosila -13,7% (Srbija -11,3%).

Premda slijede opći depopulacijski obrazac ipak je intenzitet depopulacije Hrvata u Srbiji i Srba u Hrvatskoj u analiziranom razdoblju bitno izraženiji u odnosu na ukupno i većinsko stanovništvo Hrvatske i Srbije (tablice 3 i 4). Tako je indeks promjene broja Srba u Hrvatskoj u razdoblju 2001–2021. (61,4) bio signifikantno niži i nepovoljniji u odnosu na indeks promjene ukupnog stanovništva Hrvatske (87,3) kao i Hrvata u Hrvatskoj (89,2). Ipak treba naglasiti da postoji značajna razlika u brojčanom kretanju tijekom prvog međupopisnog razdoblja (2001–2011.) u odnosu na drugo međupopisno razdoblje (2011–2021.). U prvom je međupopisju indeks iznosio 92,6 (tip promjene *jaka depopulacija*), a u drugom 66,4 (tip promjene *izumiranje*). Još nepovoljniju dinamiku zabilježili su Hrvati u Srbiji, kod kojih je u razdoblju 2002–2022. indeks promjene iznosio samo 55,4, što je bilo značajno niže od vrijednosti indeksa promjene za ukupno stanovništvo Srbije (88,7) kao i za Srbe u Srbiji (86,3). I kod Hrvata u Srbiji postoji signifikantna razlika između prvog međupopisnog razdoblja (2002–2011.) u kojemu je indeks promjene iznosio 82,0 i drugoga razdoblja (2011–2022.) u kojemu je indeks promjene iznosio 67,5, ali je tip promjene u oba slučaja bio najnepovoljniji – *izumiranje*. Dakle, Hrvati u Srbiji i Srbi u Hrvatskoj kroz promatrana međupopisna razdoblja imaju isti trend i predznak promjene broja stanovnika (negativan, tj. depopulacijski), dok odgovarajuća razlika postoji s obzirom na intenzitet ukupne depopulacije – stopa promjene Hrvata u Srbiji u razdoblju 2002–2022. iznosila je -44,6%, a stopa promjene Srba u Hrvatskoj u razdoblju 2001–2021. iznosila je -38,6%. S obzirom na bitno manji broj pripadnika hrvatske manjinske zajednice u Srbiji u odnosu na srpsku manjinsku zajednicu u Hrvatskoj, iskazana se razlika u intenzitetu ukupne depopulacije ipak može ocijeniti značajnom i nepovoljnijom za Hrvate u Srbiji u odnosu na Srbe u Hrvatskoj.[2]

[2] Do različitog zaključka o intenzitetu ukupne depopulacije može se doći ako za početnu godinu međupopisne promjene uzmemo 1991. U odnosu na nju do 2022. godine stopa promjene broja Hrvata u Srbiji iznosila je -59,8%, dok je stopa promjene Srba u Hrvatskoj do 2021. godine iznosila -78,7%.

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Tablica 3 Broj i pokazatelji promjene Hrvata, Srba i ukupnog stanovništva Hrvatske 2001.–2021. godine

Etnička kategorija	2001.	2011.	2021.
Ukupan broj stanovnika	4 437 460	4 284 889	3 871 833
Hrvati	3 977 171	3 874 321	3 547 614
% Hrvata u ukupnom stanovništvu	89,6	90,4	91,6
Srbi	201 631	186 633	123 892
% Srba u ukupnom stanovništvu	4,5	4,4	3,2
Indeks međupopisne promjene	2001.–2011.	2011.–2021.	2001.–2021.
Ukupan broj stanovnika	96,6	90,4	87,3
Hrvati	97,4	91,6	89,2
Srbi	92,6	66,4	61,4

Izvor: Državni zavod za statistiku 2002., 2013. I 2022b.

Tablica 4 Broj i pokazatelji promjene Srba, Hrvata i ukupnog stanovništva Srbije 2002.–2022. godine

Etnička kategorija	2002.	2011.	2022.
Ukupan broj stanovnika	7 498 001	7 186 862	6 647 003
Srbi	6 212 838	5 988 150	5 360 239
% Srba u ukupnom stanovništvu	82,9	83,3	80,6
Hrvati	70 602	57 900	39 107
% Hrvata u ukupnom stanovništvu	0,9	0,8	0,6
Indeks međupopisne promjene	2002.–2011.	2011.–2022.	2002.–2022.
Ukupan broj stanovnika	95,9	92,5	88,7
Srbi	96,4	89,5	86,3
Hrvati	82,0	67,5	55,4

Izvor: Republički zavod za statistiku Republike Srbije 2023a.

Konačno, u ovom dijelu prezentacije rezultata demografske analize bitno je napomenuti da je diferencirano brojčano kretanje stanovništva utjecalo na promjene u relativnim udjelima s obzirom na popisno izjašnjavanje Hrvatima i Srbima, i to na način da je relativan udio većinskog hrvatskog stanovništva u Hrvatskoj povećan sa 89,6% (2001) na 91,6% (2021), pa je riječ o procesu etničke homogenizacije, dok je relativan udio Srba smanjen sa 4,5% (2001) na 3,2% (2021). S druge strane, relativan udio većinskog srpskog stanovništva u Srbiji smanjen je, prema službeno objavljenim rezultatima popisa, sa 82,9% (2002) na

80,6% (2022),[3] pa je, uvjetno promatrano, riječ o slabljenju etničke homogenosti (ili jačanju etničke heterogenosti).

3.1 ODABRANI INDIKATORI DOBNOG I SPOLNOG SASTAVA POPULACIJE HRVATA U SRBIJI I SRBA U HRVATSKOJ

Sastav stanovništva prema dobi i spolu jedna je od najvažnijih dimenzija demografske održivosti, napose u kontekstu predviđanja budućih demografskih i migracijskih trendova i procesa. Iz demografske je literature znano da se dobni sastav stanovništva primarno formira pod utjecajem dugoročnog smanjivanja fertiliteta i produljenja životnoga vijeka (prosječnog trajanja života), dok sekundarno značenje imaju selektivne migracije po dobi, diferencijalni mortalitet po dobi, povećani mortalitet u „eksternim" uvjetima (ratovi, ekološke i prirodne kataklizme i sl.) i drugi čimbenici. Sastav stanovništva po spolu formira se pod utjecajem diferencijalnog nataliteta (u prosjeku se više rađa muške od ženske djece) i mortaliteta po spolu (smrtnost muškaraca je veća od smrtnosti žena), selektivnosti migracija po spolu i „eksternih" čimbenika (ratovi i dr.) (Wertheimer-Baletić 1999).

S druge strane, dobni i spolni sastav stanovništva bitna je odrednica budućih demoreproduktivnih procesa, kao i formiranja struktura bitnih za ekonomsku aktivnost stanovništva. Poremećeni dobni sastav, naročito u odnosu između velikih dobnih skupina (mlado stanovništvo 0–14, zrelo ili radno sposobno stanovništvo 15–64 i staro stanovništvo 65+), negativna je odrednica trenutnih, a osobito budućih demografskih promjena, što napose dolazi do izražaja kod brojčano malih populacija koje su ionako suočene s negativnim obilježjima demografske dinamike. U tom kontekstu najvažniji proces u formiranju dobnog sastava stanovništva je demografsko starenje, koje je jedno od globalnih demografskih „megatrendova" u suvremenom svijetu, pa s manjim ili većim intenzitetom karakterizira sve populacije. Uobičajeno se pod procesom demografskog starenja podrazumijevanje povećanje relativnog udjela, ne nužno i broja starog (60+/65+) u ukupnom stanovništvu (indikator starenja je koeficijent starosti[4]), povećanje relativnog značenja starog (60+/65+) u odnosu na mlado (0–14) stanovništvo (indikator starenja je indeks starenja[5]) i povećanje relativnog značenja mladog (0–14) i starog (60+/65+) u odnosu na zrelo ili radno sposobno (15–64) stanovništvo (indikatori starenja su koeficijent ukupne dobne ovisnosti i koeficijent dobne ovisnosti starih[6]).

Potrebno je naznačiti da poremećeni spolni sastav stanovništva, posebno kod pojedinih dobnih kontingenata, neovisno je li ono posljedica prevlasti muškog ili ženskog stanovništva u nekoj populaciji, može također generirati probleme u demografskom razvoju, naročito u demoreprodukciji. Naime, neravnoteža u odnosu između muškaraca i žena nepovoljno utječe na razinu nupcijaliteta (sklapanje

[3] Ako bi iz rezultata popisa 2022. koji se odnose na etnički sastav stanovništva Srbije izdvojili kategoriju „nepoznato" onda bi relativan udio većinskog srpskog stanovništva u toj zemlji iznosio 84,7% te u tom slučaju Srbi u odnosu na 2002. ne bi imali pad nego porast relativnog udjela u ukupnom stanovništvu Srbije (Stojšin, 2023: 828).

[4] U ovom radu koeficijent starosti predstavlja udio starog (65+) u ukupnom stanovništvu.

[5] U ovom radu indeks starenja je izračunat kao broj osoba u dobi 65+ u odnosu na 100 osoba u dobi 0-14.

[6] Koeficijent ukupne dobne ovisnosti pokazatelj je "opterećenosti" stanovništva radne dobi (15-64) ekonomski nekativnim osobama, tj. stanovništvom u dobi 0-14 i 65+. Koeficijent dobne ovisnosti starih predstavlja omjer stanovništva u dobi 65+ u odnosu na radni contingent (15-64).

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brakova), a to u uvjetima kada se i u Srbiji i u Hrvatskoj još uvijek zamjetan broj živorođene djece rađa u zakonski sklopljenom braku između muškaraca i žena, može rezultirati padom fertiliteta, a time i nataliteta.[7]

Rezultati analiziranih popisa stanovništva u Hrvatskoj i Srbiji (tablice 5 i 6) jasno pokazuju da je sastav stanovništva po dobi u tim državama pod jakim utjecajem procesa demografskog starenja, kao rezultata dugoročno nepovoljnih trendova u demoreprodukciji, naročito u kretanju fertiliteta i nataliteta (niska i sve niža rodnost).

U samo dvadeset godina (2001–2021.) u Hrvatskoj je koeficijent starosti povećan sa 15,7 na 22,5, indeks starenja povećan sa 92,2 na 157,4, a koeficijent ukupne dobne ovisnosti povećan sa 48,8 na 58,0, a koeficijent dobne ovisnosti starih povećan sa 23,4 na 35,5. Drugim riječima, broj starih (65+) značajno je veći od broja mladih (0–14), a više od petine ukupnog stanovništva Hrvatske staro je 65 godina i više.[8] Hrvatska je na pragu potpune inverzije dobnog sastava, a piramida starosti poprima obrise „urne" koja simbolizira duboku ostarjelost i izrazito regresivan tip dobnog sastava. Prema novijim istraživanjima Hrvatska ulazi u skupinu demografski najstarijih država u svijetu danas (Živić 2021). S obzirom na izrazitu većinu u ukupnom stanovništvu Hrvatske, u popisima izjašnjeni Hrvati pokazuju nešto povoljnija obilježja u odnosu na opću populaciju, a to znači nešto niže vrijednosti koeficijenta starosti, indeksa starenja,[9] koeficijenta ukupne dobne ovisnosti kao i koeficijenta dobne ovisnosti starih, naročito 2011. i 2021. godine.[10] Za razliku od većinskog hrvatskog stanovništva, Srbi u Hrvatskoj imaju naglašeno nepovoljniji dobni sastav (Đurđev, Livada i Arsenović 2014), a to znači više vrijednosti koeficijenta starosti, indeksa starenja, koeficijenta ukupne dobne ovisnosti i koeficijenta dobne ovisnosti starih u odnosu na opću populaciju i u odnosu na populaciju Hrvata.[11] Tako su Srbi, prema rezultatima popisa 2021., ostvarili koeficijent starosti od 42,7%, indeks starenja od čak 632,9, koeficijent ukupne dobne ovisnosti od čak 97,8 te koeficijent dobne ovisnosti starih od 84,5. Na dosegnutu razinu demografskog starenja napose upozorava indeks starenja kojega je vrijednost povećana (gotovo udvostručena) sa 384,9 (2001) na 632,9 (2021). Navedeno znači da je srpska manjinska zajednica jedna od najstarijih manjinskih zajednica u Hrvatskoj.[12] Njezin dobni sastav predstavlja dugoročan izrazito nepovoljan okvir za demografsku revitalizaciju. Činjenica da je gotovo polovica Srba u Hrvatskoj starija od 65+ godina snažno upozorava na sve veće demografske izazove revitalizacije, ponajprije u kontekstu demoreprodukcije, ali i u kontekstu položaja na tržištu rada kao i socijalne, zdravstvene i mirovinske skrbi sve starijeg srpskog stanovništva u Hrvatskoj.

[7] Prema službenim podatcima u Srbiji je broj živorođene djece izvan braka na tisuću živorođenih 2022. godine iznosio 303,8 (Republički zavod za statistiku Republike Srbije 2023c), dok je u Hrvatskoj isti pokazatelj za 2022. godinu iznosio 247,0 (Državni zavod za statistiku 2023).

[8] Premda je broj ukupnog stanovništva Hrvatske, u razdoblju 2001.–2021., smanjen za 12,7%, broj stanovnika u dobi 65+ povećan je za 25,1%.

[9] S obzirom na vrijednost indeksa starenja, prema rezultatima popisa 2021., demografski mlađi od Hrvata bili su samo Albanci, Romi i Turci (izvor: kao Tablica 5).

[10] Premda je broj Hrvata u Hrvatskoj u razdoblju 2001–2021., smanjen za 10,8%, broj stanovnika u dobi 65+ povećan je za 10,5%.

[11] Premda je broj Srba u Hrvatskoj, u razdoblju 2000–2021., smanjen za 38,6%, broj stanovnika u dobi 65+ smanjen je za svega 7,0%.

[12] S obzirom na vrijednost indeksa starenja, prema rezultatima popisa 2021., demografski stariji od Srba su bili samo Slovenci, Crnogorci, Bugari, Nijemci i Poljaci (izvor: kao Tablica 5).

Tablica 5 Odabrani indikatori dobnog sastava Hrvata, Srba i ukupnog stanovništva Hrvatske prema rezultatima popisa 2001., 2011. i 2021. godine

Velike dobne skupine	Godina popisa	Ukupan broj stanovnika	Hrvati	Srbi
Broj stanovnika do 14.	2001.	753 294	602 065	14 778
	2011.	652 428	610 276	12 224
	2021.	552 416	516 860	8359
Broj stanovnika 15–64	2001.	2 969 981	2 667 594	129 310
	2011.	2 873 828	2 611 231	114 223
	2021.	2 450 178	2 262 933	62 626
Broj stanovnika 65+	2001.	694 880	694 740	56 876
	2011.	758 633	652 814	60 186
	2021.	869 239	767 821	52 907
Koeficijent feminiteta	2001.	107,8	107,9	106,8
	2011.	107,4	107,6	104,8
	2021.	107,6	108,0	104,1
Koeficijent mladosti	2001.	17,0	15,1	7,3
	2011.	15,2	15,8	6,5
	2021.	14,3	14,6	6,7
Koeficijent starosti	2001.	15,7	17,5	28,2
	2011.	17,7	16,8	32,2
	2021.	22,5	21,6	42,7
Koeficijent ukupne dobne ovisnosti	2001.	48,8	48,6	55,4
	2011.	49,1	48,4	63,4
	2021.	58,0	56,8	97,8
Koeficijent dobne ovisnosti starih	2001.	23,4	26,0	44,0
	2011.	26,4	25,0	52,7
	2021.	35.5	33,9	84,5
Indeks starenja	2001.	92,2	115,4	384,9
	2011.	116,3	107,0	492,4
	2021.	157,4	148,6	632,9

Izvor: Državni zavod za statistiku 2002., 2013. I 2022b.

Što se spolnog sastava stanovništva tiče, rezultati posljednja tri popisa ne upućuju na značajniju neravnotežu niti Srbi u Hrvatskoj značajnije odskaču od ukupnog i većinskog stanovništva Hrvatske.

Slično procesu demografskog starenja u Hrvatskoj, i ukupno stanovništvo Srbije u analiziranih dvadeset godina (2002–2022) pokazuje karakteristike ubrzanog starenja. U samo dvadeset godina u Srbiji je koeficijent starosti povećan sa 16,5 na 22,1, indeks starenja povećan sa 105,4 na 153,7, koeficijent ukupne dobne ovisnosti povećan sa 48,0 na 57,4 te koeficijent dobne ovisnosti starih povećan sa 24,6 na 34,8. Drugim riječima, broj starih (65+) značajno je veći od broja mladih (0–14), a više od petine ukupnog stanovništva staro je 65 godina i više.[13] Srbija je, kao i Hrvatska, na pragu potpune inverzije dobnog sastava, a piramida starosti poprima obrise „urne" koja simbolizira duboku

[13] Premda je broj ukupnog stanovništva Srbije, u razdoblju 2002–2022., smanjen za 11,3%, broj stanovnika u dobi 65+ povećan je za 18,4%.

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Tablica 6 Odabrani indikatori dobnog sastava Srba, Hrvata i ukupnog stanovništva Srbije prema rezultatima popisa 2002., 2011. i 2022. godine

Velike dobne skupine	Godina popisa	Ukupan broj stanovnika	Srbi	Hrvati
Broj stanovnika do 14.	2002.	1 176 770	949 871	6362
	2011.	1 025 278	819 091	4159
	2022.	955 452	737 093	2847
Broj stanovnika 15–64	2002.	5 032 805	4 181 933	47 235
	2011.	4 911 268	4 112 983	36 772
	2022.	4 222 696	3 373 984	22 375
Broj stanovnika 65+	2002.	1 240 505	1 048 705	16 814
	2011.	1 250 316	1 056 076	16 969
	2022.	1 468 855	1 249 162	13 885
Koeficijent feminiteta	2001.	105,7	105,0	145,8
	2011.	105,4	105,2	142,6
	2021.	105,7	106,0	140,6
Koeficijent mladosti	2002.	15,7	15,3	9,0
	2011.	14,3	13,7	7,2
	2022.	14,4	13,8	7,3
Koeficijent starosti	2002.	16,5	16,9	23,8
	2011.	17,4	17,6	29,3
	2022.	22,1	23,3	35,5
Koeficijent ukupne dobne ovisnosti	2002.	48,0	47,8	49,1
	2011.	46,3	45,6	57,5
	2022.	57,4	58,9	74,8
Koeficijent dobne ovisnosti starih	2002.	24,6	25,1	35,6
	2011.	25,5	25,7	46,1
	2022.	34,8	37,0	62,1
Indeks starenja	2002.	105,4	110,4	264,3
	2011.	121,9	128,9	408,0
	2022.	153,7	169,5	487,7

Izvor: Republički zavod za statistiku Republike Srbije 2003, 2013, 2023b.

ostarjelost i izrazito regresivan tip dobnog sastava (tip *najdublja demografska starost*) (Stojilković Gnjatović 2023). U popisima izjašnjeni Srbi pokazuju nešto nepovoljnija obilježja u odnosu na opću populaciju, a to znači nešto više vrijednosti koeficijenta starosti, indeksa starenja, koeficijenta ukupne dobne ovisnosti i koeficijenta dobne ovisnosti starih.[14] Za razliku od većinskog srpskog stanovništva, Hrvati u Srbiji imaju naglašeno nepovoljniji dobni sastav, a to znači bitno više vrijednosti koeficijenta starosti, indeksa starenja, koeficijenta ukupne dobne ovisnosti i koeficijenta dobne ovisnosti starih u odnosu na opću populaciju i na populaciju Srba.[15] Tako su Hrvati, prema rezultatima popisa 2022., ostvarili koeficijent starosti od 35,5%, indeks starenja od čak 487,7,

[14] Premda je broj Srba u Srbiji, u razdoblju 2002–2022., smanjen za 13,7%, broj stanovnika u dobi 65+ povećan je za 19,1%.

[15] Premda je broj Hrvata u Srbiji, u razdoblju 2002.–2022., smanjen za 44,6%, broj stanovnika u dobi 65+ smanjen je za svega 17,4%.

koeficijent ukupne dobne ovisnosti od 74,8 te koeficijent dobne ovisnosti starih od 62,1. Na dosegnutu razinu demografskog starenja napose upozorava indeks starenja kojega je vrijednost povećana (gotovo udvostručena) sa 264,3 (2002.) na 487,7 (2022.). Navedeno znači da je hrvatska manjinska zajednica i dalje jedna od najstarijih manjinskih zajednica u Srbiji. Njezin dobni sastav predstavlja dugoročan izrazito nepovoljan okvir za demografsku revitalizaciju (Živić 2004). Činjenica da je nešto više od trećine Hrvata u Srbiji starija od 65+ godina snažno upozorava na sve veće demografske izazove revitalizacije, ponajprije u kontekstu demoreprodukcije, ali i u kontekstu položaja na tržištu rada kao i socijalne, zdravstvene i mirovinske skrbi sve starijeg hrvatskog stanovništva u Srbiji. Spolni sastav ukupnog i većinskog stanovništva Srbije u uobičajenim je vrijednostima i ne karakterizira ga neravnoteža višega stupnja. No, za razliku od te dvije promatrane kategorije hrvatska manjinska zajednica u Srbiji ima izrazito poremećen spolni sastav. Koeficijent feminiteta 2002. iznosio je 145,8 (žena na 100 muškaraca), 2011. iznosio je 142,6 (žena na 100 muškaraca) te 2022. godine iznosio je 140,6 (žena na 100 muškaraca). Stoga je spolni sastav Hrvata u Srbiji izrazito negativna, štoviše, kritična odrednica njihove demografske održivosti (Živić i Turk 2020).

3.2 ODABRANI INDIKATORI OBRAZOVNE STRUKTURE HRVATA U SRBIJI I SRBA U HRVATSKOJ

Obrazovanost neke populacije, u ovom slučaju s obzirom na etničku pripadnost, postaje sve važnijim čimbenikom njihova društvenog i ekonomskog napretka, jer razina obrazovanosti snažno utječe na dinamiku i kvalitetu ljudskih resursa. S jedne strane, visoka obrazovanost i kvalificirana radna snaga pozitivan su preduvjet napretka u današnjem globaliziranom svijetu. S druge strane, obrazovanost ima iznimno veliku ulogu u „očuvanju kulture jedne nacije, a društveni položaj neke etničke zajednice najbolje se može sagledati upravo preko obrazovne i profesionalne strukture" (Raduški 2010: 259).

Premda nije jedini indikator dosegnute razine obrazovanosti, struktura stanovništva (15+) prema školskoj spremi, odnosno najvišoj razini završene škole, često je primjenjivana u znanstvenim istraživanjima. Struktura prema školskoj spremi odnosi se na stanovništvo staro 15 i više godina te u sebi uobičajeno uključuje sljedeće kategorije formalnog obrazovanja: bez škole, nezavršena osnovna škola, završena osnovna škola (*primarno obrazovanje*), završena srednja škola (*sekundarno obrazovanje*), završena viša i visoka škola, uključujući magistarski i doktorski stupanj obrazovanja (*tercijarno obrazovanje*). Međuodnos između navedenih kategorija kao i promjene u određenom vremenskom razdoblju (između dva ili više popisa) determinirani su demografskim, ali i nedemografskim čimbenicima. Demografski čimbenici obrazovne strukture ponajviše se odnose na dobni i spolni sastav, pri čemu stariji naraštaji u odnosu na mlađe, osobito žena u odnosu na muškarce, uglavnom imaju nižu razinu završene škole i veći udjel u kategoriji „bez škole". Ulaskom starijih naraštaja u dob s većim rizikom smrti smanjuju se kategorije s najnižim razinama školske spreme što se odražava na porast opće razine obrazovanosti (Živić i Cvikić 2014).

Struktura ukupnog i većinskog stanovništva Hrvatske i Srbije, kao i srpske manjinske zajednice u Hrvatskoj, odnosno hrvatske manjinske zajednice u Srbiji,

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Tablica 7 Hrvati, Srbi i ukupno stanovništvo Hrvatske (15+) prema najvišoj razini školske spreme 2001.–2021. (%)

Etnička kategorija	Godina popisa	Bez škole	Nezavršena osnovna škola	Primarno obrazovanje	Sekundarno obrazovanje	Tercijarno obrazovanje	Nepoznato
Hrvati	2001.	2,63	15,58	21,77	47,73	11,85	0,45
	2011.	1,54	7,51	21,13	53,20	16,55	0,08
	2021.	0,60	2,12	17,12	55,92	24,23	0,0
Srbi	2001.	6,55	21,39	20,37	40,11	11,36	0,22
	2011.	4,02	12,30	22,41	47,38	13,83	0,06
	2021.	1,59	4,12	21,44	53,83	19,02	0,0
Hrvatska ukupno	2001.	2,86	15,76	21,75	47,06	11,89	0,67
	2011.	1,71	7,81	21,29	52,61	16,39	0,16
	2021.	0,69	2,28	17,38	55,53	24,07	0,05

Izvor: Državni zavod za statistiku 2024.

prema školskoj spremi (u %) prezentirani su u tablicama 7 i 8. Iz njih se zapažaju sljedeća obilježja:

1. Generalno uzevši, strukture stanovništva prema školskoj spremi u analiziranom razdoblju imaju sve bolja obilježja: pada relativan udio stanovništva bez škole i s nezavršenom osnovnom školom, a raste relativan udio stanovništva s završenim sekundarnim i osobito tercijarnim obrazovanjem.

2. Srbi u Hrvatskoj, ali i Hrvati u Srbiji imaju nižu razinu završene škole u odnosu na ukupno i većinsko stanovništvo Hrvatske, odnosno ukupno i većinsko stanovništvo Srbije.

3. Hrvati u Srbiji i Srbi u Hrvatskoj imaju relativno ujednačeni sastav stanovništva prema školskoj spremi. Ipak, ako u razmatranje uzmemo samo rezultate popisa 2021. u Hrvatskoj i 2022. u Srbiji, uočavamo da hrvatska manjinska zajednica u odnosu na srpsku manjinsku zajednicu ima manji relativan udio stanovništva bez škole (0,68% naspram 1,59%), veći relativan udio stanovništva s nezavršenim osnovnom školom (6,01% naspram 4,12%), manji relativan udio stanovništva s primarnim obrazovanjem (19,73% naspram 21,44%), veći relativan udio stanovništva s sekundarnim obrazovanjem (54,49% naspram 53,83%) te nešto veći, zapravo, ujednačeni relativan udio stanovništva s tercijarnim obrazovanjem (19,08% naspram 19,02%).

4. Za potrebe komparativne analize, na temelju podataka iz tablica 7 i 8 izračunat je indeks obrazovanosti prema modelu Ive Nejašmića (2005: 204)[16] koji pokazuje poboljšanje stupnja obrazovanosti prema svim promatranim kategorijama. Ipak, uočavaju se i razlike: (a) prema izračunu je vidljivo da ukupno stanovništvo Hrvatske (30,1, 90,6, 450,0) ima viši indeks obrazovanosti u odnosu na ukupno stanovništvo Srbije (20,7, 58,1, 189,7); (b) Hrvati u Hrvatskoj (31,1, 97,3, 498,1) imaju viši indeks obrazovanosti u odnosu na Srbe u Srbiji (22,7, 67,0, 229,3); (c) Srbi u Hrvatskoj 2001. i 2011. (16,3, 40,2) imaju niži indeks obrazovanosti u odnosu na Hrvate u Srbiji

[16] Prema metodologiji I. Nejašmića (2005), indeks obrazovanosti se računa kao omjer relativnog udjela stanovništva sa sekundarnom i tercijarnom razinom obrazovanja u odnosu na stanovništvo s nezavršenim primarnim obrazovanjem (kategorije "bez škole" i "nezavršena osnovna škola").

Tablica 8 Srbi, Hrvati i ukupno stanovništvo Srbije (15+) prema najvišoj razini školske spreme 2002.–2022. (%)

Etnička kategorija	Godina popisa	Bez škole	Nezavršena osnovna škola	Primarno obrazovanje	Sekundarno obrazovanje	Tercijarno obrazovanje	Nepoznato
Srbi	2002.	5,42	15,67	23,06	42,23	11,34	2,29
	2011.	2,41	10,37	19,65	50,39	16,98	0,19
	2022.	0,70	4,89	16,41	54,44	23,54	0,04
Hrvati	2002.	3,51	18,67	24,48	41,31	11,17	0,85
	2011.	1,73	12,76	21,82	48,85	14,67	0,16
	2022.	0,68	6,01	19,73	54,49	19,08	0,03
Srbija ukupno	2002.	5,66	16,18	23,88	41,07	11,03	2,18
	2011.	2,67	11,00	20,76	48,93	16,24	0,40
	2022.	1,01	5,27	17,80	53,08	22,44	0,40

Izvor: Ministarstvo za ljudska i manjinska prava Srbije i Crne Gore 2004; Republički zavod za statistiku Republike Srbije 2013, 2023b.

2002. i 2011. (20,8, 49,5), ali viši (179,3) prema rezultatima posljednjeg popisa u odnosu na hrvatsku manjinsku zajednicu u Srbiji (155,4). Iz ovih je podataka razvidno da i Hrvati u Hrvatskoj i Srbi u Srbiji imaju viši indeks obrazovanosti u odnosu na ukupnu populaciju u tim državama, ali zbog visokog stupnja etničke homogenosti u tim zemljama razlike nisu toliko izražene.

4 RASPRAVA I ZAKLJUČAK

Polazeći od tvrdnje izrečene u uvodu ovoga rada da je demografska održivost snažna pretpostavka unaprjeđenja društvenog, ekonomskog, kulturnog i političkog položaja srpske manjinske zajednice u suvremenom hrvatskom, odnosno hrvatske manjinske zajednice u suvremenom srbijanskom društvu, ujedno i važna odrednica očuvanja njihova kulturnog i socijalnog identiteta, prezentirani su podatci ukazali na dinamičke i strukturne demografske izazove održivosti Hrvata u Srbiji i Srba u Hrvatskoj. Demografska dinamika iskazana kroz ukupno kretanje stanovništva čiji je osnovni statistički izraz promjena broja stanovnika u međupopisnom razdoblju, u promatranom vremenskom razdoblju (od 2001. do 2021. u Hrvatskoj, odnosno od 2002. do 2022. u Srbiji) jasno ukazuje na ukupnu depopulaciju Hrvata u Srbiji i Srba u Hrvatskoj (tablice 1 i 2), ali i na depopulaciju ukupnog i većinskog (hrvatskog) stanovništva u Hrvatskoj, odnosno ukupnog i većinskog (srpskog) stanovništva u Srbiji (tablice 3 i 4). Ta je okolnost, ponajprije, determinirana aktualnim demografskim trendovima u prirodnom i mehaničkom kretanju stanovništva, kao i procesima asimilacije pripadnika manjinskih zajednica što je odraza imalo na promjene u načinu popisnoga (ne)izjašnjavanja. Hrvati u Srbiji i Srbi u Hrvatskoj daleko su od osiguranja barem jednostavne opće reprodukcije i obnavljanja u istom broju, a aktualni trendovi i strukturni odnosi (naročito s obzirom na dobni i spolni sastav) indiciraju nastavak brojčanog regresa i pada njihova relativnog značenja u ukupnom stanovništvu obje države.

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Demoreprodukcija kao bitan element ukupnog kretanja stanovništva pod snažnim je pritiskom neuravnoteženog dobnog i spolnog sastava. Naime, izrazita prevlast starog (65+) u odnosu na mlado stanovništvo (0–14) ne jamči osiguranje dovoljno vlastitih potencijala za demografsku revitalizaciju, štoviše, obje manjinske zajednice u dubokoj su demografskoj krizi iz koje se ne može izaći bez krupnih, pa i radikalnih državnih intervencija s razine pronatalitetne, imigracijske, obiteljske, porezne, stambene, ekonomske i obrazovne politike.

Uvidom u prezentirane rezultate dolazi se do zaključka da su Srbi u Hrvatskoj demografski stariji stanovništvo od Hrvata u Srbiji, premda su obje populacije snažno zahvaćene procesom demografskog starenja i da ih karakterizira vrlo visoki stupanj demografske ostarjelosti s jedne strane, dok je s druge strane primjetna signifikantna razlika u spolnom sastavu na način da Srbi u Hrvatskoj imaju relativno uravnotežen, a Hrvati u Srbiji izrazito neuravnotežen spolni sastav stanovništva. To znači da je prva hipoteza tek dijelom potvrđena.

Premda se u posljednja dva međupopisna razdoblja primjećuje poboljšanje obrazovne strukture svih kategorija analiziranih u ovom radu ipak se ne može ne zamijetiti da Hrvati u Srbiji i Srbi u Hrvatskoj imaju zamjetno niži relativan udio visoko obrazovnog stanovništva, kao i signifikantnu nižu vrijednost indeksa obrazovanosti te da navedene okolnosti predstavljaju bitan ograničavajući čimbenik unaprjeđenja njihova političkog (manjinskog) statusa, društvene uloge te položaja na tržištu rada u Srbiji, odnosno u Hrvatskoj. Osim toga, jači intenzitet ukupne depopulacije kao i bitno nepovoljnija obilježja dobno-spolnog sastava hrvatske i srpske manjinske zajednice spram ukupnog i većinskog stanovništva u Hrvatskoj i Srbiji sugeriraju zaključak da su druga, treća i četvrta hipoteza rada u cijelosti potvrđene.

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IZJAVA O DOSTUPNOSTI PODATAKA

Podaci su dostupni u rukopisu rada.

Podaci su dostupni u javnom repozitoriju koji je naveden uz svaki izvor gdje je to bilo moguće.

Zaključci rada se temelje na naprijed navedenim podacima.

DOPRINOS KOAUTORA

Dražen Živić: konceptualizacija, upravljanje podacima, istraživanje, metodologija, pisanje – originalni nacrt, pisanje – revizija i uređivanje. **Nenad Pokos**: formalna analiza, istraživanje, pisanje – revizija i uređivanje. **Nikola Šimunić**: formalna analiza, istraživanje, pisanje – revizija i uređivanje.

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Prikaz

Short review

International scientific conference

Population in post-Yugoslav countries: (dis)similarities and perspectives

Belgrade, 19–20 April 2024

Međunarodna naučna konferencija

Stanovništvo u postjugoslovenskim zemljama: (ne)sličnosti i perspektive

Beograd, 19–20. april 2024.

Konferencija je održana u Velikoj sali Instituta društvenih nauka (IDN) u Beogradu, u organizaciji Društva demografa Srbije (DDS), Centra za demografska istraživanja Instituta društvenih nauka (CDI IDN) i Geografskog fakulteta Univerziteta u Beogradu (UB-GF). Ovo je treća po redu konferencija ovog tipa. Prva je održana 2016. godine, takođe u IDN-u, sa idejom da se demografi sa prostora nekadašnje zajedničke države okupljaju na svake četiri godine. Zbog vanredne situacije izazvane pandemijom virusa COVID-19, druga po redu konferencija održana je 2021. godine u *onlajn* formatu – preko *Zoom* platforme i bila je posvećena upravo izazovima i posledicama pandemije.

Ovogodišnja konferencija bavila se sličnostima i razlikama, kao i perspektivama razvoja stanovništva u zemljama nastalim na prostoru bivše Jugoslavije. Skup su otvorili predstavnici organizatora: dr Goran Bašić, naučni savetnik i direktor IDN, dr Mirjana Bobić, redovna profesorka Filozofskog fakulteta Univerziteta u Beogradu (UB-FF) i predsednica DDS, dr Vladimir Nikitović, naučni savetnik i upravnik CDI IDN-a, i dr Danica Šantić, redovna profesorka i prodekan za nauku i međunarodnu saradnju UB-GF. U svojim obraćanjima, uvodničari su istakli značaj skupa i demografskih tema kako za naučnike i istraživače, tako i za kreatore politika i sve zainteresovane strane. Na konferenciji je predstavljeno 50 radova. Preko 60 autora iz svih bivših republika Jugoslavije uzelo je učešće na ovogodišnjem skupu. Rad konferencije je organizovan u dva dana kroz šest sesija – po tri sesije svakog dana.

Moderatorke prve sesije, pod nazivom *Demografski procesi u bivšem jugoslovenskom regionu*, bile su prof. dr Mirjana Bobić, redovna profesorka UB-FF i dr Mirjana Rašević, naučna savetnica CDI IDN u penziji. U ovoj sesiji, diskutovana su istraživanja koja se bave aktuelnim

demografskim procesima u današnjim postjugoslovenskim državama. Cilj je bio da se pokaže u kojoj meri su slični odnosno različiti demografski izazovi u pojedinim državama. Takođe, detektovani su zajednički problemi u vezi sa kvalitetom podataka. Posebnu pažnju privuklo je predstavljanje pilot istraživanja buduće prve evropske kohortne studije o dobrobiti dece i mladih ljudi, koja se sprovodi u pet država, od kojih su dve – Slovenija i Hrvatska.

Druga sesija bavila se *populacionom dinamikom* i faktorima koji utiču na nju. Moderatori sesije bili su dr Vera Gligorijević, redovna profesorka i šef katedre za demografiju UB-GF i dr Ivan Marinković, viši naučni saradnik CDI DIN. Četiri rada razmatrala su pitanja mortaliteta, a tri fertiliteta stanovništva, dok su dva u fokusu imala međunarodnu mobilnost studenata. Jedan od radova je prvi put kod nas obrađivao temu rodnih razlika u fertilitetu stanovništva Srbije, s obzirom da su u popisu 2022. godine pitanja o fertilitetu prvi put postavljena muškarcima. U ovoj sesiji predstavljeni su i rezultati odnosno dosadašnji progres na dva tekuća projekta finansirana od strane Fonda za nauku Republike Srbije.

U trećoj sesiji, posvećenoj *etničkoj strukturi*, koju su moderirali dr Vladimir Nikitović, naučni savetnik CDI IDN i dr Aleksandar Knežević, redovni profesor UB-GF, najviše diskusije se povelo oko kvaliteta podataka koji se prikupljaju tokom popisa stanovništva, a tiču se nacionalne pripadnosti. Istaknute su velike oscilacije u brojnosti i zastupljenosti određenih nacionalnih manjina kroz popise, što u mnogome otežava analizu i poređenje podataka.

Četvrta sesija je tematski pokrila *starenje stanovništva* i neke aspekte starosnih i ekonomskih karakteristika domaćinstava. Sesiju su moderirale dr Mirjana Devedžić, redovna profesorka UB-GF i dr Vesna Lukić, naučna savetnica CDI IDN. Tokom diskusije bilo je reči o značaju pravilne upotrebe termina kada govorimo o starenju i starijima. Zaključak je da je proces demografskog starenja odmakao u svim populacijama posmatranih zemalja i da će narušena starosna struktura predstavljati veliki demografski izazov u budućnosti.

Peta sesija bavila se *novim metodološkim pristupima* u demografskim istraživanjima. Moderatori sesije bili su dr Marko Galjak, naučni saradnik CDI IDN i dr Jelena Stojilković Gnjatović, docentkinja UB-GF. Učesnici su ukazali na poteškoće pri poređenju popisnih podataka zbog promena u metodologiji prikupljanja podataka, kao i na nedostupnost podataka o spoljnim migracijama stanovništva.

Moderatori šeste sesije, pod nazivom *Regionalni pristup i studije slučaja*, bili su dr Petar Vasić, vanredni profesor UB-GF i dr Vera Gligorijević, redovna profesorka UB-GF. Najveći deo izlagača činili su mladi istraživači – studenti doktorskih studija, predstavivši rezultate svojih istraživanja koja čine segment njihovih budućih doktorskih disertacija. Istraživači su podrobnije istražili manje teritorijalne celine u okviru zemalja porekla i predstavili demografske izazove na lokalnom nivou. Prikazali su kako se prirodne nepogode i ljudske aktivnosti odražavaju na stanovništvo i njihova naselja koristeći primere iz Hrvatske i Srbije.

Određen broj odabranih radova sa konferencije, nakon redovnog procesa recenziranja, biće objavljen u jedina dva demografska naučna časopisa čiji izdavači imaju sedište u Srbiji – u specijalnom broju *Stanovništva*, u izdanju CDI IDN, i u *Demografiji*, u izdanju UB-GF.

Učešće na konferenciji bilo je bez kotizacije, što je dodatno omogućilo prisustvo mladih istraživača, studenata

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doktorskih studija sa univerziteta iz Srbije i zemalja okruženja, koji su imali prilike da izlažu rezultate svojih istraživanja i upoznaju se sa istraživačima iz oblasti diskutujući o aktuelnim i budućim demografskim pojavama i procesima. Na kraju, treba napomenuti da je konferencija bila izuzetno posećena i da je u potpunosti opravdala sva očekivanja, kako učesnika tako i organizatora.

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