

BELOW REPLACEMENT FERTILITY IN EASTERN EUROPE:

A CASE STUDY OF ROMANIA

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Below replacement fertility currently characterizes most of the European countries. Although the theory of the second demographic transition offers a coherent explanation for fertility decrease in Western Europe, fertility changes in Eastern Europe (a region with a different political and social context) are still poorly explained. This paper will focus on an Eastern European country, Romania, with a special fertility history during the last thirty years. It will focus on live birth and pregnancy trajectories for women born between 1954 and 1984. We argue that the higher than replacement fertility during the period of 1967-1989 was not a natural phenomenon, but a direct result of political restrictions on using contraceptives and performing abortions. As a consequence, low fertility after 1990 is not a “strange” evolution, but an expected trend, only interrupted during 1967-1989 period.

Several researchers have attempted to explain the fertility decline that took place in Eastern Europe after 1990. Some have characterized the situation as a “demographic shock” that followed the changes in the political and economic system (Eberstandt, 1994). Others interpret the changes in fertility as a response to the pressure of a declining economy (Carlson & Omori, 1998: 186).

The idea of a “second demographic transition” in Eastern Europe is not very popular, perhaps because the other characteristics of the second demographic transition (an increase in the number of children born outside of marriage, high rates of cohabitation) have not occurred in these countries. Three groups of factors related to the post-1990 political changes can be identified as playing a role in the fertility decrease: economic decline, insecurity of jobs and changes in the health and social policy system.

Although it is plausible that these social and economic factors have played a role in decreasing fertility in Eastern Europe, it is not very clear how they shaped the trend of the last decade. For example, not only bad things occurred during the last decade in Eastern Europe. Some Eastern European countries succeeded in having fully functional

open market economies, most recorded a good economic increase, and many introduced more friendly policies regarding children. Despite these important developments, fertility continued to be very low in the region and there is little hope for a fertility increase, at least in the short term. On the other hand, poverty measured at the individual level does not decrease fertility; many studies show that, in fact, poor women have on average more children than those who are better off (*Reproductive Health Survey: Romania 1999-Final Report*). What is missing from analyses of fertility decrease in Eastern Europe is a clearly formulated theory that would link the individual-level decision of having or not having a child with aggregate-level factors, such as social and political instability. As a first step in building a general fertility theory for Eastern Europe¹, studies offering meaningful explanations of declining fertility in a specific Eastern European country would be very helpful.

The research presented in this paper focuses on one Eastern European country (Romania) and it tries to answer the following questions: (1) is fertility situation during the socialist period a good baseline for understanding what happened after 1990? and (2) how different are birth and pregnancies trajectories of women living during periods when various fertility policies were in force. The general idea for which this paper argues is that fertility changes after 1990 are not necessary a 'strange' evolution, but an expected trend, only interrupted during socialist period. Whenever the fertility policies permitted, women took advantage and postponed or reduced their number of children, and only during the times when policies were strongly reinforced fertility increased.

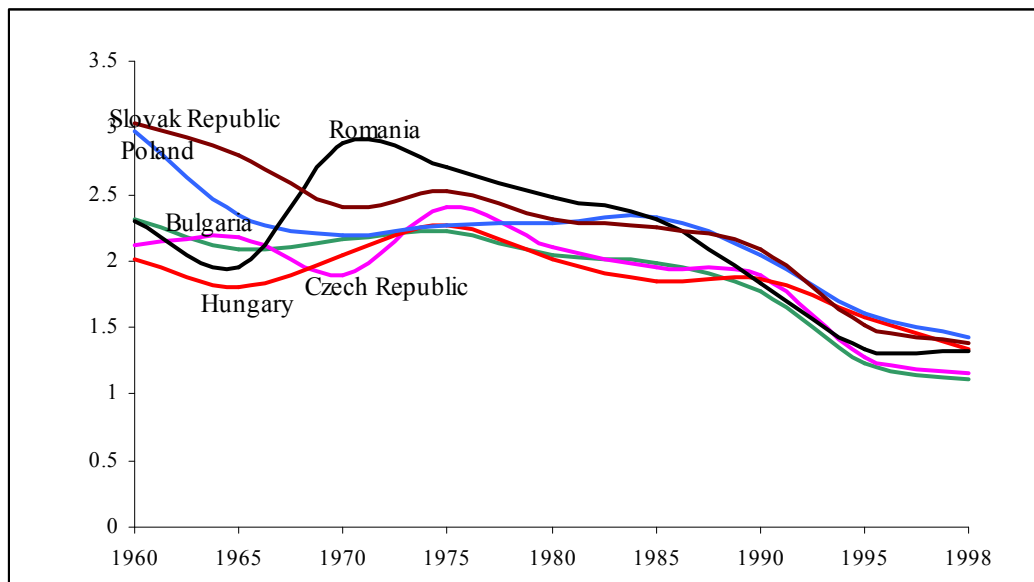
¹ Or, better, for sub regions of Eastern Europe, as Central Europe or Balkan Peninsula.

Background

The general picture shows that, if around 1965 the level of fertility (TFR) in Eastern European countries varied between 2 and 2.5 children per woman (Althus, 1992:140), after 1996 only Albania is above replacement level (Graphic 2). Gradually or very fast, all other countries fell below replacement during this period of time despite of various policies toward increasing fertility some Eastern European governments adopted.

Fertility levels in Eastern European countries are similar to or lower than in Western countries, although patterns of marriage are different (Sardon, J.P.:119): until 1990, for example, total marital fertility rates are around 28% lower in Western countries than in Eastern Europe mainly as a result of a much higher percentage of consensual unions in Western than in Eastern countries (Sardon: 137).

Graphic 2². TFR during 1960-1998, selected Eastern European countries



source: Recent demographic developments in Europe, 1999

² I did not include Albania in this graphic because data are missing for most of the years. However, it is known that demographic transition began very late in Albania in comparison with other Eastern European countries (Falkingham&Gjonca, 2002). In 1960, in Albania, TFR was 6.85 and in 1996, 2.7 (Recent Demographic Developments in Europe, 1999)

How is it possible to have a high and almost universal pattern of marriage and a low rate of fertility? For the Balkan countries the answer is: using abortion. As can be learned from Table 1 and 2, the rate of abortion in these countries is around 1 or higher than 1 and much higher than in other countries. Romania has a strong tradition of using abortion; the highest abortion rate ever recorded in the world was recorded in Romania in 1965 – 252 per 1000 women (Henshaw&all:S33).

Table 1. Rate of abortion³

Country and year	Abortions	Rate
Bulgaria (1988)	111700	0.951
Yugoslavia (1987)	365700	1.018
Romania (1990)	992300	3.153
Czechoslovakia (1987)	156000	0.729
Hungary(1987)	84500	0.671
Poland (1987)	122600	0.202

Source: F. Althus (1992)

Table 2. Number of abortions, 1995

Region and subregion	No.of abortions (millions)		
	Total	Legal	Illegal
Europe	7.7	6.8	0.9
Eastern Europe	6.2	5.4	0.8
Northern Europe	0.4	0.3	-
Southern Europe	0.8	0.7	0.1
Western Europe	0.4	0.4	-

Source: H.Davis

After 1990, the mean age at first birth increased in most of the Eastern European countries, which made some researchers conclude that the low fertility observed in the region is actually a result of postponement childbearing rather than a quantum decrease. Bongaarts and Feeney’s (1998) influential article on the adjusted TFR was enthusiastically incorporated into several articles trying to prove that the fertility perspectives of Eastern Europe are rosier than the actual data predict. The authors considered two components of the TFR: a *quantum* and a *tempo* component and the method proposed by them tries to adjust the quantum component of the TFR by taking in account the distortions introduced by the tempo component. Philipov and Kohler (1999) computed a TFR adjusted (using the Bongaarts-Feeney adjustment) for several Eastern European countries and concluded that postponement of childbearing plays a certain role in the observed low fertility in Eastern Europe. However, several critics of the Bongaarts-Feeney adjustment emphasized that “the method does not incorporate enough information to disentangle effects of fertility timing and level without imposing stringent and

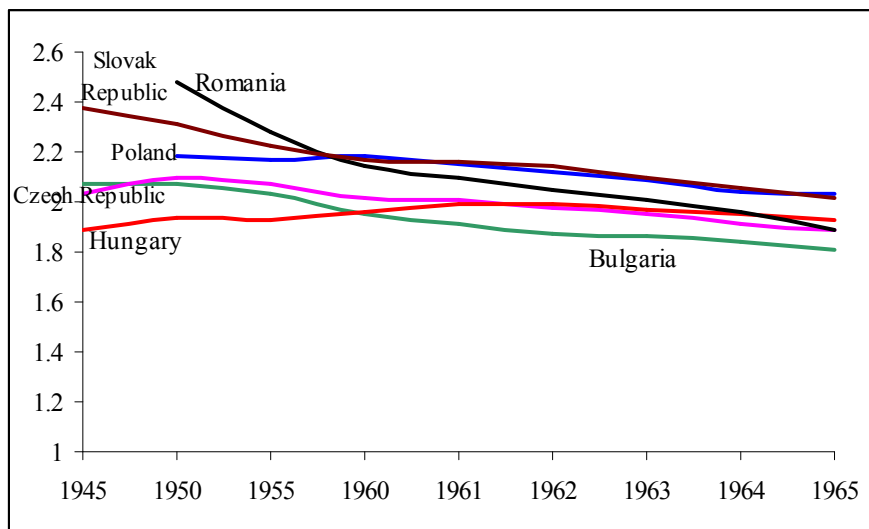
³ Rate of abortion is here defined as number of abortions per 1 live birth

unrealistic restrictions” (Kim&Schoen: 2000) and that the method “is based on unsuitable fertility measures “ (von Imhoff & Keilman: 2000).

It is still unclear what role, if any, plays postponement in declining fertility in Eastern Europe. On one hand, although for some Eastern European countries there were observed tempo changes (Philipov, Kohler, 1999), there are cases (Bulgaria, 1991, 1992) where the decrease in fertility was the sole result of quantum, not tempo changes, so it is unclear if women postpone childbearing or just give up having children.

On the other hand, the fact that fertility in Eastern Europe has been very low (1.5-1.3) for more than a decade makes less credible the idea that women will catch up soon after postponing childbearing and a sudden increase in the number of children will be recorded. Longitudinal measures (as completed cohort fertility) are not affected by the postponement of childbearing, but they can be recorded only after the cohorts leave the childbearing ages (over 45). The fertility of cohorts shows that higher order fertility decreased in the cohorts born between 1935 and 1950. On the other hand, the region is not homogeneous. Higher order fertility in Poland and Czechoslovakia is about double that in Bulgaria, East Germany and Hungary (Althus:141). In Graphic 2, we present data on the fertility of cohorts of females born during 1945-1965. Although this is not completed cohort fertility for all generations, it gives some perspective on how fertility evolves.

Graphic 2. Cohort fertility for females born during 1945-1965 in Eastern European countries



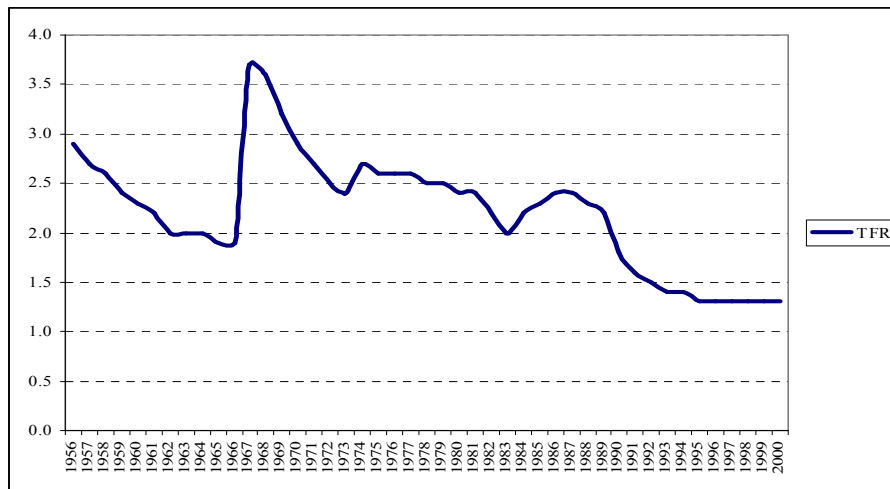
source: Recent demographic developments in Europe, 1999

Fertility is both an individual and a societal problem (Demeny, 1986), *societal*, because the age distribution of a nation influences the country level of development, and individual, because, in the end, giving birth and rearing children is an individual/family problem. Following Berelson (1974), there are two types of fertility policies that governments make use of: the *positive* ones, which use only incentives in order to attain a society's desired level of fertility, and the *negative ones*, which use all types of constraints against people in order to attain the desired goal. *Positive* policies in below replacement fertility countries offer incentives to families in order to increase or decrease fertility: money at births, monthly allowances for families with one or more children, maternity leave, benefits for mothers with many children and single mothers, paternity leaves, etc. *Negative* policies are those through which governments limit access to contraception or abortion in order to increase fertility.

State socialist governments in Eastern Europe faced a difficult situation in addressing the problem of low fertility: on one hand, the low fertility rate called for pronatalist measures, on the other hand, Marxist ideology emphasized the importance of raising women's status in the family and society. These two policy directions have different results. As many studies have shown, increasing the status of women leads to decreasing levels of fertility. It is thus complicated to discern the effect of one type of policies (pronatalist), while policies with an opposite effect (e.g. raising women status) are in place. Sometimes, the declared pronatalist policies could have an opposite effect. This seems to be the case with policies that provide child care programs: with the availability of child care centers, 'women who want to work will have the opportunity to enter or reenter the labor force much sooner; and the rewards of employment may compete effectively with the satisfactions of additional children' (US Commission, 1972a: 88, apud Demeny, 1986)'. All of the former state socialist countries adopted positive fertility policies and they succeeded remarkably in raising women's status in society. Many of them, in an attempt to raise the level of fertility, limited the number of abortions and access to contraceptives.

. In Romania, abortion was legalized in 1956, the decision being based on the Marxist idea that woman is equal to man and women have the right to do what ever they want to their body. Between 1956 and 1966 fertility decreased strongly (see Graphic 4) attaining a below replacement level of TFR as early as 1963. In the meantime, the abortion rate recorded very high values, with the highest in 1966 (estimated to be around 5 abortions per 1 live birth). Interesting enough, during all these strong changes in fertility, the rate of marriage remained high and the age at marriage low, contradicting the usual pattern of declining fertility.

Graphic 3. Evolution of fertility evolution in Romania, 1956-2000

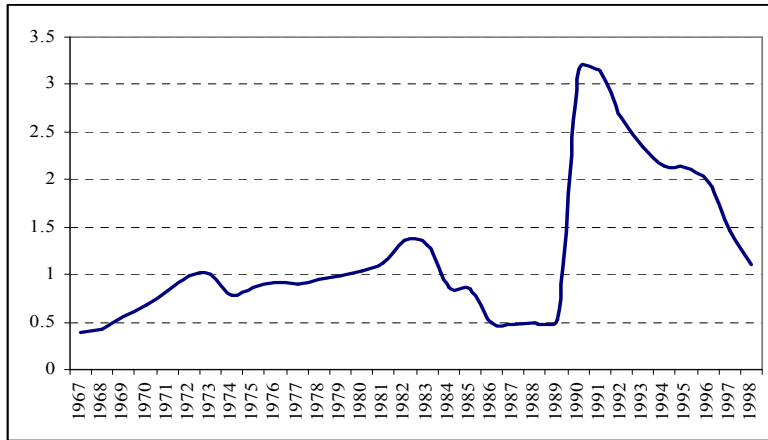


Source: Demographic Yearbook, Romania, 2001

In 1966, worried by the decreasing fertility, Romanian government emitted a law prohibiting abortion for a large female population⁴. The law was followed by a strong increase in fertility (see Graphic 4) during the next three years, and it remained above replacement level until 1990. After 1989, when the law against abortion was repealed, the immediate result was a decrease in fertility and a strong increase in the abortion rate (see Graphic 5). Fertility continued to decrease between 1990 and 2000, despite the various polices toward encouraging births.

⁴ There were several cases excepted: women with severe medical problems, older than 44 years or who had 4 or more (later on, 5) children alive.

Graphic 4. Number of abortions per 1 live birth, Romania



Source: Romanian Ministry of Health

Data and methods

This analysis was based on *Reproductive Health Survey Romania, 1999*, a survey conducted in 1999 by the CDC and Romanian Ministry of Health. The sample of this survey (national representative) includes 6888 women, age 15-44 years, living in Romania at the time of the interview (1999). The questionnaire has 9 modules: background characteristics, sex education, fertility/pregnancy, family planning knowledge/sexual experience, current and past contraceptive use, women health, reproductive health knowledge attitudes, socioeconomic characteristics, aids/std and violence. This research uses data from module 1 (background characteristics), module 3 (pregnancy/fertility history) and module 8 (socioeconomic characteristics). In Module 3 there were recorded information on the last 23 pregnancies, how and when did these pregnancies ended, if the child is still alive (in the case that the pregnancy resulted in a live birth) and how old was the child when he died (for live birth which later on died).

As a method we used simple life tables and life tables with multiple decrements (Schoen, 1988) for those women which were pregnant during times when various fertility policies were implemented in Romania. For each period of time, we kept in the analysis only those women age 15-44 at risk of having a pregnancy (for example, those who already had a pregnancy before entered the sample for the second pregnancy, but those without any pregnancy did not enter the sample).

Generally speaking, there are four main periods relevant for this study⁵:

- 1966 -1973⁶: abortion was banned for all women younger than 45, with the exception of: 1) those pregnancies resulted from rape or incest, 2)if woman already has four children in her care , 3) woman has some important physical

⁵ See also Kligman, 1998:59. During 1957-1966, abortion was legal and contraceptives available, but the women included in this sample were not at reproductive age during that period of time

⁶ In 1972, Decree 770 was changed, and the new law permitted women age over 40 to have a legal abortion (before only women age 45 and over could ask for a legal abortion). The sample of this study does not include women which, at that time, were 40 or over, so this change is not relevant for this study.

disabilities, 4) the pregnancy is a danger for woman's life or 5) woman or her male partner has a hereditary illness with serious consequences⁷. Although contraceptives were not banned, they were not longer produced or imported;

- 1974-1984: new instructions regarding implementation of Degree 770 were emitted, in an attempt to control better the abortions performed legally and illegally
- 1985 - 1989: a new decree⁸ increased the number of children and the age a woman has to have in order to get a legal abortion (5 children, and 45 years);
- 1990 - : abortion became legal.

Because of the small number of cases for 1966-1974 period of time, for some of the analyses, we considered only three main periods: 1966-1984, 1985-1989 and 1990 and over.

This research uses two main models: one in which the rate of transition from the state 'not pregnant' to the state 'pregnant' is computed and compared for periods of time when various fertility policies were in force (Figure 1). The second model (Figure 2) estimates the rates of transition from the state 'non pregnant' to 'has a live (or still) birth' and from state 'not pregnant' to 'has an abortion'. Live births and still were grouped together, because we assume a woman who had a still birth did not want to get rid of the pregnancy.

Figure 1. States for model 1

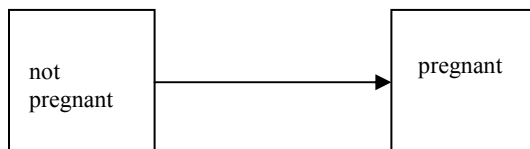
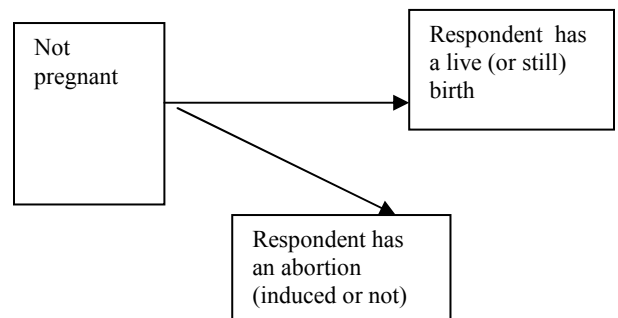


Figure 2. States for model 2



⁷ Decree 770, October 1966

⁸ Decree 411, December, 1985

Results

The analysis on pregnancy history shows that the majority of the first and second pregnancies end up in a birth, for whole sample and for each period of time see Table 1-5). From 1974 to 1999, the proportion of pregnancies (of any order) ending up in an abortion increased, showing that what happened after 1990 is not a strange evolution, but a continuation of what was before.

Table 1. Distribution of births/abortions for first to fourth pregnancy

Result	first pregnancy	second pregnancy	third pregnancy	fourth pregnancy
birth	81%	62%	43%	32%
abortion	19%	38%	57%	68%
Total	4877	3866	2752	1930

Table 2. Distribution of births/abortions for the first pregnancy

Years	birth	abortion	Total
1966-1973	89%	11%	108
1974-1984	89%	11%	1707
1985-1989	85%	15%	1188
1990-1999	70%	30%	1874

Table 3. Distribution of births/abortions for the second pregnancy

Years	birth	abortion	Total
1966-1973	70%	30%	30*
1974-1984	73%	27%	1132
1985-1989	71%	29%	1015
1990-1999	48%	52%	1689

Table 4. Distribution of births/abortions for the third pregnancy

Years	birth	abortion	Total
1966-1973	67%	33%	3*
1974-1984	60%	40%	634
1985-1989	54%	46%	702
1990-1999	31%	69%	1413

Table 5. Distribution of births/abortions for the fourth pregnancy

Years	birth	abortion	Total
1966-1973	100%	0%	1*
1974-1984	50%	50%	351
1985-1989	41%	59%	458
1990-1999	23%	77%	1120

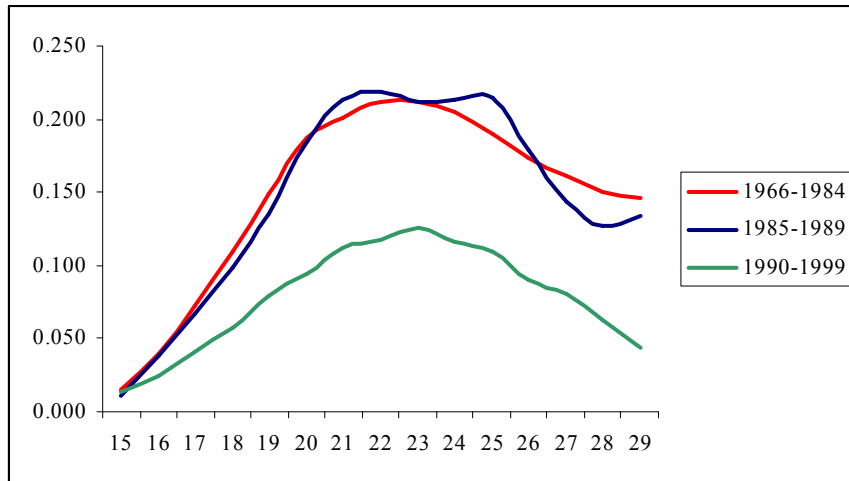
Although the proportion of pregnancies resulting in abortion is higher after 1990, taking in account that before 1990 abortion was banned and that having an abortion was a crime, the difference between what happened after and before 1990 is actually insignificant.

Life tables with multiple decrements for the first pregnancy (ended with a birth or an abortion) shows that, by the age of 30, 83% of women age 15 and over during 1966-1983 would have a first birth, 11% would have a first pregnancy ending with an abortion and about 6% would not get pregnant. During 1985-1989, 79% women age 15 and over would have a first pregnancy ending with a birth by the age of 30, 14% would have an abortion and 6% would not get pregnant. After 1990, 58% of women age 15 and over would have a birth by the age of 30, 26% would have an abortion and 16% would not get pregnant. As it can be observed, the difference between the period after 1990 and the previous periods is mainly observed in the percentage of women not getting first time pregnant by the age of 30 (16% in comparison with 6% for the periods before). This shows that availability of contraceptives after 1990 had an influence on the timing of fertility in Romania.

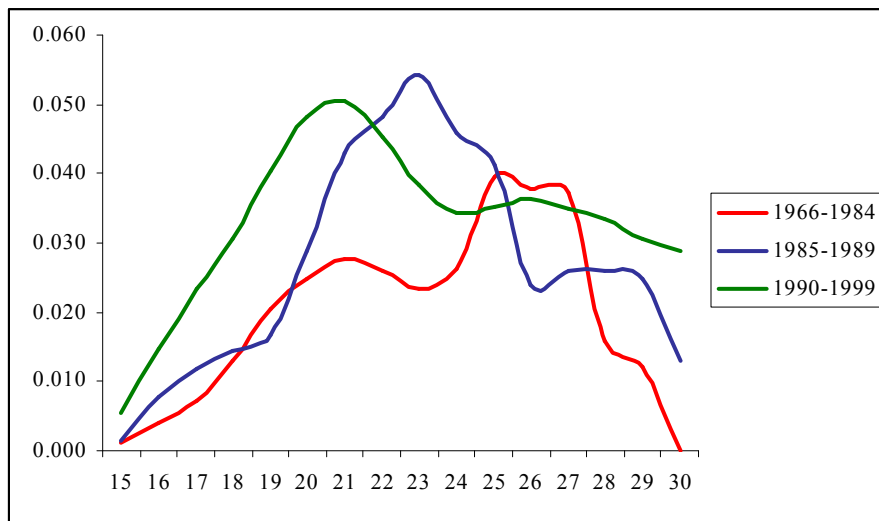
Graphic 5 and 6 show the evolution of rate of transition to a first birth and abortion during 1966-1984, 1985-1989, 1990-1999. The major change that can be observed is that the rate for a first abortion is much higher for young women after 1990

then before (Graphic 6) as a result, probably, of a younger age at sexual intercourse after 1990.

Graphic 5. Rate of transition to a first pregnancy ending with a birth



Graphic 6. Rate of transition to a first pregnancy ending with an abortion



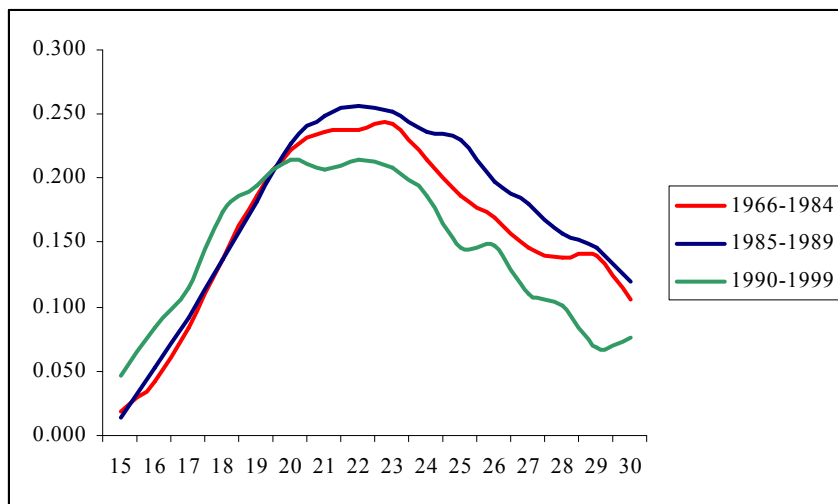
The life table with multiple decrements for the second pregnancy shows that, during 1966-1984, 80% of women at risk⁹ age 15-30, experienced a second pregnancy resulting in a birth, 15% had their second pregnancy ending with an abortion and 5% did not experience a second pregnancy. During 1985-1989, 79% of women at risk age 15-30,

⁹ By 'at risk' we understand women who already had a first pregnancy.

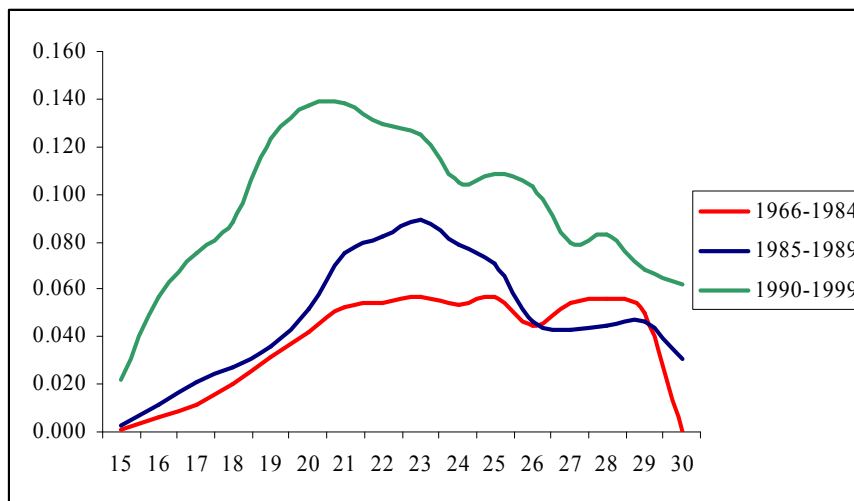
experienced a second pregnancy resulting in a birth, 20% had the second pregnancy resulting in an abortion and 1% did not experience a second pregnancy. After 1990, 61% of women at risk had their second pregnancy resulting in a birth, 37% of women had the second pregnancy ending with an abortion and 2% did not experience a second pregnancy.

The comparison of the rates of transition to a second birth and abortion for the three periods of time (Graphic 7 and 8), it shows that rate of abortion is the highest after 1990 for all ages and the lowest during 1966-1984. Rate of second birth is the lowest after 1990, and it has its maximum in early 20s (20-21) as opposed to the other two rates which has their maximum later (23-24).

Graphic 7. Rate of transition to a second pregnancy ending with a birth



Graphic 8. Rate of transition to a second pregnancy, ending with an abortion



Conclusions

In 1967, Romanian Ministry of Health surveyed 12,783 first married women, age 15-49, about number of children, optimum number of children, woman health and other aspects of woman life (Ilea & others, 1969). Although in average women said the optimum number of children, the younger cohorts (15-19) thought that the ideal number of children is 2.29. The number of children wished when married is smaller than the ideal number of children; women age 15-19 wanted in average 1.9 children (1.6 for those living in urban areas) and those age 20-29 wishing for 2 children (1.8 in urban areas). The average number of children born by a woman age 30-39 was 1.91 and for a woman age 40-49 was 2.12, which shows that fertility was already close to replacement level in 1967. Seven years later, in 1977, a similar study (Muresan & all, 1977) shows that young women wanted to have around 2 children (2.18 for women age 15-19) and women with a college education wanted 1.9 children. The average number of children born by a woman age 40-49 was 1.8 in urban areas and 2.7 in rural areas.

This research reinforce the idea of the survey done in 1967: women in Romania wished for a small number of children long time before 1990, but they lived under policy conditions that did not permit them to attain the desired number of children. The increasing rate of abortion, even during times when abortion was strictly banned, it shows that the fertility attained in Romania after 1990 was not necessarily a result of political or economic changes, but an expecting consequence after repealing the law against abortion.

Bibliography

- Althaus, F. 1992. "Replacement –Level Fertility has Now Become the Rule in Most of Eastern Europe". *Family Planning Perspectives*, 24
- Bucur, M. 2002. *Eugenics and Modernization in Interwar Romania*, 2002, Pittsburgh: University of Pittsburgh Press
- Berelson, Bernard. 1974. "An Evaluation of the Effects of Population Control Programs", *Studies in Family Planning*, vol.5 (1), pp.2-12
- Bongaarts, John and Griffith Feeney. 1998. "On the quantum and tempo of fertility", *Population and Development Review* 24 (2): 271-291
- Carlson, Elwood, Meguni Omori. 1998. "Fertility Regulations in a Declining State Socialist Economy: Bulgaria, 1976-1995". *International Family Planning Perspectives*, 24
- David, Henry P.1992. "Abortion in Europe, 1920-91:A Public Health Perspective". *Studies in Family Planning*, 23
- Demeny, Paul. 1986. "Pronatalist Policies in Low-Fertility Countries: Patterns, Performences, and Prospects", in *Population and Development Review*, 12, Issue Supplement: Below Replacement Fertility in Industrial Societies: Causes, Consequences, Policies, 335-358
- Eberstadt, Nicholas. 1994. "Demographic Shocks after Communism: Eastern Germany 1989-1993", *Population and Development Review*, 20, 1
- Ghetau, V. 1997. *Evolutia fertilitatii in Romania. De la transversal la longitudinal* [The Fertility Evolution in Romania. From transversal to longitudinal perspective] Bucuresti:CIDE
- Henshaw, S, S. Singh, T. Haas. 1999. "The Incidence of Abortion Worldwide". *International Family Planning and Perspectives. Supplement*, 25
- Hirschman, Charles. 1994. "Why Fertility Changes". *Ann.Rev.Sociol.* 1994. 20:203-233
- Kim, Young and Robert Schoen. 2000. "On the quantum and tempo of fertility: Limits to the Bongaarts-Feeney Adjustment", *Population and Development Review* 26 (3): 554-559
- Ilea, Th, P. Muresan, I.Ionescu, A.Pavel, M.Bilegan, M.Teodorescu.1969. *Cercetari medico-sociale asupra fertilitatii feminine din R.S. Romania* [A socio-medical study of women fertility in R.S. Romania]. Ministerul Sanatatii, Bucharest
- van Imhoff, Evert and N.Keilman. 2000. "On the quantum and tempo of fertility: Comment", *Population and Development Review* 26 (3): 549-553.
- Kligman, Gail. 1998. *The Politics of Duplicity. Controlling Reproduction in Ceausescu' Romania*, University of California Press

Morris&others. 2001. *Reproductive Health Survey, Romania, 1999. Final Report*. CDC and Romanian Ministry of Health

Muresan, P., I.Caniola, I.Copil, E.Malceolu, R.Paraschivescu, B.Pascu, C.Prisacaru, L.Roznatovski, D.Segal. 1977. *Studiu longitudinal al fertilitatii in R.S. Romania* [A Longitudinal Study of Fertility in R.S. Romania]. Ministerul Sanatatii, Bucharest

Sardon, J.P. 1993. "Women's First Marriage Rates in Europe: Elements for a Typology". *Population :An English Selection*, 5,

Schoen, R. 1988. *Modeling Multigroups Populations*. New York:Plenum Press