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

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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

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

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).

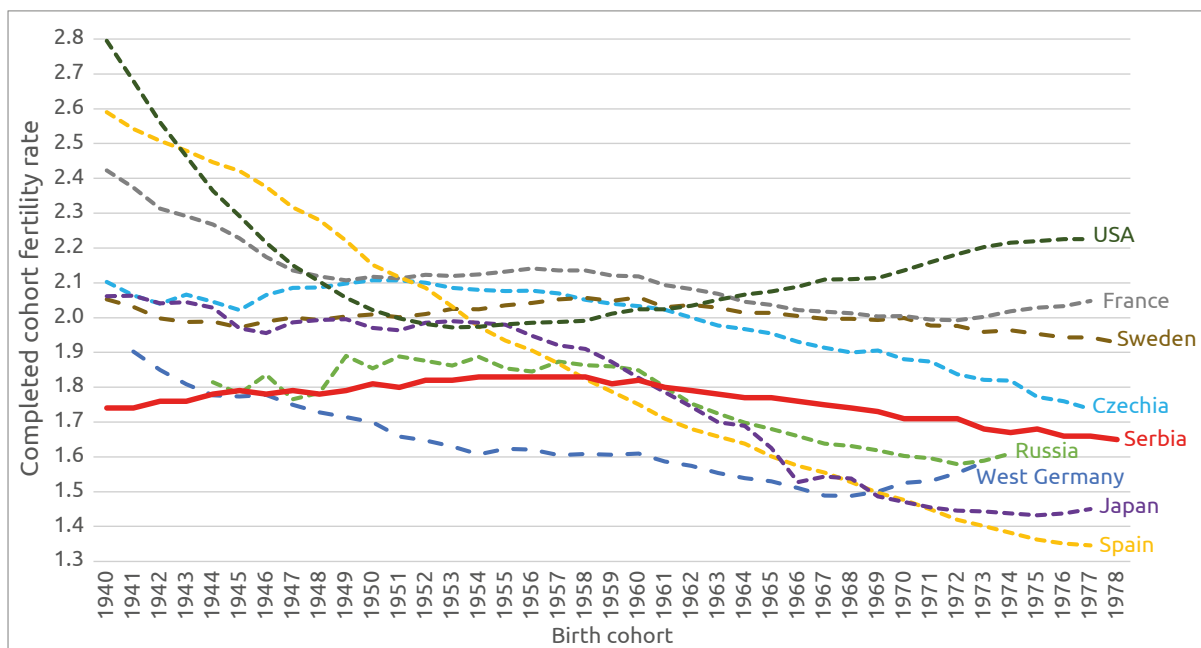All these findings are based on analyses of female fertility. Research on male

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

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).

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]

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[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:

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.

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

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:

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

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 $\qquad (3)$,

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

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):

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

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

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

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

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

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.
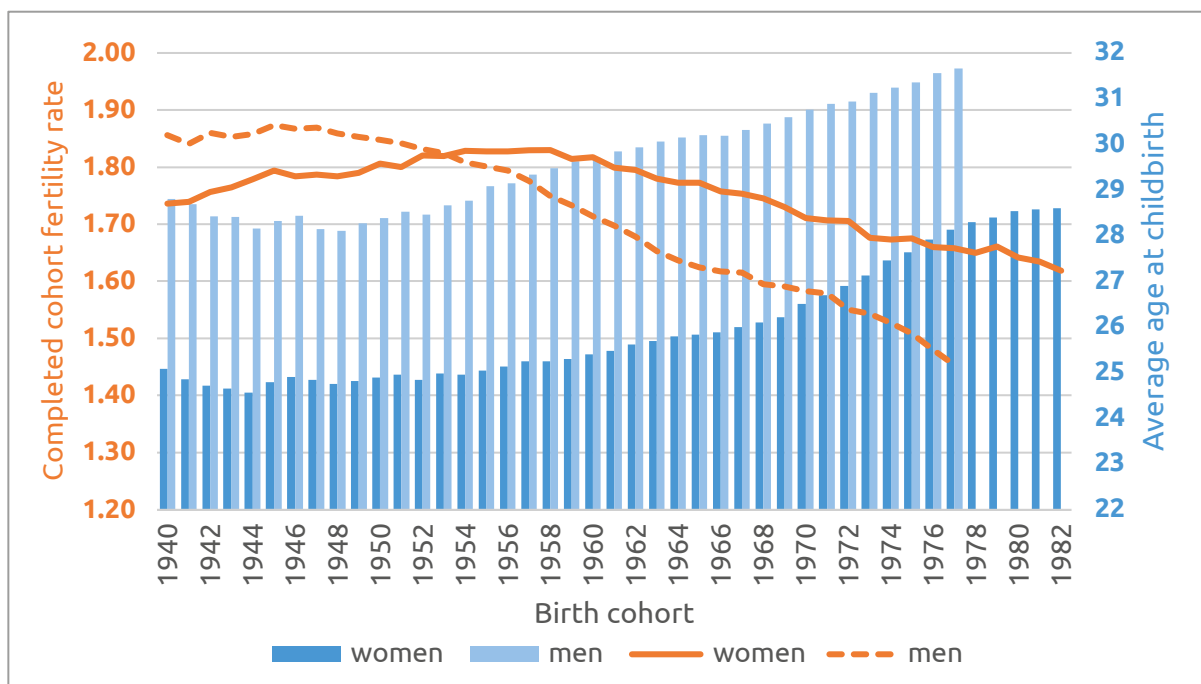

Figure 2 Cohort total fertility rate and average age at childbirth, one-year cohorts of women born 1940–1982 and men born 1940–1977
Source: authors' own calculations based on the data from the 2022 Census in Serbia

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.

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[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.

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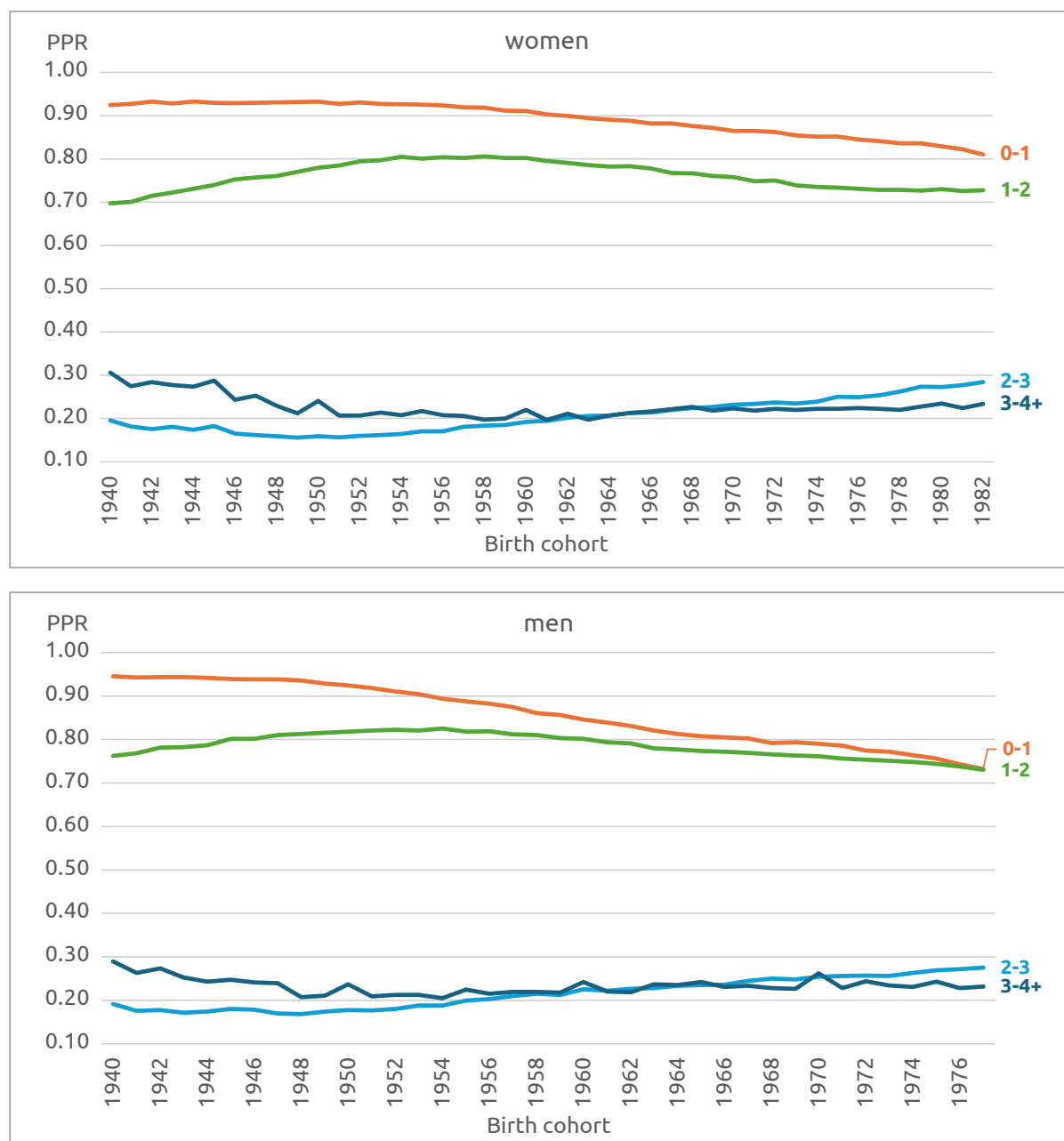
Figure 3 Parity progression ratios to first (PPR_{0-1}), second (PPR_{1-2}), third (PPR_{2-3}), fourth and higher birth orders (PPR_{3-4+}) for one-year cohorts of women born in 1940–1982 and men born in 1940–1977

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

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.
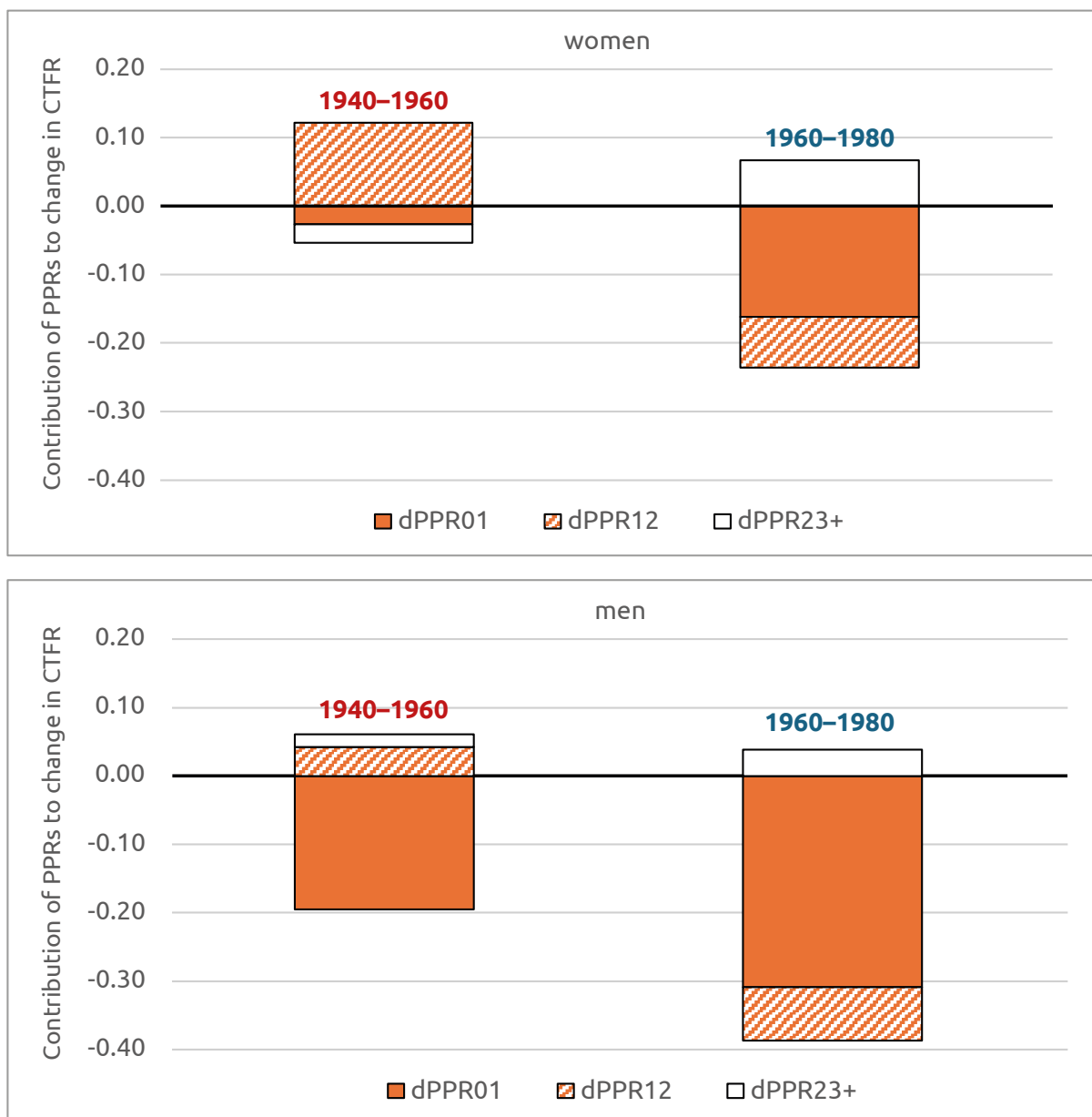

Figure 4 Contribution of changes in parity progression ratio to first (dPPR$_{01}$), second (dPPR$_{12}$) and higher-order (dPPR$_{23+}$) births to the change in completed cohort fertility among women and men born between 1940 and 1960 and between 1960 and 1980
Source: authors' own calculations based 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).
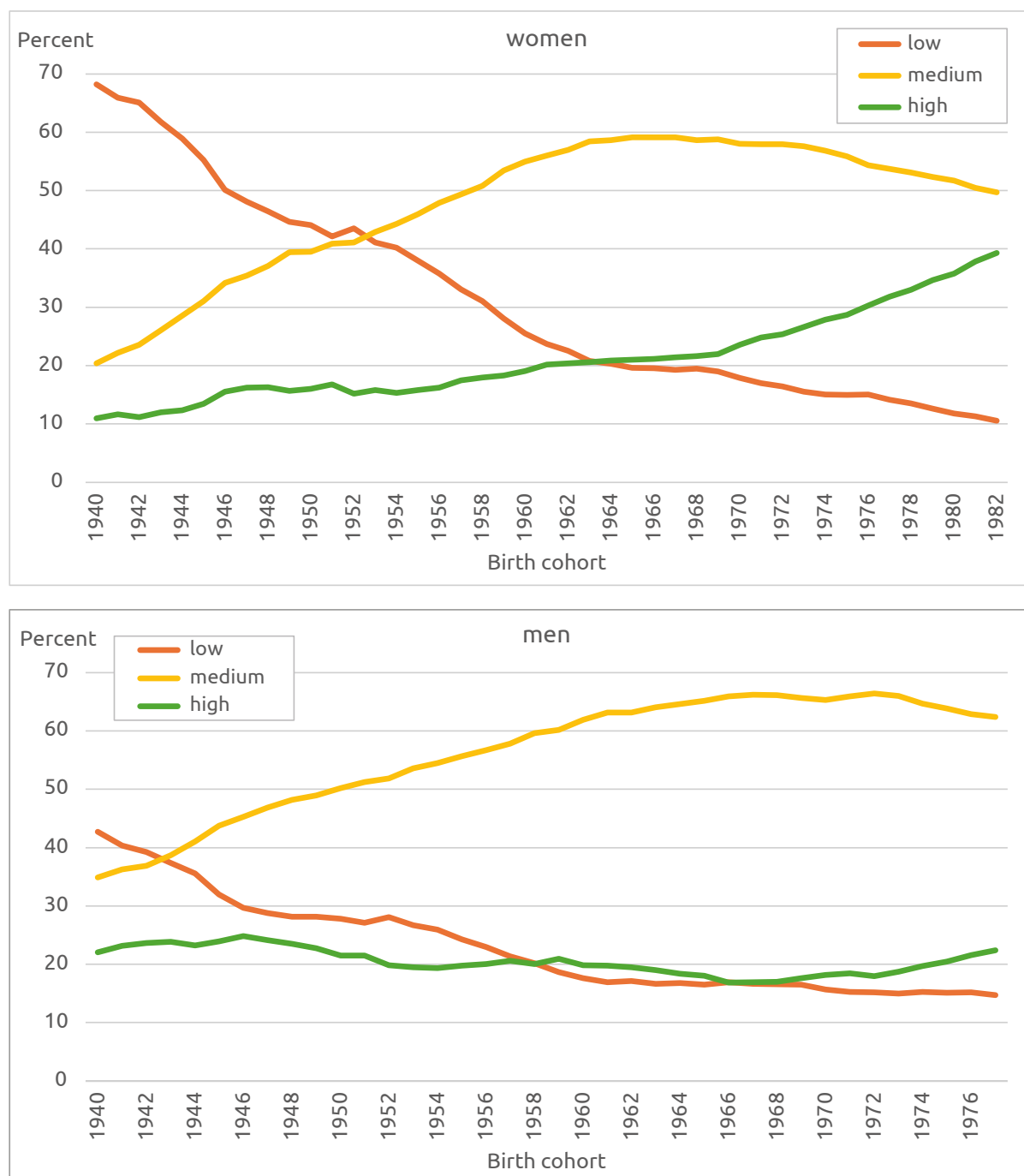

Figure 5 Educational level for one-year cohorts of women born 1940–1982 and men born 1940–1977
Source: authors' own calculations based on the data from the 2022 Census in Serbia

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.
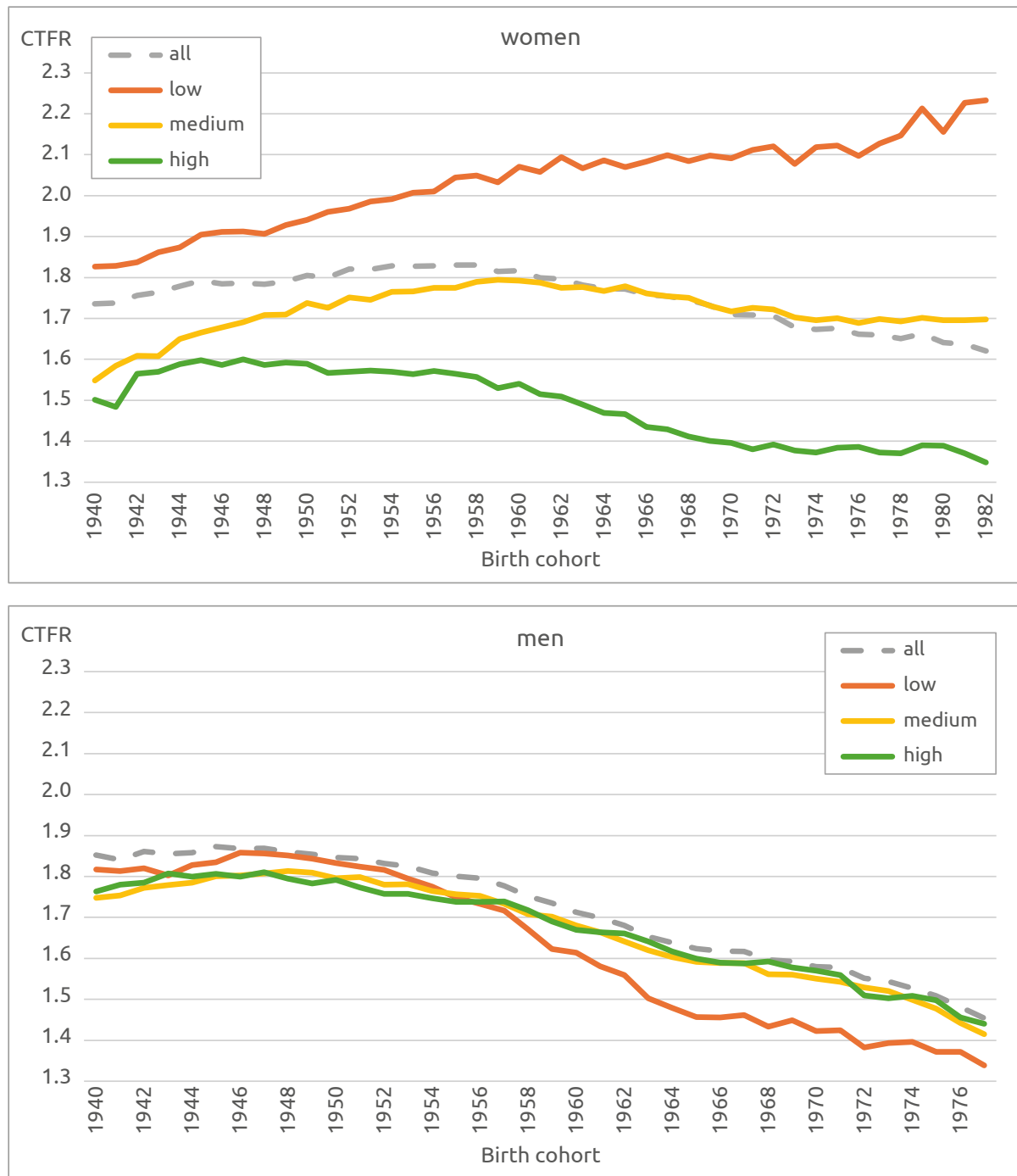

Figure 6 Completed cohort fertility rate by educational attainment for one-year cohorts of women born 1940–1982 and men born 1940–1977
Source: authors' own calculations based on the data from the 2022 Census in Serbia

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
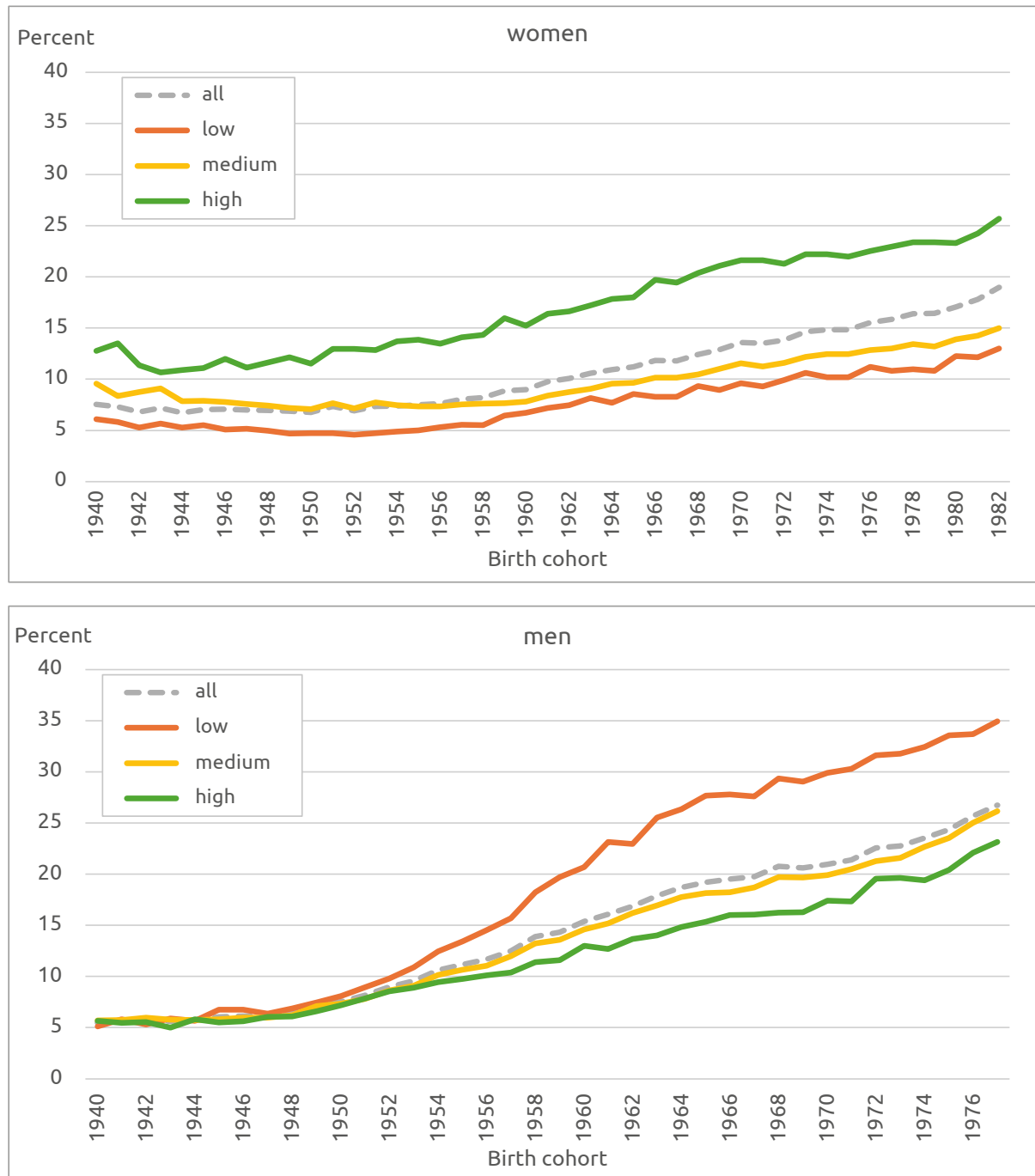

Figure 7 Childlessness (%) by educational attainment for one-year cohorts of women born 1940–1982 and men born 1940–1977
Source: authors' own calculations based on the data from the 2022 Census in Serbia

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
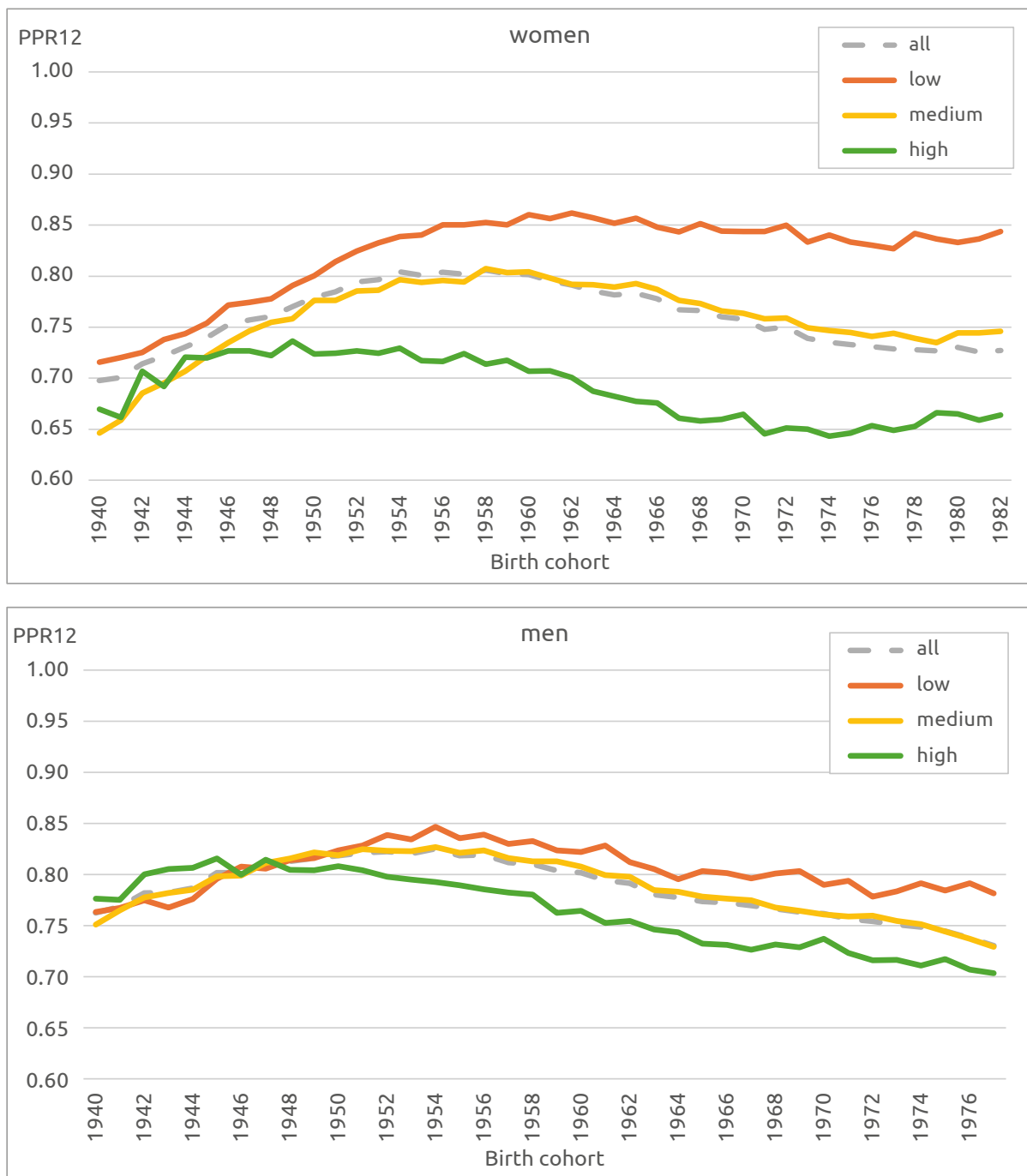

Figure 8 Parity progression ratio to second birth by educational attainment for one-year cohorts of women born 1940–1982 and men born 1940–1977
Source: authors' own calculations based on the data from the 2022 Census in Serbia

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*
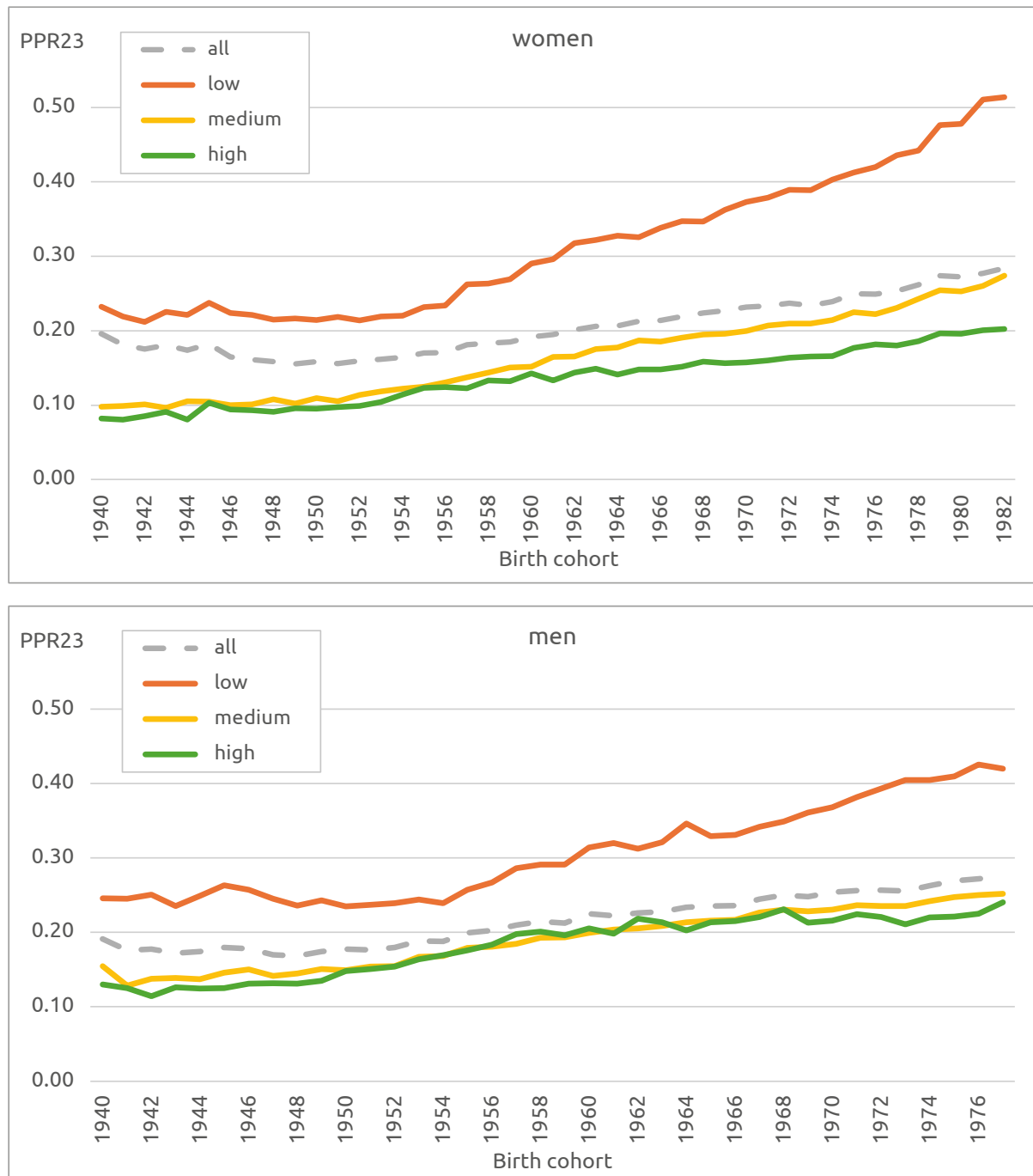

Figure 9 Parity progression ratio to third birth by educational attainment for one-year cohorts of women born 1940–1982 and men born 1940–1977
Source: authors' own calculations based on the data from the 2022 Census in Serbia

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

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

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 val-

ues 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	low	Education 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	low	Education 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

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 nisko-obrazovanih 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