# INTERGENERATIONAL TRANSMISSION OF REPRODUCTIVE BEHAVIOUR IN 20TH CENTURY ROMANIA. A CASE STUDY

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**Abstract**

*The evolution of fertility in 20th century Romania is profoundly marked by the persistence of traditionalist behaviours sometimes imposed by the brutal pronatalist policy that entered into force at the end of 1966. Under these circumstances, Romania constitutes a special case in the European demographic landscape and an interesting case study from the point of view of intergenerational transmission of the reproductive behaviour. For three successive generations, the population policy regime alternated from freedom of choice regarding the reproductive behaviour to constraints imposed by the state and back to freedom of choice. This raises the question whether the mechanism of intergenerational transmission has a growing influence, a decreasing one or lost its importance at all. The analysis aims at showing how the reproductive behaviour of Romanian women is influenced by their family. The general conclusion to be drawn from analysing the intergenerational transmission of reproductive behaviour for 20th century Romania is that its influence was stronger at the beginning of the century, in a policy-free context. Once the state began to interfere with 'natural' evolutions, the impact of the mechanism is smaller, being outweighed by the contextual factors determining fertility levels. The most dramatic effect on the reproductive behaviour of Romanian women in the 20th century, with consequences for the behaviour of the following generations, was that of the 23 years of coercive legislation imposing women an artificially high fertility. This led to significant changes not only in the behaviour of the most affected cohorts, but also to weakening the link between fertility of women and that of their mothers and to causing important shifts in perceptions, values, attitudes and even norms regarding fertility.*

## 1 Introduction

Most social and behavioural systems are based on imitation: children imitating adults in order to develop the social skills that will allow them to integrate into the community or adults imitating each other in order to refine certain behaviours and obtain social acceptance and recognition. In this context, adult children imitating the reproductive behaviour of their parents, which is the essence of intergenerational transmission of reproductive behaviour, was the mechanism ensuring the evolution of population up to present time. The main framework within which the process takes place is the one formed by family systems and kinship networks. They play an important role and the literature on the subject is vast and manifold. Its main focus is on answers to 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 on the number of children a person has throughout their fertile period.

The evolution of fertility after the Second World War in Romania may be characterised as chaotic, marked by the persistence of traditionalist behaviours sometimes imposed by a brutal pronatalist policy (Haragus, 2008). This policy, entered into force at the end of 1966, led to the doubling of fertility in 1967, compared to the previous year. The measures implied by the policy mostly affected the cohorts born in the inter-war period and during the Second World War, forcing them to increase the number of their offspring through a sudden and radical change of the permissive legislation regarding abortion. This resulted in the most numerous cohorts in modern

Romania, leading to deformation of the age structure and important short, medium and long term implications. The impact of such evolutions is complex, since the consequences are felt in the health care system, in education, on the labour market, in social insurance and in the demographic and socio-economic development of the country.

Under these circumstances, Romania constitutes a special case in the European demographic landscape and an interesting case study from the point of view of intergenerational transmission of the reproductive behaviour. For three successive generations, the population policy regime alternated from freedom of choice regarding the reproductive behaviour to constraints imposed by the state and back to freedom of choice. This raises the question whether the mechanism of intergenerational transmission has a growing influence, a decreasing one or lost its importance at all.

The analysis aims at showing how the reproductive behaviour of Romanian women is influenced by their family. To be more precise, after reviewing the literature on the topic and briefly describing the context of 20$^{th}$ century Romania, the analysis will focus on transmission of behaviour related to marriage and childbirth, considering aspects regarding their timing and intensity, and a general discussion of desires and their realisations. Thus, there are two main parts, structured as follows. The first part begins by analysing the age at first marriage, first birth and last birth of respondents and their mothers and, respectively, their children, as well as birth spacing patterns taking into account the same categories. Also, the influence of childhood family size (siblings) on the number of children the respondent, respectively her children had, is approached. The second part focuses on perceptions regarding the ideal ages for first marriage, first and last child as reflections of what respondents think about the behaviour of their parents, and the desired number of children at the beginning of their marriage as compared to the number of children she actually gave birth to. The paper ends with some general conclusions.

## 2 Literature review

In his review over the past century's literature on relationship between fertility of parents and children, Murphy (2007) shows that there is a clear tendency for the value of reported correlations to increase over time, in contrast with more traditional variables such as education or residence area, where effects are disappearing. Moreover, a greater influence of mothers than of fathers has been reported. Intergenerational transmission of fertility behaviour is stronger in cases where there are big similarities between children and parents, but correlations in fertility between generations are mainly a consequence of similarities in age at first marriage (Anderton, 1987, in Murphy, 2007).

Adding to this conclusion the findings of Steenhof and Liefbroer (2008) regarding timing of first births is further indication that the reproductive behaviour of parents, especially mothers, has an impact on the reproductive behaviour of the adult child. Moreover, children from large families tend to have large families themselves, while those born to older parents have a higher risk of postponing entry into parenthood, thus having smaller families or even of remaining childless, since they are less likely to make up for the lost time.

The same idea is commented by Haragus (2008), the author showing that postponement of childbirth until the age of 30 is rarely made up for after this age and for most European countries the decrease before the age of 30 is greater than the increase after this age. The most notable differences are between northern and southern countries, since, in the former birth after the age of

30 compensates postponement, while for the latter postponement is not recuperated through a corresponding increase in birth after 30 years.

The impact of parents' childbearing on an individual's fertility is done by comparing the number of children with that of siblings. In a study using full and half siblings, birth order and gender, Murphy and Knudsen (2002) show that, while birth order has a small impact on fertility, the total number of siblings has substantial and persistent effects for those with two or more full siblings or for those with one half sibling. The same result may also be found in Murphy (2007), who argues that birth order differences due to socialisations were relevant in early 20th century populations, but they have lost their relevance nowadays. Also, Murphy and Wang (2001) show that the size of the family is just as good an explanatory factor as education. Moreover, those coming from families with fewer members will have fewer children.

It may thus be assumed that the intergenerational transmission of reproductive behaviour was an essential mechanism for keeping fertility at a much higher level than it would have been in its absence (Murphy & Knudsen, 2002; Reher, Ortega, & Sanz-Gimeno, 2008; Reher, 1998).

## 3 Data used

Partly, the objectives of the 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 micro-level data on Romanian fertility is rather scarce, it cannot cover all the aspects that the following analysis is concerned with.

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 University 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 793 respondents during May 2012 using face-to-face interview. The target population consisted of women aged 50 years and more at the time of the interview and the sample was build 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 the rural area.

The questionnaire of the survey comprises 92 questions, grouped in five sections (Annex 1). The first section contains 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. The next four sections comprise a relatively similar set of questions regarding the respondent's children, siblings, grandchildren and parents, respectively.

Based on the questionnaire, four generations for each respondent may be distinguished and, considering that the respondents are aged 50 years and more, the sample data practically covers the entire 20th century. For this reason, it was possible to build three groups according to the age of the respondent: 50-59 years (328 respondents), 60-74 years (350 respondents) and 75 years and more (115 respondents). 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.

The third group includes persons born until 1936, which come from 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 the 'natural' baby-boom.

The cohorts born during 1937-1951 form the second age group. Women in these cohorts had already entered their fertile period in 1966, when the government interventionist policy aimed at stopping the decreasing fertility trend came into force. Thus, these women contributed most to the forced baby-boom that Romania experienced in the second half of the 1960s.

The first age group comprises the cohorts born between 1952 and 1961. 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 and its subsequent changes brought about a plunge in fertility levels, thus causing the cohorts in this age group to be less prolific than the ones in the previous two groups.

Based on the survey data the procreative behaviour of the three age groups may be analysed taking into account the various political, historical and economic landmarks that had a demographic impact, respectively a natalist one, in order to determine how they affected the reproductive behaviour in Romania throughout the 20$^{th}$ century.

# 4 Background

In Romania, the demographic transition followed the predominant European model, with a strong decreasing trend of general mortality that began in the first half of the 19$^{th}$ century and a decreasing fertility trend starting 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 (Ghetau, 1997).

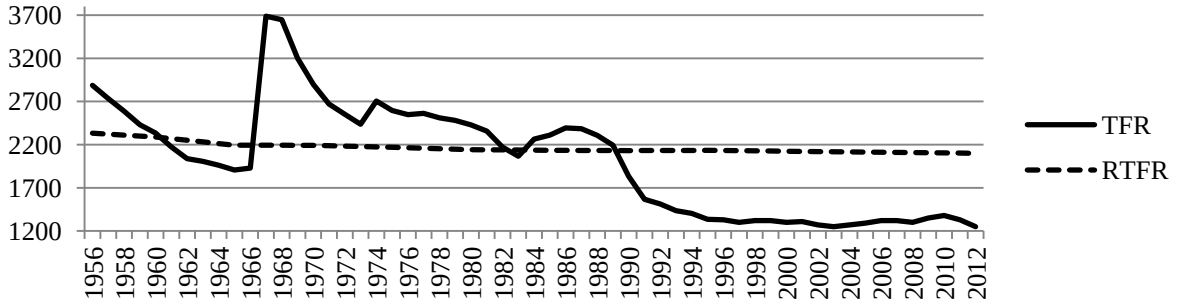
In 1957, following the USSR model, Romania, as well as other communist countries, legalized abortion (Annex 2). This period coincided with the beginning of the macro processes of intensive industrialization and urbanization, characterized by a massive exodus of the young and adult population from the country side 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. To this, one must add the new statute of the socialist woman, emancipated, schooled, with a job and equal to the man (on the labour market, but with mainly the same responsibilities at home as before), statute that weighed a lot in the decision regarding the number of children in the family.

In that 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.

To be more precise, the liberalization of abortion favoured the decrease of fertility from 3.28 children per woman in 1955 to 1.91 children per woman in 1965 (Figure 1), placing Romania as the second last in Europe, before Hungary (Dobos et al., 2010). This evolution alarmed the party and

state rulers because the reproduction index showed that, in perspective, not even the simple generational replacement was secured anymore and the threat of demographic ageing and decline 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 fertility 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, leading to an artificial baby-boom that peaked in 1967-1968, after which the fertility rate began to decrease towards levels closer to the 'natural' ones (Caplescu & Mihaescu, 2012).

**Figure 1 Evolution of the total fertility rate (TFR) and the replacement level TFR (RTFR) in Romania, 1946-2011**




Source: based on data from Ghetau (1997) and EUROSTAT

The population was taken by surprise and, as a consequence, the total fertility rate almost doubled (3.69 in 1967 and 3.65 in 1968, as compared to 1.93 in 1966), reaching levels similar to those from the period immediately after the war (1949-1950). In the absence of this legal framework, the procreative behaviour of the (most) affected cohorts would have been, as the behaviour of previous cohorts suggests, characterized by a maximum of three children, born before the age of 30 (Ghetau, 1997).

In 1972 the total fertility rate had reached an unwanted level of 2.55 children per woman and the authorities rushed to act within the same coercive line as before (Annex 2). 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.) became even more focused on coercive measures. The effects were not the ones anticipated, total fertility rate increasing by 0.27 children per woman in 1974, but reaching the 1973 level of 2.43 children per woman in 1980 and continuing to decrease.

After 1980 fertility 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 level of 1966, the year in which the coercive pronatalist policy came into force. This led to a new wave of coercive measures that were real attacks to women's lives, especially in the case of those over 40 years.

Summing up the measures enforced by the socialist regime, it may be said the first period, mainly from 1966 until 1974, was characterised by coercive measures doubled by generous socio-economic stimuli for increasing fertility, aimed preponderantly at large families and the urban areas, in attempting to stimulate their fertility level. Starting with the 1974 legislation, encouraging police and internal affair forces to get involved in controlling fertility, the stimulant measures, despite

having been enhanced, became increasingly less efficient as the coercive ones grew more repressive. The peak of repression and interference in most intimate aspects of the individual's life was reached in the second half of the 1980s and was 'triggered' by the 1985 decree measures and by intense campaigns in the press regarding risks of using contraception, rhetoric about the duty of women to supply the nation with the necessary population, but also the great presence of the state, through police and internal affairs forces in the private lives of people.

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 with 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) was doomed to failure from the beginning.

This was also shown by the evolution of fertility after the fall of the regime in 1989 and the abrogation of the legislation regarding abortion. Since couples now had the opportunity to choose the number of offspring and given the unstable socio-economic environment, fertility declined sharply. Nevertheless, the trauma, the humiliation and the sacrifices the pronatalist legislation caused left behind a heavy legacy that will persist on the long term in the economy, in the social and cultural contexts, in the reproductive health and behaviour of the population and other spheres of individual life.

# 5 The mechanism of fertility transmission in different policy contexts

The discussion regarding marriage and birth patterns will begin with three indicators broadly used for assessing the impact of intergenerational transmission of reproductive behaviour: age at first marriage, age at first birth and age at last birth. These indicators allow getting insight into the evolution of period fertility in Romania during the 20$^{th}$ century.

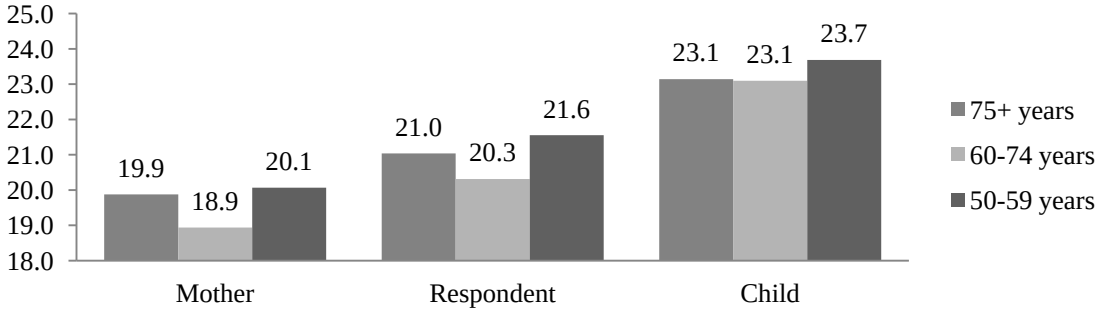
## 5.1 Age at first marriage

Although nuptiality and fertility seem to have begun their decline in the second half of the 19$^{th}$ century (Ghetau, 1983, 1997), during the period considered Romanian women, still retained a traditional view of family. A study realised in 2005 by Rotariu (2005) indicates that even in the beginning of the 21$^{st}$ century Romanian women regarded marriage as an important framework for childrearing. Admittedly, by that time the available data clearly showed a distancing of behaviour from such perceptions, with increases in extramarital births. In their Low Fertility Trap Hypothesis, Lutz et al. (2006) suggest that this gap between norms and attitudes on the one hand, and behaviour on the other hand, may be explained through the slow change pace in the former. This is also the key element of the population explosion during the early stages of demographic transition, when fertility remained at the high levels previously required for long-term equilibrium several decades after mortality began to decline.

In a context with such traditional orientation, the age at first marriage increases the lower limit of the actual fertile period for most population. For the sample analysed, over 90% of women were either married for the first time or remarried after divorce or widowhood at the time they gave birth to a child. As Figure 2 indicates, the age at first marriage tended to increase from around 19-20 years (ages of mothers), representative for the first half of the 20$^{th}$ century, to 23-24 years (ages of children) representing current situation. The fact that many of the respondents' children were not

married at the time of the interview also indicates an increase in the age at first marriage for the sample analysed. The means obtained underestimate the mean age at first marriage in Romania, which varied between 21.8 and 22.4 years for women who gave birth between 1980 and 1994, and increased sharply to about 26 years in 2011. Nevertheless, the results obtained resemble the national values quite well, given that the sample is not representative.

**Figure 2 Age at first marriage for mothers, respondents and children by age groups**




On average, both respondents aged 60-74 years in 2012 and their mothers got married one year earlier than their counterparts in the first age group and at about the same age as their older counterparts (Annex 4, Output 1). This is an interesting coincidence. On the one hand, the respondents themselves are part of cohorts most affected by the coercive pronatalist legislation of the socialist regime, namely the ones born during 1938-1952. On the other hand, the period when they were born coincided with the natural baby-boom that occurred after the Second World War, when marriages and births postponed due to the conflagration were recuperated. Thus, although impossible to determine due to the interference of policies, the generations comprised in the second age group may have gotten married earlier and have had slightly higher fertility levels than the women in the other two age groups also due to the fact that they were socialised in a context of earlier marriage and higher fertility (Lutz et al., 2006).

Nevertheless, the children of these respondents present a similar behaviour to the rest of the sample. Given the fact that these children were born after 1963, they were very little, if at all, affected by the coercive measures, thus, their reproductive behaviour is more likely to resemble that of the women in the first age group rather than their mothers'. Also, it is important to mention that in the case of children born to women in the first group, many had never been married by the time of the interview. For this reason, the means for comparing respondents with their children are computed based on a smaller number. For children of the other women this is less likely, as they are roughly the same age as the women in the age group lower than theirs and thus, their behaviour is probably similar to these women's.

The trend for the differences between the respondents and their mothers is increasing but to a slower pace, while a definite tendency of postponing marriage results from comparing the behaviour of respondents and their children (Table 1). The results show that all respondents married significantly later than their mothers, but they were influenced in their decision by the context. The younger generations (children of the respondents) tend to increase even more the difference between their and their mothers' age at first marriage.

**Table 1 Differences between mothers and respondents, respectively respondents and children, by age groups**

| Respondent age group | | | Mean | N | Mean Diff. | t | df | Sig. (2-tailed) |
|---|---|---|---|---|---|---|---|---|
| 50-59 years | Pair 1 | Mother | 20.03 | 246 | -1.47967 | -5.070 | 245 | .000 |
| | | Respondent | 21.52 | 246 | | | | |
| | Pair 2 | Respondent | 20.39 | 161 | -3.36749 | -10.262 | 160 | .000 |
| | | Children (average)* | 23.76 | 161 | | | | |
| 60-74 years | Pair 3 | Mother | 18.84 | 254 | -1.47244 | -5.141 | 253 | .000 |
| | | Respondent | 20.31 | 254 | | | | |
| | Pair 4 | Respondent | 19.86 | 280 | -3.25994 | -14.401 | 279 | .000 |
| | | Children (average)* | 23.12 | 280 | | | | |
| 75+ years | Pair 5 | Mother | 19.89 | 85 | -1.16471 | -2.495 | 84 | .015 |
| | | Respondent | 21.06 | 85 | | | | |
| | Pair 6 | Respondent | 20.93 | 99 | -2.28030 | -5.218 | 98 | .000 |
| | | Children (average)* | 23.21 | 99 | | | | |

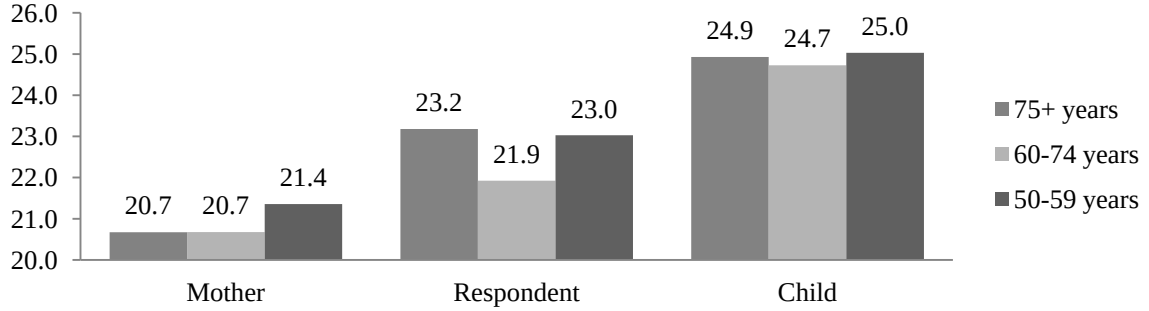
* Due to the fact that the age at first marriage for the respondent's children did not differ significantly by parity, the average value for all children of the respondent was used instead.

The main conclusion to be drawn from the analysis is that the changes in nuptiality behaviour, measured here through the age at first marriage, were already emerging at the beginning of the 20th century. Their main manifestation from the point of view of the indicator considered was a tendency of postponement. On the other hand, the impact of the coercive pronatalist policy in a context where extramarital birth was not socially acceptable temporarily stopped the postponement, even reversing the trend for the respondents in the most affected age group. Towards the end of the socialist period and after the abrogation of the legislation, the process of postponing first marriage resumed its course and seems to have intensified.

## 5.2 Age at first birth

Age at first birth practically marks the beginning of the actual fertile period of a woman. Figure 3 below shows that the pattern of age at first birth follows a similar trend to the age at first marriage. The differences between the two indicators will be discussed later on, for now the focus will be on intergenerational comparison. Thus, the overall trend for the mean age at first birth was of increase, from around 20.5 years for the cohorts born at the beginning of the century to 25 years for children of the respondents in the first age group, meaning a total overall increase of about 4.5 years. This is in accordance with the evolution suggested by national level indicators.

**Figure 3 Age at first birth for mothers, respondents and children by age groups**




The absolute gap is generally smaller than in the case of mean age at first marriage for the mother-respondent dyad and larger when comparing respondents with their children. Therefore, respondents tended to become parents at ages closer to their mothers', while their children tended to postpone transition to parenthood.

The special context in which the respondents, respectively their mothers became parents for the first time is responsible for the shrinking difference in the age at first birth. If the age at birth of the respondent's mothers was likely increasing at the turn of the 20th century (since generally lower fertility levels are associated with higher ages at first birth), the trend for the respondents was the opposite. On the one hand, the legalisation of abortion allowed women to limit their family size, while the socio-economic context was of such nature that most population still lived in traditional, rural areas, thus the woman's main responsibility was to have children and rear them. Therefore, it may be assumed that they were giving birth to their desired number of children early in their reproductive career and resorted to abortion in order to prevent their family size from increasing. There was some postponement, but to a small scale and its evolution was slow-paced.

On the other hand, women in their fertile period during the 23-year period of pronatalist legislation, initially preserving such behaviour, did not have the possibility to limit their family size after the desired number of children was reached due to insufficient or lack of sexual education and prohibition to use the method to which Romanian women were resorting to the highest extent, namely abortion. In turn, the result was an important increase in fertility levels at young ages. This was added to the massive industrialisation and urbanisation processes and the rural-urban migrations, which were parallel with increasing participation of women to the labour force. In such a context, the time allocation patterns changed as the rhetoric of the ruling party claimed an equal status of men and women on the labour market, but the responsibilities that women had at home remained the same. Thus, it became increasingly more difficult for women to deal with full-time employment and home responsibilities that were equivalent to, or even more resource (time, energy etc.) consuming than a paid job. For these reasons, the fact that the state was beginning to impose certain fertility levels could not have been well received by the women.

Although initially the outlawing of abortion was accompanied by supportive measures, a rhetoric underlining the traditional large Romanian families and the accomplishment the individual gets from them, and, in the 1970s, a favourable economic context, the situation gradually turned to rhetoric about the duty (or obligation) of women to have children, a generalised crisis (scarcity of food, electric cuts, insufficient heating of apartments, crowded living conditions, insufficient crèches and kindergartens etc.) and large sums of money paid to families with children, provided they met the required criteria.

Despite the fact that it was not difficult for a family to qualify for these financial benefits and that the criteria were increasingly relaxed to include larger shares of population (Annexes 2 and 3), having money was of little help for parents. Food, electricity, heating, housing or childcare facilities were provided by the state, which had absolute control over them. Having the money to buy food meant close to nothing in a context where food was rationalised and people were staying in queues for hours with the hope of having something to buy when their turn comes. Being able to afford a new dwelling did not ensure proper living conditions, since new buildings became available at a slow pace and here, too, there was a long waiting list. The series of examples related to the practical usefulness of money (or rather lack of), could continue, but it suffices to conclude that the real living standard of the families with children was not improved by the financial benefits that were supposed to stimulate fertility.

Given the results presented in Table 2, the apparently intriguing difference of 2.3 years between the age at first birth of the 75 years and more respondents and their mothers is thus explained if we consider the context in which the mothers of these respondents gave birth to children, namely after the demographic transition process had already begun (mortality, nuptiality

and fertility were already declining), but in a preponderantly rural country, with well-established gender roles. On the other hand, the respondents themselves fully benefited from the legalisation of abortion in 1957, which allowed them to postpone first birth until later ages.

**Table 2 Ages at first birth and differences between mothers and respondents, respectively respondents and children, by age groups**

| Respondent age group | | Mean | N | Mean Diff. | t | df | Sig. (2-tailed) |
|---|---|---|---|---|---|---|---|
| 50-59 years | Mother | 21.25 | 287 | -1.74913 | -5.849 | 286 | .000 |
| | Respondent | 23.00 | 287 | | | | |
| | Respondent | 21.10 | 140 | -3.94464 | -10.065 | 139 | .000 |
| | Children (average) * | 25.04 | 140 | | | | |
| 60-74 years | Mother | 20.58 | 307 | -1.28013 | -5.178 | 306 | .000 |
| | Respondent | 21.86 | 307 | | | | |
| | Respondent | 21.59 | 276 | -3.17301 | -11.092 | 275 | .000 |
| | Children (average) * | 24.76 | 276 | | | | |
| 75+ years | Mother | 20.68 | 98 | -2.27551 | -4.872 | 97 | .000 |
| | Respondent | 22.96 | 98 | | | | |
| | Respondent | 23.14 | 96 | -1.79167 | -3.118 | 95 | .002 |
| | Children (average) * | 24.93 | 96 | | | | |

* Due to the fact that the age at first birth for the respondent's children did not differ significantly by parity, the average value for all children of the respondent was used instead.

As the policy measures became increasingly more coercive, the differences also got smaller. The lower (1.2 years) difference for the second age group as compared to the 1.7 years difference for the first age group is explained, as in the case of age at first marriage, by the fact that the cohorts the respondents and their mothers belong to were the ones contributing most to the two baby-booms Romania experienced after the Second World War.

### 5.3 Age at last birth

However, fertility decline is not only explained through postponement of marriage and childbearing, but also by the shortening of the period in which women give birth (Flinn, 1981), which has its upper limit in the age at last birth. This indicator seems to be relatively stable since the decrease registered is not large enough to be significant. Yet, a decreasing tendency may be noted. One explanation for this result lies in the relationship between the age at first and last birth and the actual number of children born.

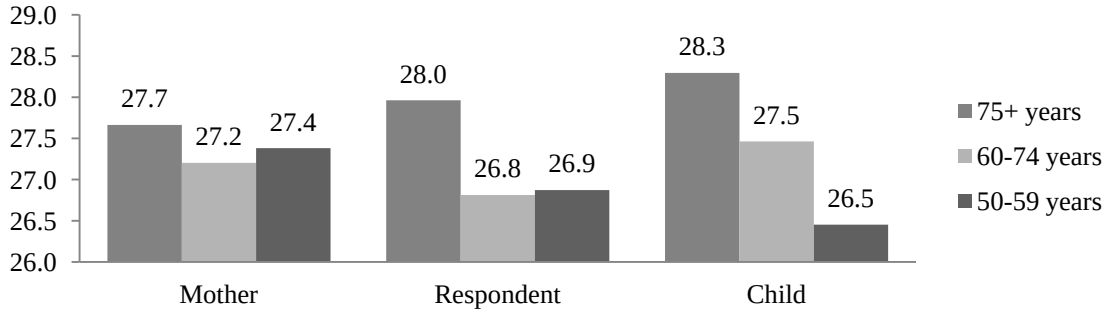
Even though fertility levels, both in transversal and in longitudinal view, are well below 2 children per woman, there is an approximately equal number of families with one and two children (Caplescu, 2011) and the decrease was caused not so much by the increase in the number of childless women, as due to steep decline in the share of women giving birth to two children or more (Ghetau, 1983; Haragus, 2008; Muresan, Haragus, Haragus, & Schröder, 2008). In this context, the simultaneous increase in age at first birth and decrease in age at last birth causes the actual fertility interval to decrease rapidly, which correlates highly with the registered decrease in the number of children.

As shown for the age at first marriage and first birth, the evolution of fertility was an exceptional one during the 20$^{th}$ century due to the state interventionism in the 'natural' course. For this reason, as the legalisation of abortion in 1957 led to an increase in the age at first birth, together with a decrease in the number of children born, the decline in the age at last birth could have not been too large. Given that during that period the prevalent norm was still a large family (3-4 children) and despite the difficulties that hindered perpetuation of large families, the shortening of

the reproductive interval through postponement had necessarily maintained the upper limit relatively constant (Figure 4).

Conversely, the special context created between 1966 and 1989 led to an increase in the number of children that caused the difference between the age at first and last birth to increase. However, since life-threatening risks associated with pregnancy for women aged 40 or more increase exponentially with age (Dobos et al., 2010) and they were relatively high for women who became pregnant in their late 30s, the upper limit could not be pushed up too much. On the other hand, since age at first birth was relatively high in 1966 (revolving around 26 years), the widening of the reproductive span was done through its decrease. It is difficult to imagine that births could be effectively postponed in a context where modern contraception was more the exception that the rule, abortion was forbidden and increasingly more coercive measures were adopted by the state. Thus, women were likely to give birth to children earlier than their older siblings and parents.

**Figure 4 Age at last birth for mothers, respondents and children by age groups**




Abrogation of the coercive legislation in 1989 did not have a strong immediate effect on the age at last birth, as even the women in the first age group were already approaching their 30s by then. The context of the 1990s was not much more favourable to childbearing than the one in the 1980s, but having an abortion in order to avoid childbirth after the age of 30 could not reduce the average level of the indicator significantly, since for the women in the analysed sample the mean age at last birth was 26 years (Table 3).

**Table 3 Ages at last birth and differences between mothers and respondents, respectively respondents and children, by age groups**

| Respondent age group | | Mean | N | Mean Diff. | t | df | Sig. (2-tailed) |
|---|---|---|---|---|---|---|---|
| 50-59 years | Mother | 27.53 | 286 | .75524 | 1.709 | 285 | .088 |
| | Respondent | 26.78 | 286 | | | | |
| | Respondent | 26.09 | 133 | -.40038 | -.758 | 132 | .450 |
| | Children (average) * | 26.49 | 133 | | | | |
| 60-74 years | Mother | 27.24 | 308 | .53571 | 1.327 | 307 | .186 |
| | Respondent | 26.71 | 308 | | | | |
| | Respondent | 26.97 | 267 | -.51454 | -1.294 | 266 | .197 |
| | Children (average) * | 27.49 | 267 | | | | |
| 75+ years | Mother | 27.67 | 98 | -.19388 | -.263 | 97 | .793 |
| | Respondent | 27.87 | 98 | | | | |
| | Respondent | 28.37 | 92 | | | | |
| | Children (average) * | 28.29 | 92 | .07518 | .094 | 91 | .925 |

* Due to the fact that the age at last birth for the respondent's children did not differ significantly by parity, the average value for all children of the respondent was used instead.

The situation is different for children of women in the first age group, who benefited from the widespread of modern contraception and sexual education campaigns in schools, combined with increasing access to higher education and better paid jobs. Thus, the trend was rather to increase the

age at first birth through postponement than a decline in the age at last birth, which explains the homogeneity of the sample with regard to this indicator.

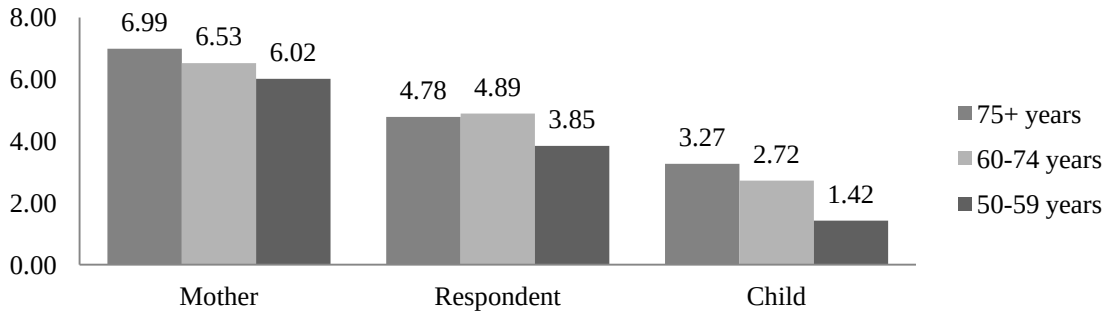
Comparing the age at last birth for children of the respondents by the three age groups indicates statistically significant differences between the children of the younger respondents (first age group) and those of the rest of the sample (Annex 4, Output 2). These differences indicate a decrease in the age of last birth as large as 1.8-1.9 years between children of respondents in the first and last age groups and about 1 year compared to children of the respondents in the second age group. It is useful to mention again that behaviour of children born to respondents aged 75 years and more in 2012 is expected to be similar to that of respondents aged 60-74 years, while children of this age group have roughly similar behaviour to that of respondents in the first age group. Thus, it could be assumed that children of the youngest respondents had their last child about two years earlier than their grandmothers (mothers of the respondent) and about 1 year earlier than their mothers (the respondents).

The fact that the significance level for this last difference was close to the 0.05 threshold (p=0.047), as well as the relatively low *p* for the difference between respondents aged 50-59 years at the time of the interview and their mothers (Table 3) could be explained by the influence of the non-responses in the database. On the other hand, the highly non-significant result obtained for the comparison between the respondents in the first age group and their children might be due to the fact that the latter are still in their fertile period, thus the sub-sample on which the means were computed is highly dependent on whether they had at least a child at the time of the interview and on whether they will have (another) one in the future. It is also possible that respondents who already had grandchildren gave birth to their own children at earlier ages, thus also stopped earlier than respondents in the same age group who had children later.

### 5.4 Birth spacing patterns

The total number of children a woman will have during her life is, as shown previously, dependent on the age at which she gets married, respectively has her first child, and on the age at which she has her last child. The last two indicators are the base for determining the actual interval during which she gives birth to her children. For the analysed sample there is a clear decreasing trend (Figure 5) that is in accordance with the previously discussed decrease in the number of children born and the increase in the age at first birth (combined with relatively stable age at last birth).

**Figure 5 Average interval (years) between first and last birth for mothers, respondents and children by age groups**




The recuperation during the inter-war period was slowing down and it was stopped by the Second World War. In turn, the recuperation of postponement in the post war period was short-

lived and greatly affected by the famine in 1947-1948. In this context, the decline in fertility that was re-emerging was 'stimulated' by the legalisation of abortion. All these factors contributed greatly to closing the distance between the first and the last birth for mothers of the respondents, being added to the changes generated by the onset of demographic transition.

The generations of women that benefited most from the legalisation of abortion in 1957 are the ones of the respondents aged 75 years and more in 2012. It is possible that the lag existent between behaviour and norms at societal level (Lutz et al., 2006) kept this interval somewhat larger. As the shock of the 'imposed fertility policy' diminished, the number of children born and postponement resumed their evolution, thus leading to a smaller interval between the first and the last birth for respondents in the first age group and children of respondents in the second age group (Figure 5).

The new context that emerged after 1989 was permissive with regard to abortion and supported large-scale introduction of contraceptive means (as an alternative to the re-emerging 'culture of abortion'). This led to further decline in the number of children and, consequently, further decrease in the actual period during which a woman would give birth. It should, however, be noted that children of some respondents in the second age group are still theoretically within the biological limits for reproduction (although mostly approaching its end), while children of the youngest respondents (first age group) are mostly at the peak of their reproductive life, so in their case the data is only preliminary.

Comparing the mean intervals for mothers, respondents and children, the shortening of the distance in age at first and last birth is less pronounced in periods when constraining, exogenous factors were in action (Table 4). From this perspective, the pronatalist legislation led to the smallest decrease, namely the actual reproductive span of respondents in the second age group was 'only' 1.8 years smaller than that of their mothers. At the opposite pole, there is a 3.5 year difference between respondents in the 50-59 years age group and their children, although these results should be treated with caution for the reasons presented above. However, the strong decrease noted in Figure 5 for this same age group as compared to their mothers, as well as the difference between the interval of respondents in the second age group and their children are as large as 2.5 years. It is, therefore, possible to assume that the difference between respondents' and their children with regard to the interval between their first and last birth is around 2.5-3 years.

**Table 4 Interval between first and last birth and differences between mothers and respondents, respectively respondents and children, by age groups**

| Respondent age group | | Mean | N | Mean Diff. | t | df | Sig. (2-tailed) |
|---|---|---|---|---|---|---|---|
| 50-59 years | Mother | 6.27 | 285 | 2.48772 | 6.779 | 284 | .000 |
| | Respondent | 3.79 | 285 | | | | |
| | Respondent | 4.96 | 132 | 3.51768 | 8.100 | 131 | .000 |
| | Children (average) * | 1.44 | 132 | | | | |
| 60-74 years | Mother | 6.66 | 306 | 1.83660 | 5.019 | 305 | .000 |
| | Respondent | 4.82 | 306 | | | | |
| | Respondent | 5.43 | 265 | 2.71308 | 8.041 | 264 | .000 |
| | Children (average) * | 2.71 | 265 | | | | |
| 75+ years | Mother | 6.99 | 98 | 2.08163 | 3.295 | 97 | .001 |
| | Respondent | 4.91 | 98 | | | | |
| | Respondent | 5.28 | 92 | 2.01540 | 3.946 | 91 | .000 |
| | Children (average) * | 3.27 | 92 | | | | |

* Due to the fact that the interval for the respondent's children did not differ significantly by parity, the average value for all children of the respondent was used instead.

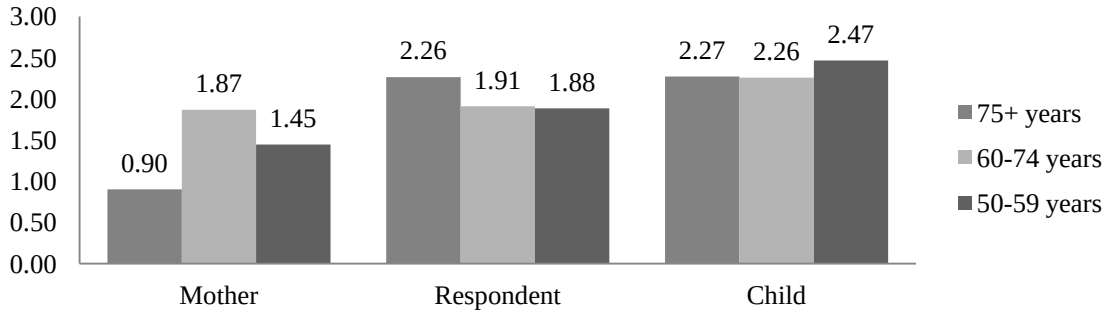
If among mothers there are no significant changes in the time period between the first and the last birth, the respondents and their children tend to experience birth within increasingly shorter intervals (Annex 5, Output 1). Respondents in the first group have given birth to their children, on average, in a time span approximately 1 year shorter than the respondents in the second and the third age groups. The children of these respondents had even smaller intervals, clearly delimiting themselves from their counterparts in the rest of the sample.

Therefore, the decrease in the age at first birth caused by the entering into force of the pronatalist legislation led to a spread of births in a longer interval, apart from an increase in the number of children born. On the other hand, the measures found by the population to pursue their own objective with regard to fertility (rather than the one imposed by the state) before 1989 and the legalisation of abortion afterwards favoured the decline registered for the interval between the first and the last birth. This is seen especially for children of respondents in the first age group, who had access to modern contraception, higher education and better jobs, factors which contributed to their increasing tendency to postpone transition to parenthood, as well as their desire to invest more in fewer children.

While the time span delimited by the first and the last birth offers information about the number of children a woman could give birth to, two other indicators are important in determining the number of children she will have, namely the interval from the first marriage to the first birth and the distance between each pair of subsequent consecutive births.

In the analysed sample the differences between the age at first marriage and that at first birth seem quite homogeneous for respondents and their children, but not for their mothers (Figure 6). Once more, the specific context of the first half of 20$^{th}$ century explains the differences. Mothers of the respondents aged 75 years and more at the time of the interview had lower ages at first marriage and first birth and more children, both as part of the recuperation after the First World War, and due to generally higher fertility levels at the time.

**Figure 6 Average interval (years) between first marriage and first birth for mothers, respondents and children by age groups**




On the other hand, mothers of respondents in the second age group gave birth in the period of the Second World War and some 5-7 years after, which was marked by strong postponement both in marriage and in birth. The first and most obvious reason was that men were on the front during the war and even after the war was over, the socio-economic and political context hindered reproduction.

Finally, mothers of the respondents in the first age group, 50-59 years, contributed to the post-war baby-boom, but they also benefited from the permissive legislation regarding abortion during 1957-1966, which created a favourable context for a sharp decline in fertility.

Although apparently relatively equal, the differences between the respondents and their mothers, respectively their children, are statistically significant (Table 5) and indicate that the trend in birth spacing is to increase. A particularly large difference was computed for the dyad mother of respondent and respondent in the 75 years or more age group, which is a reflection of the special period of recuperation after the First World War during which the mother gave birth, compared to the liberal context in which the respondents were during their maximum fertile period.

**Table 5 Interval between first marriage and first birth and differences between mothers and respondents, respectively respondents and children, by age groups**

| Respondent age group | | Mean | N | Mean Diff. | t | df | Sig. (2-tailed) |
|---|---|---|---|---|---|---|---|
| 50-59 years | Mother | 1.47 | 223 | -.69955 | -5.459 | 222 | .000 |
| | Respondent | 2.17 | 223 | | | | |
| | Respondent | 1.44 | 120 | -1.07917 | -3.443 | 119 | .001 |
| | Children (average) * | 2.52 | 120 | | | | |
| 60-74 years | Mother | 1.87 | 235 | -.43404 | -3.181 | 234 | .002 |
| | Respondent | 2.30 | 235 | | | | |
| | Respondent | 1.94 | 253 | -.32273 | -1.893 | 252 | .059 |
| | Children (average) * | 2.26 | 253 | | | | |
| 75+ years | Mother | .89 | 79 | -1.77215 | -7.613 | 78 | .000 |
| | Respondent | 2.66 | 79 | | | | |
| | Respondent | 2.40 | 88 | .11742 | .332 | 87 | .741 |
| | Children (average) * | 2.28 | 88 | | | | |

* Due to the fact that the interval for the respondent's children did not differ significantly by parity, the average value for all children of the respondent was used instead.

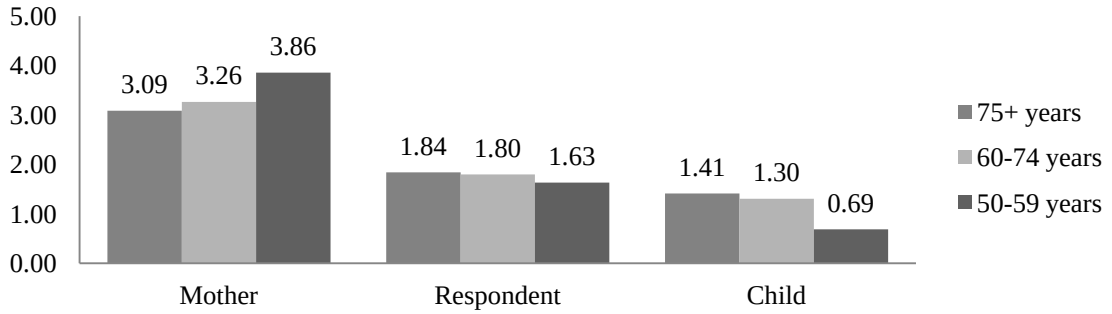
The impact of the war and the few years after it is also obvious when comparing the mean ages between the three age groups (Annex 5, Output 2). The only significant differences are found between the behaviour of the respondents' mothers. The mean interval between the age at first marriage and age at first birth for the mothers of respondents born before 1937 was about 1 year smaller than that of mothers who gave birth to respondents in the second age group and around half a year smaller compared to that of mothers of the youngest respondents. This indicates that both the recuperation in the inter-war period and the context in which the respondents in the second age group were born (war and post-war crisis) had a strong impact on spacing patterns for first births.

Due to the significant results found for differences between generations within each age group (Table 4), it may be assumed that the constraining context between 1966 and 1989 also had an effect, but not as prominent as the evolutions in the first half of the century. Nevertheless, the fact that there are no significant results for the respondent-children pairs in the 60-74 years and 75 years and more age groups indicates that the entering into force of the policy led to a relative levelling of the interval between first marriage and the birth of the first child (Table 5).

However, the significant differences resulted for the 50-59 years respondents compared to their mothers, and to their children, indicate that the population began to find ways around the constraints of the legislation and started postponing births compared to marriages. A possible explanation for this behaviour could be the enactment of Law 4/1973, which was granting easier access to dwellings for young married couples and families with children (Annex 2). Although this measure was intended to stimulate fertility, it is possible that couples got married in order to have easier access to a dwelling, but postponed childbirth. This becomes even more likely during mid-1980s, when there was a generalised economic and social crisis.

Depending of the context they were living in, mothers of the respondents experienced their first birth roughly 1-2 years after marriage. However, after the first birth, they waited for 3 or 4 years before giving birth to another child (Figure 7).

**Figure 7 Average interval (years) between two consecutive births for mothers, respondents and children, by age group**




The behaviour of the mothers and of the children of respondents in the first age group differs significantly from that of their counterparts (Annex 5, Output 3). If the spacing pattern for women giving birth between 1953 and 1962 may be explained through the great influence of the legalisation of abortion in the late 1950s, for the children of the respondents in the first age group the result obtained is unlikely to be reliable. First, the values used represent the average value for all children of a respondent, thus mixing together children who experienced birth with those who did not. Also, the children who did not experience birth have an important share, which is reasonable, given that they are still very young and that for their generations, postponement behaviour is stronger. Second, among the children of the respondents in the first age group, the large number of children who are either childless or have 1 child diminishes the average interval between two consecutive births, since for most of them this interval is zero. Therefore, although it is reasonable to assume that the interval length is smaller than for the children of the other respondents, it is unlikely that the difference is so large.

The comparison of generations within each group indicates a tendency to increase the distance between two consecutive births, although to a smaller extent for respondents compared to their children, than to their mothers (Table 6). Given that the average interval for respondents is already below two years, and taking into consideration the biological limits imposed by conception and birth (9 months of gestation and a period of post-partum amenorrhoea, depending on breastfeeding interval), the smaller differences between respondents and their children with regard to consecutive birth spacing patterns are accounted for. The explanation for the decreasing trend of this indicator is given by the tendency to concentrate births in a shorter interval.

**Table 6 Average interval between two consecutive births and differences between mothers and respondents, respectively respondents and children, by age groups**

| Respondent age group | | Mean | N | Mean Diff. | t | df | Sig. (2-tailed) |
|---|---|---|---|---|---|---|---|
| 50-59 years | Mother | 3.92 | 245 | 2.30905 | 11.174 | 244 | .000 |
| | Respondent | 1.61 | 245 | | | | |
| | Respondent | 1.98 | 132 | 1.27903 | 7.117 | 131 | .000 |
| | Children (average) * | .70 | 132 | | | | |
| 60-74 years | Mother | 3.31 | 262 | 1.44930 | 7.167 | 261 | .000 |
| | Respondent | 1.86 | 262 | | | | |
| | Respondent | 1.97 | 263 | .70325 | 5.950 | 262 | .000 |
| | Children (average) * | 1.27 | 263 | | | | |
| 75+ years | Mother | 3.12 | 86 | 1.12888 | 3.686 | 85 | .000 |
| | Respondent | 1.99 | 86 | | | | |
| | Respondent | 2.06 | 90 | .65946 | 3.636 | 89 | .000 |
| | Children (average) * | 1.40 | 90 | | | | |

* Due to the fact that the average interval for the respondent's children did not differ significantly by parity, the average value for all children of the respondent was used instead.

There are several aspects to be considered when analysing birth intervals, some of which are of social nature (religion, social status, economic and financial status, breastfeeding etc.) and others are biological (post-partum amenorrhoea).

The importance given to social factors influencing birth spacing depends on the norms, values and attitudes predominating during certain periods. If, for example religion has lost some of its influence on people in the present, this was not the case for cohorts born in the beginning of the century. Thus, it may be expected that periods of feasting correlate with the distribution of live birth by month of birth, generating seasonality and causing birth interval to be longer.

On the other hand, the urbanization process started in the 1950s led to the diminishing in importance of the multigenerational households, as increasingly more children were moving to live in urban areas, while their parents remained in rural areas. This also implied the need for financial independence of the young couples, which translated in postponement of marriage and birth until the couple has the resources to form their own family. Also, young mothers did not have the help of their own parents (especially mothers) in rearing children as readily and easily available as in the context of multigenerational households. Moreover, the changes occurred, caused time-spending patterns of women in urban areas to change. To this it is added the fact that they were employed and their maternal leave was in total 112 days (Annex 3). Such behaviour is increasingly more prominent in younger cohorts.

Breastfeeding, although biological in nature, is also influenced by social norms. Depending on the area, the length of this interval may be longer or shorter and this prolongs the period between two consecutive births (Knodel, 1968). Studies on European populations regarding the impact of breastfeeding on birth spacing indicate that this practice could lengthen post-partum amenorrhoea by four to eight months (Flinn, 1981, p. 32).

### 5.5 Family size and influence on fertility behaviour

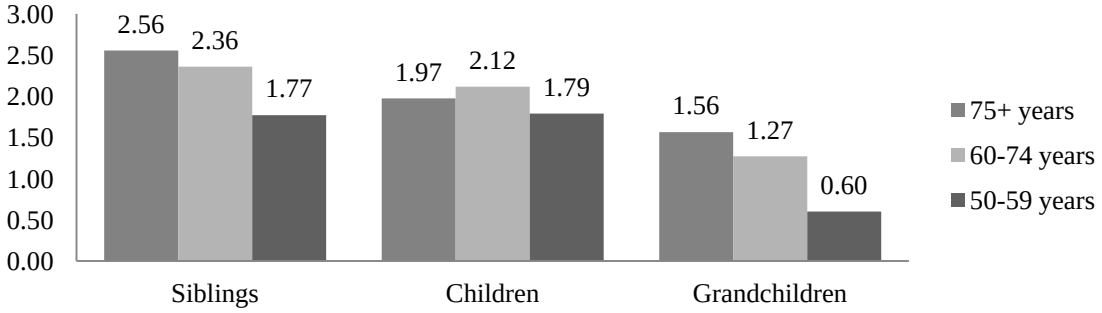
A direct relationship between fertility of parents and that of children has been widely reported in the literature and the total number of siblings was found to have substantial and persistent effect (Caplescu & Mihaescu, 2012; Lutz et al., 2006; Murphy & Grundy, 2003; Murphy & Knudsen, 2002; Murphy & Wang, 2001; Murphy, 2007; Reher et al., 2008; Reher, 1998; Steenhof & Liefbroer, 2008). The universal need to transmit values and attitudes within the family did not only foster an essential mechanism for keeping fertility at a much higher level than it would have been in its absence (Murphy & Knudsen, 2002), but it also facilitated the advent of an entirely new reproductive regime (Reher et al., 2008). Its dual role results from the interaction between the homeostatic characteristic of the demographic system and the external environment, namely the context it manifests itself in (Kohler, Rodgers, & Christensen, 1999).

The importance of family size for the number of children born to a person is also obvious in the analysed sample (Figure 8), where respondents socialised in larger families also have larger families than those who grew up with fewer siblings. Here, too, there is a trend of decreasing fertility, but it is checked by the mechanism of intergenerational transmission of reproductive behaviour. Overall, the earlier the respondents were born, the larger the family they, their children and their grandchildren grew up in, with differences tending to diminish for respondents compared to their mothers and increase in comparison with their children.

The number of siblings, children and grandchildren for the women in each of the three age groups indicates that younger respondents (50-59 years) grew up in smaller families and tended to have small families themselves, while in the case of the older women in the sample (75 years and

more) the opposite was true (Annex 6, Output 1). Given the historical context of the period considered, it is difficult to disentangle the effect of intergenerational transmission, even more so during 1966-1989, when fertility was kept at high levels artificially.

**Figure 8 Number of siblings, children and grandchildren of the respondent by age group**




A possible way around this issue is to determine the level of correlation between the number of siblings and that of children, respectively the number of children and that of grandchildren of the respondent. For the entire dataset, there is quite a strong positive influence of the number of siblings on the number of children ($r=0.221$, $p<0.001$) and in the case of the influence of respondent's fertility on her children's the impact is even bigger ($r=0.381$, $p<0.001$).

When divided into age groups, the correlations between fertility of mothers and that of respondents are still relatively strong and significant for the first and the second age group, but weak and not significant for the third one. The explanation for this situation is the degree to which the respondents were affected by the legalisation of abortion, thus giving them greater control over their final family, as opposed to the recuperation context their parents were in when they gave birth.

With regard to the impact respondents' fertility had on the fertility of their children, the correlations indicate strong associations and are highly significant. The biggest impact is that of the number of respondent's children on the number of her grandchildren for those aged 60-74 years at the time of the interview ($r=0.406$, $p<0.001$), followed by that for the respondents in the third age group ($r=0.367$, $p<0.001$). Nevertheless, this is more likely the effect of the legislation, than of the intergenerational transmission mechanism. On the other hand, the relationship remains strong even for different policy contexts (first age group), as in the case of respondents and their children ($r=0.343$, $p<0.001$).

On average, women in the first age group grew up with fewer siblings than their counterparts in the second (60-74 years) and the third (75 years and more) age groups (Annex 10, Output 1). In turn, they had fewer children and grandchildren than the women in the rest of the sample. The fact that the mothers of the respondents aged 50-59 years (thus born between 1953 and 1962) benefited from the permissive legislation regarding abortion while the other respondents were born during periods of higher fertility levels due to large family norms partly explains the evolution of this phenomenon. However, relatively large family norms still persisted in the 1950s and 1960s and this is due to the fact that women were raised in large families (Lutz et al., 2006).

Despite such favourable norms and values system, increasingly more women were limiting their family size because of the economic and social context, namely the economic crisis generated by the war and the period after it, as well as due to the intensive changes and restructurings that occurred during the second half of the 20$^{th}$ century. This assumption is supported by the non-significant difference between the number of siblings a respondent in the first age group grew up with and the number of children she had (Table 7). Thus, it may be said that there was a downward

pressure on fertility from the general context, which was, to a great extent, counteracted by the combined effect of the mechanism of intergenerational transmission (through norms) and the legislation in force at the time respondents gave birth to their children.

**Table 7 Average number of siblings, children and grandchildren and the differences between them, by age groups**

| Respondent age group | | Mean | N | Mean Diff. | t | df | Sig. (2-tailed) |
|---|---|---|---|---|---|---|---|
| 50-59 years | Siblings | 1.77 | 328 | -.01829 | -.209 | 327 | .835 |
| | Children | 1.79 | 328 | | | | |
| | Children | 1.79 | 328 | 1.19004 | 20.684 | 327 | .000 |
| | Grandchildren* | .60 | 328 | | | | |
| 60-74 years | Siblings | 2.36 | 350 | .24286 | 2.283 | 349 | .023 |
| | Children | 2.12 | 350 | | | | |
| | Children | 2.12 | 350 | .84595 | 13.256 | 349 | .000 |
| | Grandchildren* | 1.27 | 350 | | | | |
| 75+ years | Siblings | 2.56 | 115 | .58261 | 3.166 | 114 | .002 |
| | Children | 1.97 | 115 | | | | |
| | Children | 1.97 | 115 | .41014 | 3.549 | 114 | .001 |
| | Grandchildren* | 1.56 | 115 | | | | |

* Due to the fact that the number of grandchildren did not differ significantly by parity, the average value for all children of the respondent was used instead.

The impact of the pronatalist policy is most obvious in the case of the respondents aged 60-74 years at the time of the interview. The number of children they had was close to that of the older respondents and significantly higher than that of the women in the first age group (Annex 6, Output 1). Similarly, the differences in the number of grandchildren are smaller compared to the older respondents than compared to the younger ones. The gap between respondents and mothers is smaller for the respondents in this age group, while the differences observed between respondents and their children are larger than for the third age group (Table 7).

It may thus be concluded that the general trend in the differences between fertility of respondents and that of mothers tended to decrease, while the opposite was true when comparing respondents' fertility to their children's. Combined with the correlations computed earlier, this leads to the conclusion that there was intergenerational transmission of reproductive behaviour for the women in the analysed sample, but in case of the respondents in the second age group, it was less significant than the impact of the pronatalist legislation.

Further analysis indicates that among the respondents in the first age group, those who grew up with four or more siblings had significantly more children than women with no siblings (Annex 6, Output 2), but the number of children born by women in the first group was lower than that of women in the other two age groups (Annex 6, Output 4). Similar results are also found for the women in the second age group, where there are significant differences between women with no siblings as compared to women with four or more siblings (of about 1 child), as well as between women with one sibling and women with two or four siblings. For the respondents in the third age group, the number of siblings does not influence the number of children they had. This is in accordance with the non-significant value of the correlation coefficient and is due, as showed above, to the context in which the respondents, respectively their mothers, gave birth.

Similarly, the children of the respondents were influenced in their reproductive behaviour by the number of siblings they grew up with (Annex 6, Output 3). However, in the case of children born to respondents in the first group, only those growing up with two or more siblings had significantly more children, while for women in the second group the respondent's fertility had a significant impact on the number of grandchildren for all parity levels. The fertility level of the

older respondents' children was not influenced by the number of children the respondent had, but rather by the measures triggering an artificially high fertility.

Important differences between the children of younger women and the rest of the sample are also indicated by the analysis in Output 5 (Annex 6). Regardless of the number of siblings, the children of women in this age group consistently have lower fertility levels. The most obvious explanation is the age at which these children were at when the interview took place, namely the most prolific decade of the theoretical reproductive span. Although all the indicators analysed so far suggest that their level of fertility will be lower than that of their counterparts, it is very likely that it will not remain as low as the results suggest.

To sum up, the transmission of the fertile behaviour through family size is done in the context of a drastic decrease in the number of children. 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 and a shift in focus from the quantity to the quality of children. As the first child satisfies the reproductive and psychological needs of couples (Haragus, 2008), the determinants of the second birth are of different nature. In this context, intergenerational transmission plays a key role through the transfer of values and norms related to the reproductive behaviour. On the other hand, the socio-economic context is determining whether the fertility of the individual will reach the level of ideal family size. So far, the tendency to diminish family size in order to reach the 2 children per family model is so strong that it even resisted the 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. For now, there still is the advantage of a desired number of children that revolves around two, which, given the evolution in mortality, would ensure replacement of generations and a stable population size, thus equilibrium. However, as smaller cohorts born and socialised after 1989 will enter their fertile period, changes in norms and values may be noted. Given that for various reasons the actual number of children is generally lower than the desired one, the decrease of the latter to below replacement levels is a strong signal of alarm regarding future evolution of population size, as it implies a spiralling decline.

# 6 Norms and values in the context of intergenerational transmission of reproductive behaviour

Among the factors that determine the number of children a woman gives birth to, an important role is played by her values regarding reproductive behaviour. These values are formed through socialisation, starting from childhood, and are refined throughout her life, also depending on personal experience and social norms. Perceptions regarding the age at first marriage, first birth and last birth start forming early in life and are first related to the parents' behaviour. Given the fact that throughout her life, the experiences a woman has have impact on the values system formed during childhood and adolescence, perceptions recorded at the end of the fertile period, as is the case of the survey on which the analysis is based, must also take into account such changes. Starting from these observations, the following analysis will focus on the perceptions of respondents regarding the age at the three important events in the reproductive life (first marriage, first birth and last birth), as well as on the differences between these ideal values and the actual behaviour of the respondent, in order to determine to what degree these values led to the respective behaviour, or, on the contrary, the behaviour led to changes in perceptions.

The Pearson correlation coefficients between the actual age the mother was at when she experienced her first marriage, first birth and last birth and the perceptions of the respondent regarding the ideal age for these demographic events are positive and statistically significant, albeit small (Table 8). This suggests that the behaviour of the mother influenced the perceptions of the respondent.

However, in order to disentangle the influence that the subsequent changes occurred in the life of the respondent had on the initial perceptions, partial correlation coefficients were produced (Table 8). The main conclusion to be drawn from the results obtained is that although remaining generally significant when controlling for the influence of actual behaviour of the respondent, the impact of maternal influence is much smaller than the impact of personal experience (when controlling for mother's behaviour). In other words, the results obtained during the analysis have to be interpreted as mostly the result of personal experiences of the respondent, with a small influence of the intergenerational mechanism.

**Table 8** **Correlation coefficients between respondent's perceptions (ideal age), mother's and respondent's behaviour at first marriage, first birth and last birth, controlling for actual behaviour of the respondent and of the mother**

| | | | Age at first marriage | | | Age at first birth | | | Age at last birth | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Control Variables | | | Ideal | Mother | Actual | Ideal | Mother | Actual | Ideal | Mother | Actual |
| none[a] | Ideal | Correlation | | **.127** | **.296** | | **.076** | **.225** | | **.095** | **.115** |
| | | df | | 583 | 583 | | 690 | 690 | | 689 | 689 |
| | Mother | Correlation | **.127** | | **.144** | **.076** | | **.173** | **.095** | | **.121** |
| | | df | 583 | | 583 | 690 | | 690 | 689 | | 689 |
| | Actual | Correlation | **.296** | **.144** | | **.225** | **.173** | | **.115** | **.121** | |
| | | df | 583 | 583 | | 690 | 690 | | 689 | 689 | |
| Actual | Ideal | Correlation | | **.089** | | | .039 | | | **.083** | |
| | | df | | 582 | | | 689 | | | 688 | |
| | Mother | Correlation | **.089** | | | .039 | | | **.083** | | |
| | | df | 582 | | | 689 | | | 688 | | |
| Mother | Ideal | Correlation | | | **.283** | | | **.216** | | | **.104** |
| | | df | | | 582 | | | 689 | | | 688 |
| | Actual | Correlation | **.283** | | | **.216** | | | **.104** | | |
| | | df | 582 | | | 689 | | | 688 | | |

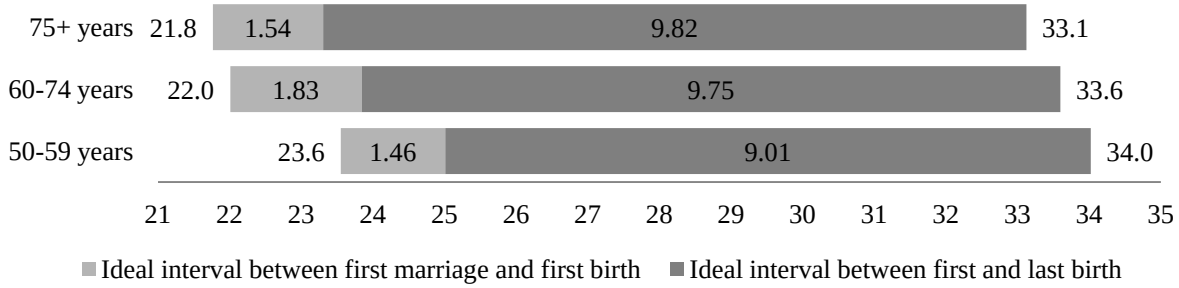
[a] Cells contain zero-order (Pearson) correlations. Values in **bold** are significant at the 0.05 level.

Based on the responses given to questions regarding the best age for women to get married for the first time, to give birth to the first child and to have the last child, the average reproductive life course patterns could be computed as shown in Figure 9. As expected, women aged 75 years and more at the time of the interview have the most traditionalist views regarding the indicators analysed, while at the opposite pole are the younger women in the first age group. In accordance with the results indicated by the analysis of patterns for timing of the reproductive behaviour, and taking into account the large influence of personal experience found in the sample, the perceptions of respondents that were most affected by the pronatalist legislation resemble the more traditionalist views of the older respondents rather than being somewhere in between the two age groups. They will thus be interpreted together and referred to as the traditional-oriented category of respondents, as opposed to the category of liberal-oriented respondents in the first age group.

The average age at first birth is 22 years and the time span between the first marriage and the last birth is roughly equal for the respondents with rather traditional views and extends over a period of 11.3-11.6 years. What differentiates the older respondents in this category from the younger ones is the average distance between first marriage and first birth, which is 0.3 years smaller for the former. On the other hand, the younger respondents believe that first marriage

should occur around the age of 23.5, with first birth following some 1.5 years later (Table 9). Also, the total interval between the first and the last birth should be about 1 year shorter, thus leading to a total span of 10.5 years between marriage and the end of the reproductive career (Figure 9). Consequently, the expressed opinions regarding the beginning and the end of the reproductive period are expected to be significantly different for respondents in the first age group as compared to the rest of the sample, while among respondents in the traditionalist category the younger ones might have different perceptions regarding age at first birth.

**Figure 9 Ideal reproductive span of the respondents**




The analysis of variance performed on the age at first marriage, age at first birth and age at last births according to age groups (Annex 7, Output 1) confirms the aforementioned assumptions. Indeed, respondents with more liberal views believe that first marriage should take place, on average, between 1.5 and 1.8 years later than the more traditionalist respondents. Also, according to their opinion first birth should be experienced about 1 or 2 years later than indicated by respondents in the rest of the sample.

**Table 9 Perceived ideal interval between first marriage and first birth and between first and last birth**

| Respondent age group | | Mean | N | Mean Diff. | t | df | Sig. (2-tailed) |
|---|---|---|---|---|---|---|---|
| 50-59 years | Best age for first child | 25.01 | 328 | 1.457 | 13.513 | 327 | .000 |
| | Best age for first marriage | 23.55 | 328 | | | | |
| | Best age for last child | 34.02 | 327 | 9.006 | 31.616 | 326 | .000 |
| | Best age for first child | 25.02 | 327 | | | | |
| 60-74 years | Best age for first child | 23.84 | 350 | 1.834 | 16.055 | 349 | .000 |
| | Best age for first marriage | 22.01 | 350 | | | | |
| | Best age for last child | 33.60 | 350 | 9.754 | 33.412 | 349 | .000 |
| | Best age for first child | 23.84 | 350 | | | | |
| 75+ years | Best age for first child | 23.30 | 115 | 1.539 | 8.533 | 114 | .000 |
| | Best age for first marriage | 21.77 | 115 | | | | |
| | Best age for last child | 33.12 | 115 | 9.817 | 18.572 | 114 | .000 |
| | Best age for first child | 23.30 | 115 | | | | |

Starting from the perceptions of the respondents, the focus will move on the relationship between the presented perceptions, which are practically the respondents' ideal ages ideal for experiencing each demographic event, and the actual behaviour (Table 10).

The only non-significant difference is for the age at first birth in the case of the respondents aged 75 years and more at the moment of the interview. This exception may be due to the more traditional values these respondents have, but also to the greater liberty they had in deciding with regard to their fertility level. In this case it is very likely that perceptions were translated into behaviour, rather than being adjusted to close the gap between external constraints and desires. This

is also confirmed by the results in Output 2 (Annex 7), the difference being approximately 1.9 years smaller for older respondents than for the rest of the sample.

**Table 10 Perceived and actual age at first marriage**

| Respondent age group | | Mean | N | Mean Diff. | t | df | Sig. (2-tailed) |
|---|---|---|---|---|---|---|---|
| 50-59 years | Best age for first marriage | 23.44 | 302 | 1.91060 | 8.190 | 301 | .000 |
| | Age at first marriage | 21.53 | 302 | | | | |
| | Best age for first child | 24.94 | 298 | 1.88591 | 7.348 | 297 | .000 |
| | Age at first child | 23.05 | 298 | | | | |
| | Best age for last child | 34.09 | 297 | 7.21212 | 18.561 | 296 | .000 |
| | Age at last child | 26.88 | 297 | | | | |
| 60-74 years | Best age for first marriage | 21.94 | 325 | 1.63077 | 7.607 | 324 | .000 |
| | Age at first marriage | 20.31 | 325 | | | | |
| | Best age for first child | 23.84 | 321 | 1.91900 | 8.786 | 320 | .000 |
| | Age at first child | 21.92 | 321 | | | | |
| | Best age for last child | 33.66 | 321 | 6.85047 | 17.771 | 320 | .000 |
| | Age at last child | 26.81 | 321 | | | | |
| 75+ years | Best age for first marriage | 21.77 | 108 | .73148 | 2.418 | 107 | .017 |
| | Age at first marriage | 21.04 | 108 | | | | |
| | Best age for first child | 23.34 | 106 | .16038 | .396 | 105 | .693 |
| | Age at first child | 23.18 | 106 | | | | |
| | Best age for last child | 33.22 | 106 | 5.25472 | 7.433 | 105 | .000 |
| | Age at last child | 27.96 | 106 | | | | |

On the other hand, the positive and highly significant differences between perceptions and actual behaviour suggest that respondents got married and had their first and last child earlier than the age which they indicated as ideal. Differences for age at first marriage tended to increase from less than 1 year for older respondents to almost 2 years for the younger ones. Similarly, the gaps between the ideal and the actual age at last birth grew larger as women reduced their actual fertile interval. More than that, compared to the 10.5 years of ideal fertile interval, the actual one for respondents in the first age group was of only 5.35 years, thus roughly half, as compared to 6.5 years for respondents in the second group and 7 years for respondents aged 75 years of more. A notable difference is also that between ideal age at first birth and the actual one for respondents in the 60-74 years age group. On average, these respondents gave birth to their first child some two years earlier than they would have liked.

These results suggest an important shift in the perceptions of the respondents and even a gap between the respondents in the first age group and the rest of the sample. Remembering that the personal experience of the respondents has a large impact on their perceptions, it is reasonable to assume that the context in which they lived their most prolific reproductive years has left a powerful mark on their perceptions and values. About half of these respondents were aged between 20 and 30 in the 1980s, when the economic situation became increasingly worse. Given that basic needs, such as food, heating and housing, were difficult to ensure, their propensity towards having children could not have been too high. Moreover, the idea that childbearing should be postponed until reasonable living standards are achieved might also be influenced (in the sense of postponement) by the subsequent evolution, namely they may unconsciously express their belief that it would have been better to wait for a few more years, as the change in the political regime brought improvements in living standards. All these factors are likely to have outweighed the initial values formed during early life according to parents' behaviour, thus, it is reasonable to assume that in the case of these respondents constraining factors were the ones 'dictating' the course of the respondents' fertility career.

On the other hand, the traditional views of the respondents born before 1938 are not surprising and it is likely that they reflect to the greatest extent their value system. However, the answers of respondents in the second age group may have been biased in the sense of declaring ideal ages closer to their actual behaviour. The enactment of the coercive legislation constrained these respondents to accept a different timing pattern than the one they would have liked to have. Given that extra-marital fertility was not socially acceptable in Romania during the second half of the 20$^{th}$ century and abortion became illegal, a pregnancy would most likely lead to marriage. Moreover, the larger interval between first marriage and first birth could be the result of an unfulfilled desire to have spent some time with their partner before enlarging the family through the birth of a child, especially since, on the one hand marriages occurred at quite young ages (generally before 25 years), and, on the other hand, during the period in most couples both partners were employed. Consequently, the reproductive behaviour of the respondents in the second age group was also the result of constraining factors, rather than an expression of intergenerational transmission of reproductive behaviour.

Therefore, the influence of the intergenerational transmission mechanism, although positive, was small and to a great extent outweighed by the political and socio-economic contexts. Also, a strong tendency of postponement at perception level was noted in the sample for the respondents in the first two age groups, which was not found for older women in the sample. It may thus be concluded that in the first case perceptions are likely to have been influenced by behaviour, while in the case of women aged 75 years or more, due to greater liberty in deciding about their reproductive life, behaviour is more likely an expression of the value system than its determinant.

### 6.1 Desired and actual number of children

Another expression of fertility-related values is the number of children a woman wanted to have when she got married. Nevertheless, as in the case of perceptions regarding ideal timing, measuring this indicator at the end of the fertile period poses the risk of bias, the number of children a woman declared she wanted being influenced by the number of children she actually had.

The results in Table 11 suggest this kind of bias for the respondents in the second age group, whose desired and actual number of children are practically equal and larger than that of the other respondents. On the other hand, the non-significant difference observed for the older respondents may be the due to their liberty in deciding about their fertility level. Since these respondents are more likely to translate their perceptions into behaviour, as shown above, it could be that they had, to a large extent, the number of children they wanted. Thus, although both the difference between respondents in the second and the third age groups are not significant (Annex 8, Output 1), what differentiates them is explained through the context in which they gave birth to their children.

**Table 11 Desired and actual number of children**

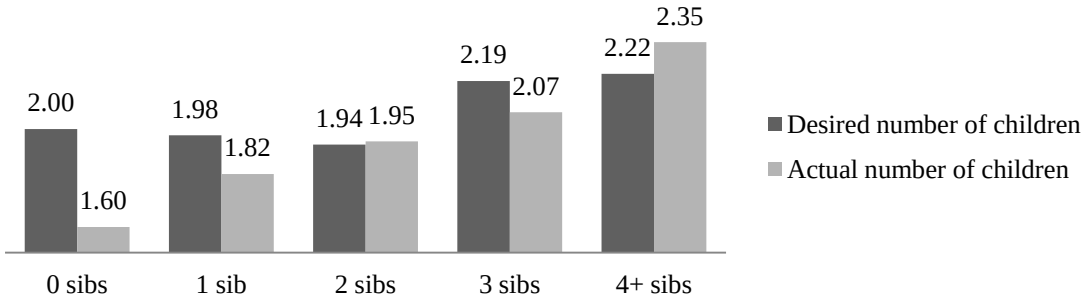
| Respondent age group | | Mean | N | Mean Diff. | t | df | Sig. (2-tailed) |
|---|---|---|---|---|---|---|---|
| 50-59 years | Desired number of children | 1.96 | 321 | .14330 | 2.690 | 320 | .008 |
| | Actual number of children | 1.82 | 321 | | | | |
| 60-74 years | Desired number of children | 2.15 | 344 | -.00581 | -.088 | 343 | .930 |
| | Actual number of children | 2.15 | 344 | | | | |
| 75+ years | Desired number of children | 2.04 | 112 | .00893 | .074 | 111 | .941 |
| | Actual number of children | 2.03 | 112 | | | | |

The younger respondents in the sample wanted to have significantly fewer children than the number indicated by the women aged 60-74 years (Annex 8, Output 1) and had fewer children than

they intended to have (Table 11). The important aspect to be noted here is the fact that their desired number of children is below two, which suggests a potential decrease in the ideal fertility level. However, there are no significant differences between the means value of this respondent and the one of the elder women in the sample, which means this might be due to a coincidence. Nevertheless, the lower level of their actual fertility indicates a tendency of decrease which renders the values of the ideal number somewhat worrisome.

The influence of family over the desired number of children may be estimated through the relationship with the number of siblings the respondent has (Figure 10). Respondents who grew up with three or more siblings wanted to have, on average, more children than the others (Annex 8, Output 2), with no significant differences between the three age groups. However, the correlation between the two indicators in weak (r=0.09, p=0.012) and becomes non-significant when controlling for the actual number of children (r=0.007, p=0.852). In contrast, the correlation between the actual number of children and the desired one remains just as strong even after controlling for the number of siblings (r=0.416, p<0.001).

**Figure 10 Actual and desired number of children by number of siblings**




In conclusion, the desired number of children a respondent wants to have is most likely the expression of social norms regarding ideal family size with little or no influence of the family size, while the number of children she has is strongly influenced by the socio-economic context, but also by the number of siblings a respondent grew up with.

# 7 General remarks regarding intergenerational transmission of fertility behaviour in 20th century Romania

The historical, socio-economic and political contexts in Romania during the 20th century left their marks in the timing, spacing and intensity patterns of the population's reproductive behaviour. The two World Wars, which were also fought on the territory of Romania, followed by the famine of the late 1940s, caused short-term fluctuations in the evolution of fertility, but did not change its long-term trend. As a consequence of the changes occurring in the age at first marriage and first birth, the total length of the actual reproductive span shortened. At the same time, there is an increase in the interval between celebrating the first marriage and giving birth to the first child, concomitant with a shortening of the interval between subsequent consecutive births.

These evolutions suggest that young couples tend to postpone marriage until they have the capital to have their own household and after having achieved this (around mid-20s), they tend to postpone first birth (after the age of 25) in order to consolidate their careers, and their social and financial positions, as well as to be able to enjoy their status for a couple of years. After this period, couples give birth to 1-2 children on average, born as soon as possible, especially since they are

already approaching the age limit after which pregnancy becomes more complicated and the chances of achieving it decrease, while related costs increase.

Given the decline in mortality, especially infant and child mortality, as well as progress made in various fields, the life span and the living standard of individuals increased. Moreover, there were important changes in the economic role of women, as well as their increasing access to education and well paid jobs, in a context of urbanisation and industrialisation. Combined with a much less significant change in the role of women within the family, the emerging context led to shifts in time spending patterns that were not favourable to childbearing.

All these factors are context-related and they constrain the manifestation of ideal behaviour, thus leading to a strong reduction of family size. There seems to be a significant influence of intergenerational transmission of reproductive behaviour, albeit small, on fertility. Its role was further diminished during periods constraining women in the sense of achieving a certain level of fertility, as well as when the socio-economic context was not favourable for childbearing. An overall view of fertility evolution during the 20$^{th}$ century fertility trends suggests that the decline, although to some extent hindered by the coercive pronatalist measures, was so strong that it consistently tended to resume its course.

The main mean for transmission of reproductive behaviour from one generation to the next is through the system of norms, values, perceptions and attitudes of the individual and the generation they are part of. The system has its origin in childhood and adolescence, but is continuously refined to include personal experience. For this reason, failure to realise intended, desired or ideal reproductive behaviour will lead to a change in the perceptions regarding it.

The analysis suggests important shifts in behaviour of the younger respondents in the sample in the sense of obvious postponement of first marriage and first birth, increasing interval between them and concentration of birth within a shorter time period. Also, the desired number of children seems to be around replacement level, while actual fertility is significantly below, thus generating a gap between desired and actual number of children, which can be attributed to the context. Significant changes occurred in the perception of women most affected by the pronatalist legislation as well. In their case, the constraining context was likely to have altered the values system with the view to closing the gap between personal choice and imposed constraints. On the other hand, the traditional views of the respondents born before 1938 are not surprising and it is likely that they reflect to the greatest extent their value system. For these last two categories of respondents, the desired and actual number of children did not differ significantly, which reinforces the previously made assumptions, according to which respondents in the second age group adapted their values system to the imposed behaviour, while those in the third age group were more likely translating their values into behaviour.

The general conclusion to be drawn from analysing the intergenerational transmission of reproductive behaviour for 20$^{th}$ century Romania is that its influence was stronger at the beginning of the century, in a policy-free context. Once the state began to interfere with ‘natural’ evolutions, the impact of the mechanism is smaller, being outweighed by the contextual factors determining fertility levels. The most dramatic effect on the reproductive behaviour of Romanian women in the 20$^{th}$ century, with consequences for the behaviour of the following generations, was that of the 23 years of coercive legislation imposing women an artificially high fertility. This led to significant changes not only in the behaviour of the most affected cohorts, but also to weakening the link between fertility of women and that of their mothers and to causing important shifts in perceptions, values, attitudes and even norms regarding fertility.

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## References

Caplescu, R. (2011). Influenta factorilor socio-economici asupra comportamentului reproductiv in Romania. *Studii Şi Cercetări De Calcul Economic Şi Cibernetică Economică*, *45*(3-4), 147–158.

Caplescu, R., & Mihaescu, C. (2012). Pronatalist policy impact on Romanian procreative behaviour throughout the 20th century. In *Proceedings of the International Days of Statistics and Economics (6th year)* (pp. 239–248). Prague.

Dobos, C., Jinga, L. M., & Soare, F. S. (2010). *Politica pronatalista a regimului Ceausescu (vol. I): O perspectiva comparativa*. Iasi: Polirom.

Flinn, M. W. (1981). *The European Demographic System, 1500-1800*. *Sixteenth Century Journal* (Vol. 18). Baltimore, Maryland: John Hopkins University Press.

Ghetau, V. (1983). Évolution de la fécondité en Roumanie. Une approche longitudinale. *Population (French Edition)*, *38*(2), 247. doi:10.2307/1532142

Ghetau, V. (1997). Evolutia fertilitatii in Romania. De la transversal la longitudinal. *Revista de cercetari sociale*, *1*, 3–85.

Haragus, M. (2008). *Tranzitia la statutul de parinte in Europa. Evolutii recente si posibili determinanti* (p. 222). Cluj-Napoca: Presa Universitara Clujeana.

Knodel, J. (1968). Infant mortality and fertility in three Bavarian villages: An analysis of family histories from the 19th century. *Population Studies*, *22*(3), 297–318. doi:10.1080/00324728.1968.10404941

Kohler, H.-P., Rodgers, J. L., & Christensen, K. (1999). Is Fertility Behavior in Our Genes? Findings from a Danish Twin Study. *Population and development review*, *25*(2), 253–288.

Lutz, W., Skirbekk, V., & Testa, M. R. (2006). The Low Fertility Trap Hypothesis. Forces that May Lead to Further Postponement and Fewer Births in Europe. *Vienna Yearbook of Population Research*, *2006*, 167–192. doi:10.1553/populationyearbook2006s115

Muresan, C., Haragus, P.-T., Haragus, M., & Schröder, C. (2008). Romania: Childbearing metamorphosis within a changing context. *Demographic Research*, *19*, 855–906. doi:10.4054/DemRes.2008.19.23

Murphy, M. (2007). Is the relationship between fertility of parents and children really weak? *Social biology*, *46*(1-2), 122–45.

Murphy, M., & Grundy, E. (2003). Mothers with living children and children with living mothers: the role of fertility and mortality in the period 1911-2050. *Population trends*, (112), 36–44. Retrieved from http://www.ncbi.nlm.nih.gov/pubmed/12870428

Murphy, M., & Knudsen, L. B. (2002). The intergenerational transmission of fertility in contemporary Denmark: the effects of number of siblings (full and half), birth order, and whether male or female. *Population studies*, *56*(3), 235–48. doi:10.1080/00324720215937

Murphy, M., & Wang, D. (2001). Family-Level Continuities in Childbearing in Low-Fertility Societies. *European Journal of Population*, *17*, 75–96.

Reher, D. S. (1998). Family ties in western Europe. *Population and development review*, *24*(2), 203–234.

Reher, D. S., Ortega, J. A., & Sanz-Gimeno, A. (2008). Intergenerational Transmission of Reproductive Traits in Spain during the Demographic Transition. *Human Nature*, *19*(1), 23–43. doi:10.1007/s12110-008-9032-6

Rotariu, T. (2005). *Anchetă asupra unor fenomene populaţionale şi emergenţa unor stiluri de viaţă în România*. Iasi: Metro Media Transilvania.

Steenhof, L., & Liefbroer, A. C. (2008). Intergenerational transmission of age at first birth in the Netherlands for birth cohorts born between 1935 and 1984: evidence from municipal registers. *Population studies*, *62*(1), 69–84. doi:10.1080/00324720701788616

**Annex 1. The questionnaire of the survey on intergenerational transmission of female reproductive behaviour in Romania (translation from Romanian)**

**Name, first name and group of interviewer: _____E-mail of interviewer operator:_____**

# INTERGENERATIONAL TRANSMISSION OF FERTILE BEHAVIOUR

***GENERATION 1 (women aged 50 years and more)***

| | | | |
|---|---|---|---|
| Q1. Year of birth | | County of residence | |
| Q2. Birth order of the respondent: 1 – first child, 2 – second child, 3 – third child etc. | | | |
| Q3. During the first 18 years of your life, you lived mostly in: 1-urban residence area, 2-rural residence area | | | |
| Q4. Between 18 and 49 years you lived mostly in: 1-urban residence area, 2-rural residence area | | | |
| Q5. Current residence area: 1-urban, 2-rural | | | |
| Q6. **Current professional status**: 1) Employer, 2) state employee, 3) Employed in the private sector, 4) Free-lancer, 5) Self-employed in own household, 6) Pensioner, 7) Housewife, 8) Student, 9) Other; **Type of work**: 1) physical work in agriculture, 2) physical work in industry, 3) physical work in constructions, 4) physical work in the service sector, 5) office work, 6) intellectual/creative work | | | |
| Q7. Highest level of education attained: 1) Primary, 2) Secondary, 3) High school/Vocational, 4) Higher, 5) Postgraduate, 6) Ph.D., 7) No education | | | |
| Q8. Religious practice: 1) going to church frequently (at least once a week), 2) going to church occasionally (only for holidays), 3) not going to church, but believes in God, 4) not going to church, nor believes in God, 5) I don't know | | | |
| Q9. Ethnicity: 1-Romanian; 2-Hunagrian; 3-Rroma (gypsies); 4-Ukrainean; 5-Other | | | |

| Q10. What is your current marital status? (one possible answer, mark with „X") | | Q11. Currently, the owner of the dwelling you live in is: (one possible answer, mark with „X") | |
|---|---|---|---|
| 1) Married for the first time | | 1) you and your husband (partner) | |
| 2) Remarried after divorce or widowhood | | 2) one of your children | |
| 3) Separated, but living with the ex | | 3) the partner of one of your children | |
| 4) Single | | 4) you | |
| 5) Divorced | | 5) your partner | |
| 6) Widow | | 6) a third party, from who you rented the dwelling | |
| 7) Consensual union | | 7) Other situation (state which ) ..... | |
| 8) Other situation (state which ) ..... | | | |

Q12. The net monthly income per household member in your household is (**lei/person**): (one possible answer, mark with „X")

| | |
|---|---|
| 1) above 5000 lei | |
| 2) 3001-5000 lei | |
| 3) 2001-3000 lei | |
| 4) 1001-2000 lei | |
| 5) 501-1000 lei | |
| 6) below 500 lei | |

| **Perceptions regarding the age at marriage and birth** | Women | Men |
|---|---|---|
| Q13. The age at which it is best to get married for the first time (years) | | |
| Q14. The age at which it is too late to get married for the first time (years) | | |
| Q15. The age at which it is best to have the first child (years) | | |
| Q16. The age at which it is too late to have the first child (years) | | |
| Q17. The age at which it is best to have the last child (years) | | |

**Generations living simultaneously in the same household** (multiple answers are possible, mark with „X" the variants declared by the respondent)

| Persons you lived with during | Maternal grandparents | Paternal grandparents | Mother | Father | Brothers (number) | Sisters (number) |
|---|---|---|---|---|---|---|
| Q18. childhood | | | | | | |
| Persons you lived with during | Your parents | Your partner's parents | Your partner | Children (number) | I was living alone | |
| Q19. maturity | | | | | | |
| Persons you live with | Your partner | Children (number) | Your children's partner | Grandchildren (number) | I live alone | |
| Q20. currently | | | | | | |

| ***CHILDREN OF GENERATION 1 (OF THE RESPONDENT)*** | | Birth order of the child | | | | | |
|---|---|---|---|---|---|---|---|
| | | 1 | 2 | 3 | 4 | 5 | 6+ |
| Q21. Number of children wanted at the beginning of your marriage | Q21. | | | | | | |
| Q22. Children ever born, by birth order (if none, go to Q29.) (1-son, 2-daughter) | Q22. | | | | | | |
| Q23. Children still alive, by birth order (1-yes; 0-no) | Q23. | | | | | | |
| Q24. Age at each birth (years) (if the respondent has 7 children or more, Q25, else, Q26.) | Q24 | | | | | | |
| Q25. Age at last birth | Q25. | | | | | | |
| Q26. Marital status* at each birth, by birth order | Q26. | | | | | | |
| Q27. Professional status and type of work** at the birth of each child | Q27. | | | | | | |
| Q28. Highest education level attained*** at the birth of each child | Q28. | | | | | | |
| Q29. Number of marriages until now | Q29. | | | | | | |
| Q30. Age at each marriage (years) | Q30. | | | | | | |
| Q31. Number of divorces until now | Q31. | | | | | | |
| Q32. Age at each divorce (years) | Q32. | | | | | | |
| Q33. Reason of the divorce (1-character mismatch, 2-infidelity, 3-violence, 4-alcohol, 5-other) | Q33. | | | | | | |
| Q34. For the childless: the reason you don't have children is: (1) I didn't want any; (2) medical causes (infertility, health problems); (3) my partner didn't want any; (4) my partner's infertility; (5) I didn't find a suitable partner; (6) other | Q34. | | | | | | |

| ***GRANDCHILDREN OF GENERATION 1 (OF THE RESPONDENT)*** | | Birth order of the child of generation 1 | | | | | |
|---|---|---|---|---|---|---|---|
| | | 1 | 2 | 3 | 4 | 5 | 6+ |
| Q35. Number of children ever born to each son/daughter (if none, go to Q45.) | Q35. | | | | | | |
| Q36. Grandchildren who survived to present | Q36. | | | | | | |
| Q37. Age at first child for sons/daughters, by birth order (years) | Q37. | | | | | | |
| Q38. Age at last child for sons/daughters, by birth order (years) | Q38. | | | | | | |
| Q39. Professional status and type of work** at the birth of the first child, for sons/daughters (years) | Q39. | | | | | | |
| Q40. Professional status and type of work** at the birth of the last child, for sons/daughters (years) | Q40. | | | | | | |

* **Marital status**: 1) Married for the first time, 2) Remarried after divorce or widowhood, 3) Separated, but living with the ex, 4) Single, 5) Divorced, 6) Widow(er), 7) Consensual union, 8) Other situation

** **Professional status:** 1) Employer, 2) state employee, 3) Employed in the private sector, 4) Free-lancer, 5) Self-employed in own household, 6) Pensioner, 7) Housewife, 8) Student, 9) Other;
**Type of work:** 1) physical work in agriculture, 2) physical work in industry, 3) physical work in constructions, 4) physical work in the service sector, 5) office work, 6) intellectual/creative work

*** **Highest level of education attained:** 1) Primary, 2) Secondary, 3) High school/Vocational, 4) Higher, 5) Postgraduate, 6) Ph.D., 7) No education

| ***GRANDCHILDREN OF GENERATION 1 (cont.)*** | | Birth order of the child of generation 1 | | | | | |
|---|---|---|---|---|---|---|---|
| | | 1 | 2 | 3 | 4 | 5 | 6+ |
| Q41. Highest education level attained** at the birth of the first child, for sons/daughters (years) | Q41. | | | | | | |
| Q42. Highest education level attained** at the birth of the last child, for sons/daughters (years) | Q42. | | | | | | |
| Q43. Marital status*** at the birth of the first child, for sons/daughters (years) | Q43. | | | | | | |
| Q44. Marital status*** at the birth of the last child, for sons/daughters (years) | Q44. | | | | | | |
| Q45. Number of marriages until now, for sons/daughters | Q45. | | | | | | |
| Q46. Age at first marriage for sons/daughters, by birth order (years) | Q46. | | | | | | |
| Q47. Residence area of sons/daughters (1-urban, 2-rural) | Q47. | | | | | | |
| Q48. Current professional status and type of work* for sons/daughters | Q48. | | | | | | |
| Q49. Highest education level attained** for sons/daughters | Q49. | | | | | | |
| Q50. Current marital status*** for sons/daughters | Q50. | | | | | | |
| Q51. For childless sons/daughters: (1) they didn't want to; (2) medical reasons; (3) I don't know | Q51. | | | | | | |
| ***SIBLINGS OF GENERATION 1 (OF THE RESPONDENT)*** | | Birth order of siblings of generation 1 | | | | | |
| | | 1 | 2 | 3 | 4 | 5 | 6+ |
| Q52. Siblings ever had, by birth order (if none, go to Q69.) (1-brother, 2-sister) | Q52. | | | | | | |
| Q53. Birth year of each sibling, by birth order | Q53. | | | | | | |
| Q54. Siblings who didn't survive to the present (record the age at death, I don't know - 999) | Q54. | | | | | | |
| Q55. Number of children of siblings, by birth order of the sibling | Q55. | | | | | | |
| Q56. Age at first marriage for each sibling, by birth order (years) | Q56. | | | | | | |
| Q57. Age at first child for each sibling, by birth order (years) | Q57. | | | | | | |
| Q58. Age at last child for each sibling, by birth order (years) | Q58. | | | | | | |
| Q59. Current residence area of each sibling, by birth order (1-urban, 2-rural) | Q59. | | | | | | |
| Q60. Current professional status and type of work* for each sibling, by birth order | Q60. | | | | | | |
| Q61. Professional status and type of work* for each sibling at the birth of the first child, by birth order of sibling | Q61 | | | | | | |
| Q62. Professional status and type of work* for each sibling at the birth of the last child, by birth order of sibling | Q62. | | | | | | |
| Q63. Highest education level attained** for each sibling, by birth order | Q63. | | | | | | |
| Q64. Highest education level attained** for each sibling at the birth of the first child, by birth order of sibling | Q64. | | | | | | |
| Q65. Highest education level attained** for each sibling at the birth of the last child, by birth order of sibling | Q65. | | | | | | |
| Q66. Current marital status*** for each sibling, by birth order | Q66. | | | | | | |
| Q67. Marital status*** for each sibling at the birth of the first child, by birth order of sibling | Q67. | | | | | | |
| Q68. Marital status*** for each sibling at the birth of the last child, by birth order of sibling | Q68. | | | | | | |

* **Professional status:** 1) Employer, 2) state employee, 3) Employed in the private sector, 4) Free-lancer, 5) Self-employed in own household, 6) Pensioner, 7) Housewife, 8) Student, 9) Other;
**Type of work:** 1) physical work in agriculture, 2) physical work in industry, 3) physical work in constructions, 4) physical work in the service sector, 5) office work, 6) intellectual/creative work

** **Highest level of education attained:** 1) Primary, 2) Secondary, 3) High school/Vocational, 4) Higher, 5) Postgraduate, 6) Ph.D., 7) No education

*** **Marital status**: 1) Married for the first time, 2) Remarried after divorce or widowhood, 3) Separated, but living with the ex, 4) Single, 5) Divorced, 6) Widow(er), 7) Consensual union, 8) Other situation

| ***PARENTS OF GENERATION 1 (OF THE RESPONDENT)*** | | Birth order of the parent | | | | | |
|---|---|---|---|---|---|---|---|
| | | 1 | 2 | 3 | 4 | 5 | 6+ |
| Q69. Birth order of the mother | Q69. | | | | | | |
| Q70. Siblings of the mother, by birth order (1-brother, 2-sister) | Q70. | | | | | | |
| Q71. Number of marriages of the mother | Q71. | | | | | | |
| Q72. Age of the mother at each marriage (years) | Q72. | | | | | | |
| Q73. Number of divorces of the mother | Q73. | | | | | | |
| Q74. Age of the mother at each divorce (years) | Q74. | | | | | | |
| Q75. Reason of the divorce (1-character mismatch, 2-infidelity, 3-violence, 4-alcohol, 5-other) | Q75. | | | | | | |
| Q76. Age at each birth for the mother (years) | Q76. | | | | | | |
| Q77. Residence area of the mother at the birth of each child (1-urban, 2-rural) | Q77 | | | | | | |
| Q78. Professional status and type of work* of the mother at the birth of each child | Q78. | | | | | | |
| Q79. Highest education level attained** of the mother at the birth of each child | Q79. | | | | | | |
| Q80. Marital status*** of the mother at the birth of each child | Q80. | | | | | | |
| Q81. Birth order of the father | Q81. | | | | | | |
| Q82. Siblings of the father, by birth order (1-brother, 2-sister) | Q82. | | | | | | |
| Q83. Number of marriages of the father | Q83. | | | | | | |
| Q84. Age of the father at each marriage (years) | Q84. | | | | | | |
| Q85. Number of divorces of the father | Q85. | | | | | | |
| Q86. Age at each divorce of the father (years) | Q86. | | | | | | |
| Q87. Reason of the divorce (1-character mismatch, 2-infidelity, 3-violence, 4-alcohol, 5-other) | Q87. | | | | | | |
| Q88. Age of the father at each divorce (years) | Q88. | | | | | | |
| Q89. Residence area of the father at the birth of each child (1-urban, 2-rural) | Q89. | | | | | | |
| Q90. Professional status and type of work* of the father at the birth of each child | Q90. | | | | | | |
| Q91. Highest education level attained** of the father at the birth of each child | Q91. | | | | | | |
| Q92. Marital status*** of the father at the birth of each child | Q92. | | | | | | |

* **Professional status:** 1) Employer, 2) state employee, 3) Employed in the private sector, 4) Free-lancer, 5) Self-employed in own household, 6) Pensioner, 7) Housewife, 8) Student, 9) Other;
**Type of work:** 1) physical work in agriculture, 2) physical work in industry, 3) physical work in constructions, 4) physical work in the service sector, 5) office work, 6) intellectual/creative work

** **Highest level of education attained:** 1) Primary, 2) Secondary, 3) High school/Vocational, 4) Higher, 5) Postgraduate, 6) Ph.D., 7) No education

*** **Marital status**: 1) Married for the first time, 2) Remarried after divorce or widowhood, 3) Separated, but living with the ex, 4) Single, 5) Divorced, 6) Widow(er), 7) Consensual union, 8) Other situation

For reasons concerning the quality check of the recording, we kindly ask you to give us some contact details:

Telephone number: E-mail:

**Thank you for your time!**

## Annex 2. Population policy measures in Romania, 1865-2013

| Year | Document | Measures |
|---|---|---|
| 1865 | art. 246, Penal Code | Abortion is considered illegal |
| 1948 | art. 482, Penal Code | Abortion is considered illegal and sanctioned accordingly |
| 1950 | Decree 106 | Introduction of state support for single mothers and families with 4 or more children; introduction of a one-time substantial birth allowance, starting with the 10th birth (provided that at least 8 of the previously born children were still alive) |
| 1953 | Instructions no. 28476 | Issued by the Health Ministry. First regulation of surgical sterilization: done only in state institutions and only if the woman requested it |
| 1953 | Decree 195 | Granting of honorific titles for women with many children (5 or more) |
| 1955 | Decree 456 | Abortion is permitted if done by qualified personnel and for certain categories of risk pregnancies |
| 1956 | Decree 256 | Regulation of support for military wives under certain circumstances<br>Introduction of the 'State children allowance' and of parents' contribution for children attending part-time and seasonal kindergarten |
| 1957 | Decree 463 | Abortion in medical and sanitary institutions and done by qualified personnel becomes legal and condition-free |
| 1960 | Decree 285 | State allowance for children |
| 1966 | Decree 770 | Abortion becomes illegal, except in very specific case |
| | Decree 779 | Divorce becomes extremely difficult to obtain |
| | Decree 954 | Change in the provisions of Decree 106/1950. The birth allowance (same nominal value) is given to mothers starting with the third birth, regardless if the child was born alive or dead |
| | Decree 1086 | Introduction of taxes for those aged 25 years or more who were childless (regardless of marital status) |
| | HCM 1040/01.06 | Regulation of state child allowance quantum. Increased support for families from urban areas, with lower incomes. For families with 4 children or more, the cumulated allowances varied between 4% and 34% of the net salary during 1965-1970, depending on residence area and parents' income (Dobos et al., 2010)<br>A series of measures aiming at supporting families with children by allowing mothers of children below the age of 7 to work only in the first shift or, when possible, have part-time employment until the children turn 10, increasing the number of places in crèches, kindergartens and orphanages, granting of birth allowances starting with the third child (half at birth and half when the child turns 1), 30% tax reduction for families with many children (3 or more), facilitating access to leisure (vacation, camp), housing or health care for families with children and cancelling of the contribution paid by parents for kindergarten according to Decree 256/1956 |
| 1968 | Decree 1045 | Changes in conditions of child allowance in favour of higher education full-time students and financed Ph.D. students. |
| | Law 61 | Reducing taxes for agricultural workers with children aged up to 15 years, according to number of children: -15% for 3 children; -20% for 4 children; -30% for 5 children; -40% for 6+ children |
| 1969 | Decree 105 | Increase in the child allowance quantum for low-income families, especially from urban areas and students |
| 1971 | | Changes in conditions for child allowance in the sense of encouraging families with at least three children and increased support for lower-income families and families of workers and masters, particularly from urban areas |
| 1972 | Decree 53 | Relaxing of the measures enacted through the Decree 770/1966 by reducing the age limit for legal abortion from 45 to 40 years |
| | Decree 411 | Introduction of financial support for mothers of many children (8,9,10 or more children) in care (18 years or 25 years if they were studying) |
| 1973 | Decree 414 | Changes in conditions for child allowance, with substantial increase in support for families with more than 5 children and conditions become more permissive for certain categories. Focus on urban areas. |
| | Law 4 | Families with many children and young married couples had priority for state provided dwellings and credits for buying them |
| 1974 | Instructions no. 27 | Regulation of abortion, solving incomplete abortion and improvement of OB medical assistance. Introduction of compulsory medical screening at the workplace of women, special provisions regarding limiting of contraceptive means (only for women who were entitled to contraception according to the law) were included, but they were ambiguously formulated and with no reference to the concept of contraception (Dobos et al., 2010) |

| Year | Document | Measures |
|---|---|---|
| 1977 | Decree 197 | Extension of financial support for mothers of many children by including mothers with 5 or more children, increase in financial support for military wives and reconfirmation of birth allowances |
| | Decree 246 | Important increase in state children allowance and perpetuation of support measures for large families, awarding the allowance starting with the first child, regardless of income level (the quantum differed greatly, especially in urban areas) |
| | Law no. 4 | Introduction of allowances for families with children, in the months when one parent worked for at least 15 days in an agricultural cooperative and realised the production target imposed by the norms |
| | Law 1 | Replacement of taxes on individual retributions with taxation of the socialist production units; this led to cancelling the tax deduction for families of with more than 3 children and establishing of a fixed monthly amount, depending on income; producers with individual agricultural households age 25 or more with no children have to pay an annual amount according to income |
| | Law 2 | Members of the agricultural cooperatives aged 25 or more who did not have children have to pay a yearly amount, depending on income |
| | Law 18 | Early retirement for women having worked at least 25 years and having reared minimum 3 children by the age of 10: 1 year for 3 children; 2 years for 4 children and 3 years for 5 or more children |
| | | Allowance for widows aged 50 years or more and who gave birth to at least 4 children within a marriage that lasted for 10 years or more |
| 1978 | | The Law regarding insurance of population health was adopted. Through it the medical and sanitary institutions were obliged to help forming a favourable opinion toward natality increase and ensure proper health care conditions for pregnant women, mothers and children |
| | Decrees 69 and 359 | Increase in the quantum of child allowances by 10 lei for each child |
| 1982 | Decree 46 | Substantial increase in the quantum of child allowances |
| 1984 | Decree 411 | Intensification of previously adopted measures regarding responsibilities of political and sanitary institutions for ensuring compliance with anti-abortion legislation. The minimum age limit for abortion was raised to 45 years again, the minimum number of children in care above which women could ask for an abortion increased from 4 to 5, the salaries of single and childless employees aged 25 years and above suffered important cuts |
| 1985 | Decree 26 | Nominal increase in the birth allowance and decrease in the birth number starting with which it was granted |
| | Decree 140 | Increase in quantum of child allowance (greater for low income families) and simplification of granting criteria. Attempt to promote families with 4-5 children; allowances for mothers with many children focus on families with 3-5 children. The allowance is not granted for less than three children and it does not increase with number of children; increase in allowances for military wives and for agricultural cooperative workers (who worked at least 20 days and reached the imposed production target) |
| | Decree 410 | Revision of the laws 1/1977 and 2/1977 in the sense of increasing the amounts to be paid |
| 1986 | Decree 300 | Issued by the Health Ministry. Surgical sterilization and use of the intrauterine devices are forbidden |
| | Dispositions | Issued by the Medical Assistance Direction and Pharmaceutical and Medical Equipment Direction. Outlawing of oral contraception |
| 1989 | Decree-Law 1 | First Decree after the revolution abrogated the entire pronatalist legislation in force after 1966, including the articles in the Penal Code regarding abortions |
| 1993 | Law 61/1993 and subsequent changes (OUG 148/2005, Law 448/2006, HG 1662/2008) | State child allowance for children is given to all children aged less than 18 years or those aged above 18 who are enrolled in upper secondary education until graduating. In 2013 the values are 200 lei per month for children aged up to 2 years (3 years for children with disabilities), 42 lei per month for children aged 3-18 years and those aged more than 18 still enrolled in upper secondary education and 84 lei for children with disabilities aged 3 years or more; |
| 2001 | Law 416 and subsequent changes (HG 1664/2008) | Birth allowance: 230 lei for each of the first four children |
| 2003 | OU 105/2003 and subsequent changes (Law 41/2004; HG 2395/2004; HG 1763/2005; HG 4/2007; HG 8/2008; Law 236/2008) | Complementary family allowance: monthly, for families with net monthly incomes per family member up to the minimum net salary – for families with one (50 lei), two (60 lei), three (65 lei) or at least four children (70 lei); monoparental family support allowance: families with one adult and children aged up to 18 years in their care and living together – for monoparental families with one (70 lei), two (80 lei), three (85 lei) or at least four children (90 lei) |
| 2004 | Law 272/2004 and subsequent changes (Law 448/2006, HG 1663/2008) | Monthly allowance for foster children – 97 lei. For children with disabilities: 50% more |

| Year | Document | Measures |
|---|---|---|
| 2006 | Law 396/2006 | 200 Euro family allowance at marriage if both partners are at their first marriage and they have legal residence in Romania, regardless of their citizenship |
| | Law 482/2006, with subsequent changes (OG 3/2007) | Layettes for new-borns: 150 lei, for each live birth |
| | Law 193/2006 and subsequent changes (Decree 23/2009) | Crèche voucher – monthly: 350 lei |
| 2010 | Law 277/2010 | Support measures for families with low income (including monoparental family): amount varies according to monthly income per family member; the smallest amount is 25 lei for two-parents families with average net income per family member between 201 and 370 lei and the highest is 200 lei for families with 4 children or more with net income less than 200 lei. |

Source: based on information from Cozma (2012), Dobos (2010), Mihaescu (2001), Muresan (1996) and the legislation enforced after 1989

## Annex 3. Measures for supporting working parents in Romania, 1965 - 2013

| Type | Year | Type | Measures |
|---|---|---|---|
| Maternal leave | 1965 | HCM 880 | State social insurance scheme enacted:<br>• paid maternity leave of 112 days (52 before and 60 after birth, compensating between each other), equivalent to a percent of the mother's monthly salary, depending on duration of employment: at least 12 months – 90%, 6-12 months – 70%, less than 6 months – 50%<br>• secured employment for the duration of maternal leave |
| | 1966 | HCM and CC of USGR 2489 | Mothers giving birth to a third child or higher birth order were entitled to 100% of monthly salary, regardless of duration of employment |
| | 1997 | Law 120/1997 | Paid parental leave: women who are ensured through social security system and those who are military cadres benefit from paid leave of up to 2 years (as compared to the 1 year established in 1997); the allowance equals 85% of the total taxable income in the previous 12 months; women ensured through the pensions systems and other social security insurance benefit of an allowance equal to 80% of the average monthly taxable income of the last 6 months for which the contribution was paid |
| Childcare leave | 1965 | HCM 880 | Paid leave for taking care of a sick child: duration established by the Health Ministry; allowance conditioned by employment duration: at least 4 months since employment to the leave during the preceding year or at least 10 months in the previous 2 years; quantum: 50% for uninterrupted duration of employment of up to 2 years, 70% between 2 and 5 years; 80% between 5 and 8 years 90% for 8 years and above |
| Parental leave | 2005 | OU nr.148/2005 and subsequent changes (OG 1/2006, OUG 44/2006, Law 508/2006, Law 7/2007, OUG 118/2008, 257/2008, OUG 226/2008) | Family support measures for childrearing – monthly allowance: 600 lei or, optional, 85% of the mean income of the last 12 months, but no more than 4000 lei (if parents had, during the last 12 months, incomes for which the income tax is applied); duration: until the child is 2 years old (3 for children with disabilities); the allowance is subject to tax for health insurance (5.5%), which is supported by the state; a 100 lei stimulant is given to those who return to work before the child is 2 years old (3 years for children with disabilities); only for children born, adopted of taken into foster care until December 30th 2010. |
| | 2009 | Law 239/2009 and subsequent changes (Law 240/2009, Law 341/2009, Law 117/2010, Law 118/2010) | Family support for childrearing: diminution of benefits granted (Law 61/1993 and subsequent changes) by 15% (if the result is less than 600 lei, the 600 lei are granted) |
| | 2011 | OUG 111/2010<br>HG 52/2011 | Parental leave and benefits: for parents of children born starting with January 1st 2011 and for persons who adopted a child or became foster parents of a child starting with this date (excepting professional maternal assistant, who can receive these benefits only for their own children, and of the legal guardian); monthly benefits are modified to 75% of the average monthly income for the previous 12 months, but no less than 600 lei or no more than 3400 lei, until the child is 1 year old and during the second year of parental leave, 75% of the average monthly income for the previous 12 months, but no less than 600 lei or no more than 1200 lei, until the child is 2 years old; benefits for parental leave in case of children with disabilities are computed similar as those for the first years, but are granted until the age of 3; For multiple births (twins, triplets etc.) extra 600 lei are granted for each child starting with the second one.<br>Child allowance of 200 lei until the child's second birthday<br>An insertion stimulant of 500 lei per month for parents who are entitled to parental leave and return to work before the child's first birthday (second for children with disabilities) for the remaining period until the 2 years (3 years for children with disabilities) for which they could benefit of parental leave; for persons who benefit from the stimulant cannot also receive the monthly allowance.<br>The job of a person on parental leave is secured on the duration of the leave or if the person benefits from the insertion stimulant |

Source: based on information from Dobos (2010) and the legislation enforced after 1989

## Annex 4. ANOVA results for age at first marriage, age at first birth and age at last birth

### Output 1. Age at first marriage by age groups

| ***Test of Homogeneity of Variances*** | Levene Statistic | df1 | df2 | Sig. |
|---|---|---|---|---|
| Children (average) (mean) | 1.070 | 2 | 560 | .344 |
| Respondent (mean) | 2.256 | 2 | 732 | .106 |
| Mother (mean) | 1.737 | 2 | 637 | .177 |

| ***ANOVA*** | | Sum of Squares | df | Mean Square | F | Sig. |
|---|---|---|---|---|---|---|
| Children (average) | Between Groups | 40.078 | 2 | 20.039 | 1.875 | .154 |
| | Within Groups | 5984.221 | 560 | 10.686 | | |
| | Total | 6024.299 | 562 | | | |
| Respondent | | 241.829 | 2 | 120.915 | 9.126 | .000 |
| | | 9698.492 | 732 | 13.249 | | |
| | | 9940.321 | 734 | | | |
| Mother | Between Groups | 185.965 | 2 | 92.982 | 7.549 | .001 |
| | Within Groups | 7846.435 | 637 | 12.318 | | |
| | Total | 8032.400 | 639 | | | |

***Multiple Comparisons (Games-Howell)***

| Dependent Variable | (I) Age group of the respondent | (J) Age group of the respondent | Mean Difference (I-J) | Std. Error | Sig. | 95% Confidence Interval | |
|---|---|---|---|---|---|---|---|
| | | | | | | Lower Bound | Upper Bound |
| Children (average) | 50-59 years | 60-74 years | .59346 | .29577 | .112 | -.1024 | 1.2893 |
| | | 75+ years | .54516 | .42421 | .405 | -.4574 | 1.5477 |
| | 60-74 years | 50-59 years | -.59346 | .29577 | .112 | -1.2893 | .1024 |
| | | 75+ years | -.04830 | .41052 | .992 | -1.0192 | .9226 |
| | 75+ years | 50-59 years | -.54516 | .42421 | .405 | -1.5477 | .4574 |
| | | 60-74 years | .04830 | .41052 | .992 | -.9226 | 1.0192 |
| Respondent | 50-59 years | 60-74 years | **1.23913** | .30054 | .000 | .5330 | 1.9453 |
| | | 75+ years | .51594 | .36681 | .339 | -.3489 | 1.3808 |
| | 60-74 years | 50-59 years | **-1.23913** | .30054 | .000 | -1.9453 | -.5330 |
| | | 75+ years | -.72319 | .34565 | .094 | -1.5390 | .0926 |
| | 75+ years | 50-59 years | -.51594 | .36681 | .339 | -1.3808 | .3489 |
| | | 60-74 years | .72319 | .34565 | .094 | -.0926 | 1.5390 |
| Mother | 50-59 years | 60-74 years | **1.12757** | .30372 | .001 | .4138 | 1.8414 |
| | | 75+ years | .18730 | .40839 | .891 | -.7780 | 1.1526 |
| | 60-74 years | 50-59 years | **-1.12757** | .30372 | .001 | -1.8414 | -.4138 |
| | | 75+ years | **-.94027** | .39423 | .048 | -1.8730 | -.0075 |
| | 75+ years | 50-59 years | -.18730 | .40839 | .891 | -1.1526 | .7780 |
| | | 60-74 years | **.94027** | .39423 | .048 | .0075 | 1.8730 |

### Output 2. Age at last birth by age groups

| ***Test of Homogeneity of Variances*** | Levene Statistic | df1 | df2 | Sig. |
|---|---|---|---|---|
| Children (average) (mean) | 1.904 | 2 | 494 | .150 |
| Respondent (mean) | 1.608 | 2 | 722 | .201 |
| Mother (mean) | .507 | 2 | 754 | .603 |

| ***ANOVA*** | | Sum of Squares | df | Mean Square | F | Sig. |
|---|---|---|---|---|---|---|
| Children (average) | Between Groups | 193.934 | 2 | 96.967 | 5.126 | .006 |
| | Within Groups | 9344.400 | 494 | 18.916 | | |
| | Total | 9538.334 | 496 | | | |
| Respondent | Between Groups | 114.189 | 2 | 57.095 | 2.316 | .099 |
| | Within Groups | 17795.788 | 722 | 24.648 | | |
| | Total | 17909.978 | 724 | | | |
| Mother | Between Groups | 18.015 | 2 | 9.008 | .257 | .773 |
| | Within Groups | 26396.371 | 754 | 35.008 | | |
| | Total | 26414.386 | 756 | | | |

***Multiple Comparisons (Games-Howell)***

| Dependent Variable | (I) Age group of the respondent | (J) Age group of the respondent | Mean Difference (I-J) | Std. Error | Sig. | 95% Confidence Interval | |
|---|---|---|---|---|---|---|---|
| | | | | | | Lower Bound | Upper Bound |
| Children (average) | 50-59 years | 60-74 years | **-1.00944** | .42453 | .047 | -2.0093 | -.0096 |
| | | 75+ years | **-1.84068** | .60196 | .007 | -3.2644 | -.4170 |
| | 60-74 years | 50-59 years | **1.00944** | .42453 | .047 | .0096 | 2.0093 |
| | | 75+ years | -.83124 | .57190 | .316 | -2.1854 | .5229 |
| | 75+ years | 50-59 years | **1.84068** | .60196 | .007 | .4170 | 3.2644 |
| | | 60-74 years | .83124 | .57190 | .316 | -.5229 | 2.1854 |
| Respondent | 50-59 years | 60-74 years | .05940 | .39342 | .988 | -.8649 | .9837 |
| | | 75+ years | -1.08978 | .58454 | .152 | -2.4720 | .2925 |
| | 60-74 years | 50-59 years | -.05940 | .39342 | .988 | -.9837 | .8649 |
| | | 75+ years | -1.14918 | .58825 | .127 | -2.5399 | .2415 |
| | 75+ years | 50-59 years | 1.08978 | .58454 | .152 | -.2925 | 2.4720 |
| | | 60-74 years | 1.14918 | .58825 | .127 | -.2415 | 2.5399 |
| Mother | 50-59 years | 60-74 years | .17797 | .46927 | .924 | -.9244 | 1.2803 |
| | | 75+ years | -.28260 | .63238 | .896 | -1.7760 | 1.2108 |
| | 60-74 years | 50-59 years | -.17797 | .46927 | .924 | -1.2803 | .9244 |
| | | 75+ years | -.46057 | .62579 | .742 | -1.9388 | 1.0176 |
| | 75+ years | 50-59 years | .28260 | .63238 | .896 | -1.2108 | 1.7760 |
| | | 60-74 years | .46057 | .62579 | .742 | -1.0176 | 1.9388 |

The values in **bold** are significant at the 0.05 level.

## Annex 5. ANOVA results for intervals between marriage and first birth, first and last birth, and average interval between births

### Output 1. The interval between first and last birth for mothers, respondents and children by age groups

| *Test of Homogeneity of Variances* | Levene Statistic | df1 | df2 | Sig. |
|---|---|---|---|---|
| Mother (mean) | .666 | 2 | 751 | .514 |
| Respondent (mean) | 1.366 | 2 | 722 | .256 |
| Children (average) (mean) | 2.857 | 2 | 491 | .058 |

| *ANOVA* | | Sum of Squares | df | Mean Square | F | Sig. |
|---|---|---|---|---|---|---|
| Mother | Between Groups | 88.573 | 2 | 44.287 | 1.663 | .190 |
| | Within Groups | 20002.944 | 751 | 26.635 | | |
| | Total | 20091.517 | 753 | | | |
| Respondent | Between Groups | 183.005 | 2 | 91.503 | 4.610 | .010 |
| | Within Groups | 14330.093 | 722 | 19.848 | | |
| | Total | 14513.098 | 724 | | | |
| Children (average) | Between Groups | 222.348 | 2 | 111.174 | 14.312 | .000 |
| | Within Groups | 3814.135 | 491 | 7.768 | | |
| | Total | 4036.483 | 493 | | | |

***Multiple Comparisons (Games-Howell)***

| Dependent Variable | (I) Age group of the respondent | (J) Age group of the respondent | Mean Difference (I-J) | Std. Error | Sig. | 95% Confidence Interval | |
|---|---|---|---|---|---|---|---|
| | | | | | | Lower Bound | Upper Bound |
| Mother | 50-59 years | 60-74 years | -.50960 | .40320 | .416 | -1.4568 | .4376 |
| | | 75+ years | -.97473 | .59202 | .229 | -2.3741 | .4247 |
| | 60-74 years | 50-59 years | .50960 | .40320 | .416 | -.4376 | 1.4568 |
| | | 75+ years | -.46513 | .59019 | .711 | -1.8603 | .9300 |
| | 75+ years | 50-59 years | .97473 | .59202 | .229 | -.4247 | 2.3741 |
| | | 60-74 years | .46513 | .59019 | .711 | -.9300 | 1.8603 |
| Respondent | 50-59 years | 60-74 years | **-1.04533** | .35490 | .009 | -1.8791 | -.2115 |
| | | 75+ years | -.93738 | .50162 | .151 | -2.1235 | .2488 |
| | 60-74 years | 50-59 years | **1.04533** | .35490 | .009 | .2115 | 1.8791 |
| | | 75+ years | .10795 | .51616 | .976 | -1.1116 | 1.3274 |
| | 75+ years | 50-59 years | .93738 | .50162 | .151 | -.2488 | 2.1235 |
| | | 60-74 years | -.10795 | .51616 | .976 | -1.3274 | 1.1116 |
| Children (average) | 50-59 years | 60-74 years | **-1.29863** | .28419 | .000 | -1.9681 | -.6291 |
| | | 75+ years | **-1.84432** | .37011 | .000 | -2.7188 | -.9698 |
| | 60-74 years | 50-59 years | **1.29863** | .28419 | .000 | .6291 | 1.9681 |
| | | 75+ years | -.54569 | .34283 | .252 | -1.3568 | .2654 |
| | 75+ years | 50-59 years | **1.84432** | .37011 | .000 | .9698 | 2.7188 |
| | | 60-74 years | .54569 | .34283 | .252 | -.2654 | 1.3568 |

The values in **bold** are significant at the 0.05 level.

### Output 2. The interval between first marriage and first birth for mothers, respondents and children by age groups

| *Test of Homogeneity of Variances* | Levene Statistic | df1 | df2 | Sig. |
|---|---|---|---|---|
| Mother (mean) | 136.244 | 2 | 637 | .000 |
| Respondent (mean) | 2.732 | 2 | 667 | .066 |
| Children (average) (mean) | 1.995 | 2 | 486 | .137 |

| *ANOVA* | | Sum of Squares | df | Mean Square | F | Sig. |
|---|---|---|---|---|---|---|
| Respondent | Between Groups | 11.723 | 2 | 5.862 | 1.399 | .247 |
| | Within Groups | 2793.842 | 667 | 4.189 | | |
| | Total | 2805.566 | 669 | | | |
| Children (average) | Between Groups | 4.023 | 2 | 2.011 | .385 | .681 |
| | Within Groups | 2539.328 | 486 | 5.225 | | |
| | Total | 2543.351 | 488 | | | |

| *Robust Tests of Equality of Mean* | | Statistic[a] | df1 | df2 | Sig. |
|---|---|---|---|---|---|
| Mother | Welch | 262.139 | 2 | 255.053 | .000 |
| | Brown-Forsythe | 207.949 | 2 | 444.681 | .000 |

[a] Asymptotically F distributed.

***Multiple Comparisons (Games-Howell)***

| Dependent Variable | (I) Age group of the respondent | (J) Age group of the respondent | Mean Difference (I-J) | Std. Error | Sig. | 95% Confidence Interval Lower Bound | 95% Confidence Interval Upper Bound |
|---|---|---|---|---|---|---|---|
| Mother | 50-59 years | 60-74 years | **-.42041** | .03724 | .000 | -.5080 | -.3329 |
| | | 75+ years | **.54540** | .04948 | .000 | .4286 | .6622 |
| | 60-74 years | 50-59 years | **.42041** | .03724 | .000 | .3329 | .5080 |
| | | 75+ years | **.96581** | .04353 | .000 | .8627 | 1.0689 |
| | 75+ years | 50-59 years | **-.54540** | .04948 | .000 | -.6622 | -.4286 |
| | | 60-74 years | **-.96581** | .04353 | .000 | -1.0689 | -.8627 |
| Respondent | 50-59 years | 60-74 years | -.02494 | .16662 | .988 | -.4165 | .3666 |
| | | 75+ years | -.37995 | .26101 | .315 | -.9976 | .2377 |
| | 60-74 years | 50-59 years | .02494 | .16662 | .988 | -.3666 | .4165 |
| | | 75+ years | -.35501 | .26065 | .363 | -.9718 | .2618 |
| | 75+ years | 50-59 years | .37995 | .26101 | .315 | -.2377 | .9976 |
| | | 60-74 years | .35501 | .26065 | .363 | -.2618 | .9718 |
| Children (average) | 50-59 years | 60-74 years | .20720 | .27610 | .734 | -.4450 | .8594 |
| | | 75+ years | .19485 | .35204 | .845 | -.6360 | 1.0257 |
| | 60-74 years | 50-59 years | -.20720 | .27610 | .734 | -.8594 | .4450 |
| | | 75+ years | -.01235 | .27342 | .999 | -.6605 | .6358 |
| | 75+ years | 50-59 years | -.19485 | .35204 | .845 | -1.0257 | .6360 |
| | | 60-74 years | .01235 | .27342 | .999 | -.6358 | .6605 |

The values in **bold** are significant at the 0.05 level.

## Output 3. The average interval between two consecutive births for mothers, respondents and children by age groups

| ***Test of Homogeneity of Variances*** | Levene Statistic | df1 | df2 | Sig. |
|---|---|---|---|---|
| Mother (mean) | 2.067 | 2 | 638 | .127 |
| Respondent (mean) | 1.939 | 2 | 718 | .145 |
| Children (average) (mean) | 3.308 | 2 | 490 | .037 |

| ***ANOVA*** | | Sum of Squares | df | Mean Square | F | Sig. |
|---|---|---|---|---|---|---|
| Mother | Between Groups | 65.313 | 2 | 32.657 | 4.648 | .010 |
| | Within Groups | 4482.139 | 638 | 7.025 | | |
| | Total | 4547.452 | 640 | | | |
| Respondent | Between Groups | 5.473 | 2 | 2.736 | 1.095 | .335 |
| | Within Groups | 1793.631 | 718 | 2.498 | | |
| | Total | 1799.104 | 720 | | | |

| ***Robust Tests of Equality of Mean*** | | Statistic[a] | df1 | df2 | Sig. |
|---|---|---|---|---|---|
| Children (average) | Welch | 14.602 | 2 | 239.510 | .000 |
| | Brown-Forsythe | 14.592 | 2 | 385.342 | .000 |

[a] Asymptotically F distributed.

***Multiple Comparisons (Games-Howell)***

| Dependent Variable | (I) Age group of the respondent | (J) Age group of the respondent | Mean Difference (I-J) | Std. Error | Sig. | 95% Confidence Interval Lower Bound | 95% Confidence Interval Upper Bound |
|---|---|---|---|---|---|---|---|
| Mother | 50-59 years | 60-74 years | **.59464** | .23016 | .027 | .0537 | 1.1356 |
| | | 75+ years | **.77079** | .30303 | .032 | .0547 | 1.4868 |
| | 60-74 years | 50-59 years | **-.59464** | .23016 | .027 | -1.1356 | -.0537 |
| | | 75+ years | .17615 | .29611 | .823 | -.5240 | .8763 |
| | 75+ years | 50-59 years | **-.77079** | .30303 | .032 | -1.4868 | -.0547 |
| | | 60-74 years | -.17615 | .29611 | .823 | -.8763 | .5240 |
| Respondent | 50-59 years | 60-74 years | -.16362 | .12923 | .415 | -.4673 | .1400 |
| | | 75+ years | -.20765 | .17326 | .455 | -.6167 | .2014 |
| | 60-74 years | 50-59 years | .16362 | .12923 | .415 | -.1400 | .4673 |
| | | 75+ years | -.04403 | .16745 | .963 | -.4397 | .3516 |
| | 75+ years | 50-59 years | .20765 | .17326 | .455 | -.2014 | .6167 |
| | | 60-74 years | .04403 | .16745 | .963 | -.3516 | .4397 |
| Children (average) | 50-59 years | 60-74 years | **-.61796** | .13179 | .000 | -.9284 | -.3076 |
| | | 75+ years | **-.72415** | .15303 | .000 | -1.0854 | -.3629 |
| | 60-74 years | 50-59 years | **.61796** | .13179 | .000 | .3076 | .9284 |
| | | 75+ years | -.10619 | .14139 | .733 | -.4401 | .2278 |
| | 75+ years | 50-59 years | **.72415** | .15303 | .000 | .3629 | 1.0854 |
| | | 60-74 years | .10619 | .14139 | .733 | -.2278 | .4401 |

The values in **bold** are significant at the 0.05 level.

## Annex 6. ANOVA results for number of siblings, number of children and number of grandchildren

### Output 1. Number of siblings, number of children and number of grandchildren by age groups

| *Test of Homogeneity of Variances* | Levene Statistic | df1 | df2 | Sig. |
|---|---|---|---|---|
| Number siblings | 12.171 | 2 | 790 | .000 |
| Number of children | 4.380 | 2 | 790 | .013 |
| Number of grandchildren | 1.742 | 2 | 790 | .176 |

| *ANOVA* | | Sum of Squares | df | Mean Square | F | Sig. |
|---|---|---|---|---|---|---|
| Grandchildren | Between Groups | 113.860 | 2 | 56.930 | 82.400 | .000 |
| | Within Groups | 545.808 | 790 | .691 | | |
| | Total | 659.668 | 792 | | | |

| *Robust Tests of Equality of Mean* | | Statistic[a] | df1 | df2 | Sig. |
|---|---|---|---|---|---|
| Siblings | Welch | 15.833 | 2 | 308.958 | .000 |
| | Brown-Forsythe | 14.233 | 2 | 432.350 | .000 |
| Children | Welch | 7.040 | 2 | 316.995 | .001 |
| | Brown-Forsythe | 6.991 | 2 | 480.746 | .001 |

[a] Asymptotically F distributed.

***Multiple Comparisons (Games-Howell)***

| Dependent Variable | (I) Age group of the respondent | (J) Age group of the respondent | Mean Difference (I-J) | Std. Error | Sig. | 95% Confidence Interval | |
|---|---|---|---|---|---|---|---|
| | | | | | | Lower Bound | Upper Bound |
| Siblings | 50-59 years | 60-74 years | **-.58866** | .12591 | .000 | -.8844 | -.2929 |
| | | 75+ years | **-.78518** | .18221 | .000 | -1.2160 | -.3544 |
| | 60-74 years | 50-59 years | **.58866** | .12591 | .000 | .2929 | .8844 |
| | | 75+ years | -.19652 | .19082 | .559 | -.6471 | .2541 |
| | 75+ years | 50-59 years | **.78518** | .18221 | .000 | .3544 | 1.2160 |
| | | 60-74 years | .19652 | .19082 | .559 | -.2541 | .6471 |
| Children | 50-59 years | 60-74 years | **-.32751** | .08786 | .001 | -.5339 | -.1211 |
| | | 75+ years | -.18428 | .11961 | .274 | -.4669 | .0984 |
| | 60-74 years | 50-59 years | **.32751** | .08786 | .001 | .1211 | .5339 |
| | | 75+ years | .14323 | .12580 | .491 | -.1537 | .4401 |
| | 75+ years | 50-59 years | .18428 | .11961 | .274 | -.0984 | .4669 |
| | | 60-74 years | -.14323 | .12580 | .491 | -.4401 | .1537 |
| Grandchildren | 50-59 years | 60-74 years | **-.67160** | .06030 | .000 | -.8132 | -.5299 |
| | | 75+ years | **-.96417** | .10825 | .000 | -1.2203 | -.7081 |
| | 60-74 years | 50-59 years | **.67160** | .06030 | .000 | .5299 | .8132 |
| | | 75+ years | **-.29258** | .10788 | .020 | -.5478 | -.0373 |
| | 75+ years | 50-59 years | **.96417** | .10825 | .000 | .7081 | 1.2203 |
| | | 60-74 years | **.29258** | .10788 | .020 | .0373 | .5478 |

The values in **bold** are significant at the 0.05 level.

### Output 2. Number of children by number of siblings according to age groups

| *Test of Homogeneity of Variances* | Levene Statistic | df1 | df2 | Sig. |
|---|---|---|---|---|
| 50-59 years | .510 | 4 | 323 | .728 |
| 60-74 years | 1.854 | 4 | 345 | .118 |
| 75+ years | 1.218 | 4 | 110 | .307 |

| *ANOVA* | | Sum of Squares | df | Mean Square | F | Sig. |
|---|---|---|---|---|---|---|
| 50-59 years | Between Groups | 13.593 | 4 | 3.398 | 3.442 | .009 |
| | Within Groups | 318.892 | 323 | .987 | | |
| | Total | 332.485 | 327 | | | |
| 60-74 years | Between Groups | 31.924 | 4 | 7.981 | 5.173 | .000 |
| | Within Groups | 532.273 | 345 | 1.543 | | |
| | Total | 564.197 | 349 | | | |
| 75+ years | Between Groups | 6.764 | 4 | 1.691 | 1.327 | .264 |
| | Within Groups | 140.158 | 110 | 1.274 | | |
| | Total | 146.922 | 114 | | | |

***Multiple Comparisons (Games-Howell)***

| Respondent age group | (I) Number of siblings | (J) Number of siblings | Mean Difference (I-J) | Std. Error | Sig. | 95% Confidence Interval | |
|---|---|---|---|---|---|---|---|
| | | | | | | Lower Bound | Upper Bound |
| 50-59 years | 0 siblings | 1 sibling | -.34384 | .15170 | .166 | -.7667 | .0790 |
| | | 2 siblings | **-.53641** | .18103 | .030 | -1.0382 | -.0346 |
| | | 3 siblings | -.56133 | .22469 | .101 | -1.1886 | .0659 |
| | | 4+ siblings | **-.65913** | .22877 | .040 | -1.2993 | -.0189 |
| | 1 sibling | 0 sibling | .34384 | .15170 | .166 | -.0790 | .7667 |
| | | 2 siblings | -.19257 | .14543 | .677 | -.5954 | .2102 |
| | | 3 siblings | -.21749 | .19715 | .804 | -.7728 | .3378 |
| | | 4+ siblings | -.31528 | .20178 | .528 | -.8859 | .2553 |
| | 2 siblings | 0 siblings | **.53641** | .18103 | .030 | .0346 | 1.0382 |
| | | 1 sibling | .19257 | .14543 | .677 | -.2102 | .5954 |
| | | 3 siblings | -.02492 | .22051 | 1.000 | -.6404 | .5906 |
| | | 4+ siblings | -.12271 | .22466 | .982 | -.7515 | .5061 |
| | 3 siblings | 0 siblings | .56133 | .22469 | .101 | -.0659 | 1.1886 |
| | | 1 sibling | .21749 | .19715 | .804 | -.3378 | .7728 |
| | | 2 siblings | .02492 | .22051 | 1.000 | -.5906 | .6404 |
| | | 4+ siblings | -.09779 | .26113 | .996 | -.8267 | .6311 |
| | 4+ siblings | 0 siblings | **.65913** | .22877 | .040 | .0189 | 1.2993 |
| | | 1 siblings | .31528 | .20178 | .528 | -.2553 | .8859 |
| | | 2 siblings | .12271 | .22466 | .982 | -.5061 | .7515 |
| | | 3 siblings | .09779 | .26113 | .996 | -.6311 | .8267 |
| 60-74 years | 0 siblings | 1 sibling | -.08304 | .21515 | .995 | -.6820 | .5159 |
| | | 2 siblings | -.20676 | .22116 | .883 | -.8223 | .4087 |
| | | 3 siblings | -.19665 | .25364 | .937 | -.9019 | .5086 |
| | | 4+ siblings | **-.80278** | .22479 | .005 | -1.4274 | -.1781 |
| | 1 sibling | 0 sibling | .08304 | .21515 | .995 | -.5159 | .6820 |
| | | 2 siblings | -.12372 | .18442 | .962 | -.6328 | .3854 |
| | | 3 siblings | -.11360 | .22233 | .986 | -.7313 | .5041 |
| | | 4+ siblings | **-.71974** | .18876 | .002 | -1.2400 | -.1995 |
| | 2 siblings | 0 siblings | .20676 | .22116 | .883 | -.4087 | .8223 |
| | | 1 sibling | .12372 | .18442 | .962 | -.3854 | .6328 |
| | | 3 siblings | .01012 | .22815 | 1.000 | -.6236 | .6439 |
| | | 4+ siblings | **-.59601** | .19558 | .022 | -1.1359 | -.0561 |
| | 3 siblings | 0 siblings | .19665 | .25364 | .937 | -.5086 | .9019 |
| | | 1 sibling | .11360 | .22233 | .986 | -.5041 | .7313 |
| | | 2 siblings | -.01012 | .22815 | 1.000 | -.6439 | .6236 |
| | | 4+ siblings | -.60613 | .23167 | .074 | -1.2488 | .0365 |
| | 4+ siblings | 0 siblings | **.80278** | .22479 | .005 | .1781 | 1.4274 |
| | | 1 siblings | **.71974** | .18876 | .002 | .1995 | 1.2400 |
| | | 2 siblings | **.59601** | .19558 | .022 | .0561 | 1.1359 |
| | | 3 siblings | .60613 | .23167 | .074 | -.0365 | 1.2488 |
| 75+ years | 0 siblings | 1 sibling | -.24242 | .33533 | .949 | -1.2307 | .7458 |
| | | 2 siblings | -.10606 | .37796 | .999 | -1.2003 | .9882 |
| | | 3 siblings | -.76190 | .37736 | .281 | -1.8555 | .3317 |
| | | 4+ siblings | -.33333 | .36000 | .885 | -1.3766 | .7099 |
| | 1 sibling | 0 sibling | .24242 | .33533 | .949 | -.7458 | 1.2307 |
| | | 2 siblings | .13636 | .30037 | .991 | -.7239 | .9966 |
| | | 3 siblings | -.51948 | .29962 | .427 | -1.3792 | .3403 |
| | | 4+ siblings | -.09091 | .27743 | .997 | -.8734 | .6915 |
| | 2 siblings | 0 siblings | .10606 | .37796 | .999 | -.9882 | 1.2003 |
| | | 1 sibling | -.13636 | .30037 | .991 | -.9966 | .7239 |
| | | 3 siblings | -.65584 | .34666 | .338 | -1.6448 | .3332 |
| | | 4+ siblings | -.22727 | .32767 | .957 | -1.1557 | .7011 |
| | 3 siblings | 0 siblings | .76190 | .37736 | .281 | -.3317 | 1.8555 |
| | | 1 sibling | .51948 | .29962 | .427 | -.3403 | 1.3792 |
| | | 2 siblings | .65584 | .34666 | .338 | -.3332 | 1.6448 |
| | | 4+ siblings | .42857 | .32699 | .686 | -.4991 | 1.3562 |
| | 4+ siblings | 0 siblings | .33333 | .36000 | .885 | -.7099 | 1.3766 |
| | | 1 siblings | .09091 | .27743 | .997 | -.6915 | .8734 |
| | | 2 siblings | .22727 | .32767 | .957 | -.7011 | 1.1557 |
| | | 3 siblings | -.42857 | .32699 | .686 | -1.3562 | .4991 |

The values in **bold** are significant at the 0.05 level.

## Output 3. Number of grandchildren by number of children according to age groups

| *Test of Homogeneity of Variances* | Levene Statistic | df1 | df2 | Sig. |
|---|---|---|---|---|
| 50-59 years | .509 | 2 | 297 | .602 |
| 60-74 years | 9.523 | 2 | 318 | .000 |
| 75+ years | 3.880 | 2 | 102 | .024 |

| *ANOVA* | | Sum of Squares | df | Mean Square | F | Sig. |
|---|---|---|---|---|---|---|
| 50-59 years | Between Groups | 12.882 | 2 | 6.441 | 10.887 | .000 |
| | Within Groups | 175.722 | 297 | .592 | | |
| | Total | 188.604 | 299 | | | |
| 75+ years | Between Groups | 4.002 | 2 | 2.001 | 2.014 | .139 |
| | Within Groups | 101.350 | 102 | .994 | | |
| | Total | 105.353 | 104 | | | |

| *Robust Tests of Equality of Means* | | Statistic[a] | df1 | df2 | Sig. |
|---|---|---|---|---|---|
| 60-74 years | Welch | 12.698 | 2 | 168.753 | .000 |
| | Brown-Forsythe | 12.967 | 2 | 191.729 | .000 |

[a] Asymptotically F distributed.

***Multiple Comparisons (Games-Howell)***

| Respondent age group | (I) Number of children | (J) Number of children | Mean Difference (I-J) | Std. Error | Sig. | 95% Confidence Interval Lower Bound | 95% Confidence Interval Upper Bound |
|---|---|---|---|---|---|---|---|
| 50-59 years | 1 child | 2 children | -.11344 | .10169 | .506 | -.3536 | .1267 |
| | | 3+ children | **-.57935** | .12568 | .000 | -.8775 | -.2812 |
| | 2 children | 1 child | .11344 | .10169 | .506 | -.1267 | .3536 |
| | | 3+ children | **-.46590** | .11703 | .000 | -.7440 | -.1878 |
| | 3+ children | 1 child | **.57935** | .12568 | .000 | .2812 | .8775 |
| | | 2 children | **.46590** | .11703 | .000 | .1878 | .7440 |
| 60-74 years | 1 child | 2 children | **-.33415** | .11786 | .015 | -.6140 | -.0543 |
| | | 3+ children | **-.57532** | .11897 | .000 | -.8577 | -.2929 |
| | 2 children | 1 child | **.33415** | .11786 | .015 | .0543 | .6140 |
| | | 3+ children | **-.24117** | .07929 | .007 | -.4282 | -.0541 |
| | 3+ children | 1 child | **.57532** | .11897 | .000 | .2929 | .8577 |
| | | 2 children | **.24117** | .07929 | .007 | .0541 | .4282 |
| 75+ years | 1 child | 2 children | -.41534 | .26996 | .282 | -1.0670 | .2363 |
| | | 3+ children | -.48595 | .24870 | .137 | -1.0918 | .1199 |
| | 2 children | 1 child | .41534 | .26996 | .282 | -.2363 | 1.0670 |
| | | 3+ children | -.07061 | .19241 | .929 | -.5306 | .3893 |
| | 3+ children | 1 child | .48595 | .24870 | .137 | -.1199 | 1.0918 |
| | | 2 children | .07061 | .19241 | .929 | -.3893 | .5306 |

The values in **bold** are significant at the 0.05 level.

## Output 4. Number of children by age group according to number of siblings

| *Test of Homogeneity of Variances* | Levene Statistic | df1 | df2 | Sig. |
|---|---|---|---|---|
| 0 siblings | .191 | 2 | 108 | .827 |
| 1 sibling | 2.674 | 2 | 239 | .071 |
| 2 siblings | .681 | 2 | 158 | .508 |
| 3 siblings | .129 | 2 | 114 | .879 |
| 4+ siblings | 3.088 | 2 | 159 | .048 |

| *ANOVA* | | Sum of Squares | df | Mean Square | F | Sig. |
|---|---|---|---|---|---|---|
| 0 siblings | Between Groups | 4.491 | 2 | 2.245 | 1.987 | .142 |
| | Within Groups | 122.068 | 108 | 1.130 | | |
| | Total | 126.559 | 110 | | | |
| 1 sibling | Between Groups | 1.746 | 2 | .873 | .861 | .424 |
| | Within Groups | 242.254 | 239 | 1.014 | | |
| | Total | 244.000 | 241 | | | |
| 2 siblings | Between Groups | 1.154 | 2 | .577 | .484 | .617 |
| | Within Groups | 188.449 | 158 | 1.193 | | |
| | Total | 189.602 | 160 | | | |
| 3 siblings | Between Groups | 3.422 | 2 | 1.711 | 1.096 | .338 |
| | Within Groups | 178.031 | 114 | 1.562 | | |
| | Total | 181.453 | 116 | | | |

| ***Robust Tests of Equality of Means*** | | Statistic[a] | df1 | df2 | Sig. |
|---|---|---|---|---|---|
| 4+ sibs | Welch | 4.411 | 2 | 77.253 | .015 |
| | Brown-Forsythe | 4.608 | 2 | 115.611 | .012 |

[a] Asymptotically F distributed.

***Multiple Comparisons (Games-Howell)***

| Number of siblings | (I) Age group of the respondent | (J) Age group of the respondent | Mean Difference (I-J) | Std. Error | Sig. | 95% Confidence Interval Lower Bound | 95% Confidence Interval Upper Bound |
|---|---|---|---|---|---|---|---|
| 0 sibs | 50-59 years | 60-74 years | -.43007 | .21889 | .127 | -.9523 | .0922 |
| | | 75+ years | -.27451 | .31600 | .666 | -1.0732 | .5242 |
| | 60-74 years | 50-59 years | .43007 | .21889 | .127 | -.0922 | .9523 |
| | | 75+ years | .15556 | .33635 | .889 | -.6818 | .9929 |
| | 75+ years | 50-59 years | .27451 | .31600 | .666 | -.5242 | 1.0732 |
| | | 60-74 years | -.15556 | .33635 | .889 | -.9929 | .6818 |
| 1 sibling | 50-59 years | 60-74 years | -.16926 | .14625 | .480 | -.5153 | .1768 |
| | | 75+ years | -.17309 | .18869 | .634 | -.6386 | .2924 |
| | 60-74 years | 50-59 years | .16926 | .14625 | .480 | -.1768 | .5153 |
| | | 75+ years | -.00383 | .21355 | 1.000 | -.5210 | .5134 |
| | 75+ years | 50-59 years | .17309 | .18869 | .634 | -.2924 | .6386 |
| | | 60-74 years | .00383 | .21355 | 1.000 | -.5134 | .5210 |
| 2 siblings | 50-59 years | 60-74 years | -.10041 | .18377 | .848 | -.5359 | .3351 |
| | | 75+ years | .15584 | .27525 | .839 | -.5201 | .8318 |
| | 60-74 years | 50-59 years | .10041 | .18377 | .848 | -.3351 | .5359 |
| | | 75+ years | .25626 | .28041 | .635 | -.4302 | .9427 |
| | 75+ years | 50-59 years | -.15584 | .27525 | .839 | -.8318 | .5201 |
| | | 60-74 years | -.25626 | .28041 | .635 | -.9427 | .4302 |
| 3 siblings | 50-59 years | 60-74 years | -.06538 | .25867 | .965 | -.6815 | .5507 |
| | | 75+ years | -.47508 | .30502 | .275 | -1.2160 | .2659 |
| | 60-74 years | 50-59 years | .06538 | .25867 | .965 | -.5507 | .6815 |
| | | 75+ years | -.40970 | .30594 | .382 | -1.1520 | .3326 |
| | 75+ years | 50-59 years | .47508 | .30502 | .275 | -.2659 | 1.2160 |
| | | 60-74 years | .40970 | .30594 | .382 | -.3326 | 1.1520 |
| 4+ siblings | 50-59 years | 60-74 years | **-.57372** | .23442 | .043 | -1.1333 | -.0141 |
| | | 75+ years | .05128 | .28649 | .982 | -.6349 | .7375 |
| | 60-74 years | 50-59 years | **.57372** | .23442 | .043 | .0141 | 1.1333 |
| | | 75+ years | **.62500** | .25883 | .048 | .0040 | 1.2460 |
| | 75+ years | 50-59 years | -.05128 | .28649 | .982 | -.7375 | .6349 |
| | | 60-74 years | **-.62500** | .25883 | .048 | -1.2460 | -.0040 |

## Output 5. Number of grandchildren by age group according to number of children

| ***Test of Homogeneity of Variances*** | Levene Statistic | df1 | df2 | Sig. |
|---|---|---|---|---|
| 1 child | 3.444 | 2 | 192 | .034 |
| 2 children | 2.737 | 2 | 342 | .066 |
| 3+ children | 3.845 | 2 | 183 | .023 |

| ***ANOVA*** | | Sum of Squares | df | Mean Square | F | Sig. |
|---|---|---|---|---|---|---|
| 2 children | Between Groups | 71.736 | 2 | 35.868 | 57.868 | .000 |
| | Within Groups | 211.983 | 342 | .620 | | |
| | Total | 283.719 | 344 | | | |

| ***Robust Tests of Equality of Mean*** | | Statistic[a] | df1 | df2 | Sig. |
|---|---|---|---|---|---|
| 1 child | Welch | 13.339 | 2 | 65.517 | .000 |
| | Brown-Forsythe | 11.496 | 2 | 69.684 | .000 |
| 3+ children | Welch | 16.425 | 2 | 71.005 | .000 |
| | Brown-Forsythe | 18.773 | 2 | 113.201 | .000 |

[a] Asymptotically F distributed.

***Multiple Comparisons (Games-Howell)***

| Number of children | (I) Age group of the respondent | (J) Age group of the respondent | Mean Difference (I-J) | Std. Error | Sig. | 95% Confidence Interval | |
|---|---|---|---|---|---|---|---|
| | | | | | | Lower Bound | Upper Bound |
| 1 child | 50-59 years | 60-74 years | **-.55613** | .13077 | .000 | -.8658 | -.2465 |
| | | 75+ years | **-.88650** | .23468 | .002 | -1.4625 | -.3105 |
| | 60-74 years | 50-59 years | **.55613** | .13077 | .000 | .2465 | .8658 |
| | | 75+ years | -.33037 | .24441 | .376 | -.9263 | .2656 |
| | 75+ years | 50-59 years | **.88650** | .23468 | .002 | .3105 | 1.4625 |
| | | 60-74 years | .33037 | .24441 | .376 | -.2656 | .9263 |
| 2 children | 50-59 years | 60-74 years | **-.77683** | .08445 | .000 | -.9758 | -.5779 |
| | | 75+ years | **-1.18840** | .16775 | .000 | -1.5907 | -.7861 |
| | 60-74 years | 50-59 years | **.77683** | .08445 | .000 | .5779 | .9758 |
| | | 75+ years | **-.41156** | .16442 | .039 | -.8066 | -.0165 |
| | 75+ years | 50-59 years | **1.18840** | .16775 | .000 | .7861 | 1.5907 |
| | | 60-74 years | **.41156** | .16442 | .039 | .0165 | .8066 |
| 3+ children | 50-59 years | 60-74 years | **-.55210** | .11336 | .000 | -.8220 | -.2822 |
| | | 75+ years | **-.79310** | .15024 | .000 | -1.1533 | -.4329 |
| | 60-74 years | 50-59 years | **.55210** | .11336 | .000 | .2822 | .8220 |
| | | 75+ years | -.24100 | .12756 | .154 | -.5506 | .0686 |
| | 75+ years | 50-59 years | **.79310** | .15024 | .000 | .4329 | 1.1533 |
| | | 60-74 years | .24100 | .12756 | .154 | -.0686 | .5506 |

The values in **bold** are significant at the 0.05 level.

## Annex 7. ANOVA results for perceived age at first marriage, age at first birth and age at last birth, and comparison with actual behaviour

### Output 1. Ideal age at first marriage, age at first birth and age at last birth by age group

| *Test of Homogeneity of Variances* | Levene Statistic | df1 | df2 | Sig. |
|---|---|---|---|---|
| Best age for first marriage | .394 | 2 | 790 | .674 |
| Best age for first child | .109 | 2 | 790 | .896 |
| Best age for last child | 4.616 | 2 | 789 | .010 |

| *ANOVA* | | Sum of Squares | df | Mean Square | F | Sig. |
|---|---|---|---|---|---|---|
| Best age for first marriage | Between Groups | 499.619 | 2 | 249.810 | 37.642 | .000 |
| | Within Groups | 5242.754 | 790 | 6.636 | | |
| | Total | 5742.373 | 792 | | | |
| Best age for first child | Between Groups | 349.879 | 2 | 174.939 | 25.212 | .000 |
| | Within Groups | 5481.678 | 790 | 6.939 | | |
| | Total | 5831.556 | 792 | | | |

| *Robust Tests of Equality of Means* | | Statistic[a] | df1 | df2 | Sig. |
|---|---|---|---|---|---|
| Best age for last child | Welch | 1.276 | 2 | 308.480 | .281 |
| | Brown-Forsythe | 1.263 | 2 | 412.520 | .284 |

[a] Asymptotically F distributed.

***Multiple Comparisons (Games-Howell)***

| Dependent Variable | (I) Age group of the respondent | (J) Age group of the respondent | Mean Difference (I-J) | Std. Error | Sig. | 95% Confidence Interval | |
|---|---|---|---|---|---|---|---|
| | | | | | | Lower Bound | Upper Bound |
| Best age for first marriage | 50-59 years | 60-74 years | **1.543** | .201 | .000 | 1.07 | 2.02 |
| | | 75+ years | **1.787** | .271 | .000 | 1.15 | 2.43 |
| | 60-74 years | 50-59 years | **-1.543** | .201 | .000 | -2.02 | -1.07 |
| | | 75+ years | .243 | .258 | .614 | -.37 | .85 |
| | 75+ years | 50-59 years | **-1.787** | .271 | .000 | -2.43 | -1.15 |
| | | 60-74 years | -.243 | .258 | .614 | -.85 | .37 |
| Best age for first child | 50-59 years | 60-74 years | **1.166** | .205 | .000 | .69 | 1.65 |
| | | 75+ years | **1.705** | .283 | .000 | 1.04 | 2.37 |
| | 60-74 years | 50-59 years | **-1.166** | .205 | .000 | -1.65 | -.69 |
| | | 75+ years | .539 | .270 | .117 | -.10 | 1.18 |
| | 75+ years | 50-59 years | **-1.705** | .283 | .000 | -2.37 | -1.04 |
| | | 60-74 years | -.539 | .270 | .117 | -1.18 | .10 |
| Best age for last child | 50-59 years | 60-74 years | .424 | .402 | .542 | -.52 | 1.37 |
| | | 75+ years | .900 | .610 | .305 | -.54 | 2.34 |
| | 60-74 years | 50-59 years | -.424 | .402 | .542 | -1.37 | .52 |
| | | 75+ years | .475 | .614 | .719 | -.98 | 1.93 |
| | 75+ years | 50-59 years | -.900 | .610 | .305 | -2.34 | .54 |
| | | 60-74 years | -.475 | .614 | .719 | -1.93 | .98 |

The values in **bold** are significant at the 0.05 level.

**Output 2. The difference between the actual and the ideal age at first marriage, age at first birth and age at last birth by age groups**

| ***Test of Homogeneity of Variances*** | Levene Statistic | df1 | df2 | Sig. |
|---|---|---|---|---|
| Age at first marriage (diff.) | 1.714 | 2 | 732 | .181 |
| Age at first child (diff.) | 1.793 | 2 | 712 | .167 |
| Age at last child (diff.) | .794 | 2 | 721 | .453 |
| Ideal interval between two consecutive births (diff.) | 1.233 | 2 | 703 | .292 |

| ***ANOVA*** | | Sum of Squares | df | Mean Square | F | Sig. |
|---|---|---|---|---|---|---|
| Age at first marriage (diff.) | Between Groups | 102.077 | 2 | 51.039 | 3.350 | .036 |
| | Within Groups | 11152.339 | 732 | 15.235 | | |
| | Total | 11254.416 | 734 | | | |
| Age at first child (diff.) | Between Groups | 309.406 | 2 | 154.703 | 8.615 | .000 |
| | Within Groups | 12785.090 | 712 | 17.957 | | |
| | Total | 13094.495 | 714 | | | |
| Age at last child (diff.) | Between Groups | 262.222 | 2 | 131.111 | 2.744 | .065 |
| | Within Groups | 34448.717 | 721 | 47.779 | | |
| | Total | 34710.939 | 723 | | | |

***Multiple Comparisons (Games-Howell)***

| Dependent Variable | (I) Age group of the respondent | (J) Age group of the respondent | Mean Difference (I-J) | Std. Error | Sig. | 95% Confidence Interval | |
|---|---|---|---|---|---|---|---|
| | | | | | | Lower Bound | Upper Bound |
| Age at first marriage (diff.) | 50-59 years | 60-74 years | .29501 | .32181 | .630 | -.4610 | 1.0511 |
| | | 75+ years | **1.13276** | .38434 | .010 | .2265 | 2.0390 |
| | 60-74 years | 50-59 years | -.29501 | .32181 | .630 | -1.0511 | .4610 |
| | | 75+ years | .83775 | .37258 | .065 | -.0413 | 1.7167 |
| | 75+ years | 50-59 years | **-1.13276** | .38434 | .010 | -2.0390 | -.2265 |
| | | 60-74 years | -.83775 | .37258 | .065 | -1.7167 | .0413 |
| Age at first child (diff.) | 50-59 years | 60-74 years | .03854 | .34405 | .993 | -.7699 | .8470 |
| | | 75+ years | **1.88524** | .50072 | .001 | .7024 | 3.0681 |
| | 60-74 years | 50-59 years | -.03854 | .34405 | .993 | -.8470 | .7699 |
| | | 75+ years | **1.84670** | .47736 | .000 | .7175 | 2.9759 |
| | 75+ years | 50-59 years | **-1.88524** | .50072 | .001 | -3.0681 | -.7024 |
| | | 60-74 years | **-1.84670** | .47736 | .000 | -2.9759 | -.7175 |
| Age at last child (diff.) | 50-59 years | 60-74 years | .24431 | .54930 | .897 | -1.0462 | 1.5348 |
| | | 75+ years | 1.79912 | .81453 | .073 | -.1267 | 3.7249 |
| | 60-74 years | 50-59 years | -.24431 | .54930 | .897 | -1.5348 | 1.0462 |
| | | 75+ years | 1.55481 | .81377 | .139 | -.3692 | 3.4788 |
| | 75+ years | 50-59 years | -1.79912 | .81453 | .073 | -3.7249 | .1267 |
| | | 60-74 years | -1.55481 | .81377 | .139 | -3.4788 | .3692 |

The values in **bold** are significant at the 0.05 level.

## Annex 8. ANOVA results for the desired number of children and comparison with actual behaviour

### Output 1. The desired number of children and the difference between the actual and the desired number of children by age groups

| *Test of Homogeneity of Variances* | Levene Statistic | df1 | df2 | Sig. |
|---|---|---|---|---|
| Desired number of children | 9.598 | 2 | 774 | .000 |
| Actual number of children | 4.380 | 2 | 790 | .013 |
| Difference between actual and desired number of children | .824 | 2 | 774 | .439 |

| *ANOVA* | | Sum of Squares | df | Mean Square | F | Sig. |
|---|---|---|---|---|---|---|
| Difference between actual and desired number of children | Between Groups | 4.006 | 2 | 2.003 | 1.562 | .210 |
| | Within Groups | 992.388 | 774 | 1.282 | | |
| | Total | 996.394 | 776 | | | |

| *Robust Tests of Equality of Means* | | Statistic[a] | df1 | df2 | Sig. |
|---|---|---|---|---|---|
| Desired number of children | Welch | 3.658 | 2 | 280.258 | .027 |
| | Brown-Forsythe | 2.799 | 2 | 314.113 | .062 |
| Actual number of children | Welch | 7.040 | 2 | 316.995 | .001 |
| | Brown-Forsythe | 6.991 | 2 | 480.746 | .001 |

[a] Asymptotically F distributed.

***Multiple Comparisons (Games-Howell)***

| Dependent Variable | (I) Age group of the respondent | (J) Age group of the respondent | Mean Difference (I-J) | Std. Error | Sig. | 95% Confidence Interval Lower Bound | 95% Confidence Interval Upper Bound |
|---|---|---|---|---|---|---|---|
| Desired number of children at the beginning of the marriage | 50-59 years | 60-74 years | **-.18900** | .07000 | .019 | -.3500 | -.0200 |
| | | 75+ years | -.07600 | .11900 | .798 | -.3600 | .2100 |
| | 60-74 years | 50-59 years | **.18900** | .07000 | .019 | .0200 | .3500 |
| | | 75+ years | .11300 | .12600 | .644 | -.1800 | .4100 |
| | 75+ years | 50-59 years | .07600 | .11900 | .798 | -.2100 | .3600 |
| | | 60-74 years | -.11300 | .12600 | .644 | -.4100 | .1800 |
| Number of children | 50-59 years | 60-74 years | **-.32751** | .08786 | .001 | -.5339 | -.1211 |
| | | 75+ years | -.18428 | .11961 | .274 | -.4669 | .0984 |
| | 60-74 years | 50-59 years | **.32751** | .08786 | .001 | .1211 | .5339 |
| | | 75+ years | .14323 | .12580 | .491 | -.1537 | .4401 |
| | 75+ years | 50-59 years | .18428 | .11961 | .274 | -.0984 | .4669 |
| | | 60-74 years | -.14323 | .12580 | .491 | -.4401 | .1537 |
| Difference between the actual and the desired number of children | 50-59 years | 60-74 years | -.14912 | .08511 | .187 | -.3491 | .0508 |
| | | 75+ years | -.13437 | .13189 | .566 | -.4465 | .1777 |
| | 60-74 years | 50-59 years | .14912 | .08511 | .187 | -.0508 | .3491 |
| | | 75+ years | .01474 | .13772 | .994 | -.3107 | .3402 |
| | 75+ years | 50-59 years | .13437 | .13189 | .566 | -.1777 | .4465 |
| | | 60-74 years | -.01474 | .13772 | .994 | -.3402 | .3107 |

The values in **bold** are significant at the 0.05 level.

## Output 2. The desired number of children by number of siblings

| ***Test of Homogeneity of Variances*** | Levene Statistic | df1 | df2 | Sig. |
|---|---|---|---|---|
| Desired number of children | 5.695 | 4 | 772 | .000 |
| Difference between the actual and the desired number of children | 4.787 | 4 | 772 | .001 |

| ***Robust Tests of Equality of Means*** | | Statistic[a] | df1 | df2 | Sig. |
|---|---|---|---|---|---|
| Desired number of children | Welch | 2.693 | 4 | 318.569 | .031 |
| | Brown-Forsythe | 2.695 | 4 | 532.895 | .030 |
| Difference between the actual and the desired number of children | Welch | 2.372 | 4 | 327.848 | .052 |
| | Brown-Forsythe | 2.610 | 4 | 611.686 | .035 |

[a] Asymptotically F distributed.

| | Number of siblings | | | | |
|---|---|---|---|---|---|
| Contrast coefficients | 0 sibs | 1 sib | 2 sibs | 3 sibs | 4+ sibs |
| 1 | 2 | 2 | 2 | -3 | -3 |
| 2 | 3 | 3 | -2 | -2 | -2 |

| ***Contrast Tests*** | | Contrast | Value of Contrast | Std. Error | t | df | Sig. (2-tailed) |
|---|---|---|---|---|---|---|---|
| Desired number of children | Assume equal variances | 1 | -1.43 | .443 | -3.226 | 772 | .001 |
| | Does not assume equal variances | 1 | -1.43 | .493 | -2.897 | 407.836 | .004 |
| Difference Actual - Desired | Assume equal variances | 2 | -1.3716 | .51804 | -2.648 | 772 | .008 |
| | Does not assume equal variances | 2 | -1.3716 | .50832 | -2.698 | 465.003 | .007 |