

## FERTILITY DYNAMICS IN SWEDEN, SPAIN, THE CZECH REPUBLIC AND UKRAINE: A COHORTE PERSPECTIVE

*Elena SOLDAN<sup>1</sup>, Master Student,  
Academy of Economic Studies of Moldova  
Olga GAGAUZ<sup>2</sup>, PhD,  
National Institute for Economic Research,  
Republic of Moldova*

*The present study aims to explore the dynamics of the cohort fertility in Sweden, Spain, the Czech Republic and Ukraine. The postponement and recuperation of fertility are analysed in order to find the differences within this process and how it is reflected in complete cohort fertility rate. The study is based on the Human Fertility Database that provides high quality, comparable and detailed data for comparative analysis of the fertility postponement and recuperation process of childbearing. The benchmark model proposed by Sobotka, Zeman, Lesthaeghe and Frejka has been used as the main tool. The results show that the diversity of complete cohort fertility rates of the 1970s cohort of women is determined by the different level of recuperation of the postponed births. Sweden and the Czech Republic, which experience the stronger recuperation of the postponed births, have a complete cohort fertility higher than in countries with weaker Recuperation Index (Spain and Ukraine). The lower fertility levels of the early 1970s cohorts compared to 1960 cohort was driven by the diverse recuperation attainment according to birth orders. The low fertility in Ukraine was influenced by the reduced recuperation especially of the second birth, while in Spain the low fertility is also driven by the increase in childlessness. Due to the policies that encourage gender equality and availability of high-quality childcare provision, Sweden has a high recuperation of second and third birth. The limited recuperation of the postponed births in Spain is a result of the persistence of double burden for women and of the rigid labour market. A successful transition to the market economy and accessibility of childcare provision allowed the Czech Republic to have a recovery of second birth higher than Ukraine.*

**Keywords:** *cohort fertility, postponement, recuperation, birth order, Sweden, Spain, Czech Republic, Ukraine.*

*Prezentul studiu are scopul de a explora dinamica fertilității pe cohorte în Suedia, Spania, Republica Cehă și Ucraina. Amânarea și recuperarea fertilității sunt analizate din perspectiva identificării diferențelor în cadrul acestui proces și impactului asupra descendenței finale a cohortei. Studiul este bazat pe Human Fertility Database care oferă date de înaltă calitate, comparabile și detaliate pentru analiza procesului de amânare și recuperare a nașterilor. Ca instrument principal a fost utilizat modelul de referință propus de Sobotka, Zeman, Lesthaeghe și Frejka. Rezultatele arată că divergențele în descendența finală a cohortelor feminine născute în anii 1970 sunt determinate de diferențele în recuperarea nașterilor amânate. Suedia și Republica Cehă, pentru care este specific un grad mai înalt de recuperare a nașterilor amânate, se evidențiază printr-o descendență finală a cohortelor mai înaltă decât în țările cu un indice de recuperare mai slab (Spania și Ucraina). Descendența finală mai scăzută a cohortelor din anii 1970, comparativ cu cohorta din 1960, este determinată și de gradul variat de recuperare în funcție de rangul nașterilor. Fertilitatea scăzută în Ucraina a fost influențată de reducerea recuperării, în special a celei de-a doua nașteri, în timp ce în Spania această este determinată și de creșterea numărului de femei care către sfârșitul perioadei reproductive nu au născut nici un copil. Datorită politicilor care încurajează egalitatea de gen și disponibilitatea serviciilor de îngrijire a copiilor de înaltă calitate, Suedia are o recuperare ridicată a nașterilor de rangul doi și trei. Recuperarea scăzută a nașterilor amânate în Spania este rezultatul persistenței sarcinii duble pentru femeile născute în anii 1970 și a pieței forței de muncă rigide. O tranziție reușită către economia de piață și accesibilitatea serviciilor de îngrijire a copilului a permis Republicii Cehă să aibă o recuperare mai mare a nașterilor de rangul doi, decât în Ucraina.*

**Cuvinte-cheie:** *fertilitate pe cohorte, amânare, recuperare, rangul nașterilor, Suedia, Spania, Republica Cehă, Ucraina.*

<sup>1</sup> © Elena ȘOLDAN, elena.sholdan@gmail.com

<sup>2</sup> © Olga GAGAUZ, gagauzo@inbox.ru

В статье представлены результаты сравнительного исследования динамики рождаемости через призму поколений в Швеции, Испании, Чехии и Украине. Различия в откладывании и восстановлении рождаемости рассматриваются с точки зрения их влияния на итоговый уровень рождаемости когорты. Исследование основано на данных Human Fertility Database, обеспечивающей высококачественные, сопоставимые и подробные данные для анализа процесса отсрочки и реализации отложенных деторождений. В качестве основного инструмента была использована эталонная модель, предложенная Соботкой, Земаном, Лестегом и Фрейкой. Результаты исследования показывают, что различия в уровне рождаемости женских когорт 1970-х годов рождения определяются разным уровнем восстановления отсроченных деторождений. В Швеции и Чешской Республике, отличающихся более высоким уровнем реализации отсроченных деторождений, итоговая рождаемость когорты выше, чем в странах с более низким индексом восстановления (Испания и Украина). Более низкие уровни итоговой рождаемости когорт 1970-х годов рождения, по сравнению с когортой 1960-х годов, обусловлены различным уровнем реализации отсроченных рождений в зависимости от порядка рождений. Низкая рождаемость в Украине определяется снижением реализации отложенных деторождений, особенно вторых, в то время как в Испании низкая рождаемость также обусловлена ростом бездетности. Благодаря политике, поощряющей гендерное равенство и доступности высококачественных услуг по уходу за детьми, в Швеции наблюдается относительно высокий уровень реализации отложенных рождений второго и третьего порядка. Более низкий уровень восстановления отсроченных деторождений в Испании является результатом сохраняющегося двойного бремени для женщин и жестких условий на рынке труда. По сравнению с Украиной успешный переход к рыночной экономике и доступность услуг по уходу за детьми позволили Чешской Республике достичь более высокого уровня реализации отложенных деторождений.

**Ключевые слова:** рождаемость когорт, отсрочка, восстановление, порядок рождения, Швеция, Испания, Чехия, Украина.

**JEL Classification:** J10, J13, J19.

**UDC:** 614.3

### Introduction

By the early 21st century, the fertility transition from high to low fertility, from large to small families, has been occurring in most populations around the world, but the biggest changes were recorded on the European continent. Western European countries are among the first, which recorded significant changes in fertility dynamics (the decrease in the average number of childbirth per woman and the increase of maternal age at first birth). So far, many countries, especially from the northern Europe, have completed the process of fertility transition, which is confirmed by the proximity of period fertility rates and completed cohort fertility rates, while in other countries, especially in Eastern Europe, the fertility transition process is still underway. The complex understanding of the fertility dynamics is critical for proper and efficient policy measures for countries with low fertility in order to manage their economic, social and demographic challenges and, to enable families to fulfil their reproductive rights.

The previous studies regarding fertility levels and trends in Europe at the very beginning of the 21<sup>st</sup> century draw attention to the diversity of low fertility across European regions, and no signs of convergence between them [6, 17, 19, 5, 16, 15]. The early childbearing pattern was replaced by a late one across all European countries, but with a different onset of postponing [12, 20, 18]. The delay in childbearing occurred in the Western and Northern countries at the end of 1960s and starting with the 1990s – in the Central and Eastern Europe [6]. Postponed births were eventually recuperated, but diversity persisted even in the non-socialist country group: in Northern and some Western countries births were recuperated, resulting in almost replacement quantum fertility levels, whereas in Southern and German speaking countries recuperation has been significantly smaller [6].

The postponement of fertility as well as the drivers of the fertility delay were widely documented [12, 18, 17]. Among the main factors leading to the delay in marriage and childbearing are the increasing participation in the tertiary education [12], diffusion of modern contraceptive, increase in divorce rate, rising aspirations for self-realisation and higher living standards, the transformation in partnership explained in the Second Demographic Transition (SDT) framework [14]. The factors of the recuperation at later ages by the cohorts of women remain quite limited, due to the family policies [20, 3, 1, 10, 15], attaining gender

equality [16, 17, 18] and the acceptance of fertility outside the marriage [20], as well as labour and housing market conditions [8].

This study is focused on the analysis of cohort fertility that can be a proper point of departure in order to explain diverse social and economic mechanisms that influence fertility levels. While the cohort analysis in European countries was well documented in previous researches, the detailed analysis by birth order has remained scarce [22].

For comparative purpose, regions with different fertility, history pathways were selected. We choose Sweden because this country is one of forerunner of the Second Demographic Transition [13], presents a “Nordic fertility regime” [2] and has had a pattern of high recuperation and stable fertility close to two births per woman [20].

The Southern region is one of the cases of very low fertility rates in developed countries related to the new female reproductive behaviour and Spain is the country with such a fertility regime [8]. In addition, the available data from Human Fertility Database was more detailed for this country.

The Czech Republic was found as a “model case of postponement transition among post-communist societies of Europe” [19, p. 447] characterized by the rapid transformation to a late childbearing pattern followed by a consistent recuperation at older ages.

Ukraine is the case study of very low fertility in Eastern Europe that experience many features of SDT [17] and has similar pattern with former Soviet countries (Moldova, Belarus and Russian Federation) [9].

The late childbearing pattern has been adopted in Sweden and Spain, while in the Czech Republic and Ukraine the late fertility timing is on the way to be installed. The extent to which delayed births were recovered differs between selected countries and determines the current cohort fertility levels.

The main objectives of this study are:

- To compare the cohort fertility levels and trends by birth order in four countries with diverse fertility levels;
- To compare the dynamics in fertility timing of the selected cohorts in Sweden, Spain, the Czech Republic and Ukraine;
- To determine and compare the degree of recuperation of the postponed births in the selected cohorts in Sweden, Spain, the Czech Republic and Ukraine;
- To analyse and compare the postponement and recuperation process of the most recent cohort by birth order among the selected countries.

**Data and methods of the research.** The present study is based on data provided by Human Fertility Database [11], that provides high quality, comparable and detailed data making possible the analysis of the fertility postponement and recuperation process of childbearing. The cohort approach is the only way in order to analyse which portion of postponed births was recuperated and which one was never realized [20, 18].

The Complete Cohort Fertility Rates (CCFR) were analysed for the cohort of woman at age of 40, while the proportion of births that occur after, are yet small and have little impact on the overall fertility level. The advantage of using CCFR until the age of forty (CCFR (40)) consists in possibility to analyse nine cohorts of women.

In order to explain the differences in recuperation attainment between cohorts and countries, we use the methods proposed by Sobotka, Zeman, Lesthaeghe and Frejka [20]. In the benchmark model, postponement and recuperation can be measured by age for any cohort of interest, which is compared with an older reference cohort – the benchmark cohort. In this study, we use as benchmark the 1960 cohort for all four selected countries. Although the postponement transition occurs in those countries at different times, the 1960 cohort still has comparable young motherhood timing in all four countries compared with the early 1970s cohorts. The three components of postponement transition (the recuperation index, the postponement component and the initial fertility level) as the explanatory framework of cohort fertility diversity between countries were detailed theorized in the same work. We explore it applying on the selected countries with diverse fertility timing and cohort levels.

### The result of research

The data shows that the complete cohort fertility decreased from one generation to another and the women born in the late of 1960 and the early 1970 had a bellow replacement fertility level in all four selected countries. However, the degree of cohort fertility decline is different and in some countries, a very low CCFR is recorded. The CCFR (40) of the youngest cohort born in 1973 ranges from 1.32 in Ukraine and 1.49 in Spain to a relatively higher level of 1.88 and 1.78 children per woman in Sweden and the Czech Republic, respectively (*Fig.1*).

It is known that the new fertility behaviour has been observed in Sweden between cohorts of women and diffused to other countries in 1940 [14]. At the same time, Sweden is the country with the most stable

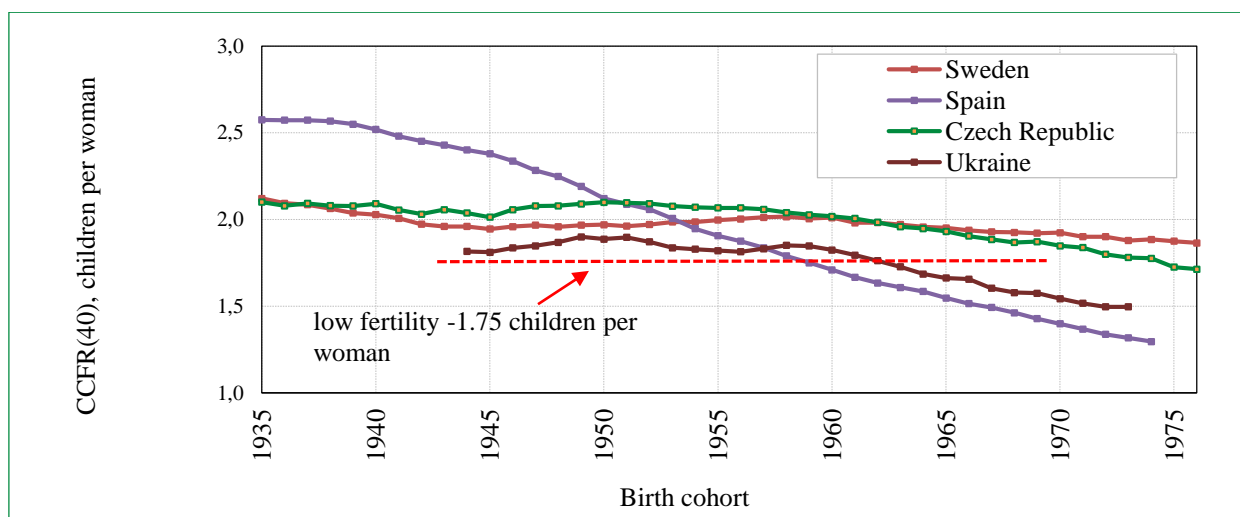
cohort trend. Among 27 cohorts of women, beginning with the 1939 the CCFR remained at the level of 2.0 children per woman. The cohorts of the second half of the 1960s brought a decline in fertility to 1.9 children per woman that remained unchanged in the subsequent 10 cohorts, and is likely to remain quite stable. In addition, during the period of fertility transition, the CCFR never fell to a very low level (the demographic literature determined that a completed cohort fertility level of 1.75 children per woman is a threshold below which cohort fertility becomes “very low” [22]).

Although in Spain the decrease in fertility occurred from quite high values, 2.6 children per woman for the cohorts born in 1935-1939, the following dynamics has a sudden and continuous decline. Women cohorts born in 1953 and later, have CCFR less than 2 children per woman and those born in 1959 and later have a very low CCFR – less than 1.75 (Fig.1).

CCFR in the Czech Republic and Ukraine, as in other ex-socialist countries started to decline with women born around 1960. This was apparently engendered by the collapse of the state socialist systems and the onset of the transition to democracy and market economy.

The middle 1940s cohorts of women in Ukraine already had a level above replacement threshold: 1.8 children per woman, which remained quite stable for the subsequent two decades (Fig.1). The decrease above 1.8 began from the 1963 cohort that unregistered a level of 1.72 children per woman.

The cohort fertility level at the age 40 in the Czech Republic registered a stable level among women born during 1935-1963, that was around 2.1 children per woman. As in Ukraine, the 1963 cohort of women had a decline of fertility that continued in the subsequent cohorts. The decline, though, was not as prominent as in Spain and Ukraine, and the complete fertility of the 1960s cohorts in the Czech Republic did not fall below 1.9 children per woman.



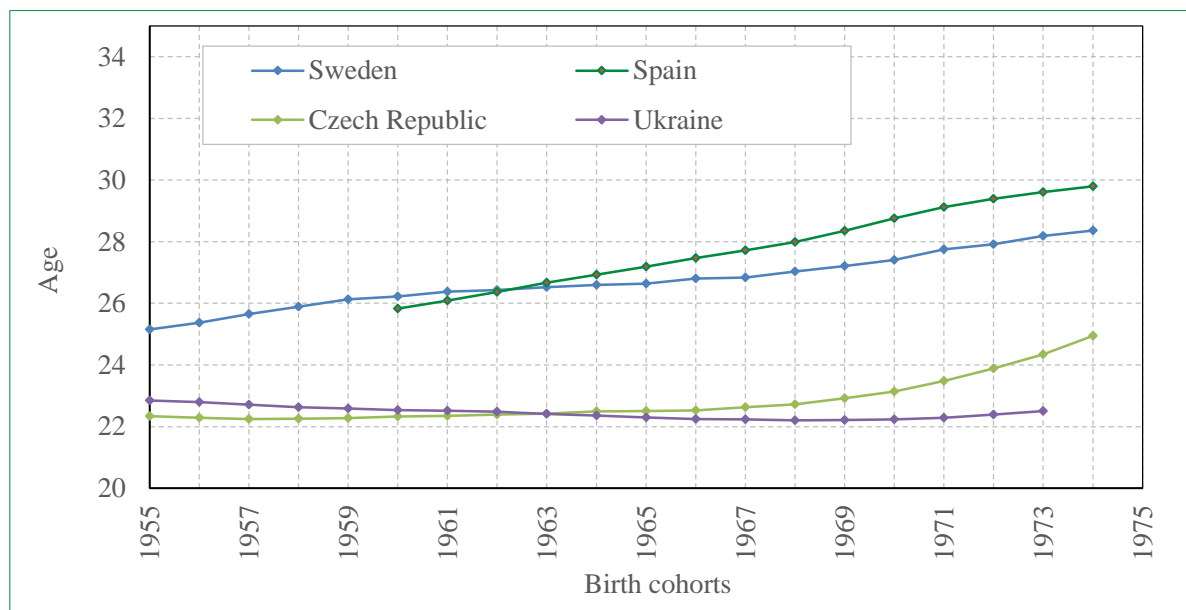
**Figure 1. Completed Cohort Fertility Rates, selected countries, birth cohorts 1935-1975**

Source: Human Fertility Database.

In all four countries, the age patterns of childbearing have been changing from one generation to the next one. The delay of the first birth began in Spain among the middle 1950s cohorts of women and ten cohorts earlier in Sweden [20]. For the youngest generation in these countries, the average age of the mother at the first birth is close to the 30 years old, only the growth rate was different (Fig.2). In Sweden, increasing in the mother's age at the first birth has grown smoothly from generation to generation. The average age of women at the first birth of the cohort born in 1974 is 28.3, having increased by 4 years compared with the generation 1955. Available data for Spain show an increase in MAFB from 25.8 in the 1960 cohort to 29.6 and 29.8 in the 1973 and 1974 cohorts respectively. The increase of average age at first birth in Spain of the 1973 cohort compared with the 1970 cohort was +0.85 years. The MAFB of the 1955 cohort in Sweden was 25.1 and 28.2 in the 1973 cohort (+0.78 years).

In the Czech Republic and Ukraine situation is different, the young childbearing pattern is observed in both countries. The increase of MAFB in the Czech Republic is prominent, beginning with the 1969 cohorts of women. The average age at first birth of the 1973 cohort of woman in the Czech Republic was 24.3, an increase by 1.2 years compared with the 1970 cohort. In Ukraine, an increase in average age at first

birth is also noted, but at a smaller extent. The average age at first birth of the 1973 cohort was 22.5, an increase by +0.27 years compared with the 1970 cohort.



**Figure 2. Mean age of woman at first birth, selected countries, birth cohorts 1955-1974**

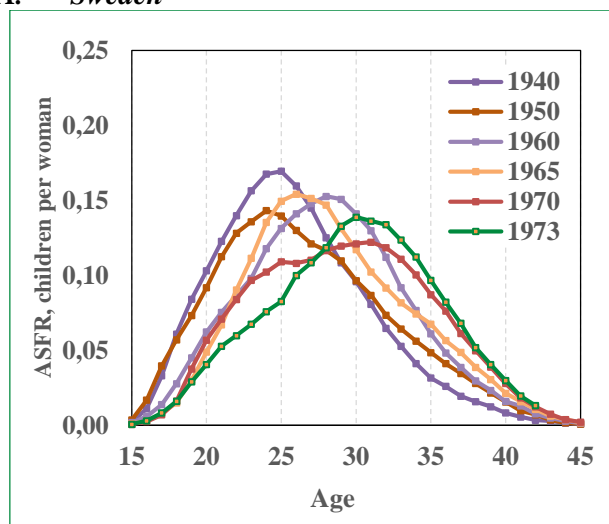
Source: Human Fertility Database.

The shift of the first birth to higher ages no longer occurred among the 1970s cohorts in Spain and in Sweden, and a late childbearing pattern has been installed in these countries (*Fig. 3, panel A, B*). The later fertility timing of the 1960-1970 cohorts is explained by the increasing youth enrolment in tertiary education and by the increase of women labour force participation [12], as well as the changes in values, attitudes and beliefs of youth.

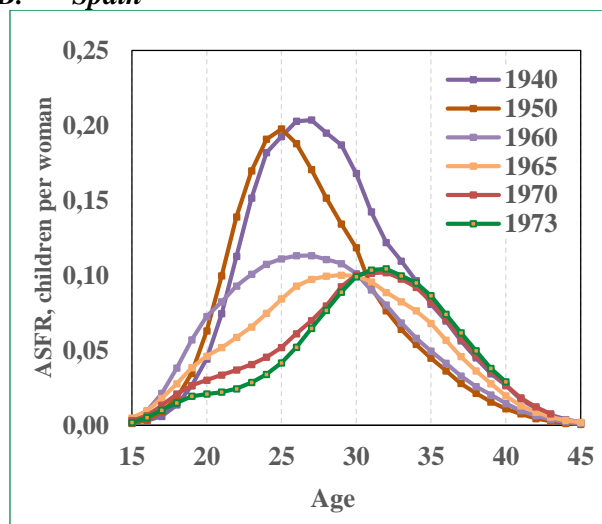
The fertility postponement transition began in the East and Central Europe in the 1990s, but the early 1970s cohorts of women have adopted differently the new fertility calendar in the Czech Republic and in Ukraine [19, 16], (*Fig. 3 panel C, D*). The age pattern of childbearing of the early 1970s cohorts in the Czech Republic is characterized by a marked propensity of first birth postponing [7], while in Ukraine those cohorts still experience an early fertility pattern [12, 16].

In the Czech Republic, the spread of modern contraception after 1990s and the rising demand for tertiary education influence the late 1960s and the early 1970s cohorts to adopt the western characteristic of family and childbearing behaviour [19].

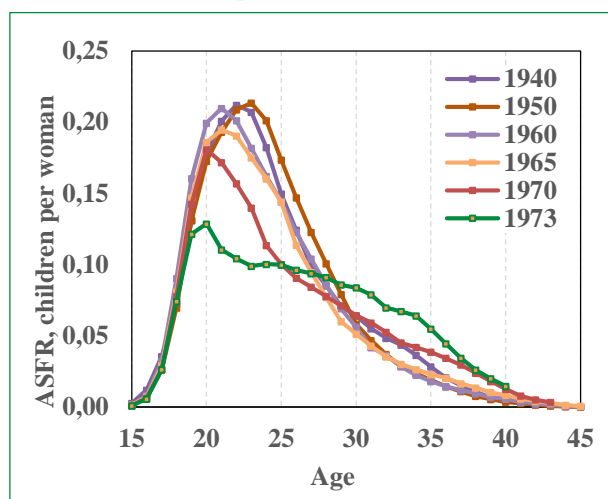
#### A. Sweden



#### B. Spain



C. The Czech Republic



D. Ukraine

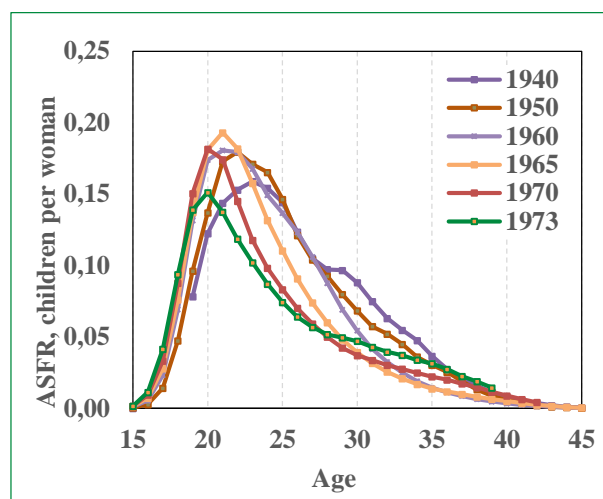


Figure 3. Changes in age specific cohort fertility rates, the 1940, 1950, 1960, 1965, 1970, 1973 cohorts of women, selected countries

Source: Author's computation, Human Fertility Database.

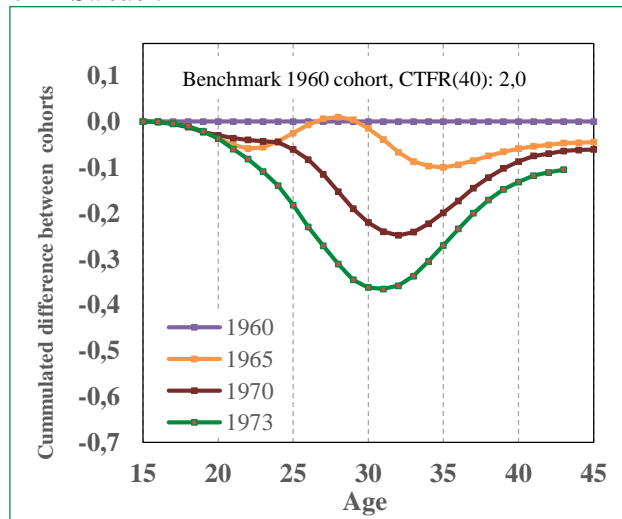
The fertility transition that occurs through the postponement of births to older ages, as well as their subsequent recuperation, had a distinct feature in the studied countries. Only 38% of postponed births were recuperated at the age of 40 among the 1973 cohort of women in Spain, while the Recuperation Index in Sweden was 64% (Fig. 4, panel A, B). The two welfare states differ in generosity of the family policies, the level of the gender equality attainment both in public and private spheres, the labour market environment that determine the work-family life conciliation, etc.

The level of postponed births did not necessarily determine the degree of recuperation. The 1973 cohorts in the Czech Republic show a higher level of postponement than Ukraine. At the same time, the recuperation was also higher than in Ukraine (57% versus 24% (Fig. 4, panel C, D).

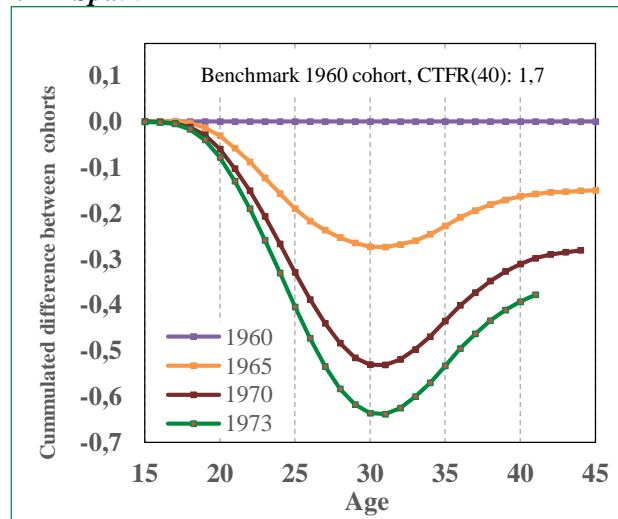
The weak recuperation of the postponed births in Ukraine, as in other former Soviet countries among the 1970s cohorts is explained by the persistent economic uncertainty, social anomie and the continuous double burden of the woman within families. The weak possibility to conciliate the work and family is reinforced by the poor childcare services and the traditional gender roles within families.

Sweden can be considered a model case of social policies and gender equity in parenting that seem to determine the relative high level of birth recuperation after age of 30s among the 1960s and 1970s cohorts of women. The full recuperation of the postponed birth among the 1973 cohorts compared with the 1960 cohort was attained by no country.

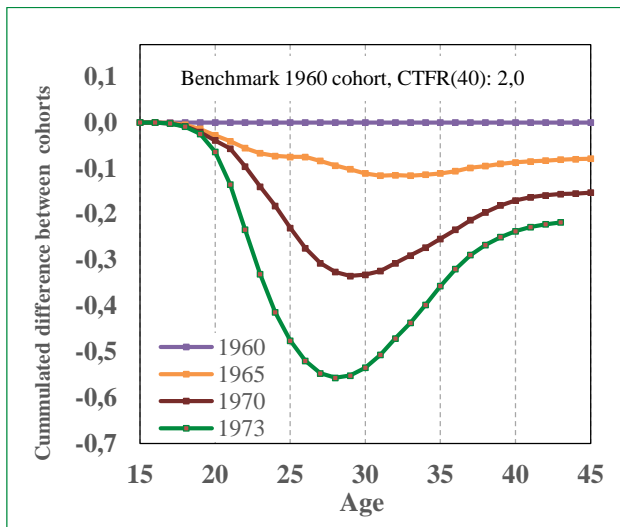
A. Sweden



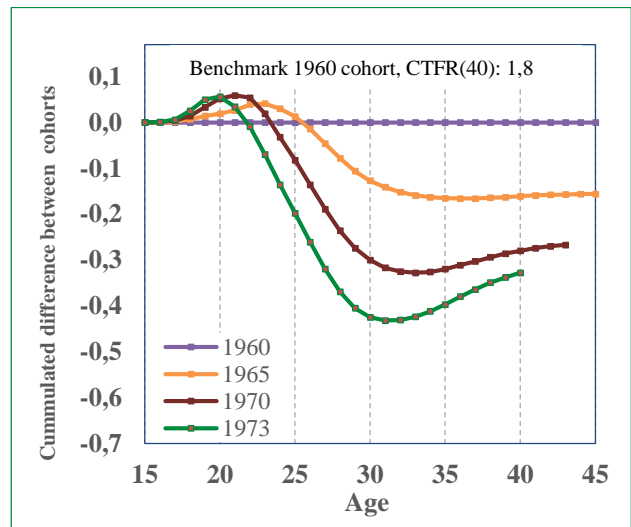
B. Spain



C. *The Czech Republic*



D. *Ukraine*

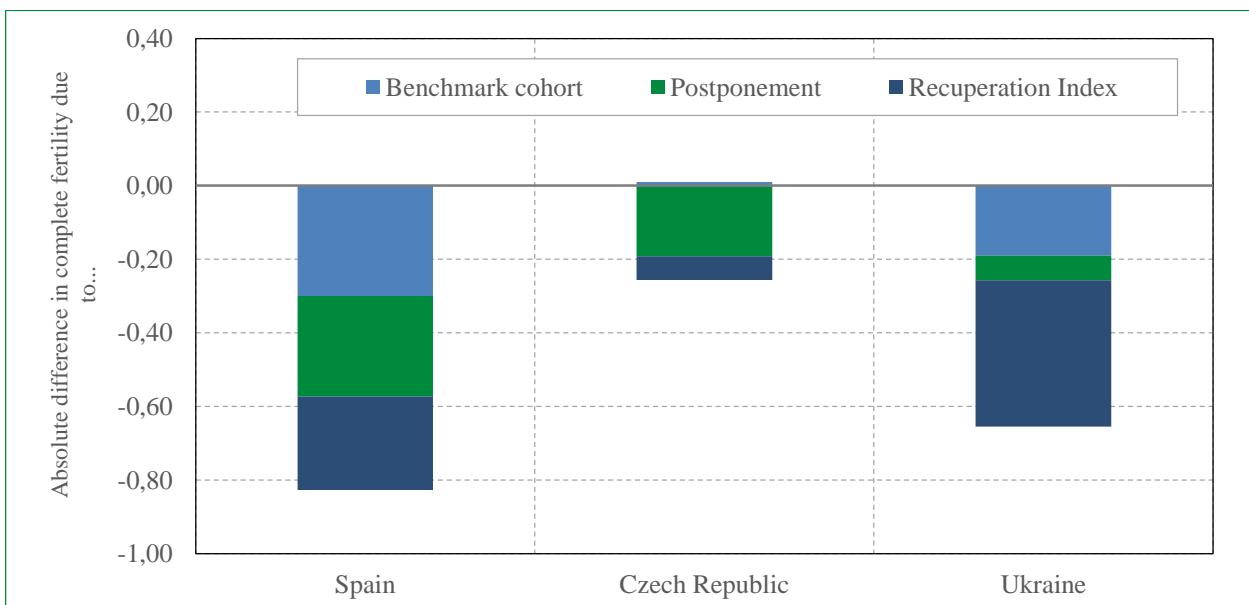


**Figure 4. Cumulated differences between cohorts of women born 1965, 1970, 1973 compared to the reference cohort 1960, selected countries, children per woman**

Source: Author's computation, Human Fertility Database.

Additionally, it should be added that the 1973 cohort experience in their youth not only the economic challenges of the 1990s, but also the globalization process. In their 30s, the age of recuperation of postponed childbearing, they had experienced the unprecedented increase in housing price followed by the 2008 economic crisis. The evidence from Spain showed that the labour and housing market deregulation might limit the childbearing decision [3]. Hence, we presume that the economic context lived by the 1973 cohort in their 30s could also influence the recuperation attainment of the postponed births in analysed countries, although more evidences are required.

Spain, the Czech Republic, and Ukraine were compared with Sweden, as a model case of high cohort fertility and strong tendency for recuperation. The CCFR (40) of the 1973 cohort of women registered a level of 1.88 children per woman in Sweden. The absolute difference in complete fertility of the 1973 cohort of women between Spain, the Czech Republic and Ukraine compared with Sweden was decomposed in three components of the postponement transition (Fig. 5).



**Figure 5. The absolute contribution of the three components of the postponement transition to the differences in CCFR (40) between Sweden and selected countries, the 1973 cohort**

Source: Author's computation, Human Fertility Database.

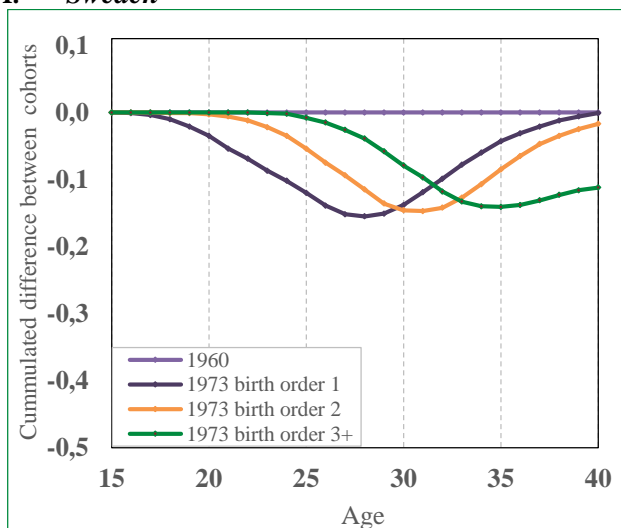
The diversity in 1973 cohort fertility among the selected countries was influenced by the degree of recuperation of the postponed births, by the initial fertility level and by the level of postponement. A smaller CCFR (40) of the 1973 cohort of women in Spain compared to Sweden is determined by all three components of the postponement transition to almost the same extent. As the postponement transition occurred slowly in Ukraine, the difference in fertility level compared to the 1973 cohort in Sweden was influenced at lesser extent by the postponement component but, rather by the smaller level of initial fertility of the benchmark cohort and by the limited recuperation attainment.

A more detailed picture on the postponement recuperation process of the 1973 cohort provides the benchmark analysis by birth order. The decomposition of postponement and recuperation process by birth order 1, 2, 3+ of the 1973 cohort compared to the 1960 cohort is illustrated in the figure 6.

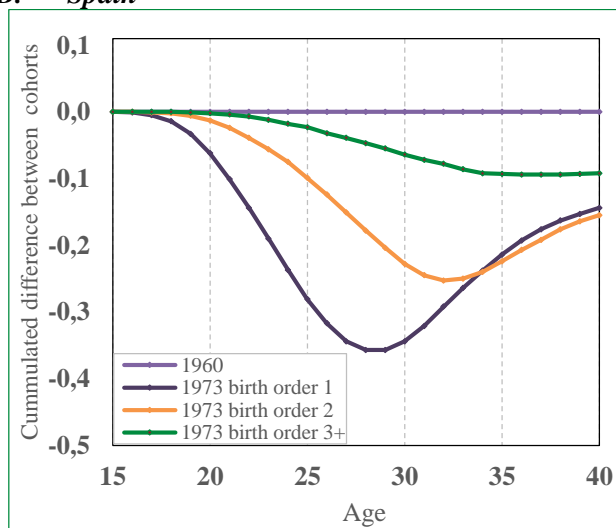
Postponed first births of women born in 1973 in Sweden were almost fully recuperated (99%) and a high proportion of the delayed first births were recuperated in Spain (60%) and the Czech Republic (80%).

Sweden still shows a high propensity to recuperate the second child (88%), but fertility recovery at 3+ births is limited. The overall modest Recuperation Index of the 1973 cohort of women in Spain is the result of the scarce recuperation at second and especially the 3+-birth order.

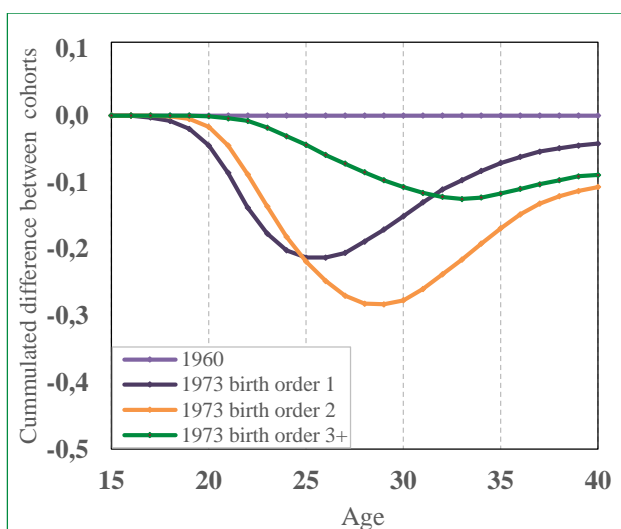
A. Sweden



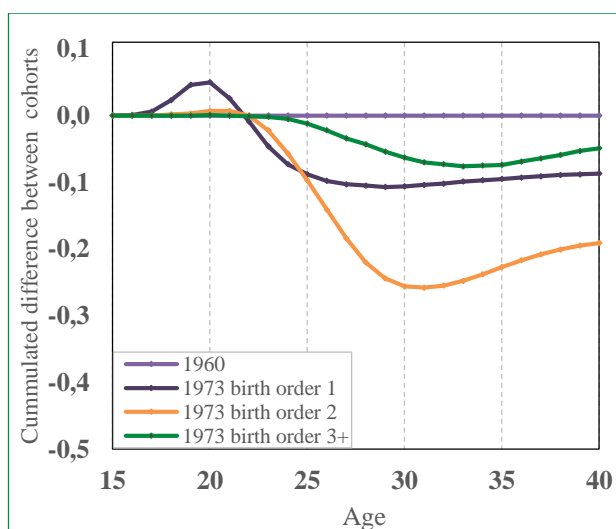
B. Spain



C. The Czech Republic



D. Ukraine



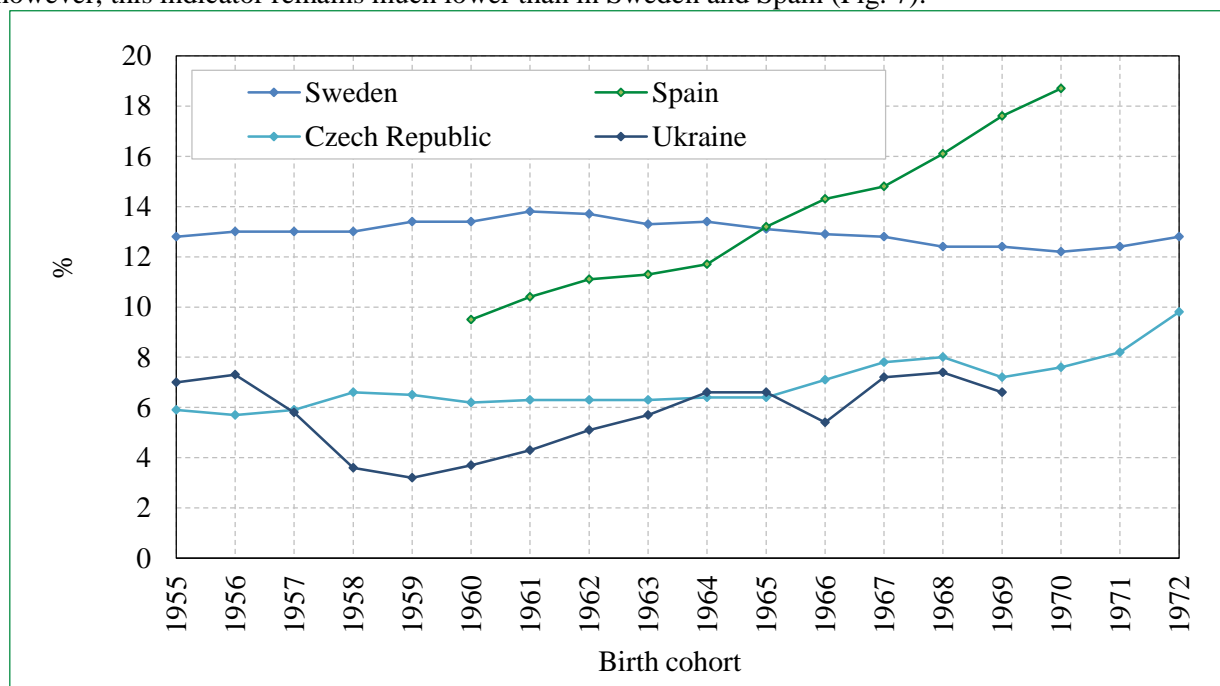
**Figure 6. Cumulated differences by birth order between cohorts of women born 1973 compared to the reference cohort of 1960, selected countries, children per woman**

Source: Author's computation, Human Fertility Database



In Sweden, Spain, and the Czech Republic, the Recuperation Index decreased in step with the birth order increase. The recuperation component of the 1973 cohort in Ukraine followed a different pattern, as the postponement began with the second child, and, as the early childbearing pattern at first birth is still maintained in the region (Fig. 6).

Another phenomenon contributing to reduction of CCFR is the increase in the proportion of women who did not give birth during the reproduction period. The largest increase in the proportion of childlessness women is recorded in Spain. In ten consecutive cohorts, this indicator increased from 10.4% to 18.4%. In Sweden is noticed a stabilization of the situation. The proportion of women who did not give birth to any child dropped from 13.8% among women born in 1961 to 12.2% among those born in 1970. Although in the Czech Republic and Ukraine there has also been an increase in the proportion of childlessness women, however, this indicator remains much lower than in Sweden and Spain (Fig. 7).



**Figure 7. Proportion of childlessness women born in 1961-1979 years**

Source: Human Fertility Database.

Family policies became a relatively usual attribute of the contemporary European society, as a response to fertility decline in the second half of the 20th century. The incentives for fertility have developed from being pro natalist and intrusive to social welfare policies aimed at providing a minimum level of social security, education and childcare provision, gender equity and balanced work and family life.

Family policies in Sweden are not directly aimed to boost the childbearing, but rather to encourage woman's participation on the labour market, to improve gender equality and work-private life conciliation [1]. Overall, it includes a set of facilities mostly started in the 1974 and made the social and family policies in Sweden one of the most generous in Europe: the parental leave with a benefit of 80% of earned income; facilities, when there are no more than 30 months between children ("Speed premium"); the ten benefit days awarded to the father in connection with each childbirth ("Daddy days"); time for sick-child leave (up to 120 paid days per year per child); cash child benefit and house-rent support in case of need; all-day day-care and all-day schools provision [10]. Thus, those measures were reflected in the complete fertility level and number of children in families in Sweden, that remained stable for many generations [8, 1], (Fig. 1). Combination of employment and parenthood is also promoted through the significant provision of high-quality public childcare in Sweden. This is also considered to be as a guarantee of equality regarding the provision of care and education and the redistribution of resources between children among social classes and ethnic origin [15].

The generous income transfers in Spain during the Franco dictatorship (1936-1975) aimed at keeping women at home, caring for their families, as well as at raising birth rates [5]. Given the transition to democracy, social policy has been changed prioritizing sufficient allowances and protection for the

unemployed. The proportion of social protection expenditures for families and children in GDP still were one of the lowest in the European Union [8]. The maternity leave has increased successively up to 16 weeks in 1989 and expanded to 18 weeks in 2007, in the case of children with disabilities [5]. Since 2007, the employees have also been entitled to cut back their working hours from 1/8 to 1/2 with a proportional cut in their salaries to take care for children under the age of eight after. The introduction in 2003 of an allowance of up to 1.200 euros yearly for children under the age of three is only granted to mothers who work and pay a social security tax, but not to those who are on leave or have a non-paid job [5]. The care for children under age three, was very low (13.5%) and takes place primarily in informal contexts (family or baby – sitters). Hence, the low cohort fertility rates, as well as the prominent childbearing delay and increase in childlessness in Spain is the result of the limited social support. The family policies in Spain mirrored the employment relationship while successful improvement in work and family balance remains scarce in the region.

The policy measures during the socialist era in the Czech Republic had a pro natalist and interventionist character [19]. By the 1970s, families with children in Czechoslovakia received one of the most generous social benefits available behind the Iron Curtain [4]. Having children greatly contributed to the access to an apartment rental, entitled parents to significant allowances and payments, and made women eligible for earlier retirement. Thus, the country had one of the lowest proportion of childless women in the region [19, 4] and cohort fertility remained quite stable among the 1940-1955 cohorts of women. Family policy measures after 1989 became less focused on the number of family members and mostly based on social welfare policies aimed at reducing income inequality, preventing poverty and providing a minimum level of social security. Since 1990, all mothers were able to receive paid maternal leave regardless of the number of children. Since 1995, paid parental leave was further extended until the child's fourth birthday, making the paid post-natal period in the Czech Republic one of the longest in Europe [19]. During maternity leave (28 weeks), women receive 69% of their previous salary with a possibility of unlimited additional part-time income allowed since 2004. Day-care enrolment rates of children aged 3-5 have remained high since 1990, reaching 88% in 2005, while the public provision of nurseries has practically collapsed due to a combination of extended parental leave [19]; however, two-year old children are frequently admitted to day-care facilities. Thus, due to those incentives, despite the prominent fertility postponement after 1990s, the early 1970s cohorts of woman in the Czech Republic registered a high level of fertility recuperation.

After Ukraine gained independence in 1991, the Ukrainian government began to finance its own social protection programs, but the proportion dedicated for family programs was minimal. Child assistance has increased substantially since 2005. It was introduced a one-time payment of \$677 following the birth of a child, and \$1023 to be paid throughout the course of the next year. Additionally, during three years after the birth of a child, women could receive maternity payments based on household income, but not less than \$18 per month [16]. The access of the payment benefit is also important (one-time payment following the birth of a child and during three years after the birth of a child) those benefits however were limited [16]. Some regions experienced budget deficit, thus the payments could be delayed. Moreover, the application process was limited to a six-month period when mothers had to collect many documents and to deal with inefficient bureaucracy. The payments also do little to address larger socio-economic problems, such as low living standards, insufficient wages, or expensive housing [16]. Thus, although the Ukraine's family policy appears to be generous in terms of payment and maternal leave, the irregularities of payment, insufficient support throughout the period of childrearing, the neglect of childcare facilities and poor accessible housing reduce the policy's effectiveness.

Family policies in the analysed countries differ with respect to their magnitude, the attainment in work and family life balance, gender equity and the ability of the state to systematically and into a well-organized way improve them. The Swedish family policies can be considered a model case of policies supporting childbearing due to its social orientation, effective organization and generosity that seem to be effective on both the well-being of families and its member's number.

### Conclusions

The results of the research show that the diversity of fertility levels of the 1970s cohort of women is determined by the diversity in recuperation of the postponed births. Countries such as Sweden and the Czech Republic, which experience the stronger recuperation of the postponed births, have a final cohort fertility higher than in countries with weaker Recuperation Index, such as Spain and Ukraine. In addition, the study revealed that the low fertility levels of the early 1970s cohorts compared to 1960 cohort in the four analysed

countries were driven by the diverse recuperation attainment according to birth orders. The low fertility in Ukraine was influenced by the reduced recuperation especially of the second birth, while in Spain the low cohort fertility is also driven by the increase in childlessness. The stronger recuperation of the second birth explains the relative higher cohort fertility levels in Sweden.

The comparative approach has allowed identifying some factors that have influenced different levels of birth recuperation. Due to the policies that encourage gender equality and availability of high-quality childcare provision, Sweden has a high recuperation of second and third birth. The limited recuperation of the postponed births in Spain is a result of the persistence of double burden for women born in the 1970s and of the rigid labour market. A successful transition to the market economy and accessibility of childcare provision allowed the Czech Republic to have a higher recovery of second birth than other ex-socialist states such as Ukraine. In the later, the early fertility regime is still being maintained among women born in the early 1970s, while the low recuperation of second births is the result of insufficient childcare provision, the deteriorated intergenerational support, a continues double burden for working mom and weak accessibility of housing.

The future fertility trends in Spain, the Czech Republic and Ukraine will be conditioned by the social reaction to the continuous decrease in fertility among young women cohort. The economic and social stability presents the main factors that will influence the reproductive behaviour of the younger generations.

### REFERENCES

1. ANDERSSON, Gunnar. A review of policies and practices related to the 'highest-low' fertility of Sweden. In: Vienna Yearbook of Population Research. Vienna, 2008, vol. 6, pp. 89-102. ISSN 1728-4414.
2. ANDERSSON, Gunnar, KNUDSEN, Lisbeth B. et al. Cohort fertility patterns in the Nordic countries. 2009. [Accesat 22.04.2018]. Disponibil: <https://www.demographic-research.org/volumes/vol20/14/20-14.pdf>
3. BAIZAN, Pau. The policy context of fertility in Spain: Towards a gender-egalitarian model? In: Ronald R. RINDFUSS, Minja Kim CHOE (eds.). *Low Fertility, Institutions, and Their Policies: Variations across Industrialized Countries*. Springer, 2016, pp. 195-219. ISBN 978-3-319-32997-0.
4. BRZOZOWSKA, Zuzanna. Female Education and Fertility under State Socialism in Central and Eastern Europe. In: *Population*. 2015, vol. 70 (4). [Accesat 16.05.2018]. Disponibil: [https://www.cairn-int.info/article-E\\_POPU\\_1504\\_0731--female-education-and-fertility-under.htm](https://www.cairn-int.info/article-E_POPU_1504_0731--female-education-and-fertility-under.htm)
5. DELGADO, Margarita, MEIL, Gerardo, ZAMORA-LÓPEZ, Francisco. Spain: Short on children and short on family policies. In: *Demographic Research*. Rostock, 2008, vol. 19 (27), pp. 1059-1104. [Accesat 05.04.2018]. Disponibil: <http://www.demographic-research.org/Volumes/Vol19/27/>
6. FREJKA, Tomas, SOBOTKA, Tomas. Fertility in Europe: Diverse, delayed and below replacement. In: *Demographic Research*. Rostock, 2008, vol. 19 (2), pp. 15-46. [Accesat 05.04.2018]. Disponibil: <http://www.demographic-research.org/Volumes/Vol19/3/>
7. FREJKA, Tomas. The Fertility Transition Revisited: A Cohort Perspective. In: *Comparative Population Studies - Zeitschrift für Bevölkerungswissenschaft*. 2017, vol. 42, pp. 89-116. [Accesat 05.04.2018]. Disponibil: <http://www.comparativepopulationstudies.de/index.php/CPoS/article/view/272/243>
8. FREJKA, Tomas, SARDON, Jean-Paul. *Childbearing trends and prospects in low fertility countries: A cohort analysis*. European Studies of Population. Dordrecht: Kluwer Academic Publishers, 2004. ISBN 978-1-4020-2458-0.
9. GAGAUZ, Olga, GRIGORAȘ, Ecaterina. Restructurarea calendarului nașterilor și declinul fertilității = Restructuring of the calendar of births and fertility decline. In: *Revista de Filosofie, Sociologie și Științe Politice*. Chișinău, 2017, nr. 1 (173), pp. 104-114. ISSN 1957-2294.
10. HOEM, Jan M. Why does Sweden have such high fertility? In: *Demographic Research*. Rostock, 2005, vol. 13 (22), pp. 559-572. [Accesat 05.04.2018]. Disponibil: <https://www.demographic-research.org/Volumes/Vol13/22/>
11. Human Fertility Database. Max Planck Institute for Demographic Research (Germany) and Vienna Institute of Demography (Austria). [Accesat 05.04.2018]. Disponibil: [https://www.demogr.mpg.de/en/laboratories/demographic\\_data\\_27/projects/human\\_fertility\\_database\\_1257\\_details.htm](https://www.demogr.mpg.de/en/laboratories/demographic_data_27/projects/human_fertility_database_1257_details.htm)
12. KOHLER, Hans-Peter, BILLARI, Francesco C., ORTEGA, Jose Antonio. The emergence of lowest-low fertility in Europe during the 1990s. In: *Population and Development Review*. New York, 2002, vol. 28

- (4), pp. 641-680. ISSN 0098-7921.
13. LESTHAEGHE, Ron. The unfolding story of the second demographic transition. In: Population and Development Review. New York, 2010, vol. 36 (2), pp. 211-251. ISSN 0098-7921.
  14. LESTHAEGHE, Ron. The second demographic transition: A concise overview of its development. Proceeding National Academy of Sciences. 2014. [Accesat 05.04.2018]. Disponibil: <https://www.pnas.org/content/pnas/111/51/18112.full.pdf>
  15. OLÁH, Livia Sz., BERNHARDT, Eva. Sweden: Combining childbearing and gender equality. In: Demographic Research. Rostock, 2008, vol. 19 (28). [Accesat 05.04.2018]. Disponibil: <https://www.demographic-research.org/volumes/vol19/28/default.htm>
  16. PERELLI-HARRIS, B. Ukraine: On the border between old and new in uncertain times. In: Demographic Research. Rostock, 2008, vol. 19 (29), pp. 1145-1178. [Accesat 15.06.2018]. Disponibil: <http://www.demographic-research.org/Volumes/Vol19/29/>
  17. SOBOTKA, Tomas. The diverse faces of the Second Demographic Transition in Europe. In: Demographic Research. Rostock, 2008, vol. 19 (8), pp. 171-224. [Accesat 14.02.2018]. Disponibil: <http://www.demographic-research.org/Volumes/Vol19/8/>
  18. SOBOTKA, Tomas. Postponement of childbearing and low fertility in Europe. PhD Thesis, University of Groningen. Amsterdam: Dutch University Press, 2004. [Accesat 15.06.2018]. Disponibil: <https://www.rug.nl/research/portal/files/9808322/c6.pdf>
  19. SOBOTKA, Tomas, ŠTASTNÁ, Ana et al. Czech Republic: A rapid transformation of fertility and family behaviour after the collapse of state socialism. In: Demographic Research. Rostock, 2008, vol. 19 (14), pp. 403-454. [Accesat 15.06.2018]. Disponibil: <http://www.demographic-research.org/Volumes/Vol19/14/>
  20. SOBOTKA, Tomas, ZEMAN, Krystof et al. Postponement and recuperation in cohort fertility: New analytical and projection methods and their application. European Demographic Research Papers 2-2011. Vienna: Vienna Institute of Demography, 2011. 86 p. [Accesat 15.06.2018]. Disponibil: <https://pdfs.semanticscholar.org/d66c/3ad5b1f4437abca3b0ad9b91edd8987d7929.pdf>
  21. ZAKHAROV, Sergei. Russian Federation: From the first to second demographic transition. In: Demographic Research. Rostock, 2008, vol. 19 (24), pp. 907-972. [Accesat 15.06.2018]. Disponibil: <https://www.demographic-research.org/volumes/vol19/24/default.htm>
  22. ZEMAN, Krystof, BEAUJOUAN, Éva et al Cohort fertility decline in low fertility countries: decomposition using parity progression ratios. Vienna Institute of Demography Working Paper. Human Fertility Database Research Report VID WP 3/2017 and HFR RR 2017-003. 2017. [Accesat 15.06.2018]. Disponibil: [https://www.oeaw.ac.at/fileadmin/subsites/Institute/VID/PDF/Publications/Working\\_Papers/WP2017\\_03\\_HFDRR.pdf](https://www.oeaw.ac.at/fileadmin/subsites/Institute/VID/PDF/Publications/Working_Papers/WP2017_03_HFDRR.pdf)

*Recommended for publication: 29.10.2018*