POLICY AND DISCONTINUITY IN ROMANIAN PROCREATIVE BEHAVIOUR

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Abstract

Romania is a famous example of the forced baby-boom caused in 1967 by the pronatalist policy. The entering into force of this legislation led to the doubling of live births fertility, compared to the previous year. The impact of these large cohorts was and still is complex, since the consequences are felt in the health care system, education, labour market, social insurance and in the economic and demographic evolutions of the country. This being the demographic context, we aim at analysing the fertile behaviour of 20th century Romanian women, as well as the way in which they transmit this behaviour, taking into account the tumultuous political, economic and social conditions before the fall of the former regime. The analysis is based on a recent survey on the topic of intergenerational transmission of fertility behaviour developed by a team of researchers from the Polls and Surveys Centre of the Bucharest Academy of Economic Studies. The target population consisted of women aged 50 years and more and the sample was build using quota sampling by two criteria: age and residence area. Based on this survey data we will study the procreative behaviour of the respondents in order to show whether there are major discontinuities in the evolution of the reproductive behaviour throughout the 20th century. The main conclusion is that the alternation of the periods when abortion was legal with those when it was illegal caused discontinuities in the fertile behaviour of the respondents. The restrictive policy had only a temporary impact on the downward trend of fertility in Romania.

Introduction

Starting with the beginning of the 19th century, the European countries were increasingly more affected by the process of demographic transition, which caused fertility levels to decrease below the replacement threshold. Currently, although fertility is low all over Europe, it varies from fertility levels that revolve around 1.3 children per woman in the former socialist countries, to levels close to the generational replacement threshold in some Northern and Western European countries (Lutz, Mamolo, Scherbov, Sobotka, & Zeman, 2010). As a consequence, population sizes began to decline and the process of demographic ageing accentuated.

An important role in the fertility levels across the continent is that of the policies regarding family and children. In the north and the west, where the support for families with children is bigger, the total fertility rates (TFR) are higher than in southern and eastern European countries, where the legislation in the matter is less supportive.

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Another factor of influence is the evolution of fertility after the Second World War. If the countries in the northern and western parts of Europe experienced a strong baby-boom in the period immediately after the war, with fertility declining since 1965, in the Mediterranean countries the demographic transition was a late one, with relatively high fertility levels until the 1970s, followed by a sharp decline. A third group is the one of the former socialist countries (Eastern Europe), which had a chaotic demographic evolution, marked by the persistence of traditionalist behaviours, imposed by sometimes brutal pronatalist policies (Haragus, 2008).

Romania is a famous example for the forced baby-boom caused in the 1960s by such a pronatalist policy. The entering into force of this legislation led to the doubling of fertility, compared to the previous year. The cohorts born since the end of the First World War until the end of the Second one were constrained to increase the number of their offspring by the sudden and radical change of the family planning conditions they benefited from since 1957, when abortion was made legal. The cohorts of that period are the most numerous ones in the modern demographic history of the country, deforming the age structure of the population and leaving marks on the short, medium and long term. The impact of these cohorts was and still is complex, since the consequences are felt in the health care system, education, labour market, social insurance and in the economic and demographic evolutions of the country.

The evolution of fertility is also influenced to a great extent by the intergenerational transmission of the procreative behaviour, which is a relatively new research area in the field. Its main focus is on the influence of family and kin on reproductive behaviour, taking into account various factors that affect fertility, among which social, economic and cultural ones. There is an extensive body of literature dealing with questions like the influence of family size on future reproductive behaviour, transmission of age at first marriage and first birth from parents to children or influence of genetic and environmental factors on decisions regarding the number of children, in order to gain insight in the complex mechanisms that drive fertility behaviour.

The fertile behavior has a major impact on the Romanian population decline and on its accelerating ageing process. These are the main reasons to analyze the procreative behaviour of 20th century Romanian women, as well as the way in which they transmit it, taking into account the tumultuous political, economic and social conditions before the fall of the former regime.

Background

Various political, economic and military landmarks of the 20th century had a demographic impact on the fertility in Romania, causing more or less abrupt discontinuities in its evolution. Cohorts born from the beginning of the century until the end of the 1920s were influenced in their fertile behaviour by the First World War, which caused fertility to increase in order to make up for the population loss resulted from it.

On the other hand, the generations born since 1928 until the early 1960s were affected to different degrees both by the legalization of abortion in 1957 and by the coercive pronatalist policy of the communist regime. In the absence of the later legal framework, the procreative behaviour of these cohorts would have been, as the behaviour of previous cohorts suggests, characterized by a maximum of three children, born before the age of 30 years. However, since

1966 this behaviour was altered by the rigid legislation, in the sense that these cohorts did not have the chance to freely choose the number of children born.

Furthermore, among these later cohorts, the ones born during 1940-1950 were fully affected by the 1966 legislation and the two subsequent waves of tightening in 1972 and 1985. In the two peak years of the baby-boom, 1967-1968, age-specific fertility rates increased significantly in all age-groups. The most outstanding increases, more than double the 1966 levels, were registered for the "older" age groups, 30-34 years and 35-39 years. In fact, these women were forced to give birth at older ages than the most prolific age group for that period (20-25 years) and to have more children than they would have wanted (Figure 1).

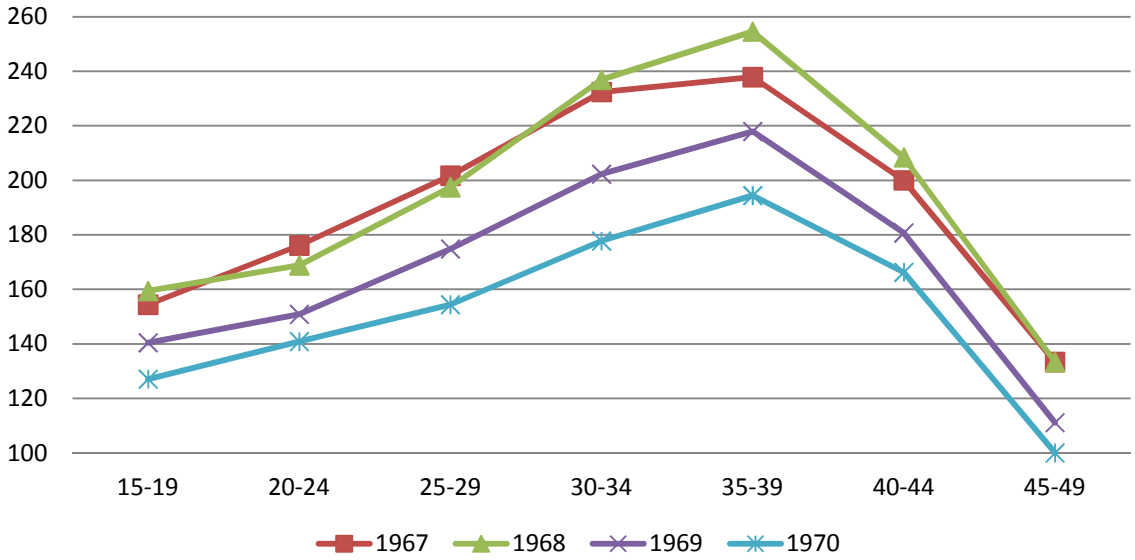

Figure 1. Age-specific fertility rates by 5-year age groups, 1967-1970, Index (1966=100)
Source: based on data from the "Romanian Demographic Yearbook – 2005", National Institute of Statistics, Bucharest, 2006.

The fall of the regime in 1989 and the abrogation of the legislation regarding abortion gave the fertile cohorts the opportunity to choose the number of offspring, which resulted in a sharp decrease of fertility with severe implications on the evolution of the population size.

Further, we will present the effects in socio-economic and demographic plans of the legislation regarding the reproductive behaviour in Romania from the transversal and longitudinal perspectives.

Some transversal effects throughout the 20th century

According to Ghetau (1997), the Romanian demographic transition followed the predominant European model, since the strong decreasing trend of general mortality began in the first half of the 19th century and the decreasing trend of fertility around 1885. Until the Second World War the Romanian population manifested a demographic behaviour similar to the Western European ones. The downward trajectory of fertility continued, under "natural" circumstances, until the middle of the 1950s because there were no interfering exogenous factors to modify fertility one way or another.

In 1957, following the USSR model, which had legalized abortion in 1955 (after Stalin's death), Romania, as well as other communist countries, decided to legalize abortion (see

Appendix). This period coincided with the beginning of the macro processes of intensive industrialization and urbanization, characterized by a massive exodus of the young and adult population from the rural area to the city. In their search for jobs and better living standards, these segments of the population left behind the villages where the forced collectivization caused radical changes in the economy of the rural areas, as well as in the traditional norms, attitudes and values. In other words, the young generations in reproductive ages moved away from their parents' traditional fertile behavior to a modern one, characterized by less and more "expensive" children. To this, one must add the new statute of the "socialist" woman, emancipated, educated in school, with a job and equal to the man, statute that weighted a lot in the decision regarding the number of children in the family.

In the post-war period the Romanian authorities rejected modern contraceptive and family planning means, allowing for the emergence of a so called "culture of abortion". Thus, although rather improperly said, abortion became, until 1966, the main contraceptive method used by the Romanian population (Henry P. David, 1999, in Dobos, 2010, p. 40). During this period, the severe reduction of fertility in the Eastern European countries is strongly related to the reproductive behaviour, mainly focused on abortion as a contraceptive mean, as compared to what was happening in the rest of the European countries.

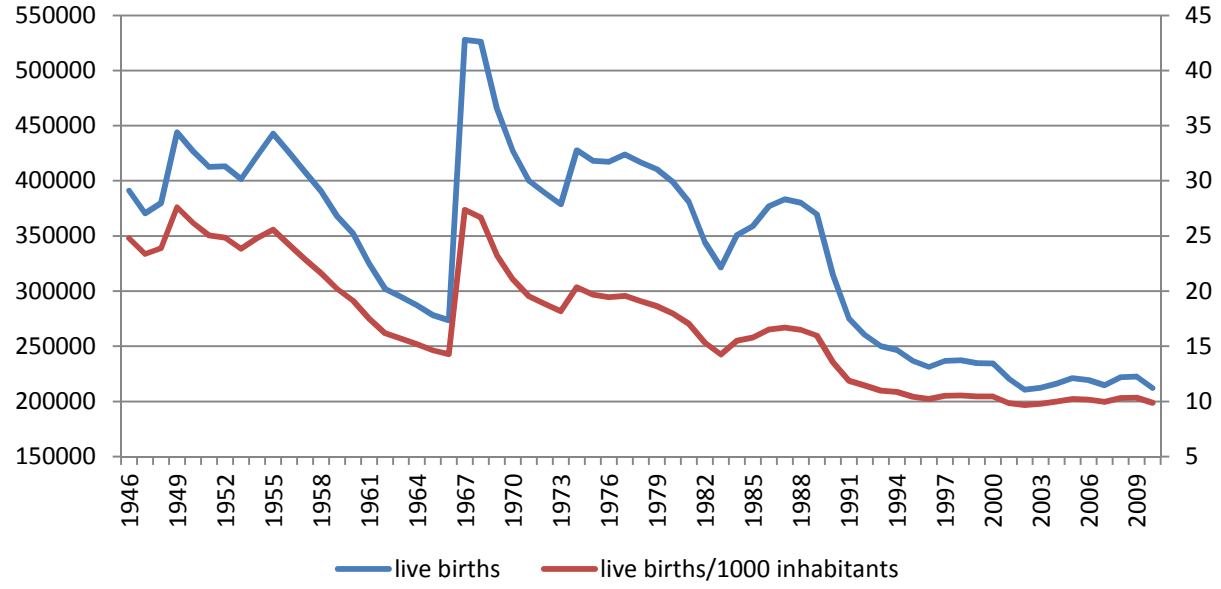

Figure 2. Live births and fertility rates in Romania, 1946-2010
Source: based on data from Ghetau, Vasile, « Evolutia fertilitatii in Romania. De la transversal la longitudinal », Revista de Cercetari Sociale nr.1/1997, Bucuresti, p. 31 and the TEMPO on-line database of the National Institute of Statistics

To be more precise, the liberalization of the abortion favoured the decrease of fertility from 25.6‰ in 1955 to 14.3‰ in 1966 (Figure 2), placing Romania as the second last in Europe, before Hungary (Henry P. David, 1999, in Dobos, 2010, p. 38). This evolution alarmed the party and state rulers because the reproduction index showed that, in perspective, not even the simple generational replacement was ensured anymore and the threat of the demographic ageing was undermining the ambitious objectives of economic, social and geopolitical development of the multilaterally developed socialist society in Romania. Consequently, the Romanian authorities created a rigid legal framework, meant to counteract the gloomy demographic perspectives by

quickly and massively increasing live births with minimal financial efforts. The result was the famous Decree number 770 from November 1966, which, after a decade of liberalization, was suddenly and brutally restricting the access to abortion.

The population was taken by surprise and, as a consequence, the birth rate almost doubled (27.4‰ in 1967 and 26.7‰ in 1968, as compared to 14.3‰ in 1966), reaching higher levels than those from the period immediate after the war (1949-1950). An overview of the effects of this decree shows that it generated a forced "baby-boom" with its peak in 1967-1968, after which the fertility rate began to decrease towards levels closer to the "natural" ones.

In 1972 the birth rate fertility rate had reached an unwanted level of 18.8‰ and the authorities rushed to act within the same coercive line as before (see Appendix). The legislation centred on elements that could cause changes in the fertile behaviour (abortion, contraceptive and family planning means, divorce, marriage, taxes on celibacy etc.) was hardened. The effects were not the ones anticipated, an increase in fertility revolving around 19‰ and spread on a period of five years (1974-1979) being a modest one.

After 1980 fertility birth rates started to decline abruptly on the background of the economic, social and political evolutions that significantly lowered the living standard of the population. In 1983 the fertility rate had reached the same as in 1966, year in which the coercive pronatalist policy came into force. This led to a new hardening of the antiabortion legislation, with absurd measures that were real attacks of women's lives, especially in the case of those over 40 years.

Thus, during 1985 two changes were made in the legislation regarding abortion. First, the age limit after which a woman may have an abortion was raised from 40 years (as it was since the entering into force of the 1972 legislation) to 45 years (as it was in the 1966 decree). The second change was related to the minimum number of children born and reared by a woman in order to be permitted to have a legal abortion, which became five instead of four.

Although the demographic statistics were obviously showing the small contribution of women aged 40 to 45 years to general fertility, these measures were applied generating dramatic consequences. Infant mortality increased from 22 infants in 1000 live births in 1984 to 30‰ in 1989, in parallel with the increase in the number of dystrophic and premature children and children with congenital malformations. In 1986 the number of illegal pregnancy terminations decreased, however the number of incomplete abortions and maternal mortality caused by abortions and obstetrical risk increased (Dobos, 2010, p.152). As legislation became more rigid, the number of illegal pregnancy terminations increased. These evolutions were caused by the lack of sexual education, the absence of contraceptive means and the fact that only a small part of the population knew how to use them. Furthermore, with the help of educative-propagandistic means, the negative effects of the various contraceptive and family planning means were highlighted.

The measures in force during 1967-1989 were among the simplest and the most rigid ones specific to a dictatorial state, taken with the purpose of obtaining immediate and consistent results, but with a minimum allocation of resources and without taking into account the medium and long term consequences. Since regulation of abortion touches a deep dimension of human personality, the sexual one, the success of a policy based mainly on restrictive measures regarding abortion (in reality the main mean of birth control) is doomed to failure from the beginning.

The Romanian policy is considered to be the most "rigidly imposed pronatalist policy in the world", without significant effects on increasing fertility on the long term. The fertility of the Romanian women was permanently comparable to the one in other Eastern European countries, sometimes even lower than that in Poland or Czechoslovakia, countries where the legislation regarding abortion and modern contraception was liberal (Dobos, 2010, p.43).

These measures had strongly deformed the cohort structure of the population leading to the existence of larger cohorts, which still stand out. On the 1st of January 2010, the weight of each generation from the age groups 20-25, 28-25 and 37-42 years was ranging among 1.5 and 2% of the total population (Figure 3). Overall, there are 20 cohorts affected that together represent 33% of the population. In other words, the pronatalist coercive legislation caused a major disequilibrium in the cohort structure, since a fifth of the cohorts alive at that time represent about a third of Romania's population.

This disequilibrium was and is diffusing its consequences in almost all domains of the economic, social and political life. Currently, the most visible are problems on the Romanian labour market, generated by the world economic crisis and the structural problems of the national economy. The consequences may be seen in the increasing unemployment for all age categories and in the growth of the number of young and adult workers, who emigrate in the search for a better living standard, especially after the country's integration in the EU.

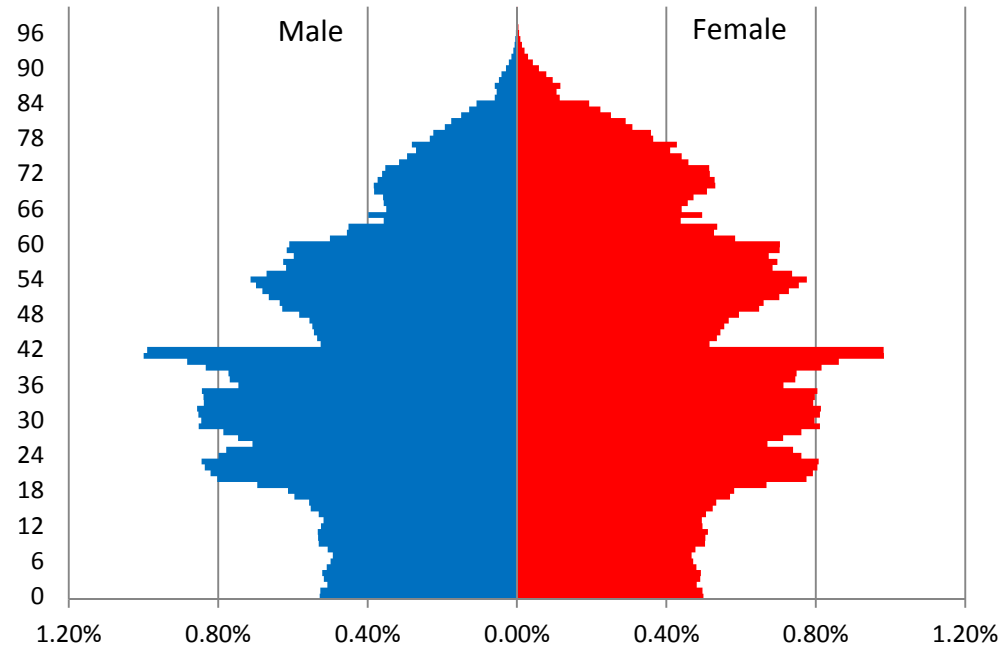

Figure 3. Cohort structure of the Romanian population on January, 1st 2010 (%)
Source: based on data from the TEMPO on-line database of the National Institute of Statistics.

With regard to the demographic ageing, the implications of these cohorts' disequilibria are obvious. However, compared to Western Europe, where the baby-boom took place after the Second World War, during 1946-1964, Romania still has 2 decades before the peak of the phenomenon. The very numerous cohorts born after 1967 will begin to retire starting with 2032, but until then the entire configuration of the social security and assistance systems could be reformed and adapted to the demographic restrictions, taking advantage of the experience of the countries that will have already had to deal with these problems.

Fertility of the 1928-1961 cohorts

The evolution of the total cohort fertility of a great number of cohorts constitutes a unique case among the European populations through the way and the intensity with which the factors of interventionist nature have driven the long term evolution of population fertility. The situation is a special one in European context, which is illustrated by the evolution of total cohort fertility rate of the above mentioned cohorts in Romania and in representative countries from Western Europe. While in these countries those cohorts recorded a net diminution of the total cohort fertility, in Romania the evolution was opposite (Figure 4).

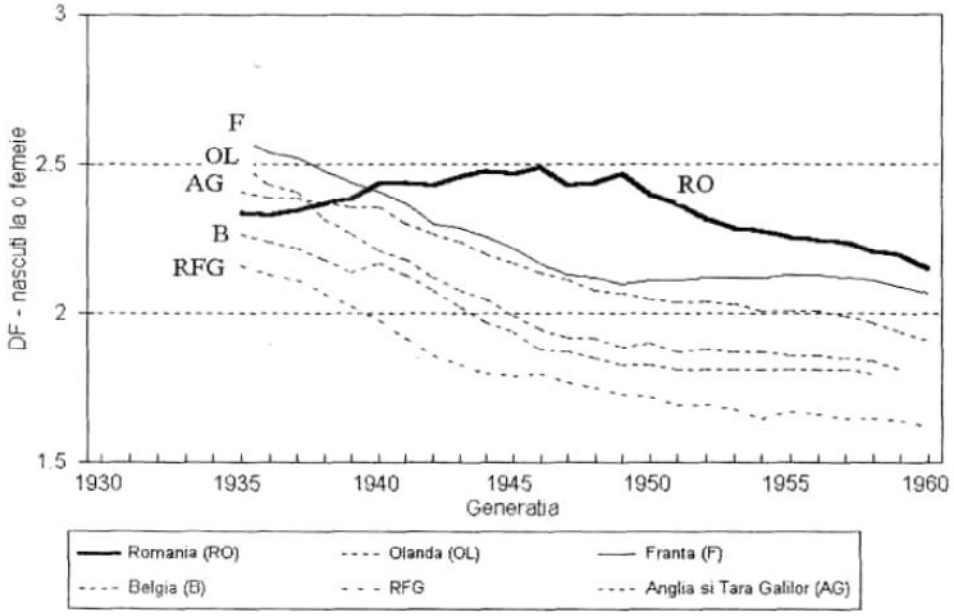

Figure 4. Total cohort fertility of the 1935-1960 cohorts in Romania and some Western European countries
Source: Ghetau, Vasile, « Evolutia fertilitatii in Romania. De la transversal la longitudinal », Revista de Cercetari Sociale nr.1/1997, Bucuresti, p. 60.

Women born between 1928 and 1933 are the ones that "benefited" most from the liberalization of abortion in 1957. Until 1966 these cohorts were in the age groups with maximum fertility and their total cohort fertility was smaller than the one of the 1934-1951 cohorts (Figure 5).

The 1935-1960 cohorts suffered a "mutation" of the reproductive behaviour imposed by the legislation that restricted the access to the most widespread mean of birth control. From cohorts that would surely have not reached a total cohort fertility superior to the generational replacement threshold, they became cohorts that realized cohort fertility above it (Ghetau, 1997, p.23).

The biggest gross total cohort fertility may be seen for the 1940-1950 cohorts, which in 1967 and the following years were aged between 15 and 30 years, the most prolific age group. Thus, the high values of the descendents of the 1940-1950 cohorts are exclusively caused by the coercive antiabortion measures from 1966, conclusion also sustained by the decrease in the mean age at first birth for these cohorts.

The shock caused by the restrictive legislation did not "take by surprise" the cohorts born after 1950 as much as the ones before. The former could take advantage of the experience of the

later, benefitting from the solutions that they had found in order to have the wanted number of children and not the imposed one. For this reason, the line of their cohort fertility rate goes below the generational replacement threshold (2.1 children per woman in the fertile period 15-49 years) (Figure 5).

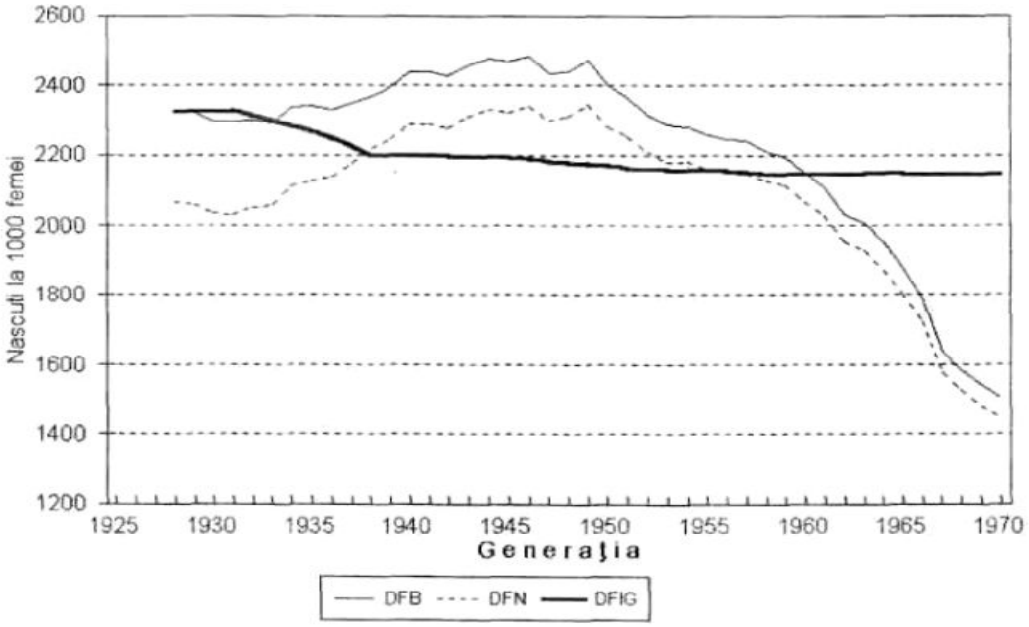

Figure 5. Gross Total Cohort Fertility Rate (DFB), Net Total Cohort Fertility Rate (DFN) and Total Cohort Fertility Rate ensuring generational replacement (DFIG), female cohorts 1928-1970
Source: Ghetau, Vasile, « Evolutia fertilitatii in Romania. De la transversal la longitudinal », Revista de Cercetari Sociale nr.1/1997, Bucuresti, p. 58.

Based on thorough longitudinal computations, Ghetau (1997) states that the important changes occurred in the cohort fertility calendar are found in the structure formation of the total cohort fertility by age. Some important aspects were the age at which each cohort was in 1967, whether it was within the maximum fertility period or older, whether there were birth of superior order with unwanted children etc. The early model of Romanian fertility (with the maximum value of fertility rates before the age of 25 years) was replaced in certain periods with the "intermediary" model (values approximately equal for the 20-24 years and 25-29 years age groups) or even with the "late" one, with the maximum value in the 25-29 years age group.

The pronatalist coercive policy of the former regime had, along 36 years, deformed the evolutions of fertility for a great number of cohorts, in the sense of intensity and calendar changes. The most affected were the 1940-1950 cohorts, from the point of view of the age they were at during 1967-1968.

These generations experienced an "imposed fertile shock", being characterized by the unwanted increase of the total cohort fertility and a decrease of the mean age at first birth. The cohorts born after 1960 manifested their wanted fertile behaviour to a greater extent than the elder generations, despite the restrictive legislation in force until the end of 1989. During the 1980s and 1990s, these generations placed total cohort fertility rates below the replacement threshold. During the 2000s the total fertility rate stabilized around 1.3 children per woman, which places Romania in the group of countries with low fertility, along with Germany, Hungary, Moldova, Slovakia and Portugal.

The procreative behavior of these generations is one of the important factors that determine the recent decline of population size and the acceleration of demographic ageing. The analysis of the intergenerational transmission of the procreative behavior could reveal important mechanisms for finding policy solutions, in order to increase fertility and diminish the negative effects of ageing.

Data used

Partly, the objectives of our analysis can be answered with the use of the Generations and Gender Survey data, in which Romania took part in 2005 (first wave). Unfortunately the recordings did not continue for the second wave (2008) of this Survey initiated by the UN (UNECE). Although the data from the first wave represented a great step forward, since data on Romanian fertility is rather scarce, it cannot cover all the aspects that we are interested in.

Thus, in order to see how reproductive behaviour was affected by the changes that occurred during the 20th century, a team from the Polls and Surveys Centre of the Bucharest Academy of Economic Studies developed a questionnaire on the topic of intergenerational transmission of fertility behaviour. The survey was conducted on a non-probability sample of 885 respondents during May 2011 using face-to-face interview. The target population consisted of women aged 50 years and more and the sample was built using quota sampling by two criteria: age and residence area. According to the first criterion, a third of the respondents were aged at least 75 years and according to the second criterion, at least a third, but no more than a half of the respondents were from rural area.

The questionnaire of the survey comprises 90 questions, grouped in five sections. The first section comprises questions regarding the respondent, such as year of birth, residence area, occupational status, educational level and marital status, children and marriage, as well as some questions about perceptions regarding ideal age for first marriage, first birth, when it is too late to get married and to have children. Also, in this section the respondent is asked the generations that she lived together with during childhood, at maturity and currently.

The next four sections comprise a relatively similar set of questions, i.e. children, marital status, age at first marriage and birth, occupational status, education level and residence area at the moment of first and last birth, regarding the respondent's children, siblings, grandchildren and parents.

Based on the questionnaire, we can distinguish between four generations for each respondent and, considering that our respondents are aged 50 years and more, the sample data practically covers the entire 20th century. For this reason, we were able to build three age groups (50-59, 60-74 and 75 years and more). Behind the rationale for such grouping were the socio-economic and political events that took place in Romania since the beginning of the 20th century.

Thus, in the third group we included persons born until 1936, which comprises relatively numerous cohorts due to the high fertility rates specific for the Romanian society at that time, but also because of the increased fertility that occurred after the First World War. Most of these cohorts were in their fertile period during 1946 and 1966, when Romania experienced a "natural" baby-boom.

The cohorts born during 1937-1951 comprise the second age group, who had already entered their fertile period in 1966. In this year, with the view to stopping the decreasing fertility trend, the Romanian socialist government adopted the decree number 770 according to which abortion became illegal, thus generating a forced baby-boom.

These cohorts, born between 1952 and 1961, form the third age group. They already began to enter their fertile period and they are the parents of the cohorts born since the 1980s. The abrogation of the decree 770/1966 brought about a plunge in fertility levels, thus causing the cohorts in the last age group to be less numerous than the one in the previous three groups.

Based on the survey data we will analyse the procreative behaviour of the most affected cohorts using political, military and economic landmarks that had a demographic impact, respectively a natalist one, in order to analyse whether there are major discontinuities in the evolution of the reproductive behaviour throughout the 20th century.

Results

Marriage and birth

Perceptions and realities

The respondents' perceptions regarding **the ideal age for first birth and marriage**, as well as the ones regarding the age when it is too late to have the first child, in comparison with the ages when they first got married and had their first child are presented in this section.

In this analysis, the 50-59 years age group stands out by always being significantly different from the other two groups (see Table 1). The respondents in this group are less traditional when it comes to the matters analysed. They believe first marriage should occur later than the other respondents. A possible explanation for these results is the fact that they were, to a higher extent, "beneficiaries" of the socialist equality between men and women. Also, they are, on average, more educated and more involved on the labour market.

Table 1. Perceptions regarding age at first marriage and birth

Indicator	50-59		60-74 years		75 years and more	
	Women	Men	Women	Men	Women	Men
(1) Ideal age for first marriage	24.55	27.63	*22.36*	26.07	*22.48*	25.27
(2) Ideal age for first child	26.26	29.44	*24.41*	28.14	*24.09*	26.93
(3) Difference between (1) and (2)	*1.71*	*1.81*	*2.06*	*2.07*	*1.61*	*1.66*
(4) Too late for first marriage	36.38	40.40	*34.14*	*37.96*	*33.61*	*37.40*
(5) Too late age for first child	37.52	41.80	*35.59*	*39.43*	*35.19*	*38.59*

The differences between age groups for the values in *Italic* are not significant for α=0.05

For these respondents the **ideal age for the first marriage** is around the age of 24.5 for women and 28 years for men, followed by the first child roughly two years after. Although the respondents from the other cohorts also think a two year difference between the first marriage and first birth is ideal, they think the former should take place around the age of 22.5 for women and 25-26 for men and the later around 24 years for women and 27-28 years for men (the differences for the second and the third age groups are significant for ideal age at first child for men, but no for women).

The differences in perceptions among the three age groups regarding the interval between first marriage and birth are not statistically significant for either men, or women. They vary within a 0.5 years interval and indicate a slightly larger difference for the middle cohorts.

When it comes to the age when it is too late to get married for the first time or to have the first child, there are statistically significant differences only between the first age group and the rest, all women from cohorts aged 60 years and more in 2011 having similar perceptions in these matters. The former believe it is too late to get married towards 37 years in the case of women, respectively around 40.5 years for men and it is too late to have the first child after 37.5 years for women and around 42 years for men. Similar to perceptions regarding ideal age for first marriage and birth, the respondents in the other age groups indicated lower values, the mean for women being around 33-34 years for the first marriage and 35-36 years for the first child, and towards 38 years for marriage and around 39.5 years for the first child for men, respectively.

In contrast with the expressed opinions, the ages at which the respondents got married for the first time and had their first child (Table 2) are between 1.66 and 2.44 years lower, differences that are statistically significant for all age groups. However, there is significant correlation between these ages and the expressed perceptions, which indicates that there could be some constancy in their responses, due to the fact that the data comes from the same persons. This might be explained by the fact that the life experience of the respondent made her realize that it would have been better if she had postponed these steps. This is also supported by the tendency reported in the literature to postpone first marriage and births (Haragus, 2008), tendency that was counteracted by the restrictive socialist legislation regarding abortion and by the taxes imposed for celibacy and for childless couples (Tismaneanu, 2006).

Table 2. Actual ages for first marriage and first birth

Indicator	50-59	60-74 years	75 years and more
(1) Age for first marriage	22.47	20.73	19.87
(2) Age for first birth	24.32	22.92	21.41
(3) Difference between (1) and (2)	*1.86*	*2.18*	*1.57*

Results are significant for α=0.05. In the case (3) the differences between the first and the second and the first and the third age groups are not significant, but they are significant between the second and the third age groups.

In this context, the respondents in the age group 50-59 years, which were born between 1952 and 1961 and began to enter their fertile period (15 years) since 1967, considered it would have been better to postpone both first marriage and first birth with 2, respectively 2.3 years (Table 3). These cohorts are the least conservative ones compared to the other respondents and they were also least affected by the pronatalist legislation.

The cohorts born between 1937 and 1951 were most affected by the above mentioned legislation, being at the beginning or the peak of their fertile period in 1966. **Their mean age at first marriage and birth shows the early model of Romanian fertility imposed by the legislation**. On average, the respondents from these cohorts first got married around the age of 21 and had their first child around 23 years, which means a difference of 1.7 years for marriage and 1.4 years for birth, as compared to expressed opinions. The parents of these cohorts benefited to some extend from the permissive legislation regarding abortion from 1957, which meant the cohorts in the second age group had their children in a different context than the one they grew up in themselves.

Table 3. Differences between ideal and real ages at first marriage and birth

Indicator	50-59 years	60-74 years	75 years and more
(1) Differences for age at first marriage	2.30	1.66	2.44
(2) Differences for age at first birth	2.08	1.37	2.43

All results are significant for α=0.05.

The cohorts most affected by the legislation at late ages were the ones born before 1937. They are also the ones who followed closest their parents' family formation model. The respondents in this group got married a little before 20 years and had their first child around the age of 21.5. They are also the ones that indicated the greatest differences between the ideal age at first marriage and birth, thus the ones who thought to a greater extent that they got married and had their first child too early (approximately 2.4 years). The respondents in this age group are part of cohorts that entered their fertile period shortly after the end of the Second World War, thus contributing most to the "natural" Romanian baby-boom.

Timing

With regard to **the age at first marriage**, the respondents tended to marry later in the younger cohorts, their average age at first marriage increasing from just below 20 years for those aged 75 and more in 2011, to almost 21 for those in the second group and reaching 22.5 for women born in the cohorts of the third group (Table 4). On the other hand, the average age at marriage of their mothers, although they also tended to marry later than the cohorts before them, increased from 18.5 in the case of the third group, to 19.3 for the second group and finally to 20.3 for the first. the gap for the first group being two times larger than the one for the third group.

Table 4. Ages at first marriage, first birth and last birth for the respondents and their mothers

Age group	First marriage		First birth		Last birth	
	Respondent	Mother	Respondent	Mother	Respondent	Mother
(1) 50-59 years	22.47	20.29	24.32	21.68	27.36	28.63
(2) 60-74 years	20.73	19.29	22.92	20.97	28.02	29.18
(5) 75 years and more	19.87	18.67	21.41	19.49	26.28	27.81

Results are significant for α=0.05. In the case of last birth for mothers, the differences between the first and the second and the first and the third age groups are not significant, but they are significant between the second and the third age groups.

The same pattern is shown by the **mean age at first birth**, which increases with age both for the respondents and for their mothers, the gap being generally larger than in the case of mean age at first marriage. Thus, women in the last age group gave birth to their first child when they were 21.5, almost two years older than their mothers, those in the second age group were already 23 at the first birth (as compared to their mothers who were 21) and those from the first age group experienced this transition after they turned 24, while their mothers had already given birth to their first child when they were 21.5.

However, fertility decline is not only explained through postponement of marriage and birth, but also by the shortening of the period in which women usually give birth (Flinn, 1987, p. 33), which is shown by the evolution of the mean age at last birth. The tendency at European level is to concentrate births in a shorter time span (Lee, 2003). For 20th century Romania, the trend is not so clear. Both for the respondents in the second group and for their mothers a

substantial increase of 2, respectively 1.5 years is observed as compared to the third group, which already registered relatively low levels of 26.3 for the respondents and 27.8 for their mothers. This can, however, be explained by the **two "baby-booms" of Romania**. During the "natural" one, the mothers of the respondents born between 1937 and 1951 were at the height of their fertile period and delay is not an unlikely consequence of the war in the first half of the 1940s. In the case of the respondents themselves, on the other hand, they were already between 15 and 29 years old in 1966, thus the hardening waves of the policy affected especially the end of their fertile period.

In the case of the first group, the mean age at last birth is by around 0.5 years smaller than the respective value for their mothers, but the age is still higher than the corresponding one registered for the last group. In the case of the third group, last birth of the respondent occurred on average approximately 1 year earlier than that of her mother. Therefore, the differences between the mean ages at last birth for the generations of the respondents and those of their mothers are show indication of decreasing with age, but the data does not show a clear downward trend.

Family size and influence on fertility behaviour

Fertility behaviour is influenced by a wide range of biological, economic, social, demographic, psychological and genetic factors and different combinations of these factors have different impacts on first and higher order birth decisions. However, family systems and kinship networks also play an important role. The previous section analysed the transmission of timing of first marriage and birth, and last birth, while this sections will focus on **family size**. The literature on the subject is trying to answer questions like those regarding the influence of the number of siblings on procreative behaviour or the impact of the relationships with parents, grandparents and siblings during childhood and adolescence.

According to the existent literature, there is a fairly strong and increasing correlation between **the fertility of parents and that of their children** (Murphy, 2007). In other words, the number of siblings and the number of children are related, various authors reporting a positive impact of the former on the later (Caplescu, 2011; Kohler, Rodgers, & Christensen, 1999; Murphy, 2007; Murphy & Knudsen, 2002; Reher, Ortega, & Sanz-Gimeno, 2008). Also, Murphy & Wang (2001) argue that family size is just as good an explanatory factor as **education or residence area**, for example, the correlations of the later two with fertility tending to decrease over time (Murphy, 2007).

Other studied demographic characteristics of the individual related to the family it belongs to are **birth order, gender and influence of extensive kin**. While birth order is reported to have little influence in the present (Kohler et al., 1999), it has been shown that its impact on the number of children an individual will have by the end of their reproductive life was rather substantial in early 20th century populations, due to socialisation (Murphy, 2007). Namely, older children, who often helped in rearing their younger siblings, tended in turn to have a larger number of children. The strongest correlation between the fertility of parents and children is often reported to be the mother-daughter one (Kohler et al., 1999; Reher et al., 2008) and some studies have analysed the transmission of fertility taking into account the impact of parents-in-law on fertility as well (Reher et al., 2008). The fact that **woman to woman transmission** is

stronger than other combinations is not surprising since women are mostly the ones who take care of children, even in contemporary Europe.

There, therefore, a substantial body of literature shows that **family** is a key agent in defining reproductive success in the context of declining family size and that intergenerational transmission of reproductive behaviour is an essential mechanism for keeping fertility at a much higher level than it would have been in its absence. We may say, therefore, that the universal need to transmit values and attitudes within the family ended up playing a significant role in facilitating the advent of an entirely new reproductive regime.

As may be seen in Table 5, the age group a respondent belongs to significantly influences the transmission of reproductive behaviour through family size, but for the cohorts affected by the legislation regarding abortion the environment was the one playing a major role. The earlier the respondents were born, the larger the family they, their children and their grandchildren grew up in, with differences tending to shrink with each new generation. Thus, respondents born before 1937 grew up in families with an average of 4 children, they had an average number of 2 or 3 children and an average number of 3 grandchildren from each child. The reason for the substantially larger number of grandchildren as compared to that of children for these cohorts is due to the entering into force of the anti-abortion legislation.

Those born between 1937 and 1951 only had families with an average number of 3 or 4 children, gave birth to 2 or 3 children themselves and had an average number of 2 grandchildren per child. If the natural baby-boom kept fertility relatively high after the Second World War, the legalisation legalising abortion accelerated the declining trend. The fact that the number of grandchildren is close to that of children is an effect of the 1966 Decree and its subsequent waves of hardening.

The ones born during 1952-1961 grew up in families with 3 children on average, had in turn an average number of 2 children and 1 grandchild per child. The legalisation of abortion in 1957 gave couples the possibility to control the number of offspring they would have, thus allowing for a substantial decrease in the number of children born. The respondents in this group were least affected by the legislation, which, combined with the decreasing trend in fertility, led to below replacement levels. Regarding the number of grandchildren, it is true, for this later group, that their children are merely at the beginning of their fertile period, thus not much may be said about the final average number of grandchildren they will have.

Table 5. Average number of siblings, children and grandchildren

Age group	Siblings	Children	Grandchildren
(1) 50-59 years	2.80	1.78	0.71
(2) 60-74 years	3.36	2.25	2.11
(3) 75 years and more	3.90	2.34	3.30

The differences between age groups for the values in *Italic* are not significant for α=0.05

To further deepen the analysis, the correlation between the number of sibs and the number of children of the respondent is relatively strong for the entire database (0.174) and statistically significant (p-value<0.001). When divided into age groups, the correlations are still relatively strong and significant for the first and the last age group, but weak and not significant for the second age group. The explanation for this situation is the degree to which these

generations were affected by the policy, thus restricting their choices, and consequently the influence of environmental factors, in this matter.

The differences between the number of sibs and the number of children of the respondent are statistically significant (Table 6), both when the entire data set is considered, as well as when it is divided into age groups. The mean difference for all the respondents is around 0.38, with bigger differences for the last group, and 0.14 less for the second group, which is also not significant.

With the view to highlighting the way in which family size influences the number of children, we did an analysis for the next generation as well (Table 7). Thus, we wanted to know how the respondent's number of children influences the average number of grandchildren from each child. The results of the ANOVA test show that the former significantly influences the later, however, the transmission of the fertile behaviour through family size is done in the context of a drastic decrease in the number of children. The descendants of the respondents with one or two children generally have no children or at most one, while the descendants of the respondents with three children or more have on average 1.36 children. These results should be treated with caution, however, since they also include cohorts that are at various stages of their fertile period, especially the children of the 50-59 years group.

Table 6. Differences between the average number of siblings and children

Age group	Difference
(1) Total	0.38
(2) 50-59 years	0.39
(3) 60-74 years	*0.24*
(4) 75 years and more	0.54

Table 7. Average number of grandchildren by number of children

Number of children	Difference
(1) 1-2 children	0.73
(2) 3-4 children	*1.36*
(3) 5+ children	*1.36*

For both tables, the differences between age groups for the values in *Italic* are not significant for α=0.05

In order to see whether the number of sibs the respondent grew up with influences the number of children they have, we did an analysis of variances for the entire database and for the three age groups. From the general analysis we may conclude that the number of sibs significantly influences the number of children, but the difference in the number of children is statistically significant only for those with four sibs and more, who have about 2.5 children (Table 8). This level is above the one for the other groups, but it clearly shows the shift towards the family model with one or two children. The ones coming from families with three or four children have an average number of children a little above two as well, thus having fewer children than their mothers. Respondents with one or no sibs have, on average, 1.86 children, meaning they mainly kept their family model.

Table 8. Average number of children by number of siblings

Number of siblings	Total	50-59 years	60-74 years	75 years and more
(1) 0-1 siblings	1.86	1.62	*2.14*	*2.04*
(2) 2-3 siblings	2.08	1.81	*2.32*	*2.22*
(3) 4+ siblings	2.47	2.15	*2.38*	2.74

The differences between age groups for the values in *Italic* are not significant for α=0.05. In the case of the 50-59 years age group, the differences between the first and the second and the second and the third sibling groups are not significant, but they are significant between the first and the third sibling groups.

When divided by age group the trend is even more obvious, with the exception of the second group, which constitutes a special case for the reasons presented above. For the first age group, the predominant number of children is 1.6-1.8, only respondents with 4 or more sibs having an average number of 2 children, difference that is statistically significant. In the second group, due to the context, the average number of children is 2, with slightly more children for those with 2 sibs and more, however not statistically significant, while in the third group, those with 4 or more sibs have, on average 2.7 children, significantly more than those with less sibs, whose average number of children revolves around 2.

Thus, although the size of the family has an influence on the number of children a person will have, the model of the family with many children is losing ground in favour of less numerous families, more concerned with the quality than the quantity of children (Luci & Thevenon, 2011), satisfying their reproductive and psychological needs by giving birth to the first child (Haragus, 2008). The tendency to reach this family model is so strong that it even resisted to coercive policies aimed directly at increasing fertility. From the point of view of family size, the data indicates strong tendencies of aligning to Western European realities.

Desired and actual number of children

Another focus in the field is on the factors that determine the difference between the **desired and the actual number of children**. Studies at European level (Testa, 2012) indicate an average number of desired children close to the threshold of simple generational replacement of 2.1 children per woman. Despite this, only a few countries have fertility levels above or close to the generational replacement threshold, while most European countries have fertility rates between 1.3 and 1.6 children per woman (Lutz et al., 2010).

The data allows for an indirect intergenerational comparison of final fertility by using mean birth order as a proxy. The analysis of this variable for the respondent, her parents and her grandparents, indicates a steady decline (Figure 6). This finding is supported by the results presented above, namely that family size tends to decrease as we get closer to the present. It has been shown that the influence of parents-in-law in a woman's fertility is smaller than the one of her parents (Reher et al., 2008) and that the influence is stronger on the mother-daughter transmission line (Kohler et al., 1999; Reher et al., 2008), however, the results obtained on the analysed database are not consistent with these findings.

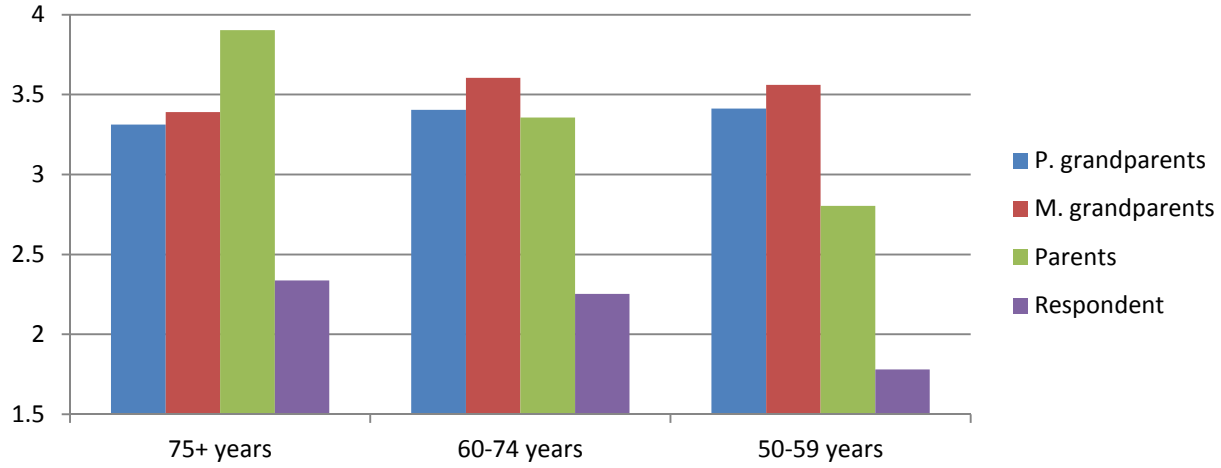

Figure 6. Average birth order by generations

The reproductive behaviour of the grandparents of the women in the third age group indicates that fertility was already declining by the beginning of the 20th century, but recuperation that occurred after the First World War kept the average birth order relatively high for the cohorts that were in their fertile period between the two world wars, namely the respondents in the third age group and the parents of the respondents in the second one. The decreasing in birth rates that followed the post-World War II baby-boom was accelerated by the legalisation of abortion in 1957, which led to fewer children born by the parents of the respondents in the first and second age groups and respondents in the third one. The entering into force of the anti-abortion legislation kept the number of births artificially high for the respondents in the second group especially, affecting the other two groups to a lesser extent.

When focusing on the number of children, it is obvious from Figure 7 that most respondents have 1 or 2 children, regardless of the age group they belong to. It may be noted, however, that for the respondents aged 75 years or more, the proportion of women with three children is only slightly lower that the other two. Also, as we look to younger cohorts, the distribution is increasingly more skewed to the left, thus suggesting that large families are rarer now than they were at the beginning of the century. Moreover, the proportion of women remaining childless seems to have an increasing trend, which is a problem identified in previous research as well (Haragus, 2008). These evolutions strongly suggest that completed cohort fertility is declining.

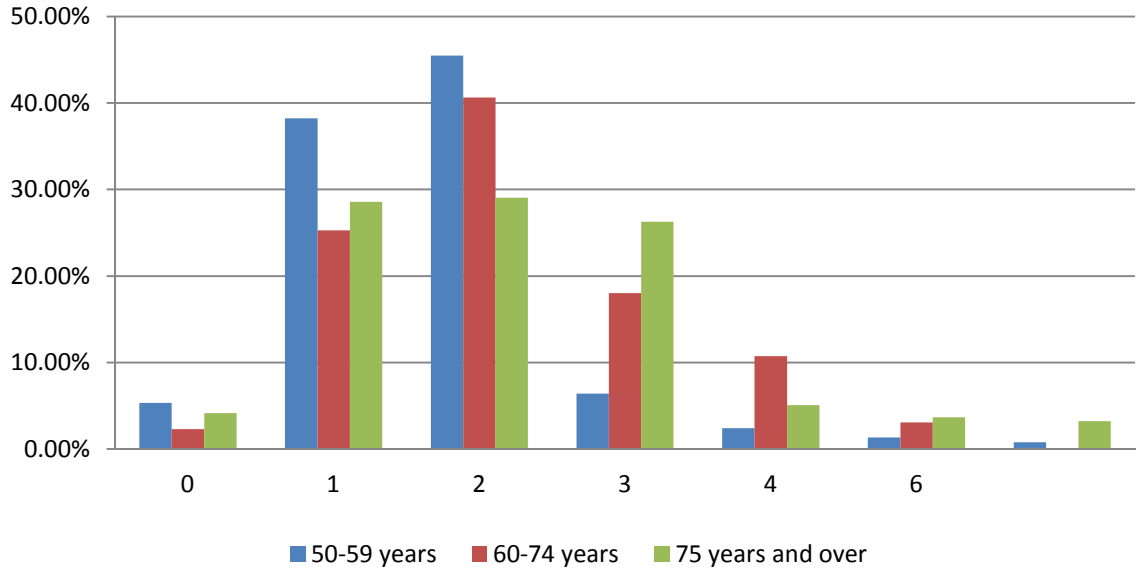

Figure 7. Distribution of women by number of children and age groups

The consequences have already begun to be felt, most stringent on the labour market. Increasingly smaller cohorts enter the labour market and contribute to the pension budget (and they are further diminished by a longer time spent in education and by emigration). On the other hand, the relatively larger cohorts of the "natural" baby-boom retire, and their number is supplemented by the pensioners that benefited from the early retirement schemes of the late 1990s and the early 2000s. Thus, an increasing burden is placed on a decreasing active population, in order to maintain an already reduced subsistence level of an increasingly larger retired population.

The problem is not that Romanians do not want children. Nevertheless, they seem to want fewer and tend to have even less than they want (Table 9). The number of wanted children is on average significantly lower for the younger cohorts in the first age group, than the ones for the others and the pattern is repeated for the actual number of children.

Table 9. Desired number of children, actual number of children and differences between them

Age group	Desired	Actual	Differences
(1) 50-59 years	1.89	1.70	0.20
(2) 60-74 years	*2.28*	*2.22*	*0.06*
(3) 75 years and more	*2.42*	*2.24*	0.18

The differences between age groups for the values in *Italic* are not significant for α=0.05.

When it comes to differences between **the wanted and the actual number of children**, the data show that they are significant statistically. The positive value of the average difference (0.15) means that women want, on average, more children than they give birth to, which was also an intuitive conclusion from the results presented above. This is in accordance with the results presented previously.

The difference remains significant in the first and the third age groups, but becomes not significant for the second one. A reasonable explanation for this situation is the policy influence on the second group in the sense that they were forced to have more children than they would have wanted to, thus the actual number of children gets closer to the desired one (or the desired number is biased by the fact that they declared the wanted number equal to the actual number). The first and the third age groups were influenced by the policy to a lesser extent, hence the bigger (and significant) difference between the actual and the desired number of children.

A model of the Romanian fertile behaviour

The factors influencing fertility are numerous and various. A realistic model of the reproductive behaviour in Romania throughout the 20th century would necessarily be very complex, including a large number of variables and equations. However, in order to illustrate in what way certain types of factors influenced this behaviour, we chose one variable from each of the types of factors as a proxy.

Usually, reproductive behaviour is analysed based on the **Total Fertility Rate** (most studies use this variable for analysing reproduction; for example, see Muresan, Haragus, Haragus, & Schröder, 2008; Myrskylä, Kohler, & Billari, 2011)). However, this measure is computed at national level and since this sample is not representative for the Romanian population, it cannot be used in this case. Another increasingly used variable recently is **Completed Cohort Fertility** (Frejka & Calot, 2001; Myrskylä, Goldstein, & Cheng, 2012). A measure that could approximate this indicator in my data is the **average birth order**, but the way in which it was computed does only allow for general comparisons, being unsuitable for detailed analysis. The best option for reproductive behaviour that can be used for the sample analysed is **the number of children born by the respondents (Children)**, thus this will be the dependent variable.

The five independent variables chosen are the number of children the respondent's mother had (Children_mother), respondent's age at first birth (Age_birth_1), current education

level (Education), residence area (Residence) during adult life (18-49 years) and a dummy indicating if the respondent belongs to the second age group (Age_group).

The first independent variable was chosen as a proxy for family size, since I have shown that the number of siblings influences the number of children to a great extent. Also, I expect the influence of this variable to be a positive one, since it has been shown that children growing up in larger families tend to have large families themselves (Caplescu, 2011; Murphy, 2007; Murphy & Knudsen, 2002; Murphy & Wang, 2001).

The respondent's age at first birth was taken as a proxy for timing factors. Its influence is expected to be a negative one, since postponing births tends to lead to fewer children born (Haragus, 2008; Steenhof & Liefbroer, 2008).

Current education level is the best indicator the data offers for socio-economic status. It is presumed that the more educated the woman is, the better her living conditions and social status, thus the higher the economic and social cost of a child (Haragus, 2008). In a context where the value of children is decreasing, the expected influence of this variable on the number of children a woman has is a negative one (Muresan & Hoem, 2010). The education level is introduced in the model as a categorical variable, where "0" represents "no education" and "6", post-graduate education".

The cultural differences between the rural and urban have old roots. Even as far back as early modern Europe, urban populations tended to have lower fertility than the more conservative, traditionalist rural ones (Flinn, 1981). Nowadays, this is still true. The better living standards, the greater opportunities and a different pattern of time allocation (Caplescu, 2011) are only a few of the factors that contributed to a fastening of the individualisation and secularisation processes in the urban area. We expect, therefore, the urban population to have lower fertility levels than the rural one. When introduced in the model, the dichotomic variable was given the codes "0" for "rural" and "1" for "urban".

The last variable, the dummy indicating whether the respondent belongs to the second age group (code 1) or not (code 0), was used as a proxy for the impact of the socialist policy. I have shown that this age group was most affected by the 1966 regulation and its subsequent tightening, its fertility levels being artificially maintained at higher levels than they would have been in the absence of the policy. We expect thus the number of children born to these women to be somewhat higher, as a result of the policy impact, which would also explain the counterintuitive similarities between the second and the third age groups that were obtained so far in the analysis.

We chose a multiple regression model because we considered the relationship between the dependent and the independent variables linear, the various factors either adding or subtracting from the final number of children. Based on the coefficients in Table 3.13 the equation of the resulting model is presented below:

$$\mathbf{Children_i = 3.663 + 0.270 \cdot Age\_group_i - 0.261 \cdot Residence_i - 0.064 \cdot Age\_birth\_1_i + 0.177 \cdot Children\_mother_i - 0.216 \cdot Education_i}$$

The ANOVA shows that the regression model is valid ($F=122.403$, Sig. $F<0.001$) and a value of R^2 of 0.419 means that almost 42% in the variation of the final number of children a respondent has is explained by the variations in the five independent variables chosen.

Table 10. Coefficients of the regression model

Coefficients[a]

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	3,663	,231		15,850	,000
Age_group	,270	,085	,111	3,161	,002
Residence	-,261	,092	-,174	-2,158	,009
Age_birth_1	-,064	,011	-,238	-6,082	,000
Children_mother	,177	,013	,115	3,269	,001
Education	-,216	,036	-,216	-2,628	,002

a. Dependent Variable: Children

If the influence of no other variable is considered, a respondent would have, on average 3.663 children.

However, the coefficients obtained for all the independent variables are significant, which means they all influence the dependent variable. A positive influence, thus causing the number of children to increase along with their values, results from the effects of the **age group** and that of **number of children the respondent's mother** has. These results support the affirmations made earlier. Thus, if the respondent belongs to the second age group, she will have, on average, almost 0.3 children more than otherwise. Similarly, if she grew up in a large family, she will tend to have more children, every additional sibling adding 0.177 units to the number of children of the respondent.

The other variables have a negative impact on the dependent variable, the number of children decreasing with every additional year in the mean age at first birth, with every further step towards post-graduate education and especially if the respondent lived preponderantly in the rural area when she was aged between 18 and 49 years. These results also support the assumptions made and are in accordance with the literature. Thus, respondents living in the urban area will have on average 0.25 children less than their counterparts living in the rural area, to which a further 0.2 decrease is added with every new education level achieved. If the phenomenon of birth postponement occurs, every 1-year delay of the first birth will lead to a 0.06 decrease in number of children.

However, these variables were used as proxies for large categories of factors with a very complex interplay. Wishing to explain as much as possible the influence of various factors on reproductive behaviour, in the initial model there were other variables included as well, but were eliminated because they proved to have a non-significant (statistically) influence on the number of children a respondent has.

Among them was religious practice, which we believe to be a better proxy for the cultural sphere (regarding traditions, customs and values, for example) than the residence area, since people who practice religion more often tend to be more traditionalist, more conservative in their views than the others. A possible explanation for the small impact detected in this database may emerge from the distribution of the respondents according to this variable: almost half of them declared that they are going to church at least once a week, 40% say they go to church occasionally (mostly at holidays) and 10% declare they don't go to church, but they have a feeling of belonging to a religion. This indicates, on the one hand, a rather high influence of religion in people's lives and, on the other hand, a fairly uniform one in fertility related issues.

Additional information, this time from the area of family influence on fertility, might have emerged from the living arrangements of the respondent during childhood and maturity, namely from the kin with whom they shared the dwelling. Besides the already explored way in which family size influences fertility, living in extended families might also lead to larger families. In these types of living arrangements responsibilities are shared among more members of the family and usually there are more resources as well (Flinn, 1981). Thus, living with grandparents during childhood or with parents during maturity may stimulate birth by sharing the responsibility for rearing children and taking care of the household among more women. In Romania gender equality is still reduced, being rather the exception than the rule. On the other hand, increased participation on the labour market or in education requires the redistribution in the time allocation of women for various tasks.

Nevertheless, these two variables proved to have little or no impact on the fertility of this sample. Here, too, the explanations may vary, depending on the perspective, from individualisation and shifting towards the nuclear family type to emancipation of women or urbanization.

The trends underlined by the model generally follow those reported in Western Europe. Family size is an important factor in determining fertility levels and among the few with a positive impact. The residence area and family formation timing have been reported to influence negatively fertility as early as the 16th and 17th centuries (Flinn, 1981; Livi Bacci, 2000) and the same is true for education in the 20th century (Barakat & Durham, 2012; Spéder, 2006).

The unique feature of Romania with regard to 20th century fertility is the coercive pronatalist policy of 1966, which influenced fertility positively, in the sense of artificially increasing its level. The result was a weaker influence of the genetic factors (general health, natural ability to reproduce, genetic conditions etc.) and a stronger influence of environmental factors (education, living standard, occupational status etc.), which limited their reproductive choices (Kohler et al., 1999).

Conclusions

The focus is on Romanian fertility in the broader European context and the data on which the analysis is based comes from a specialised survey on the intergenerational transmission of the reproductive behaviour from 2011. The data allow for an analysis of reproductive behaviour throughout the 20th century.

Such an analysis must take into account a few factors that will influence its evolution, such as policies and intrinsic mechanism of the reproductive behaviour, which may be either biologically or socially determined (Kohler et al., 1999). During the 20th century, there were various political, economic and military landmarks that influenced fertility in both in Europe and in Romania causing more or less abrupt discontinuities in its evolution.

According to previous research (Dobos, 2010; Ghetau, 1997; Haragus, 2008), Romania's evolution with regard to fertility was in accordance with the general trends in Europe until the late 1960s. The increases generated by the need to recuperate losses of the two world wars and the subsequent declining fertility, accentuated by legalisation of the abortion, were, allowing for normal variations in rhythm and pace, similar to the ones in other parts of Europe. However, the

adoption of the famous 1966 coercive pronatalist policy, isolated Romania from the influence of western, and even central European countries, forcing fertility to rise much above the "natural" level and maintaining this increased value through artificial, coercive means. The effects of this legislation caused and continue to lead to major disequilibria in many domains, ranging from personal lives of the individuals to structural problems of the economy.

After the abrogation of the legislation at the beginning of the 1990s, fertility levels plunged to below replacement levels, reaching 1.3 children per woman in the 2000s. This places Romania in the same group of countries as Germany, Hungary, Moldova, Portugal and Slovakia.

The increasing freedom of choice with regard to reproductive decisions and the improvement in living standard allows for Romanian trends to align to the Western European ones. This may be seen in the opinions expressed by Romanian women regarding the ideal age at first marriage and birth and the age at which it is too late to get married. These opinions reflect an increasing support for later marriage as cohorts get younger. Nevertheless, the target group consisted only of women aged 50 years and more, therefore the ages are still quite low (22-24 years for women and 25-28 years for men) and actual ages are even lower. The situation is similar with regard to first birth and the ideal interval between marriage and first birth is considered to be around 2 years, although the actual differences are slightly lower. Increasingly higher ages at first marriage and first birth are also revealed by the data, showing that this should occur before the late 30s.

A comparison of the ages of the respondents at first marriage and first birth show clear indication of postponement, but the early pattern is obvious both for marriages and births: the youngest respondents married around the age of 22-23 (which is only slightly over Hajnal's (1965) upper age at first marriage for early marriage pattern, and significantly below the 25 landmark for the late one). All other generations, including both respondents and their mothers, show absolute compliance with the early pattern. The same holds true for the age at first birth, where, again signs of postponement are clear even for the second age group, which was most affected by the communist policy, and the results confirm previous findings (Ghetau, 1997), according to which fertility decline in Romania began, as in most of Europe, in the late 19th century.

The trends in age at last birth show clearly the effect of the policy by an increase for the second group that goes towards 30 years. The low values compared to theoretical end of the reproductive period, which, even without the modern improvements in nutrition (that may lead to a later age for menopause), are way below the ones recorded in European countries for the early modern period (Flinn, 1981). This is consistent with current European tendencies of concentrating fewer and later births in a shorter time span and may be explained by lower ages at first marriage, which tend to lower the age at last birth as well, but it is not possible, based on this data, to show how much of this decrease is due to early marriage and how much results from the tendency to reduce the reproductive period.

Family size and kinship network seem to have a powerful effect on fertility, the number of children being influenced by the number of siblings the respondent grew up with. Even so, the general tendency is to reduce family size. Thus, a respondent will tend to have a smaller family than her parents, but respondents who grew up in larger families will tend to have larger families themselves. This is consistent with previous findings in European countries (Caplescu, 2011; Haragus, 2008; Kohler et al., 1999; Reher et al., 2008; Steenhof & Liefbroer, 2008).

There is a lot of debate in the literature on the differences between the desired and the actual number of children and previous analysis (Caplescu, 2011) shows that a series of factors of socio-economic and cultural nature are the ones determining most of these differences. The actual number of children is a more valuable indicator, since it may give important information about future labour force, future consumer market and other socio-economic indicators. Therefore, an analysis of the factors that determine it was considered necessary. The results indicate a strong positive effect of the socialist policy on the number of children, but also a considerable influence of family. As expected, the urban area tends to have a negative influence on the number of children, and so do education and age at first birth. These results generally follow the trends in Western Europe, the only distinctive feature of Romanian fertility being the pronatalist policy with its long term effects.

In conclusion, Romania entered the 20th century in phase with general European demographic trends and it continued to go along the same path during the first half of the century. The temporary isolation from Western European influences that occurred during communist rule had the effect of delaying rather than modifying its course with regard to fertility, but left the country profoundly marked by the former regime's attempts to generate growth. However, it seems that the realignment tendency is strong. This conclusion is important for policy makers since, allowing for some specificities due to the legacy of the former regime, it may be taken advantage of the advances made in Western Europe by developing a well-designed mechanism to allow the country to evolve at a much lower cost.

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Appendix

Abortion legislation, access to modern contraception and evolution in the abortions number, fertility and fertility rates in socialist Romania

Time frame	Abortion legislation				Number of registered abortions	Fertility rate	TFR	Contraception and sexual education	
	At request	Medical and eugenic reasons	Socio-economic reasons	Legal reasons				Official	In practice
1945-1957	No	Well defined medical reasons	No	No	25.6 registered abortions – 1955 24.2 registered abortions – 1956	26.2 – 1950 30.7 – 1955 28.9 – 1956	3,14 – 1950	No	No
1957-30.09.1966	Yes	Yes	Yes	Yes	332 registered abortions – 1958 1571 registered abortions – 1959 2186 registered abortions – 1960 3397 registered abortions – 1965 3556 registered abortions – 1966	22.9 – 1957 21.6 – 1958 19.1 – 1960 14.6 – 1965 14.3 – 1966	2.73 – 1957 2.59 – 1958 2.34 – 1960 2.04 – 1962 1.96 – 1064 1.90 – 1966	Yes	Moderately
01.10.1966-16.02.1972	Yes (only with approval of medical committee, up to the 3rd month of pregnancy)	Yes, for well defined medical reasons (validated by a committee)	If the supplicant is at least 45 years old or gave birth to 4 children and is rearing them	Rape or incest	390 (of which 99 legal) – 1967 419 (of which 120 legal) – 1968 553 (of which 174 legal) – 1969 685 (of which 230 legal) – 1970 992 (of which 434 legal) – 1971	27.4 – 1967 26.7 – 1968 21.1 – 1970	3.66 – 1967 3.63 – 1968 2.89 – 1970	No	No
16.02.1972-26.12.1985	Yes (only with approval of medical committee, up to the 3rd month of pregnancy)	Yes, for well defined medical reasons (validated by a committee)	If the supplicant is at least 40 years old or gave birth to 4 children and is rearing them	Rape or incest	782 (of which 370 legal) – 1973 782 (of which 370 legal) – 1974 859 (of which 435 legal) – 1975 918 (of which 481 legal) – 1976 983 (of which 519 legal) – 1979 1036 (of which 547 legal) – 1980 1121 (of which 580 legal) – 1981 1359 (of which 685 legal) – 1982 1311 (of which 687 legal) – 1983 864 (of which 514 legal) – 1984 844 (of which 498 legal) – 1985	20.3 – 1974 19.5 – 1976 18.6 – 1979 18.0 – 1980 15.3 – 1982 15.5 – 1984	2.55 – 1972 2.71 – 1974 2.55 – 1976 2.53 – 1978 2.43 – 1980 2.17 – 1982 2.26 – 1984 2.31 – 1985	No	No
26.12.1985-26.12.1989	Yes (only with approval of medical committee, up to the 3rd month of pregnancy)	Yes, for well defined medical reasons (validated by a committee)	If the supplicant is at least 45 years old or gave birth to 5 children and is rearing them	Rape or incest	488 (of which 153 legal) – 1986 476 (of which 161 legal) – 1987 488 (of which 195 legal) – 1988 523 (of which 228 legal) – 1989	16.5 – 1986 16.5 – 1988 16.0 – 1989	2.39 – 1986 2.42 – 1987 2.31 – 1988 2.19 – 1989	No	No

Source: Dobos, C. (2010), pp. 302-303 [author's translation]