PERCEPTIONS OF CHILD COSTS AS PROXIMATE DETERMINANT FOR ROMANIAN FERTILITY DECLINE[1]

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Abstract: *This paper explores the issue of demographic decline in Romania by looking at the three proximate factors of the Oppenheim Mason theoretical model of fertility transition. For two of these factors, child survival probabilities and cost of prenatal and postnatal controls, we used macro level data (population indicators). With low infant mortality and wide availability of prenatal birth control methods, these factors would favour low fertility. The third and last proximate factor is the perception of child cost and benefits for the household. The analysis of this factor we used both macro level data and individual level data from a representative national survey.*

As in almost all other European countries, there is a difference in Romania as well between the ideal and actual number of children. A plurality of adult Romanians in the sample (45 per cent) have fewer children that they would like to have; more than one third (37.6 per cent) have as many children as they would like to have, while a minority (17.3 per cent) have more children than they would like to have. Qualitative data analysis on the perceived reasons for which Romanians do not have the number of children they desire was carried through an indirect, open-ended question. A clear majority (55 percent) pointed to material issues concerning the standard of living at household level as the main reason. Health issues and infertility was the second category in a distant second (10 percent). Almost all social and economic variables have no influence, at individual level, with the variance of the answers to the open ended question. As the perception of high child costs acts as a third factor that also favours low fertility, we conclude that the cultural shift towards a restrained natality culture became more entrenched.

Keywords: *Romania, population decline, births, fertility, children, perceived child costs.*

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Introduction

Like most other Central and Eastern European countries, Romania has experienced a demographic decline since the early 1990s. The latest census (2011) showed the population total set to drop below 20 million. This result arguably increased the salience of the issue. Questions were raised over a range of topics covering possible long-term effects, from the functioning of the labour market and the potential for economic growth to the sustainability of public finances and the social insurance system.

The aim of this paper is to contribute to a better understanding of Romania's demographic decline. Using the theoretical model for explaining fertility transition put forward by Karen Oppenheim Mason, we look at several determinants for fertility decline using both macro level and individual level data. In the first part, we analyze the long term trends in population indicators in the country, infant mortality, and prenatal birth controls. In the second part, by use of survey data, we look at the issue of child costs as perceived reasons for not having children.

Methodology and data

Secondary data analysis is employed to follow key elements in the Oppenheim Mason model of fertility transition in two stages. In the first one, at macro level, we use population data regarding several indicators such as crude birth and death rate, infant mortality, abortion rate, covering the period since World War Two. The source is official data provided by the Romanian National Statistics Institute (INS), collected by population census, statistical surveys, and administrative reports. In the second stage, at individual level, we use data from a nationwide representative survey for the adult population of Romania with a sample size of 1, 212. The survey was based on a probabilistic tri-stadial stratified sample. Data collection was carried through computer assisted telephone interviews by the CCSCC polling company for the Liberal Institute "Brătianu". Phone numbers included both mobile and fixed telephony. The margin of error for the sample is +/- 2.81 at the 95 per cent level of confidence. Available variables in the dataset include social-demographical and economic variables, but not cultural variables. In addition, no variable in the dataset covers religious affiliation or behaviour.

All the variables used in the individual-level analysis are categorical (marital status, age category, level of education, Internet usage, subjective wellbeing, gender, etc.). On the issue of ethnicity, the dataset features a common problem in Romanian surveys, namely the underrepresentation of the Roma/Gipsy population. In the sample, the Roma/Gipsy group totals 0.7 per cent, as compared to 3.3 per cent (620, 000) of the population at the 2011 census and an estimate of 1.5 million put forward by the Research Institute for Quality of Life in 2002 (Zamfir and Preda, 2002: 13). The reason is that some Roma/Gipsy respondents self-report themselves as Romanians.

The questionnaire also included an open ended, indirect question phrased as follows: "In your opinion, what prevents Romanians from having the number of children they desire?" The responses were coded in several categories. We use chi-square test to see if social, economic and other variables, including the desired versus actual number of

children, significantly influence the variation of the responses to the abovementioned question.

Explaining fertility transition: the Oppenheim Mason model

In its classic formulation, demographic transition theory dates to the period around the mid 20th century, close to the end of the Second World War. According to Notenstein (1944), all societies experience a transition from an initial stage of high mortality and high fertility to a final stage of low mortality and low fertility. Socio-economic factors drive the transition, most visible through the inter-related processes of industrialisation and urbanisation. In turn, these factors lead to changes in society in terms of way of life, values and norms. The demographic transition theory has been debated in terms of accuracy, especially concerning the pace of fertility decline, and its strength as a theory, considering its development from a perceived generalisation. In addition, the issues of causes and conditions of demographic transition have spurred much debate (Kirk, 1996).

After reviewing the debate for causality of the demographic transition, Dudley Kirk (Dudley, 1996: 379) put forward several key points:

- Mortality decline is a prime factor, which destabilized the old pattern of high mortality and high fertility;

- All causes are closely linked and part of the wider process of modernization; each cause emphasizes different element of this process;

- Once started in Western Europe fertility transition spread rapidly and independent of the socio-economic level;

- The causal factors could be groups in economic and social, on one hand, and cultural and ideational, on the other hand; American tend to favour the former, Europeans the latter; socio-economic factors receive perhaps undeserved dominance due to being easier to measure and hence regarded as more 'scientific'.

Based on the broad changes in Western European societies in the last quarter of the 20th century, van de Kaa and Lesthaeghe (1986) introduced the idea of a second demographic transition. Observing a decline in fertility below the levels described in the first demographic transition, the second transition also features changes such as:

- Nuptial indicators show rapid and sharp decline; marriage no longer felt as universal;

- The timing of marriage changed with the steady increase in age at first marriage steadily increased;

- The divorce rate increased rapidly, leading to fewer and increasingly unstable marriages, as well as markedly increased cohabitation both among the young (singles) and the elderly (widowed/divorced);

- Childbearing was postponed and contributed partially and temporarily to the fertility decline;

- Extramarital births rose significantly both among cohabiting and single mothers;

- Women's status within the household changed due to increased female employment and involvement in professional careers, at the expense of domestic activities.

Asked to state the difference between the first and the second demographic transition, van de Kaa (2002:2) wrote that "while the first, the traditional demographic transition, was a long term consequence of the decline in mortality, the second transition should be interpreted as a consequence of fertility declining way below the levels long thought plausible."

Oppenheim Mason (1997) calls for a better understanding of fertility transitions through multi-causal theoretical models that would need to be ideational and interactive. Ideational denotes the importance of perceptions. For Mason, "changing *perceptions* ultimately drive fertility change" (Mason, 1997:450). In turn, perceptions could change slowly or quicker than reality. Interactive indicates the dependent relationships between fertility transitions and pre-existing conditions in the population, as well as other changes occurring in society. Mason puts forward such a model, which features three factors, called proximate determinants (Figure 1), four conditions, and a factor process. The three proximate determinants include:

1. Perceptions of child survival probabilities among reproducing couples or women;

2. Perceptions of child costs and benefits;

3. Perceptions of the costs of postnatal versus prenatal controls on family size and composition (including social, psychological, and financial costs). Postnatal controls consist of migration, adoption, child marriage, fostering and infanticide. The balance between prenatal and postnatal controls derives from the relative costs.

The four pre-existing conditions comprise:

1. Mortality levels;

2. Acceptable number of surviving children;

3. Acceptable sex composition of surviving children;

4. Costs of post-natal versus prenatal controls on family size and composition.

Of the abovementioned factors and conditions, Oppenheim Mason stresses the importance of the pre-existing number of surviving children that families can accommodate at the onset of mortality decline, and their prior and subsequent use of controls on family size and composition.

Demographic trends in Romania

In this section we first set out to explore the broad demographic trends in Romania for the past seven decades. In addition, we will look at several major issues in academic

debate concerning these trends. In the second stage we will focus on three variables derived from the proximate determinants from the Opperheim Mason model, namely child survival and infant mortality, prenatal and postnatal controls, especially abortion, and perceptions of child costs and benefits.

The start of demographic transition in Romania could be traced to the period after the World War Two. Up to then, Romania experienced the usual pattern of high mortality rate and high birth rate found in pre-modern societies (Rotariu, 2006: 12-13). The rural population totalled 78.6 percent at the 1930 census and 76.6 percent at the 1948 census. Following the war, the new Communist regime initiated a crash program of industrialisation and urbanisation. By 1956, the rural population declined to 68.7 percent, then to 61.8 percent in 1966. In addition, mortality rates were reduced by the introduction of universal public health care system and wide vaccination programs. As a result, the mortality rate, which held steady at close to 20 in the last decade of the interwar period (19.3 in 1930, 18.9 in 1940) declined sharply to 9.7 in 1955, and would remain close to this level up to the end of the Communist period (Figure 2).

Up to the early 1950s, the birth rate mirrored the declining trend of the mortality rate. However, in the early 1960s, after the mortality rate stabilised, the birth rate continued to decline. In the mid to late 1950s, the Communist government liberalized divorce and abortion. This policy turn seemed to correlate with the sharp decline in fertility. A change in the leadership at the top of the Communist regime brought about a change of policy as well. The new party general secretary, Nicolae Ceaușescu, moved to repeal the liberal abortion and divorce legislation. These measures led to almost a doubling of the birth rate from 14.3 in 1966 to 27.4 in 1967. Afterwards, the birth rate entered a steady decline, eventually reaching in 1983 the same value of 14.3 as in 1966. With an increase of mortality rates to around 11, natural population growth slowed down in the 1980s, a decade of economic decline and severe fall in the standard of living.

Following the Romanian Revolution of December 1989, the provisional government moved quickly to liberalise abortion. This was followed by similar measures regarding divorce. As a result, the early 1990s saw a sharp decline of the birth rate and the total fertility rate, which dropped below the replacement level. In 1992, the natural population growth turned negative and has remained so since. Estimates for the future show that "the effects of demographic changes will increase as the "missing generation" reaches fertile age and the generations between 1966 and 1989 reach retirement age. The expected result is an even steeper fertility decrease leading to even lower child birth ratios, less people in labour prone age groups, while more people reach the retirement age" (Bărbulescu, 2012: 84-85). The "missing generations" are characterized by Bărbulescu (2012: 84) as those with "a chronic low fertility among a decreasing fertile population." Compared to a high of 23.2 million in 1989, projections for the upcoming decades place the total population Romania around 18 million for 2030, 16 million for 2040, and 15 million for 2050 (Table 1).

Child survival and infant mortality

One of the three proximate determinants of fertility in the Oppenheim Mason model deals with perceptions of child survival probabilities among reproducing couples or

women. While measurements of perceptions on this issue are not available in public opinion surveys, there is objective data. The underlying hypothesis is that high prevalence of stillborn and infant mortality leads to increase in the number of births, as couples or women hope that at least some of them will survive into adulthood. This is the common behaviour in the pre-modern world, before the demographic transition. Once infant mortality is reduced, families adjust by having fewer children. Looking back at data from 1950 onwards, we see a very sharp fall in infant morality rates, from a high of 116.7 in 1950 to just 44.1 in 1965. The fact that more than one in ten infants did not survive up to their first birthday is another point supporting the thesis that the start of Romania's demographic transition is after the Second World War.

In the mid to late 1960s there was a spike in infant mortality. More likely than not, this is explainable through the doubling of the number of births in 1967. As we mentioned before, this huge increase in births was caused by the 1966 policy turn regarding abortion and divorce. After families and the health system adjusted to the increase of births, infant mortality once more reverted to its decreasing trend. Postnatal controls could provide an additional, but as yet unexplored, explanation. The economic and social shocks of the late 1980s and early 1990s were the only periods during which infant mortality picked up again. In the 21st century, concerted efforts by successive governments in targeting the reduction of infant mortality were by and large successful (Figure 3). However, infant mortality in Romania is still one of the highest in the European Union, according to Burlea (2012). Looking at the variance of infant morality at national level and in Neamt, the county with the highest national value, Burlea found the percentage of the population with no education is the only independent variable that has a significant effect on infant morality, explaining 19% of the variance at national level and 5% in Neamț County.

Prenatal birth control

One of the main issues in all analysis of Romanian fertility trends is the 1966/1967 moment, in which the birth rate almost doubled (Figure 2). Rotariu summarizes it as "a historical accident that was induced by the excessive pro-natalist policy of the communist regime". The two main pillars of this policy were the tight regulation of abortion and a stricter regime for divorce. In effect, the first pillar had a wider target concerning overall prenatal birth control, such as making contraceptive pills unavailable on the market.

In 1957, abortion was liberalised. This was fallowed by a quick decline of the birth rate, as abortion became a widely practiced method of prenatal birth control. By the mid 1960s, there were four registered abortions for each live birth (Trebici, 1994: 52). In absolute terms, this meant more than a million abortions per year at a population of around 16 million. In this context, a series of reports by health ministry officials dealt with the decline of the birth rate and medical aspects of abortions. Although the reports correctly highlighted that the fertility rate had declined below replacement level, Trebici (1994: 52) aptly noted that no direct causal link between abortions and the birth rate was demonstrated.

An important nuance in the "communist ban on abortion" is the nature of the limitations to abortion rights that occurred in 1966. The idea that abortions were banned altogether is present not just in the mainstream media (Furedi, 2013), but also in academic works. For instance, Gail Kligman (1995: 234) speaks about "The Banning of Abortions in Causescu's Romania". The confusion is also aided by the fact that some authors mention both the real nature of the limitation and the idea of the full ban in the same paper. For instance, Keil and Andreescu (1999: 481), after correctly mentioning that "Causescu signed a decree making induced abortions illegal", note that "At the same time that abortion was banned, it was extremely difficult for Romanians to obtain safe and effective contraceptives, except for condoms." Udvuleanu nominates Decree 770 as the one "which ban abortions" (2012: 269), right after mentioning "the ban on abortion on demand in communist Romania" (2012: 268). While the decree did achieve was a substantial reduction of the total number of abortions, the number of legal abortions remained high. During 1988-1989, there was one legal abortion per each registered birth (Trebici, 1994: 52). The other real consequence of the policy to limit abortions was social effect on the population, especially women (Kligman, 1995, Keil and Andreescu, 1999).

The second pillar of the 1966 pro-natalist policy repealed the liberal divorce legislation introduced in the late 1940s and early 1950s. As with abortions, the authorities reacted to a marked increase in the abortion rate. According to studies authored by health ministry officials at the time, the divorce rate in 1965 was three times higher than in 1938. In 1964, one in five new marriages ended with divorce (Udvuleanu, 2011: 30). The authorities decided to repeal the liberal legislation and introduce new rules that made divorcing much more difficult. As with the restrictions on abortion, the population adjusted to the new rules. By 1980, the divorce rate reached the same rate as before the 1966 legislation (Keil and Andreescu, 1999: 41).

The abortion rate sharply increased following the repeal of the 1966 legislation in the aftermath of the 1989 Romanian Revolution. In 1990, there were more than 1 million registered abortions, which was three times more than the number of registered births. Although contraception pills and other birth control methods became widely available, births would start to outnumber abortions in 2004. As late as 2013, there was still a ratio of 4 abortions per 10 births (Figure 4).

Returning to the issue of prenatal controls as proximate determinants of fertility, the prevalence of abortions and other prenatal birth control methods after 1990 would suggest that, in terms perception, the cost of birth control would rather not be a problem for a large share of the population. However, this hypothesis would require further testing with individual level data.

Child costs and benefits

The third proximate determinant of fertility deals with perceptions on child costs and benefits. As we have seen, despite the pro-natalist policy introduced in 1966, in the late 1980s the birth rate declined back to pre 1966 values. For Cătălin Zamfir (1999), the main reason is that the child costs actually increased through the post-war period, marked by an intense and fast modernisation drive, but carried out with limited

resources: "it would be wholly erroneous to think that the socialist state fully covered the supplementary needs of the household with children or that, moreover, it would put in place a series of significant additional benefits for these households. In fact, paradoxically only at first glance, despite an extensive child protection policy, the cost supported by the family for brining up a child was very high as a share of its available resources" (Zamfir, 1999: 172). The overall result, according to Zamfir, was a lasting shift in the culture of natality towards a restrained natality culture. The main requirement of this culture is "setting on the number of children accordingly with the capability of the family to provide the necessary material support for success in life" (Zamfir, 1999: 173).

The sharp decline of the birth rate in the aftermath of the fall of Communism in Romania is similar to other Central and Eastern European countries (Ellman, 1997, Jemna and Gicu, 2014). In the context of economic and social shocks of the transition (Stuckler et al., 2009), it is more likely than not that that the share of child costs in the family budget remained high or even increased, both in real terms and in terms of perception.

Regarding the persistent demographic decline in the decades following the fall of communism, there are two outstanding points of debate. The first concerns the content and outcome of family and child support policy. Summing up the findings at the end of a review of family policies in Romania within European context on four dimensions (regulatory frameworks, expenditures with family policies, leave entitlements, and childcare services), Raluca Popescu (2014: 108) concludes that "Romania itself has an incoherent situation, with a conservative regulatory framework, a lack of financial effort and a scarcity of childcare services but with pretty generous leave policies".

The second issue of debate looks into whether the demographic decline is associated with a change of in terms of family values. Repeated survey results show that "the family is the most important value for Romanians and the fundamental support of their life" (Popescu, 2010: 27). Traian Rotariu's conclusion on the traditional value system and low fertility rates in Romania is that "most Romanian women still hold to a system of family values generally consisting of the most important components of the "bourgeois" vision of marriage and family life to which some elements of pre-modern traditional societies are added. This does not prevent them either from practicing extremely low fertility, ranked lowest on global scales, or from adopting attitudes and behaviours that place them far from their Western contemporaries and even from the situation acknowledged in Romania a few decades ago" (Rotariu, 2006: 25).

Perceptions on reasons for not having children

By using the difference between two continuous variables present in the available survey dataset, one regarding the desired and the other about the actual number of children, we computed a categorical variable that accounts for the difference between the two. A frequency analysis of this variable showed that a plurality of adult Romanians in the sample (45 per cent) have fewer children that they would like to have; more than one third (37.6 per cent) have as many children as they would like to have, while a minority (17.3 per cent) have more children than they would like to have. These

findings are in line with previous research data, which showed a constant gap between the ideal and the actual number of children (Rotariu, 2006, Testa, 2012, OECD, 2014) in almost all European countries, including Romania.

In order to obtain qualitative data on this issue, respondents were asked to answer an indirect question: "In your opinion, what prevents Romanians from having the number of children they desire?". The indirect framing was intended to avoid conformist answers. In addition, it prompts the respondent to project his own ideas and experience on the others. In other words, the respondent projects himself in the image of the others.

After coding the answers, a clear majority of 55 percent of valid answers belonged to the category concerning the material situation of the household and perceived child costs (Table 3). The category regarding health issues and infertility was in a distant second with just 10 per cent of valid answers. Other categories generally related to material wellbeing (the economy, family and child support policies by the state, lack of housing) amounted to around 9 per cent of answers, as did categories related to lifestyle and ideational issues.

The relationship between this variable and the following socio-demographic variables was analysed using the chi-square test:

- gender

- age category, with four age groups: 18-35, 36-49, 50-64, 65 and older

- urban/rural residence

- subjective wellbeing, used as alternative for income (estimation of household total income compared to needs), with the following categories: we have everything we need, without great effort; we are able to buy more expansive goods, but with some effort; we have enough for decent living, but we can not afford more expensive goods; we have enough for basic needs, we do not have enough even for basic needs

- education: primary school or no education, general school (lower secondary education), vocational school (upper secondary), high school, post-secondary and non-tertiary school/college, higher education

- martial status: unmarried, married, divorced, separated, widow

- ethnicity: Romanian, Gypsy/Roma, other

- Internet usage: yes or no.

There was a significant association on the reasons for from having the desired number of children with just two variables: age category (χ^2 (30) = 50.06, p < 0.001), gender (χ^2 (10) = 18.46, p < 0.048). There was no significant association with marital status, education, internet usage, urban/rural residence, subjective wellbeing, and ethnicity (Table 4).

Looking at different age categories, seniors were more inclined (65.6%) to consider lack of money, low income, financial situation, poverty, standard of living, living conditions, lack of jobs as reasons for not having children than any other category. In terms of gender difference, 60 per cent of women regarded lack of material resources as the main reason compared to 50 per cent of men. On the other hand, 15.8 per cent of men blamed health and infertility issues, compared to just 9.2 per cent of women.

Discussion

This paper explored the issue of demographic decline in Romania by looking at the three proximate factors of the Oppenheim Mason model of fertility transition. For two of these factors, child survival probabilities and cost of prenatal and postnatal controls, we used macro level data (population indicators). Both at the onset of the demographic transition in the 1950s, and at the beginning of the demographic decline in the early 1990s, infant mortality entered a downward trend. Although still high compared to other European countries, infant morality is a factor that would favour low fertility.

Postnatal and, especially, prenatal controls have a peculiar history in Romania. The 1966 pro-natalist policy, focused mainly, but no exclusively, on repealing liberal abortion and divorce laws had long-lasting effects both in demographic and social terms. By the end of the communist period in the late 1980s, the population has adjusted to this policy, with birth the birth rate and the divorce rate back to pre 1967 levels. The full liberalisation of abortion and the increasing availability of other birth control means since 1990 lead to the conclusion that the cost of prenatal and postnatal birth control is a second factor that would favour lower fertility.

The third and last proximate factor is the perception of child cost and benefits for the household. The analysis of this factor we used both macro level data and individual level data from a representative national sample. The sharp fall in the birth rate that occurred in the early 1990s, a trend that has not reversed since, is not unique in Romania. Indeed, almost all Central and Eastern European countries, former members of the Soviet bloc, the Soviet Union itself or the former Yugoslavia, have experienced the same trend. The economic and social shock of the transition induced an increase in relative terms of child costs for the households, while state support benefits and services were cut.

Subjective data further supports the importance of child costs as a factor favouring lower fertility. After coding the answers to an open ended indirect question on the reasons that prevent Romanians from having the number of children they desire, results show that a clear majority pointed to issues concerning the standard of living at household level (money, low income, financial situation, poverty, standard of living, living conditions, lack of jobs). Moreover, the second placed answer category, health issues and infertility, was in a distant second at just 10 percent. The importance of the perceived costs is highlighted by the fact that almost all social and economic variables have no influence, at individual level, with the variance of the answers. Only in the case of age category and gender there was a significant correlation with some of the answer categories: seniors and women placed even more emphasis on standard of living issues.

The lack of influence of social characteristics on the perceived reasons for not having children is a fact in itself.

In describing the phases of Romania's demographic transition, Cătălin Zamfir put forward the idea of a cultural shift towards a restrained natality culture, which occurred as the population adjusted to the Communist program to modernise the economy and society. In the aftermath of the fall of Communism, the transition period strengthened this cultural shift. The implication from this point is that changing fertility trends would mean changing a very deep rooted perception of high child costs, as well as the facts that underpin the perception, a challenge of a very tall order.

Tables and figures

Table 1. Projections for the total population of Romania

Source	2030	2040	2050
Bărbulescu (2012, p. 83)	19.2	17.3	15.9
Ghețău (2012, p. 47)	17.3	16.1	14.8
United Nations, Population Division (2015)	17.6	16.4	15.2

Table 2. Difference between desired and actual number of children (N=1, 212)

Actual vs. desired number of children	Valid percent
Has less children than desired	45.0
Has children as desired	37.6
Has more children than desired	17.3

Source: survey database

Table 3. Coding for open ended question "In your opinion, what prevents Romanians from having the number of children they desire?"

	Percent	Valid percent
Money, low income, financial situation, poverty, standard of living, living conditions, lack of jobs	44.6	55.4
Health issues, infertility	10.0	12.4
The economy, social outlook, the crisis, uncertainty	4.9	6.1
Other, other problems, everything, several issues	7.0	8.7

|	Percent	Valid percent
Worldview, running away from responsibility, indifference towards the future, laziness, the mood	3.9	4.8
Lack of time, the job, the profession, stress	3.1	3.8
The political leadership, the state, child allowance too low, lack of support from the state	2.6	3.2
Lack of housing, poor housing	1.7	2.1
Relationship problems, lacking a partner	1.1	1.3
Career, professional fulfilment, other goals and priorities	1.1	1.3
Nothing	0.7	0.8
Don't know	14.4	
No answer	5.0	

Source: survey database

Table 4. Chi-Square tests output (N=976) for the variable
"In your opinion, what prevents Romanians
from having the number of children they desire?"

| Variable	Pearson Chi-Square	df	Asymp. Sig. (2-sided)
Marital status	41.79	40	0.395
Age	50.06	30	0.012*
Education	60.18	50	0.154
Internet usage	11.16	10	0.312
Urban/rural residence	6.77	10	0.747
Subjective wellbeing	52.63	40	0.087
Gender	18.46	10	0.048*
Ethnicity	31.27	30	0.402

Source: survey database
* p < 0.001

Figure 1. Oppenheim Mason model for explaining fertility transitions
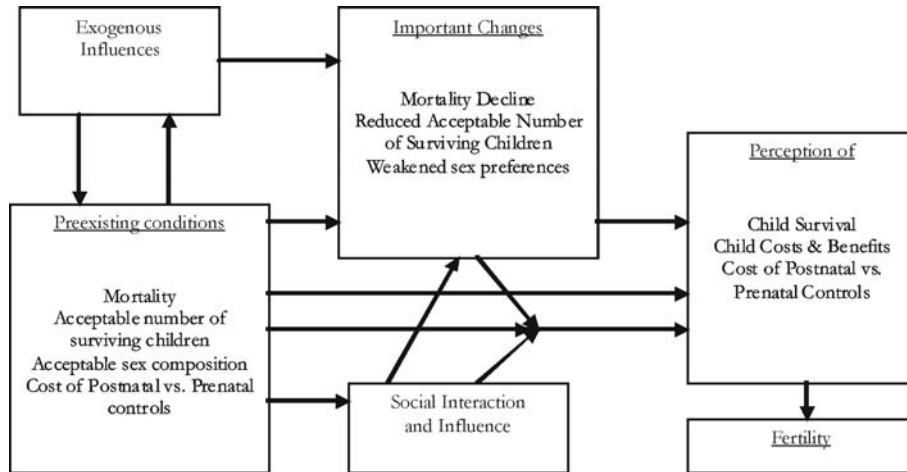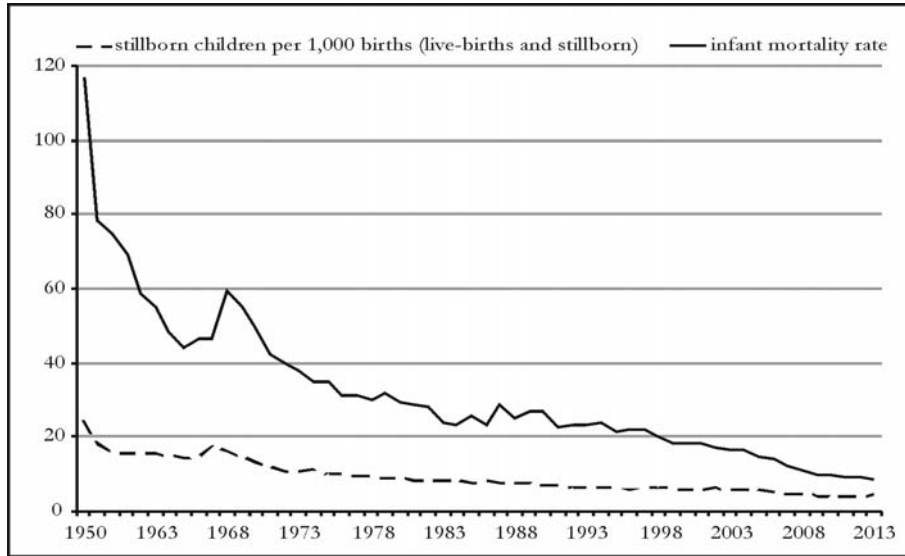

Source: Oppenheim Mason (1997, p. 450).
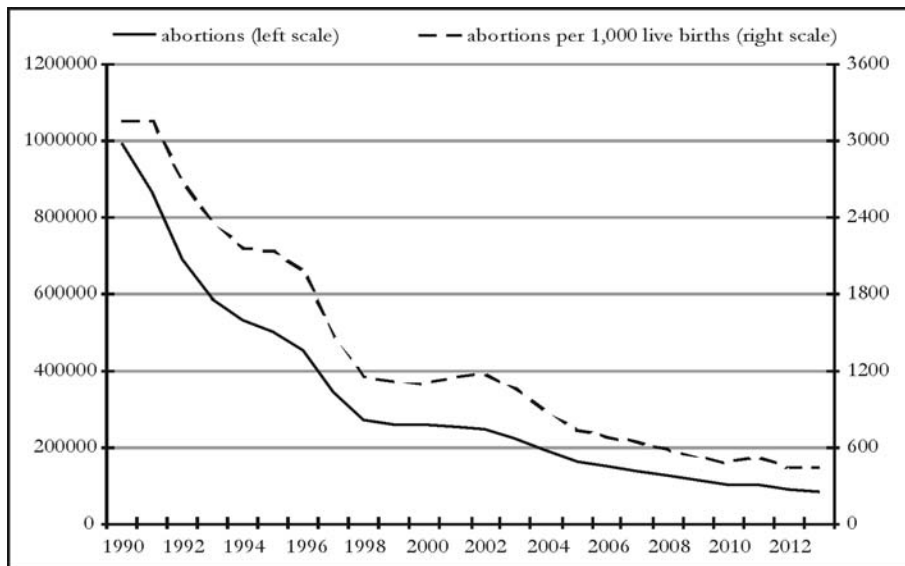
Figure 2. Birth and death rate in Romania since 1960
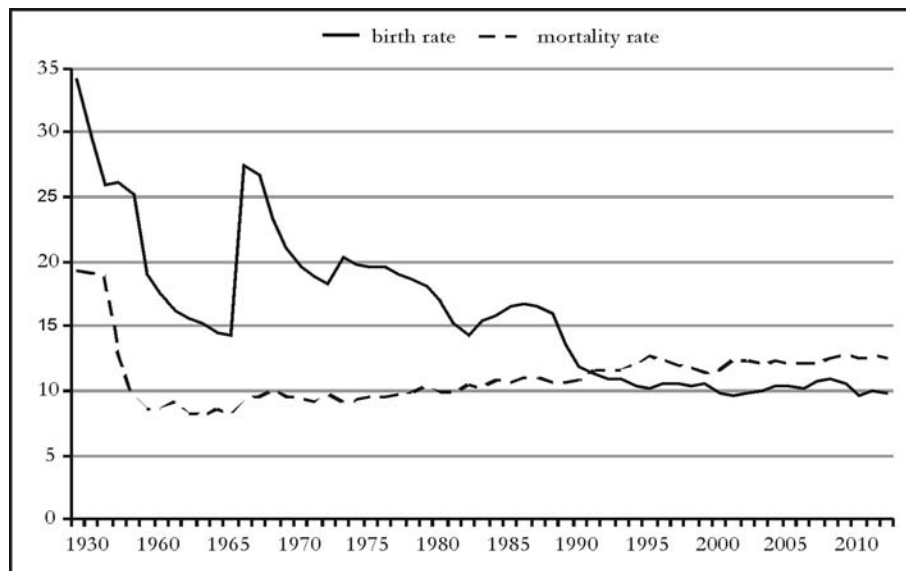
Source: Romanian Statistical Yearbook 2013, Tempo database

Figure 3. *Infant mortality indicators in Romania since 1960*

Source: Romanian Statistical Yearbook 2013, Tempo database

Figure 4. *Abortion indicators in Romania 1990-2013*

Source: Romanian Statistical Yearbook 2013, Tempo database

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