

Fertility in Romania: The Delay of the Second Gender Revolution

Mălina VOICU

Răzvan Mihail PAPUC

Mălina VOICU (corresponding author)

Lecturer, PhD, Faculty of Business and Administration,
University of Bucharest, Bucharest, Romania

Tel.: 0040-733-986.543

E-mail: malina.voicu@faa.unibuc.ro

Răzvan Mihail PAPUC

Professor, PhD, Faculty of Business and Administration,
University of Bucharest, Bucharest, Romania

E-mail: razvanmihail.papuc@faa.unibuc.ro

Abstract

Fertility in Romania dropped rapidly after the collapse of the communist rule, placing the country among those with low fertility rates, and started to grow again after the year 2014. The paper approaches the dynamic of fertility in Romania, focusing on the period when fertility grew again. Using data from the semi-panel conducted by World Values Survey Romanian in 2012 and 2018, the paper looks at the changes in fertility in Romania based on micro-level data and studying trends in cohort fertility among women of fertile age and the drivers of these changes. The cohort analysis indicates that birth postponement is the main mechanism leading to the growth in fertility in Romania in the past decade. At the same time, the results provide support to the uncertainty explanation, the fear of job losing having negative impact on the number of children born by a woman. Altogether, the results suggest that Romania does not yet reach the second gender revolution, that has gender equality in private sphere at its core, fertility decision relying on traditional factors such as economic uncertainty and patriarchal model, with the male partner being the main breadwinner.

Keywords: Total Fertility Rate, Second Gender Revolution, gender roles, World Values Survey, family policies.

1. Introduction

During the Cold War, the two parts of Europe evolved in different directions, fertility following different paths in East and West, due to the differences in economic and political contexts, as well as, to distinctive values, beliefs, and norms (Frejka and Sobotka, 2008). The existing literature documents the ‘baby boom’ in the decade after the World War II, followed by the drop in fertility, in Western Europe, while in countries under Soviet influence from Central and Eastern Europe, Total Fertility Rate (TFR) remained closer to generational replacement by the collapse of the communist regime. Among the factors that sustained a TFR closer to the generational replacement, Frejka and Sobotka (2008) mentions: full employment policies providing economic stability for families and no uncertainty regarding job and income, free and broadly available public childcare, access to housing for families and for those having children, limited access to hormonal contraception and promotion of abortion as the main way to deal with unexpected pregnancy, lack of leisure activities and of travel opportunities, shorter time spent in education.

The collapse of communism in Central and Eastern Europe led to a dramatic change in fertility across the region and to the instauration of the lowest low fertility pattern for more than a decade (Jemna and David, 2018). After the year 2000, economic growth and reduction in unemployment led to a slight recovery of fertility, economic growth going hand in hand with the end of lowest low fertility in many countries (Goldstein, Sobotka and Jasilioniene, 2009), the adjustment of fertility after 1990 depending highly on the birth cohort (Frejka, 2012).

Among the countries in CEE, Romania is an interesting case, as the pro-natalist policies encouraging people to conceive early in their lives had been coupled with anti-abortion legislation and strong control of the state over the individual private life since 1967 (Kligman, 1998). Despite the efforts done by the communist government to stop the demographic decline, fertility rate varied around the level of generational replacement with some peaks when new episodes of state repression occurred (Rotariu, Dumănescu and Hărăguș, 2017). The post-communist transition brought a big drop in fertility, the lowest low fertility level being reached in 1996 and staying there for more than a decade. Fertility recovered after 2014, as in the case of other countries in CEE.

This paper looks at the trends in fertility in Romania over the past decade (2009–2020), analyzing the dynamic of TFR as compared to other countries in the European Union, and goes deeper into understanding the mechanisms leading to the recovery of fertility, as well as to the drivers of the change in fertility. It does so, by using micro-level data coming from the semi-panel collected as part of World Values Survey Romania in 2012 and 2018. The survey provides information regarding the number of children birth by women up to the moment of the interview, allowing to study the factors leading to the growth of the number of children between the two data collections. The dataset offers information about age, education, income, gender roles, and gender ideologies shared by respondents in both waves. Random Effects Regression Models were used to analyze the factors associated with the growth in the number of children. The data are particularly relevant for

understanding the drivers of fertility as the panel data collection overlaps with the period when fertility started to grow in Romania.

This paper consists of five parts, the first one being dedicated to the literature review. The second part introduces the data and the methods employed when conducting the research, while the third one presents the results. The fourth section looks at the results from the perspective of public policies employed by Romania in the past three decades. The final section is dedicated to drawing several conclusions based on the empirical data analysis and suggests further developments for research in the field of fertility.

2. Literature review

Several explanations have been employed for the lowest low TFR in CEE countries: economic uncertainty, institutional change, and cultural/ideational factors being responsible at individual and aggregate levels (Billari, 2005). Ideational explanations stress the nexus between fertility and value orientations, fertility decisions being grounded in individual beliefs and values. Economic explanations rely on rational choice as the core mechanism employed when making fertility decisions (Billingsley, 2010). The institutional approach considers changes that occurred in the institutional settings leading to transformation in fertility patterns, such as changes in the welfare state (Billari, 2005), the transition from planned to market economy in CEE countries (Frejka, 2012), or consolidation of democratic institutions during the post-communist transition (Frejka, 2012).

2.1. Cultural/ ideational explanations

The Second Demographic Transition (SDT) relates the drop in fertility with basic needs fulfillment and self-actualization, the change of TFR being the outcome of the cultural change from traditional and modern value orientations to post-modern/ post-materialist value orientation, self-actualization being at the core of this value change (van de Kaa, 1987; Lesthaeghe and Surkyn, 1988). Self-actualization is the outcome of three different revolutions: the contraceptive revolution (allowing childbirth postponement), the sexual revolution (separating sex and marriage), and the gender revolution (residing in changing gender roles and bringing women in the labor market) (van de Kaa, 1987).

The gender revolution is one of the core elements of changes in fertility and it unfolded in two parts (Goldstein *et al.*, 2009; Frejka, Goldschneider and Lappegård, 2018). In the first part of the gender revolution, women entered the labor force but did not receive support in dealing with domestic work and they entered the ‘second shift’ once they arrived home (Goldstein *et al.*, 2009). The outcome was a significant change in family life and fertility patterns, with couples resizing their fertility intentions so that the wife can cope with employment and housework. The second part of the gender revolution brought men closer to the private area and to unpaid domestic work, having the potential to lead to the growth of marriages and fertility and to the reduction of divorce and separation (Frejka, Goldschneider and Lappegård, 2018).

Empirical evidence confirms that the dominant causal arrow is from (plans for) employment to (plans for) childbearing (Frejk, Goldschneider and Lappegård, 2018). The authors found a connection between the two stages of the gender revolution, with countries with high load of second shift experiencing a steep decline in fertility, while the second gender revolution led to the growth of fertility in Norway.

A second approach focused on cultural change is Developmental Idealism and stands only for post-communist societies. The theory proposed by Thornton and Philipov (2002), places the change of social norms at the core of the drop of TFR in CEE, as the public of post-communist societies adopts norms and behaviors from the Western world and low fertility is considered as an attribute of advanced industrial societies. The mechanism bringing demographic change deals with the diffusion of social norms and behaviors, after the collapse of the Iron Curtain, in countries having previously limited contact with highly industrialized countries and their culture.

2.2. Economic explanations

The economic approach has rational choice at its core, as the main explanatory mechanism. Its' traditional version, proposed by Becker (1993), relates fertility decisions with direct and indirect costs of having children, people assessing the impact of conceiving against the direct expenses of having children (costs of food, shelter, clothing, medicines, education) and indirect expenses, the opportunity costs related with the impact on parents' carrier. Thus, when economic conditions worsen, families cannot afford to have additional costs and decide against having children at all or postpone the decision.

Postponement Transition is a theoretical approach stemming from rational choice theory, that puts uncertainty at the core of the decision-making process. According to Billari and Kohler *et al.* (2002), economic uncertainty leads to the postponement of childbearing as the outcome of a rational decision, because couples are uncertain with respect to their prospects. The effect of postponement may be traced to changes in the tempo and quantum of childbirth, leading to a low level of fertility in times of economic scarcity or when society experienced significant social change and people avoid making irreversible decisions (Billingsley, 2010).

Another explanation emphasizing the contribution of the economy to changes in TFR stems from the relative deprivation/ affluence theory proposed by Easterlin (1976). Thus, people decide to have children by assessing their aspirations against their resources, not necessarily based on the ratio between needs and resources. This approach may be particularly relevant in the context of post-communist societies that experienced, after the collapse of the communist rule, a high level of relative deprivation because they adjust their aspirations to the standards of living existing in Western Europe (Voicu, 2005).

2.3. Institutional explanations

Institutional explanations have at their core, the change of social institutions due to various reasons, like the transition from one type of economic activity to another (agrarian to industrial, industrial to post-industrial), the adaptation of the welfare state to the new

economic and social context, or consolidation of a new political rule having an impact on the governmental political agenda and on political decision making. As post-communist transition implied multiple institutional transformations, the literature talking about a quadruple transition (democratization, marketization, stateness, and nationality) (Kuzio, 2001), the former communist countries make good candidates to understand the impact of institutional change on fertility dynamics.

According to Frejka and Sobotka (2008) the resizing of fertility in CEE has been the outcome of marketization and democratization, leading to an economic and cultural context that discouraged fertility. A few simple mechanisms were employed in resizing fertility in these countries and they were rooted in the transition from planned to market economy. Economic shortage is only one of these mechanisms, that was accompanied by the rise of job insecurity and growing costs of having children due to the dissolution of the communist welfare system (Zamfir, 2000). At the same time, political transition led to the dissolution of family policies without replacing them with a new framework adapted to the requirements of the post-communist political and economic context, while exposure to the norms, attitudes, and values coming from Western Europe led to the adjustment of gender roles and family values (Voicu and Tufiş, 2012).

In the same vein, the 'communist greenhouse' approach assumes that countries under the Iron Curtain followed a different path as compared to Western Europe, because the state promoted pro-natalist policies and exerted strict control over individual life (Sobotka, 2002). Thus, due to generous family allowances, extensive public free childcare, and other incentives to get married and have children early in life, the former communist states kept the level of TFR higher than would have been without these policies (Sobotka, 2011). When the 'greenhouse' disappeared, fertility dropped suddenly because the new institutional framework was inappropriate to sustain the same social benefits and control individual lives as their predecessors did before (Frejka and Sobotka, 2008).

2.4. Mechanisms of low fertility: tempo and quantum

The number of children born by a woman depends on the tempo and quantum of childbirth. The first one refers to the age of the first pregnancy and the intervals among the following ones while the second points out the number of children.

In the 20th and 21st centuries, the main mechanism leading to a low fertility rate resides in the postponement of childbearing, namely a change in the fertility tempo (Frejka, 2008). Short tempo gives fewer opportunities to conceive, while the ability to conceive goes down with age, leading to a lower quantum of births (Toulemon, 2004). Fertility may remain constant if the quantum of birth does not go down even when tempo is delayed and that requires a shorter time span between successive pregnancies. In theory, fertility may not drop despite postponement, if the cohorts of fertile age catch up with the quantum later in life. Recuperation of fertility occurs more often in the case of the first child, and less frequently in the case of the second, and is more spread in Western Europe and Scandinavian countries and less likely to occur in Southern Europe and CEE (Frejka and Gietel-Basten, 2016).

Postponement of childbearing occurred as the outcome of several factors such as economic scarcity and rising unemployment (Goldstein, Sobotka and Jasilioniene, 2009), female employment, and time they spent in education, both being related to the change of gender roles (Frejka, Goldscheider and Lappegård, 2018). The postponement has its own rhythm: starts slowly, accelerates and decelerates when a new equilibrium is reached (Goldstein, Sobotka and Jasilioniene, 2009).

Postponement of childbearing leads to delays in conceiving and different tempo of motherhood across various cohorts. Although easily available, completed cohort fertility has the disadvantage of providing information with a time lag of 10 to 15 years. The data available for analysis now reflects the trends in fertility a decade ago, a shortcoming that can be overpast by computing the cohort fertility pattern of the generations that are in the middle of their reproductive period (Frejka and Sobotka, 2008).

The transition of cohort fertility followed four different paths: Central and Eastern Europe reported an early drop in the cohort fertility rate at the end of the 19th century, followed by a recovery for the cohort 1930 and a drop under the replacement level for the cohorts born after 1970 (Frejka, 2017). This result indicates that variation in fertility is path dependent, being rooted in the common history of these countries.

3. Data and methods

The study employs data coming from two sources. The first one is Eurostat which provided aggregate data about Total Fertility Rate (TFR) in EU countries allowing to analyze the trends in fertility between 2009 and 2020. The analysis describes the trends in CEE countries and countries having a high fertility rate in the past decade, namely France, Belgium, Netherlands, Finland, Sweden, Denmark, and Norway.

The second source of data resides in World Values Survey (WVS) Romania conducted in 2012 and 2018 (Inglehart *et al.*, 2020), which includes a partial panel of 561 cases¹. After selecting the women of fertile age, born between 1970 and 1994, the sample size was reduced to 305 and dropped further to 264 cases after the listwise deletion of missing values. The sample size does not allow making statistical inferences, however, it helps to understand the mechanisms leading to the growth of fertility, as well as the factors leading to social change.

The study employed descriptive statistics to analyze the differences in fertility among birth cohorts, and the percentage of the birth cohorts by the rank of birth being used. In the next step, Random Effects Linear Regression analysis was used to test the connection between the number of children and several independent variables. The birth cohort was tapped by five dummy variables, the first cohort born between 1970 and 1974 being the reference category, while the effect of the period was controlled by a dummy variable, 2012

1 Further details regarding the data collection and the dataset are available here <http://www.romanianvalues.ro/in-the-news/firstpublicreleaseoftheromanianevswvs20172018data>.

being the reference category. Family income and the squared variable were used to control for the effect of economic status and the fear of losing job stands for the impact of economic uncertainty. Education was tapped by a 9-point scale variable values ranging from 1 ‘no education’ to 9 ‘doctoral studies’, while a dummy variable pointed out the effect of residential area (rural as reference category). Two variables captured the effect of gender roles, one dummy indicating whether the respondent is the main breadwinner and the second measuring on a four-point scale the support for the statement ‘A university education is more important for a boy than for a girl’.

4. Results

4.1. Trends in fertility in Europe: 2009 to 2020

The dynamic of fertility in Europe changed in the past decade, two trends being notably opposed. The literature documents the high level of fertility in several European countries, France, Belgium, Netherlands and the Scandinavian ones (Frejka and Sobotka, 2008). For decades these countries were considered champions in keeping up the level of fertility and in motivating their residents to conceive. However, since the beginning of the Great Recession, the total fertility rate has fallen in all these countries and the decline is still ongoing. The most notable evolution was experienced by Finland where the TFR dropped from 1.86 in 2009 to 1.37 in 2020, while in Ireland it went from 2.06 in 2009 to 1.63 in 2020, as shown in Figure 1.

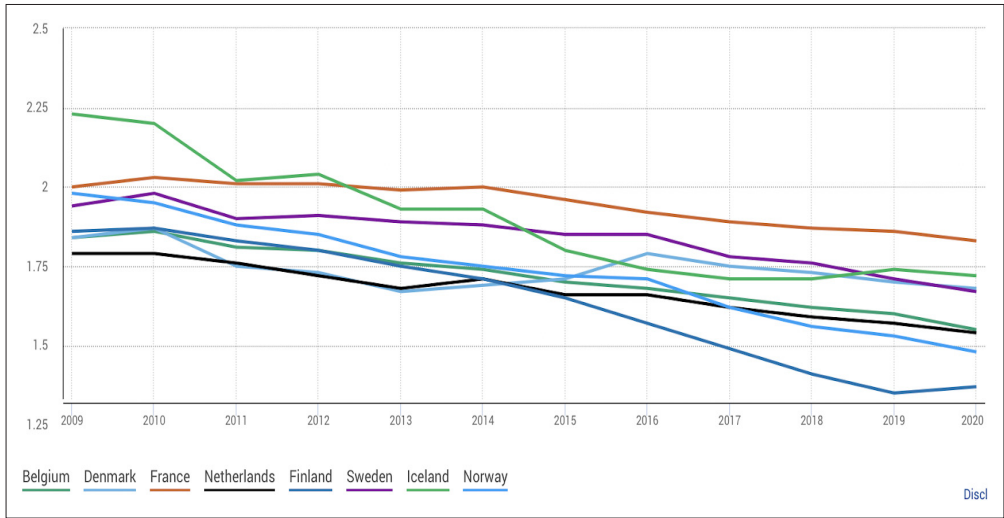


Figure 1: Total Fertility Rate in European countries with high fertility (2009–2020)

Source: Eurostat [TPS00199]

On the opposite end, several post-communist countries have recorded growth in TFR since the end of the Great Recession, as shown in Figure 2. Czechia, Hungary, Poland, Romania, and Slovakia experienced at least five consecutive years of positive trends in TFR beginning with 2013. Poland is the only country where the TFR dropped after 2017, while in the other four, the positive trend continued until 2020. The data for 2021 are not yet available but TFR bears the imprint of the COVID-19 pandemic that pushed down the willingness of having children everywhere.

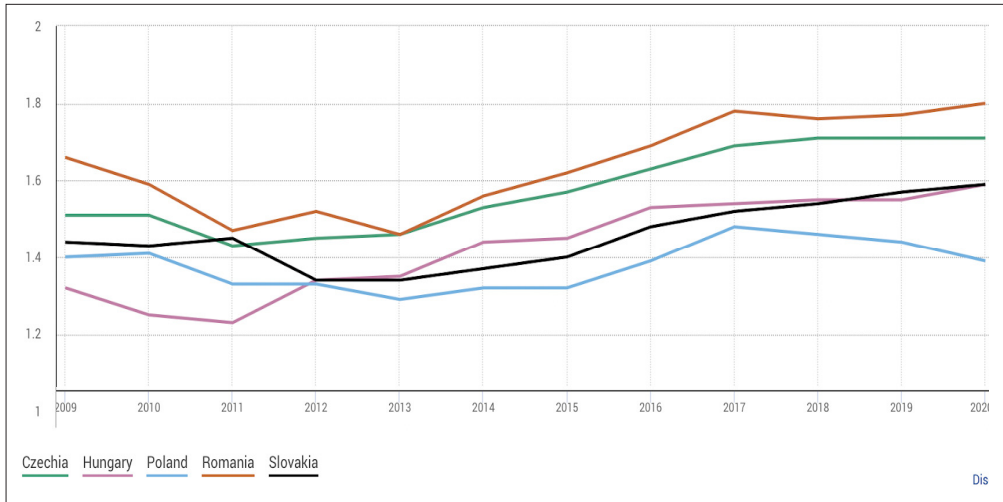


Figure 2: Total fertility rate in post-communist countries (2009–2020)

Source: Eurostat [TPS00199]

4.2. Fertility in Romania

Romania belongs to the group of post-communist societies that experienced a huge drop in the fertility rate, at the same time as the massive immigration in the past three decades. The outcome resides in a decrease in the total volume of the population from about 23 million in 1990 to 19 million residents in 2022 (Census of Population and Housing, 2021). Since the collapse of the communist regime, fertility has dropped very fast in the first decade of transition and remained low by 2013. After the collapse of the communist regime, fertility dropped from 2.2 in 1989 to 1.3 in 1996, Romania becoming one of the countries with the lowest-low fertility (Rotariu, Dumănescu and Hărăguș, 2017). Since 2013, TFR has grown constantly, following a path like the one in Czechia, Slovakia, and Hungary, and having one of the top TFR in Europe.

Although there is no microdata allowing to analyze the trends in fertility and fertility intentions covering the period after 1990, the macro data from EUROSTAT points out to the positive trend in Romania. Previous work has shown that fertility intentions in Romania are due to normative pressure and perceived benefits of having children, both being connected to the traditional family pattern promoted by Romanian culture (Cirtel, De Rose and Arezzo, 2019).

Data coming from the WVS panel covering the period 2012 to 2018 provides additional support to the same trend. According to the data in Figure 3, the share of women of fertile age without children was 24%, while in 2018 dropped to 18%. Moreover, fertility grew over the observed period due to both first-rank births, as well as to superior-rank births. While in 2012 the share of those having one child was the same as the one of women having two children, namely 32%, in 2018 the model of two children families prevailed in 40% of cases as compared to the one-child families (28%). In the same vein, the share of those having more than three children grew from 10% to 15% and that is a considerable growth within 6 years.

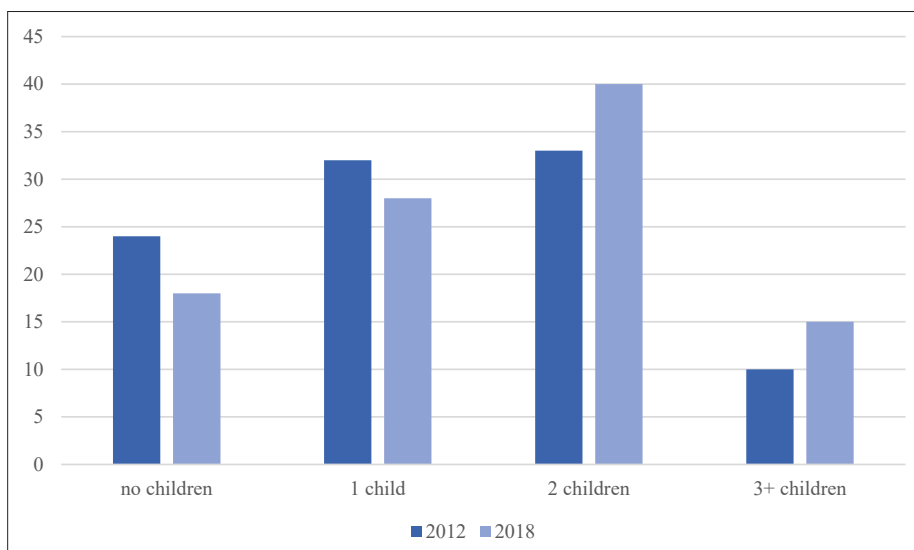


Figure 3: Share of women of fertile age by number of children 2012 to 2018 (WVS panel)

Source: WVS Romania 2012 and 2018

Looking from the perspective of birth cohorts, according to the data shown in Table 1, the highest change between 2012 and 2018 occurs in the case of the cohort born 1990–1994, the share of those childless women dropping from 44% to 18%, while the share of first rank births grew from 33% to 59% and the one of second rank birth grew with 13%. Basically, 37% of women in our sample, who are in the middle of their fertile period, gave birth to at least one child between 2012 and 2018. This finding points out in a different direction as compared to the existing literature that finds postponement as main mechanism for fertility recovering in CEE countries (Frejka, 2017).

Another important change occurred in the case of the cohort 1985–1989, which is also in the middle of its fertile period. In this case, there was a drop in the share of first and second-rank births and an increase of 17% of 3+ births. No change was recorded for childless women. These findings suggest a split in fertility trends among the women in this birth cohort, some of them remaining childless or postponing their fertility intentions, while those who bear a child at the beginning of their fertile age go for the larger family model.

Table 1: Number of children by birth cohort of women of fertile age in 2012 & 2018 (%)

| Birth cohort | 2012 | | | | 2018 | | | | Total 2012 | Total 2018 |
|--------------|------|----|----|----|------|----|----|----|------------|------------|
| | 0 | 1 | 2 | 3+ | 0 | 1 | 2 | 3+ | | |
| 1970–1974 | 11 | 25 | 42 | 22 | 9 | 23 | 51 | 17 | 100 | |
| 1975–1979 | 17 | 37 | 47 | 0 | 13 | 27 | 57 | 3 | 100 | |
| 1980–1984 | 19 | 38 | 31 | 13 | 17 | 30 | 37 | 17 | 100 | |
| 1985–1989 | 13 | 39 | 35 | 13 | 13 | 26 | 30 | 30 | 100 | |
| 1990–1994 | 44 | 33 | 11 | 11 | 18 | 59 | 24 | 0 | 100 | |
| 1995–1999 | 85 | 15 | 0 | 0 | 69 | 15 | 15 | 0 | 100 | |

Source: WVS Romania 2012 and 2018

The two cohorts approaching the end of their fertile age (1970–1974 and 1975–1979) display growth in second and higher ranks births, trying to catch up with the two-children family model. This is most likely the outcome of the childbearing postponement of the two cohorts that entered their fertile age in the first decade of the post-communist transition, which was also the most difficult one with respect to the economic crisis, future uncertainty, and institutional change. A growth in second and higher ranks births can be noticed for the cohort 1980–1985 which approaches the second half of their fertile period and starts enlarging their families above the one-child family model.

According to these results, the boost in fertility in Romania after 2013 occurred as a combination of generational change and birth postponement. In the case of younger cohorts, that came of age after the collapse of the communist regime, we can talk about a boost in fertility before the age of 30, this finding contradicts the existing literature reporting postponement as the sole reason for fertility recovery in CEE countries.

4.3. Drivers of changes in fertility in Romania

Random effects linear regression was employed to figure out the drivers of fertility between 2012 and 2018. The analysis based on Romanian WVS panel data points out a mix that explains the growth of the number of children among women of fertile age. The model shown in Table 3 points out to important differences within and between individuals that account for the trends in fertility. Thus, the birth cohort seems to be one of the relevant drivers of fertility, with all cohorts having lower levels of fertility as compared to the reference category which is the cohort born between 1970 and 1974. The differences are statistically significant between these cohorts and the cohort 1975–1979 as well as between it and the youngest cohorts in the sample (women born after 1990). This result provides support to the postponement hypothesis, showing that women at the end of their fertile age were more likely to conceive than any other cohort and to catch up with desired fertility. Besides the effect of the birth cohort, the data in Table 3 indicates a significant contribution of the period to the growth in fertility, as shown by the statistically significant coefficient of the survey year.

Table 3: Random effects linear regression dependent variable: number of children birth by women of fertile age (2012 and 2018)

| | Unstandardized Coefficient | |
|-------------------------------------|----------------------------|-----|
| Cohort (1970–1974 reference) | | |
| 1975–1979 | -0.387 | + |
| 1980–1984 | -0.279 | |
| 1985–1989 | -0.160 | |
| 1990–1994 | -0.983 | *** |
| 1995–1999 | -1.410 | *** |
| survey year 2018 | 0.294 | ** |
| urban residence | -0.260 | ** |
| Income | -0.295 | * |
| income ² | 0.027 | * |
| Education | -0.062 | ** |
| not afraid to losing job | 0.130 | ** |
| not main income provider | 0.250 | * |
| gender ideology | -0.166 | * |
| _const | 3.169 | *** |

R² within = 0.175; R² between = 0,343; R² within = 0.337

*** p <.001; ** p<.01; * p<.05; + <.10;

valid N individuals=263; valid N groups=151

Source: Authors' own calculations

Among the individual factors contributing to the growth of fertility, the results of random effect regression indicate an important effect of living outside urban areas, the growth of fertility being more likely to occur among those having rural residency. This finding supports the idea that the family model promoted by the rural population in Romania is more traditional than the one living in towns (Voicu and Popescu, 2006).

Moreover, the results provide support to the uncertainty explanation and to the economic explanations of fertility, but to a lesser extent. Thus, income and education play a role in growing fertility, the same being true in case of economic uncertainty taped by the variable 'not afraid of losing job' that has a statistically significant effect on the number of children born by a woman over the observed period. The regression results point out a quadratic relationship between fertility and income, with high fertility in the case of low and high income. Regarding uncertainty, the results show that childbearing is high when the mother does not feel insecure regarding her job prospects.

The last factors employed in the model account for the contribution of gender roles to childbearing, both in terms of the gender balance of power within a couple and gender ideology shared by women. Both factors, power balance, and gender ideology indicate an association between the traditional family model and the number of children, with women living in traditional arrangements having a higher number of children. Thus, women who

are not the main income provider and those sharing traditional gender ideology have a higher number of children.

5. Discussions

If we look at the trends in fertility from the perspective of population policies, the outlook is rather a puzzle, not a picture, as this dynamic is partial to the outcome of the public policies targeting population size, but part of it was neither expected, nor envisaged. Therefore, considering the changes pointed out by these analyses may be of great help in both changing the puzzle into a picture and designing public policies better tailored to the current population trends in Romania.

After the collapse of the communist rule in Romania, the pro-natalist policy promoted by the former regime was abandoned, while the scientific debate pointed out the need of replacing it with public policies that can foster fertility without intervening directly into individual private life, such as poverty reduction, quality of life, gender equality and family policies (Mărginean, 2000; Trebici, 1994). In the following decades, the public policies with an impact on fertility targeted the middle class, providing various incentives for women in paid employment, mainly residents in urban areas, to conceive, through a mix of paid leaves and incentives to return to work early after childbirth, at the same time, fertility among women outside formal labor market being discouraged by connecting the childcare entitlements to previous participation to the labor market. Moreover, public childcare provision was reduced after 1990, affecting mainly children under three years old, while the family was supposed to be the main care provider (Băluță, 2014). Raț (2010) calls this mix a dual policy of ‘implicit familism’ that targeted families outside paid employment and ‘optional familism’ for parents active on the labor market, pointing out that family is seen as the main provider of care and welfare for children, while the public policies were meant to unburden only the parents with employment record. In addition, this policy might lead to a reduction in fertility among low-income families, as the family allowances have been top-up mean tested benefits, granted up to the third child and conditioned by school attendance (Raț and Szikra, 2018).

On the other hand, as the demographic decline became a hot issue on the public agenda, the government adopted more proactive policies to boost fertility and did so based on the assumption that the main mechanism beyond low fertility lays in birth postponement which led to a reduced likelihood to conceive as the couples approach the end of their fertile age. Since 2011, the government has partially subsidized In Vitro Fertilization (IVF), while in 2022, the Ministry of Family adopted the National Program for Natality Growth, which extends the previous support for IVF, and a program meant to encourage family formation by subsidizing loans for organizing weddings, buying furniture and home appliances or family cars. These policies are relevant for at least two reasons, they provide further incentives to the middle class to get married and to have children, and they do so by encouraging both at the same time, which shows that in the view of policy decision-makers, family formation is the first step for having children.

The effect of these family policies became visible after the year 2012, when fertility started growing and continued its positive path in the following years. However, this trend was not the full outcome of the family policies promoted by the government in the past decades, as the results reported by this paper indicate a boost in fertility among high-, and low-income families, as well as among those living in rural areas. In other words, in spite of the lack of incentives among low-income, traditional families from rural areas, fertility grew here too, leaving the parents without much support from the state and pushing into poverty a large share of these families, as the risk of poverty in Romania is the highest among families with young children (Zamfir, 2022). Thus, the needs of low-income families with children should be better addressed, by providing active support for the care and education of the young generation, with special attention being required by those families living in rural areas where access to public childcare and education is limited.

6. Conclusions

The paper approaches the dynamic of fertility in Romania, focusing on the past decade, which was the decade of the revival of fertility that started in 2014. Using data from various sources, such as Eurostat to analyze aggregate change and World Values Survey Romanian panel 2012 and 2018, the paper looks at the trends in Total Fertility Rate in CEE countries as compared to other European countries with high TFR, focusing on the next step on changes in fertility in Romania based on micro-level data and studying the trends in cohort fertility among women of fertile age between 2012 and 2018 and the drivers of these changes.

The results indicate a change in fertility trends in the European Union, some of the post-communist countries that belonged to the lowest low fertility group, switched trends, and experienced a growth in the fertility rate after 2013. At the same time, countries that had high fertility rates in the past decades, closer to the generational replacement, display a descendent trend after 2010, as the consequence of the Great Recession between 2008 and 2011 (Alderotti *et al.*, 2021). Not only that Romania belongs to the first group of countries, but according to the Eurostat data, reached the top position of TFR in the European Union in 2020, surpassing countries like France, Belgium, and Sweden which are now on the decreasing path.

The micro-data retrieved from the semi-panel conducted within the frame of the World Value Survey in Romania provides the opportunity to analyze the factors influencing the change in fertility among women of fertile age. The data allows understanding the mechanisms that fueled the growth of fertility in the past decade, as the micro-data covers the period when the change occurred. The cohort analysis indicates that the boost of fertility was the outcome of the mix between generational change, young cohorts born after 1990 displaying a positive trend in fertility over the observed period, and the postponement of birth of high rank in the case of cohorts approaching the end of their fertile period. After controlling for period effects, area of residence, and socio-demographic factors, the oldest cohort in the sample differs significantly from the following cohort and the youngest cohorts

and has the highest likelihood of giving birth. These findings put forward the postponement as the main mechanism leading to the growth in fertility in Romania in the past decade.

The results provide support to the uncertainty explanation, the fear of losing the job having a negative impact on the number of children, while the quadratic impact of income proves that fertility is high among those having low and high incomes and drops in the case of those with income around the mean. Gender roles also play a role in shaping fertility, women living in traditional arrangements and sharing traditional gender ideology have more children. This traditional family pattern is reinforced by rural residence. Altogether, the results suggest that Romania does not reach yet the second gender revolution and fertility decision relies on traditional factors such as economic uncertainty and the patriarchal model, with the male partner being the main breadwinner.

This outcome suggests that the drop in fertility in the first decades of the post-communist transition originated mainly from the economic uncertainty that prevailed between 1990 and 2000, affecting mainly fertility of the women born between 1970 and 1979, who postponed childbearing and catch up at the end of their fertile period. The economic recovery that followed after 2000 did not bring an immediate growth of fertility but left an imprint on the young cohorts that had their formative years after 2000 and who do not follow the same postponement pattern. However, the small sample size and the fact that the panel is limited to only two points in time, do not allow generalizing these results and further research is needed to understand the fertility behavior of the younger cohorts and the impact of generational change on childbearing.

Moreover, the connection between fertility and traditional gender roles and gender ideology may lead to a split between women sharing traditional and modern gender ideology, the first ones following the path of high-rank births while the second group remains childless. However, further research is needed to fully understand the mechanisms leading to fertility decisions and their association with gender roles and gender ideology. As proved in the case of countries in Northern Europe, the second gender revolution was not powerful enough to resist in front of economic disruption and uncertainty. Future research should look at CEE countries from a broader perspective and understand the evolution of fertility here by comparing it with the trends in Western Europe.

The empirical data shows that family policies in Romania targeted mainly the middle class and they were successful, the growth in fertility being, at least in part, connected to the support provided to the parents active on the labor market. However, by targeting only the middle class, the government neglected fertility in low-income strata, which led to the boost of poverty rate among low-income families with children, which display a growth in fertility after 2012, too. Moreover, fertility grew among low-income families too, even though there was no support provided for childcare and education, leading to an increase in the size of the population with children but no support and not enough resources to invest in their future. For practical reasons, the Romanian society should also design and implement more encompassing policies that can reach the children at high risk of poverty and social exclusion and provide them equal chances to develop into the next generation of full citizens.

References:

1. Alderotti, G., Vignoli, D., Baccini, M. and Matysiak, A., 'Employment Instability and Fertility in Europe: A Meta-analysis', 2021, *Demography*, vol. 58, no. 3, pp. 871–900.
2. Băluță, I., 'Child Care in Post-communist Romania between Familialist Ideology, Labour Market and Gender Roles', 2014, *Revista de Cercetare și Intervenție Socială*, vol. 46, pp. 227–242.
3. Becker, G., *A Treatise on the Family*, Cambridge: Harvard University Press, 1993.
4. Billari, F. and Kohler, H.P., 'Patterns of Lowest-low Fertility in Europe', 2002, Max Planck Institute for Demographic Research, Working Paper 2002-040.
5. Billari, F., 'Europe and its Fertility: From Low to Lowest Low', 2005, *National Institute Economic Review*, vol. 194, no. 1, pp. 56–73.
6. Billingsley, S., 'The Post-Communist Fertility Puzzle', 2010, *Population Research and Policy Review*, vol. 29, no. 2, pp. 193–231.
7. Census of Population and Housing 2021. Population at censuses from years 1948, 1956, 1966, 1977, 1992, 2002, 2011, and 2021 [Table 1.01], [Online] available at <https://www.recensamantromania.ro/rezultate-rpl-2021/rezultate-definitive-caracteristici-demografice/> accessed on April 18, 2023.
8. Ciritel, A.A., De Rose, A. and Arezzo, M.F., 'Childbearing Intentions in a Low Fertility Context: The Case of Romania', 2019, *Genus*, vol. 75, no. 4.
9. Easterlin, R.A., 'The Conflict between Aspirations and Resources', 1976, *Population and Development Review*, vol. 2, no. 3/4, pp. 417–425.
10. Eurostat, 'Total fertility rate', [Online] available at <https://ec.europa.eu/eurostat/web/products-datasets/-/TPS00199>, accessed on March 28, 2023.
11. Frejka, T. and Gietel-Basten, S., 'Fertility and Family Policies in Central and Eastern Europe after 1990', 2016, *Comparative Population Studies*, vol. 41, no. 1, pp. 3–56.
12. Frejka, T. and Sobotka, T., 'Fertility in Europe: Diverse, Delayed and Below Replacement', 2008, *Demographic Research*, vol. 19, no. 3, pp. 15–45.
13. Frejka, T., 'The Fertility Transition Revisited: A Cohort Perspective', 2017, *Comparative Population Studies*, vol. 42, pp. 89–116.
14. Frejka, T., 'The Role of Contemporary Childbearing Postponement and Recuperation in Shaping Period Fertility Trends', 2012, *Comparative Population Studies*, vol. 36, no. 4, pp. 927–957.
15. Frejka, T., Goldscheider, F. and Lappegård, T., 'The Two-part Gender Revolution, Women's Second Shift and Changing Cohort Fertility', 2018, *Comparative Population Studies*, vol. 43, pp. 99–130.
16. Goldstein, J.R., Sobotka, T. and Jasilioniene, A., 'The End of 'Lowest-low' Fertility?', 2009, *Population and Development Review*, vol. 35, no. 4, pp. 663–699.
17. Inglehart, R., Haerper, C., Moreno, A., Welzel, C., Kizilova, K., Diez-Medrano, J., Lagos, M., Norris, P., Ponarin, E. and Puranen, B. et al. (eds.), *World Values Survey: All Rounds – Country-Pooled Datafile*, Madrid, Spain & Vienna, Austria: JD Systems Institute & WWSA Secretariat [Version: <http://www.worldvaluessurvey.org/WVSDocumentationWVL.jsp>], 2020.
18. Jemna, V.D. and David, M., 'Post-transitional Regional Fertility in Romania', 2018, *Demographic Research*, vol. 38, art. 57, pp. 1733–1776.

19. Kligman, G., *The Politics of Duplicity: Controlling Reproduction in Ceausescu's Romania*, Los Angeles: University of California Press, 1998.
20. Kuzio, T., 'Nationalising States' or Nation-building? A Critical Review of the Theoretical Literature and Empirical Evidence', 2001, *Nations and Nationalism*, vol. 7, no. 2, pp. 135–154.
21. Lesthaeghe, R. and Surkyn, J., 'Cultural Dynamics and Economic Theories of Fertility Change', 1988, *Population and Development Review*, vol. 14, no. 1, pp. 1–45.
22. Mărginean, I., 'Oportunitatea Politicilor Demografice în România' [Opportunity of Demographic Policies in Romania], 2000, *Calitatea Vieții*, vol. 12, no. 1-4, pp. 3–6.
23. Philipov, D., 'Fertility in Times of Discontinuous Societal Change: The Case of Central and Eastern Europe', 2002, Max Planck Institute for Demographic Research, Working Paper 2002-024.
24. Raț, C. and Szikra, D., 'Family Policies and Social Inequalities in Central and Eastern Europe: A Comparative Analysis of Hungary, Poland and Romania between 2005 and 2015', in Eydal G.B. and Rostgaards, T. (eds), *Handbook of Family Policy*, Cheltenham, UK: Edward Edgar Publishing, 2018, pp. 223–235.
25. Raț, C., 'Disciplining Mothers: Fertility Threats and Family Policies in Romania', 2010, *Social Sciences Eastern Europe: Family Patterns and Demographic Development*, vol. 1, pp. 75–86.
26. Rotariu, T., Dumănescu, L. and Hărăguș, M., *Demografia României în perioada postbelică (1948–2015)* [Demography of Romania in the postwar period (1948–2015)], Iași: Polirom, 2017.
27. Sobotka, T., 'Fertility in Central and Eastern Europe after 1989: Collapse and Gradual Recovery', 2011, *Historical Social Research*, vol. 36, no. 2, pp. 246–296.
28. Sobotka, T., 'Ten Years of Rapid Fertility Changes in the European Post-communist Countries. Evidence and Interpretation', 2002, University of Groningen Population Research Centre, Working Paper Series 02-1.
29. Thornton, A. and Philipov, D., 'Sweeping Changes in Marriage, Cohabitation, and Childbearing in Central and Eastern Europe: New Insights from the Developmental Idealism Framework', 2009, *European Journal of Population*, vol. 25, no. 2, pp. 123–156.
30. Toulemon, L., 'Fertility among Immigrant Women: New Data, A New Approach', no. 400, April 2004, *Population and Societies*, [Online] available at <https://www.ined.fr/en/publications/editions/population-and-societies/fertility-among-immigrant-women-new-data-a-new-approach-en/>, accessed on January 15, 2023.
31. Trebici, V., 'Este necesară o politică demografică în România?' [Is There a Need for a Demographic Policy in Romania?], 1994, *Revista de Cercetări Sociale*, vol. 2, pp. 47–58.
32. Van De Kaa, D.J., 'Europe's Second Demographic Transition', 1987, *Population Bulletin*, vol. 42, no. 1, pp. 1–59.
33. Voicu, B., *Penuria postmodernă a postcomunismului românesc* [The Postmodern Shortage of Romanian Postcommunism], Iași: Expert Projects, 2005.
34. Voicu, M. and Popescu R., 'Nașterea și căsătoria la populația de romi' [Birth and Marriage in the Roma Population], 2006, *Calitatea Vieții*, vol. 17, no. 3-4, pp. 253–279.
35. Voicu, M. and Tufiș, P.A., 'Trends in Gender Beliefs in Romania: 1993–2008', 2012, *Current Sociology*, vol. 60, no. 1, pp. 61–80.
36. Zamfir, C., *Politici sociale în România 1990–1999* [Social Policies in Romania 1990–1999], Bucharest: Expert, 2000.

37. Zamfir, E., 'Rata riscului de sărăcie în rândul copiilor' [Risk of Poverty Rate among Children], in Căce, S., Voicu, M., Marin, M. and Aldea, I. (eds.), *Atlas social: România la 14 ani de la integrarea în Uniunea Europeană* [Social Atlas: Romania 14 Years after Integration in the European Union], Bucharest: Quality of Life, 2022.