

Recent fertility trends and second birth decision-making in Georgia

Nicoletta Balbo

Department of Sociology/ICS, University of Groningen

Address: Grote Rozenstraat 31, 9712 TG Groningen

E-mail: n.f.g.balbo@rug.nl

Date: May 2009

Discussion Paper to be presented at the
XXVI IUSSP International Population Conference

Marrakech, Morocco

27 September – 2 October, 2009

<http://www.iussp.org/marrakech2009/>

Abstract

Since the Soviet Union's collapse, Georgia has undergone profound socio-political and demographic changes. This paper examines recent fertility trends in Georgia by using GGS data (2006). Results show that the postponement of first birth does not significantly account for the decline in childbearing, suggesting that decline is primarily due to a reduction of second-order births. I then investigate determinants of intentions to have a second child in three different periods: now, within three years and ever. Findings reveal that household income, education level and psychological well-being of the respondents as well as their satisfaction concerning the division of tasks within the couple have a significant effect on the second birth decision-making. However, these determinants differ significantly regarding the timing of the intended child. Rather, there seems to be no effect on fertility intentions of ideational changes, represented by a measure of the spread of post-materialist values within the society.

Keywords

Fertility intentions; fertility decline; Georgia, GGS data.

1. Introduction

Since the end of the Soviet Union, Central and Eastern Europe has undergone profound changes in all spheres of life. Demographic behavior has also been affected, giving rise to new family tendencies and a drastic fall in fertility. Post-communist countries are now among the group with the lowest fertility in the world (Sobotka, 2004). As many scholars and policy-makers has been pointing out, societies with declining populations face rapid ageing and shortages in labor supply, creating a problem that penetrates all areas of social life such as adjustments in pension reforms, the retirement age, to urban planning (Kohler et al., 2006, Teitelbaum & Winter, 1985; Demeny, 2003; Lutz, O'Neill & Scherbov, 2003). The interest in explaining the sudden fertility decline in the former communist countries of Central and Eastern Europe is therefore of scientific as well as societal relevance.

During the period of societal transformation no demographic surveys suitable for studying fertility decision-making at individual level were undertaken. Only recently, micro-level surveys on family and fertility dynamics have been carried out (e.g., Fertility and Family Survey (FFS), Generations and Gender Survey (GGS), European Social Survey (ESS), and other country-specific surveys). These data have been enabling demographers to investigate the nature of individuals' decisions that lead to lower total fertility or to the postponement of births in Central and Eastern European countries. Recent studies have however mainly focused on Balkan and Central European countries (among the others, Kohler et al., 2006, and Bühler and Philipov, 2005, for Bulgaria and Hungary, Bühler and Fraczak, 2004, and Kotowska, 1999, for Poland, Kantorová, 2004, for Czech Republic), leaving most of the C.I.S.¹ and Caucasian countries aside, apart from Russia (e.g., Philipov and Shkolnikov, 2001; Bühler, 2004) and to a lesser extent Ukraine (e.g., Perelli-Harris, 2005).

This study aims to investigate the determinants of the fertility decline after the end of the communism in Georgia, one of the least studied countries among the former Soviet republics.

Georgia is a particularly interesting case to study the decline in fertility because of its great internal contradictions. The country has been vacillating between tradition and modernity and this swing has also shaped its demographic patterns. While Georgia has experienced massive societal transformations since the end of the communism, many of the values and norms concerning family and childbearing have not changed. For example, the age at the first birth has hardly shifted and the gender inequality within the family has remained high.

¹ Commonwealth of Independent States, thus Armenia, Azerbaijan, Belarus, Georgia, Kazakhstan, Kyrgyzstan, Republic of Moldova, the Russian Federation, Tajikistan, Ukraine and Uzbekistan.

After analyzing the timing at first birth, I focus on the intentions to have a second child. Specifically, I study three different types of intentions, that differ regarding the timing of the desired second birth: now, within three years and ever. In doing so, besides linking fertility decline to ideological change (e.g., Lesthaeghe and van de Kaa, 1986; Lesthaeghe and Surkyn, 2002), economic uncertainty and the role of human capital (Mills & Blossfeld, 2005), the present paper also highlights the effect of gender inequality (McDonald, 2000) and social anomie (Arts et al., 1995).

The paper proceeds as follows. In the next section, I give an overview of the main features of Georgia. Section 3 describes the theoretical approaches that guide me in choosing the explanatory variables and explains my strategy. In sections 4 and 5 data and methods are presented and results are discussed. The last section includes the concluding remarks.

2. Georgia

After being one of the most prosperous areas of the former Soviet Union, Georgia experienced a dramatic economic decline during the 90s (the real gross domestic product (GDP) dropped by more than 70% between 1990 and 1994, and by the end of 1996, Georgia's economy shrunk to around one-third of its size in 1989), that was compounded by the civil war and the difficult relations with Russia. Unemployment has become a real problem since the beginning of the 1990s, even though it has not increased proportionally with the GDP fall because of a massive reallocation of labour into small-scale agricultural self-employment. Indeed, in the absence of social security and formal work opportunities, Georgians have turned to small-plot agriculture to generate livelihoods.

Since 2003, Georgia has experienced a recovery. Nevertheless, its economy has not caught up to the pre-transition period: real GDP is still below the 1989 level. Moreover, poverty struggles to lessen and the labour market situation still remains largely unfavourable and unstable

Comparing the current population of 4.6 million to that in 1989 of 5.4 million, we observe a significant and fast decline of nearly 20 percent, reflecting a falling birth rate, besides a massive emigration due to economic and social hardship.

From a TFR of 2.1 in 1989, Georgia slid under the replacement level during the 90s, until reaching a TFR of 1.35 in 2005. Such a trend induced Kohler et al. in 2002 to look at Georgia as one of the upcoming countries of the lowest-low fertility group. However, since lowest-low fertility is defined as a total fertility rate below 1.3, until today the country has

only come close to that threshold, without permanently joining the group, also because in the last years the TFR has shown a relatively small increase (1.42 in 2006 and 2007).

Looking at the trend of the total fertility rate between 1989 and 2003 (Figure 1), we can see that the most significant decline in fertility was between 1991 and 1993. It is noteworthy that these years were characterized by great political instability, as a result of the recent collapse of Soviet Union, the consequent process of independence and the civil war. Moreover, since then, the social assistance system and family policy have weakened. New laws have removed many of the subsidies, such as that of sick child leave, or have reduced eligibility, duration and compensation of other benefits, especially those related to parental leave. In addition, preschool educational establishments (PEE) have become more expensive and since 1992 many of the public childcare institutions have been privatised.

Observing the age-specific fertility rates (live births per 1000 women in age-group, Figure 2), it is evident that the number of births has decreased in all age-groups, except for women over 40 years old, who show a stable pattern (however this group is very small). The most significant decline is observable in women aged between 20-24 years old.

During the 90s, and still at the beginning of this decade, also the number of registered marriages decreased significantly. This trend is evident from the two main marriage indicators: the crude marriage rate (marriages per 1000 population) fell from 6.8 in 1990 to 2.9 in 2003; the total female first marriage rate (below age 50) decreased from 0.80 to 0.28, within the same reference years. If we look at the age-specific female first marriage rate (that is first marriages by 1000 females by age group, Figure 3), we can see that during this period number of marriages declined in all age groups (especially for women under 25 year-old).

While extra-marital unions increased, also extra-marital births showed a substantial rise beginning in 1990: from 18.2 (per 100 births) in that year to 44.6 in 2003.

According to the Georgian Reproductive Health Survey, Georgian women were and still are traditional and conservative in their attitudes about family planning. For example, they tend to become sexually experienced after marriage or other alternative forms of long-term union (only 3% of sexually experienced women aged 15–24 year-old reported “premarital” intercourse). Therefore young people begin having sex when they get married or start cohabitation. This means that, in the case of Georgia, extra-marital births are mainly induced by an increase in non-marital unions and not by premature births, even if the lack of modern contraceptives may contribute to this trend.

Furthermore, the Georgian Reproductive Health Survey carried out in 1999 and in 2005 highlights that Georgia has the highest rate of abortion in Central and Eastern Europe (3.7 per woman in 1999, 3.3 in 2005).

According to the theory of the “Hajnal line”, Georgia has traditionally shown earlier marriage and childbearing patterns than those in Western Europe. Differently from other countries in the region, mean age of women at first marriage (MAFM) has remained substantially unchanged: the indicator increased less than one year in 19 years. The same trend can be observed in the mean age of women at birth of the first child (MAFB): during the 90s it remained around 23 years old, showing continuity relative to that over the 80s. Since 1997, a slight increase has started but it has brought about a rise of less than one year, compared to the value in 1989 (23.7) and to that in 2003 (24.5).

3. Theoretical framework: possible explanations for low fertility

The economic approach or economic crisis argument

This approach focuses on the deteriorating economic situation experienced by large parts of the population in Central and Eastern Europe as an explanation of the postponement and decline in fertility. One of the key factors of this hypothesis is the dramatic increase in economic uncertainties, due to rising unemployment, decreasing wages and a reduction in effectiveness of family policies, thus in state support for parents. High levels of uncertainty, as a result of the tumultuous transition toward a market economy, lead people to postpone fundamental life decisions, such as having a child. In fact persons who don't have a reliable and safe income prefer to postpone a birth until better and more secure times.

Another social and economic aspect which is considered important for its impact on fertility is relative deprivation (Philipov, 2002). This term means that the sense of deprivation is relative: even if the well-being of a person is not really lowered, he will perceive it as low relative to others or to personal expectations. This feeling, widespread among people during the transition, did not encourage them to have a (another) child. Rising costs of children, due to a more expensive childcare and a reduction in state support of families, also influence fertility. According to Becker (1960), the increasing costs of children lead to the substitution of the quantity of children by their quality. He applies the microeconomic theory of consumption to fertility behavior. In fact he considers children as consumption goods, introducing them in one's utility function in terms of their quantity and quality.

While this static approach investigates the effects of monetary (income) and non-monetary (time and human capital) factors on the choice of a lifetime number of children, a more

dynamic approach, suitable for dynamic microeconomics fertility models, considers the impact of timing on childbearing choices, that are therefore studied in a sequence of periods of time. Gustafsson (2001), in her analysis of maternity timing, showed that the main factor that leads to the postponement of childbearing is the mother's career costs. She argued that women tend to postpone childbearing since costs of having a child are lower in a later stage of their career.

Previous macro-level analyses, which embrace the economic approach, investigate the impact on fertility of changes in GDP per capita, labor market and educational system. As far as the latter is concerned, it is interesting to note that in Central and Eastern Europe the new market-driven education and the need of new professions and skills brought about a longer and higher enrolment in schools and universities. As education usually precedes family formation during the life course and a higher education often leads people to prefer job career to family, this educational expansion induced a decrease in fertility and a postponement in childbearing, especially for the first birth. Recently, the same aspects have also been investigated at a micro-level (Philipov, Spedér and Billari, 2006 and Rieck, 2006).

As far as the unemployment is concerned, its effects on childbearing do not seem to be clear and straight-forward (Mills et al., 2005). In particular women's unemployment can lead to two opposite consequences. On the one hand, it could fuel fertility postponement, because unemployment increases economic uncertainty and women may prefer to find work before becoming mothers. On the other hand, especially when the income of the male partner is sufficient, it could be a factor which motivates women to take advantage of temporary inactivity, also because career opportunity costs are low.

The ideational approach

Theorists of the first demographic transition (FDT) envisioned as end-point of the transition an older stationary and stable population corresponding with replacement fertility (i.e. just over 2 children on average) and a zero population growth. Actually this has not been the case of most of the Western and Eastern European countries, that have been showing an evident below-replacement fertility. This has led to the conviction that the cyclical fertility theory as formulated by Richard Easterlin (1973) no longer holds, and, at the same time, it has brought about the formulation of new theories, such as that of the second demographic transition (SDT).

The second demographic transition does not envision the previous equilibrium as end-point. Rather, Lesthaeghe and van de Kaa (1986) used the term "Second Demographic

Transition” to refer to the new developments that have brought about sustained sub-replacement fertility, a multitude of new living arrangements other than marriage, disconnection between marriage and procreation, and no stationary population. Such trends have been experienced first in Western Europe, since the 1960, and later, during the 90s, also in Central and Eastern Europe, where the transformation has more rapidly occurred.

The ideational approach refers to this idea of second demographic transition, stating that new trends are mainly caused by value changes. Lesthaeghe and Surkyn (2002) highlighted the connection between demographic and ideational transformations, identifying three main features of the latter ones: (i) the accentuation of individual autonomy in ethical, moral and political spheres, (ii) the concomitant rejection of all forms of institutional controls and authority, and (iii) the rise of expressive values connected to the so called “higher order needs” of self-actualization, self-fulfillment and a quest for recognition.

This shift in value systems has been related to Inglehart’s “post-materialist” orientation, but, as Lesthaeghe clarified, Inglehart’s term “post-materialism” has been a constant source of misinterpretation. He coined the term largely as the expression of Maslow’s “higher order needs” in the political sphere (democratic participation, grass-roots democracy, concerns related to environmental quality, freedom of speech, emancipation, new political ideas, etc...). The “materialist” orientation in Inglehart’s formulation deals with income security, safeguarding of the social security system, political stability and “law and order”. This concept has nothing to do with consumerism or conspicuous consumption of luxury goods.

Spread of these post-modern values oriented toward the self, such as secularization, rising female autonomy and rising expressive individualism, contributes to decreasing the importance attached to family formation and childbearing.

This approach has been widely adopted by demographers in order to explain the demographic transformation undergone by Central and Eastern European countries in the 90s. There, the end of the totalitarian regimes eased the diffusion of new values and attitudes characteristic of modern democratic societies, which lowered the pressure of traditional norms pertaining to high fertility. Examples of studies of this kind are those of Lesthaeghe and Surkyn (2002), who carried out a complex analysis concerning ideational changes for the overall region, and Kotowska (1999), who tackled that issue in the specific case of Poland.

The impact on fertility changes of gender equity within family

During communism, women were expected to participate in paid employment while at the same time having the main responsibility for childrearing and household duties (Hansson,

2001b). Thus, even though the official policy under the communistic regime prescribed gender equality in all areas of society, roles within the household remained traditional. Even after the end of the Soviet Union, the dual-income family, with a traditional couple role-set has kept representing the standard model. Therefore, working women have been experiencing the so called “dual burden” of employment and family, because of the double active presence at home and in the labor market. In general, the reconciliation of roles within and outside the family is more difficult for a mother: empirical data show that the birth of a child increases working women’ stress (Cromton, 2004) and reduces the satisfaction of couple relationship (Coltrane, 1996). Women feel a “violation of expectations” by their partners: the so called “stalled revolution” (Hochschild, 1989), whereby a higher women employment rate is not followed by men’s increasing responsibility for domestic chores and childcare.

Women and men, according to the hypothesis of “incompatibility of roles”, can perceive the problem of reconciliation between working activity and family differently (Lehrer and Nerlove, 1986). For men, the working activity can be an instrument to exercise their role of “providers”, according to prevalent social norms, whereas for women, social norms have traditionally prescribed the role of family career to them. Time spent for remunerate work outside the family can therefore conflict with that spent for the family, at home.

According to the “relative resources and bargaining theory” (Lundberg and Pollak, 1996) or “power rule” (Thomson, 1990), the higher the job position and professional success of a woman, the greater is her bargaining power with the partner on childcare. If a woman works, the partner’s participation in family tasks can be a necessity and therefore the degree of his involvement could be merely dependent on woman characteristics.

Recently, fertility theory has taken into consideration gender inequality as a possible explanation of lowest-low fertility. McDonald (2000), in particular, distinguishes two types of gender equity: gender equity in individual-oriented institutions and gender equity in family-oriented institutions. The movement to very low fertility is associated with a rapid shift toward high levels of gender equity in individual institutions, such as education and market employment, in combination with persistent low lowest of gender equity within the family and in family-oriented institutions. It is not difficult to observe, in fact, that the developed countries with a very low fertility are the ones with a less equal gender system compared with countries where fertility is relatively higher (counterpoising the countries of Southern and Northern Europe).

However, within any given setting displaying relative gender equity in individual-oriented institutions, fertility variation might be responsive to gender equity or inequity in the family. Specifically, at the individual level, women who disproportionately bear domestic responsibilities might be expected to respond by delaying or stopping childbearing. In a study of women's fertility in Canada (a low fertility society with a high level of women's involvement in market work), Matthews (1999) reported that women responded to feeling overburdened at home by having fewer children. Moreover, examples of continuing inequality within the family are provided by various time-budget surveys, which clearly indicate that women still do most of the domestic work and the equal division of domestic tasks between men and women may be a distant goal. Both among housewives and employed women, the time spent on 'social reproduction'—childrearing and related domestic tasks—is not compensated for in terms of family benefits or other means.

Although ideas about work-childcare incompatibility and declining fertility have been pervasive in literature, there has been little empirical work on the effect of couples' division of household labor on fertility, especially at an individual level.

Among these few empirical studies, an interesting analysis was carried out by Miller Torr and Short (2004). Using data from the National Survey of Families and Households for dual-income couples in the United States, they investigated whether gender equity in the family, as indicated by the division of housework between couples with one child, is related to the transition to a second birth. They showed that gender equity at home matters to fertility: although gender equity appears to support fertility, at the individual level, the relationship between gender equity at home and fertility, among dual-earner couples in the United States, is U-shaped.

Concerning the specific case of Central and Eastern Europe, the transition toward a market economy caused an even more difficult reconciliation of work and motherhood because of the loss of socialist regime's provision of childcare facilities and subsidies. In that situation, traditional, and usually unequal, gender relations in the home sphere, could be a significant disincentive for childbearing.

Anomie, social capital and coping strategies

Although the previous approaches are applied to Central and Eastern Europe, they were initially developed in order to explain fertility changes in Western Europe, and therefore only later used also in this context.

On the contrary, there is a body of studies and theories that found in Central and Eastern Europe their major and specific use. One of these approach concerns the impact on fertility of anomie, disorderliness and disorientation. Although these parameters are not specific per se to the region of interest, having been discussed in the wider context of development, their impact on fertility was discussed for the first time in relation to the former German Democratic Republic (GDR) and subsequently, in more details, by Philipov (2002), who claimed their significance in all Central and Eastern Europe. His study was soon followed by others, which considered the topic of measuring the impact of anomie on fertility, such as that carried out by Philipov, Spéder and Billari (2006) on Bulgaria and Hungary.

The transition to a market-economy was a period of discontinuity that encompassed the entire political, institutional, economical, social and cultural setting. The old institutions were abolished, but the new ones had taken longer to become fully functioning. Also the legal and value systems witnessed such discontinuity, causing a period of normlessness and anomie.

The French sociologist Emile Durkheim was the first person who developed the concept of anomie, at the end of 1800. He explained that in a situation of deinstitutionalization and normative deregulation, people become disoriented and uncertain. These consequences on individual mental well-being can, in extreme cases, flow into anxiety, widespread fears or depression.

Later, in 1968, an American sociologist, Robert Merton, reviewed the concept of anomie in a broader setting of cultural values and social structure. He underlined that an anomic society is caused by a disjunction between goals and means at the macro-level, due to the fact that norms prescribe both, but social structures are not able to provide the means of attaining the goals. Such disjunction induces, at the micro-level, deviant behavior in people who decide to not observe norms, and alienation in people who try to follow norms but cannot attain their goal.

However, both scholars claimed that an anomic society lead to uncertainty, loneliness and disorientation.

During the 90s numerous social scientists discussed the topic of anomie in the context of Central and Eastern countries. Rousselet (1994) highlighted the role of anomie in the lack of identity of the Russian society, where religion has been able to provide some moral support. In Bulgaria the impact of anomie on quality of life was studied by Genov (1998). He detected a high level of widespread fears among Bulgarians and viewed them as a signal of the presence of anomie. Moreover, Hungary offers many and detailed studies on this topic, also thanks to a battery of questions on anomie in the Hungarian Household Panel Survey, that

showed its presence in the society during the 90s (Spéder et al., 1999). In the end, in the Czech Republic some scholars (Rabušic and Mareš, 1996) underlined that anomie may affect people in different ways and with diverse intensity.

The impact of anomie on fertility is not so directly evident. In order to make comprehension of the mechanism easier, we can compare effects on births of anomie with the role of uncertainty in the economic approach. In fact, people in a situation of anomie become indecisive and are likely to postpone crucial and irreversible life events, such as births. Sometimes this postponement can lead to a complete rejection. According to Srole (1956), such rejection is due to a loss of desire to have a child, a feature that may be found in anomic people.

In addition we can also consider anomie and consequent disorientation as part of the ideational approach. The lack of norms and the weakness of institutions can lead people to a greater autonomy in life's decisions (this kind of persons are the so called "winners"), but, at the same time, some individuals may feel uncertain and unable to take decisions for themselves (these are the "losers" of the societal transformation).

Deinstitutionalization and normlessness decreased dramatically the support traditionally provided by the state and the community. In order to face the transition period with its uncertainty and difficulties, people may rely more on their social ties, such as those with relatives, friends or colleagues. The level of this informal support will depend on the resources available in the person's social network: the so called "social capital". This help can be provided in different ways, such as employment, loan of money, childcare and supply of information (Philipov et al., 2006). Social capital is crucial for an individual, because often it allows him to develop successful coping strategies in order to face difficult economic situations or uncertainty. Philipov (2002) highlights that there are a lot of different possibilities for an individual to cope with a situation of uncertainty. He can find an additional job, invest in higher education or emigrate, but he also can steal, evade taxes or bribe. In any case, these are all ways to react to a difficult economic situation, which can also have an impact on fertility.

Even if the link between social capital and fertility had already been discussed in literature, Philipov in more than one study and with different others scholars (Philipov and Shkolnikov, 2001; Philipov, 2002; Buehler and Philipov, 2005; Philipov et al., 2006) studied the impact on fertility intentions. He underlined that the two essential features of social capital are trust and reciprocity, and even if it can help to decrease uncertainty, it works through interpersonal relationship and not through economic channels, so it cannot be considered in the light of the

economic approach. Moreover he analyzed the relationship between social capital and fertility from a new, and in a way complementary, perspective in respect to that suggested before by Schoen et al. (1997), according to which children help parents to reduce uncertainty, by increasing their social capital. Philipov overturned this perspective, suggesting that people with more social capital may feel less uncertain, and therefore more willing to have a child.

My strategy

As the timing of childbearing is a key factor in the explanation of lowest-low fertility (Kohler et al., 2002), and considering fertility postponement partly responsible for the fall in total fertility rates, the first part of my analysis is aimed at evaluating the possible presence and the consequent impact of the tempo effect on changes in fertility level over the last 20 years. I focus on the timing of first birth, using an event history analysis technique.

Official data concerning the mean age at first birth (MAFB) show that young age at first birth in Georgia was maintained also during the transition period, that is during the 1990s, when fertility experienced the major fall. Considering the fact that the proportion of childless women by birth cohort has over time been quite stable at about 10%, indicating a low level of childlessness, it may be argued that a considerable share of births are first births. In fact, in 2005, 58.8% of all births were first births and the percentage of second births relative to first ones was around 50%². These figures suggest that the decline in fertility levels has been mostly driven by the postponement or significant reduction of higher-parity births, starting from the second. Actually, such a reduction may be combined with some tempo changes, specifically, some postponement of the second child. Since most women who were fertile during the 1990s are still in their reproductive period, more time would be needed to determine if second births are being delayed or eliminated. However, by studying fertility intentions instead of actual behavior, I in part overcome that problem since intentions can anticipate upcoming behaviors.

Therefore, the second part of my analysis consists in investigating determinants of the intention to have the second child. The above-analyzed theoretical background guides me in the choice of the explanatory variables. I incorporate in the model all of the mentioned approaches, computing and using a variable for each one, in order to evaluate their explanatory effectiveness in the Georgian context, and, at the same time, in order to identify the main factors of the fertility decline.

² Source: Georgian Centre of Population Research.

Supported by some sociological and psychological literature (e.g., Ajzen, 1991; Miller and Pasta, 1994), I consider fertility intentions as key determinants of the concrete decision to have a child. Specifically, the theory of planned behavior (Ajzen, 1991) provides useful interpretations of the link between intentions and behaviour. According to this theory, intentions result not only from attitudes towards the behaviour in question (in this case, having a second child), but also from subjective and internalized norms about the behaviour, as well as from the perception of the controllability of the behaviour. As a consequence, factors which have an impact on intentions will also have an impact on behaviour, but the contrary cannot be assumed, considering that there are accidental and unplanned births, as well as unrealised desired pregnancy.

It is undeniable that a widespread scepticism is observed in literature regarding the use of fertility intentions as predictors of fertility. That is due especially to the fact that the relationship between intended and actual fertility is not so straightforward: intentions do not always result in actual births and vice versa (see, for example, Toulemon and Testa, 2005). To this end, Morgan (2003) underlined the importance of the role of the childbearing intentions' revision, that is, the decision to have fewer (or more) children than anticipated, on the basis of one's life experiences. However, I agree with the position of Philipov et al. (2006), who claimed that "*divergence between intentions and subsequent behaviour is to be expected given that both are outcomes of decision processes occurring within a context of changing constraints*". Even if it is true that the ability of intentions to predict actual fertility depends on how much revision occurs, there are several studies in literature that demonstrate the adequacy of intentions as a proxy variable of fertility. Interesting examples are those of Schoen et al. (1997) in the U.S. and Islam and Bairagi (2003) in Bangladesh.

4. Data and method

Data

I use data from first wave of the Gender and Generation Survey in Georgia, carried out in 2006. This survey is part of the Generations and Gender Programme (GGP), a system of national Generations and Gender Surveys (GGS) and contextual databases, which aims at improving the knowledge base for policy-making in UNECE countries. The GGS is a panel survey of a nationally representative sample of 18-79 year-old resident population in each participating country with at least three panel waves and an interval of three years between each wave. The contextual databases are designed to complement micro-level survey data with macro-level information on policies and aggregate indicators.

The GGP sets out to explain demographic choices in forming and dissolving partnerships and having children. By studying the relationships between parents and children and relationships between partners, GGS can uncover the determinants of demographic choices at the individual level, thereby achieving a better understanding of the causal mechanisms that underlie demographic change.

The Georgian sample comprises 10,000 respondents aged 18-79, among which 4,405 are men (44%), and 5,595 women (56%). Unlike most surveys concerning fertility, which usually have a strong majority of women among respondents, the GGP uses nationally representative samples that include approximately equal numbers of men and women. Moreover it collects most of its data from a couple perspective so that respondents provide a large amount of information also about their current partner, if they have one.

Although fertility is a “two-sex” issue, according to most research, I decided to study only women for two main reasons. First, information from women is more reliable and precise because “mater semper certa est” and also because they can have only one pregnancy at a time. Moreover, in this way data are more easily attainable because it is easier to delimit the set of ages in which births are given. For the first part of my analysis, I use the sub-sample of women born between 1960 and 1979, who have at least one child (2139 respondents). Then, for the second, more explorative part of the study, I consider women aged 18-45 who have only one child (483 respondents).

The timing of first birth

In order to investigate if the timing of first birth has changed over time, I divide my sample into 4-year age groups (1960-1963, 1964-1967, 1968-1971, 1972-1975 and 1976-1979). I consider only cohorts born within this range of years because I am interested in comparing fertility behavior during the 80s, and after the start of the transition. For this purpose, women born in 1960 are enough old for studying fertility behavior during the last decade of the socialist regime because they entered in their reproductive age around the end of the 70s. On the other hand, I do not consider birth cohorts born after 1979 because they are too young, having entered their childbearing age only few years earlier than the time of the interview. Moreover, most of the cases are censored and consequently calculating the median age at first birth for them is misleading because data are partial.

I conduct a Kaplan-Meier Survival Analysis, using survivor function as a tool for comparison among cohorts.

Just looking at the graph (Figure 4), it appears immediately evident that there was not a clear upward trend in age schedule among cohorts during this time. All curves are quite close to each other and they show similar patterns. In the final point of the survivor functions there are some censored cases, due to the fact that women interviewed had not reached that age and therefore they had not yet finished their reproductive period.

Another useful way to compare different groups is by analyzing the median survival time (here, the median age at first birth, Table 1), calculated as the smallest survival time for which the survivor function is less than or equal to 0.5.

Birth cohorts	Median age
1960 – 1963	25.00
1964 – 1967	23.75
1968 – 1971	22.83
1972 – 1975	23.08
1976 – 1979	23.92

Table 1: Median ages at first birth by cohort.
Source: My estimation is based on the Georgian GGS.

As we can see from the table, there was little change in median age at first birth during the time considered and, especially, also from these data, we cannot observe an evident and substantial postponement of childbearing.

The older birth cohort (1960-1963) shows the highest median age, 25 years-old. This datum seems to go along with official data concerning the mean age at first birth. In fact the MAFB was higher during the 70s compared to that during the 80s, and women who were born around 1960 had started their childbearing age just during the 70s. However, it is important to highlight that this figure could be in small part influenced by the fact that cohorts born in 1960-1963 had for the most part completed childbearing at the time of the survey, being 43-46 years-old. As a result, only few cases are censored (11.3%, as compared with 34.1% of the last group), bringing about the inclusion in the sample of women who became mothers late.

The other two groups (1964-197 and 1968-1971) show a slight decline in the median age, respectively 23.75 and 22.83 years-old, probably due to Soviet pronatalist incentives that encouraged early childbearing.

Again, cohorts born during the 70s (1972-1975 and 1976-1979), who therefore had reached their reproductive age in the 90s, exhibit a new small increase compared to the previous two, but such a rise was so slight that it did not offset the decrease during the 1980s. In fact the

median age at first birth of women born between 1976 and 1979, that is 23.92, is lower than that of women born between 1960 and 1963.

Although a small postponement effect was observed during the 90s as compared to the 80s, it may be argued that it was substantially pelting. To this end, the non-parametric Log Rank test of equality of survival distributions shows that difference among cohorts is not statistically significant (Table 2).

Test	Chi-Square	df	Sig.
Log Rank (Mantel-Cox)	7.184	4	0.126

Table 2: Log Rank Test of equality of survivor functions.
Source: My estimation based on the Georgian GGS.

An explanation for this preserved early childbearing tradition is that Georgian women are conservative in their attitudes about marriage, long-term unions and family planning. In fact, according to Olds and Westoff (2004), who carried out a study using data especially from “Reproductive Health Survey, Georgia 1999”, once married or having started cohabiting, Georgian women desire a child. They showed that there is no demand for contraception, or abortion, until after the birth of the first child, and three-quarters of women interviewed do not use any contraception before their first pregnancy.

To this end, “Final Report of Reproductive Health Survey, Georgia 2005” highlighted that in Georgia “*traditional norms are strong and have not been altered by recent changes that have influenced young adult reproductive behaviours in the industrialized world and in some of the Eastern European former Soviet-bloc countries*”.

Such deep-seated spread of traditional norms and values can well explain the lack of a substantial postponement of childbearing, usually related to the diffusion of new and “more Western” attitudes toward family. Georgian women may feel the need and the responsibility to become mothers, at least once, more strongly than other needs such as self-actualization and career.

Intention to have a second child

Dependent variables and model

The sixth section of the Georgian GGS, that concerns fertility, offers several questions about childbearing decision-making and fertility intentions. For my analysis, I consider the following three key questions: (i) “*Do you yourself want to have a/another baby now?*”; (ii) “*Do you intend to have a/another child during the next three years?*”; (iii) “*Supposing you*

do not have a/another child during the next three years, do you intend to have any (more) children at all?”.

Actually, the last two questions concern proper intentions, the first, instead, pertains more to current decision-making.

The third question is additionally asked only to respondents who have given a negative answer to the second one. I therefore use as dependent variables the binary answers of the first two questions, and I combine the answers of the second and the third ones, in order to obtain a binary answer that concerns intentions to ever have any more children, regardless of when.

In this way, I develop three dependent variables: the first involves the decision to have a baby now; the second measures the intention to have a child within three years; the third, the intention whether or not to ever have a child.

Considering that I use the sub-sample of women aged between 18 and 45 years-old, who have already one child, all the previous variables pertain to the second birth. I use a binary logistic regression for each of the three dependent variables.

Explanatory variables

In order to identify the main determinants of decision/intention to have the second child, I follow the previous theoretical framework and I compute one key variable for each of the analyzed approaches (except for the economic one, where I use two different variables). However, I do not claim to have selected variables that validly represent these theories and I am aware of their approximation.

In this way, besides controlling for age³, I use five explanatory variables: household income, education, post-materialism index, satisfaction of chores' division, anomie index.

In order to control age effects, I consider the age variable in the estimations by using five different age-groups: 18-24, 25-29, 30-34, 35-39 and 40-45.

Concerning the economic approach, I decide to use two different proxy variables, household income and education, realizing the impossibility of properly representing and synthesizing in only one key variable the two fundamental facets of the theory. In fact, this approach underlines not only the importance of the economic factor on childbearing, well

³ I tried to also control for partnership status, employment status and living area (urban vs. rural), but all these variables are not significant and controlling for them do not change the results.

represented by the household income, but also the role of education. These aspects cannot be accumulated in one unique proxy variable.

Household income. Respondents of the Georgian GGS had the choice of reporting the exact figure for the household income value (monthly or annual) or of giving the approximate range of the monthly amount (they could choose among nine different income brackets). As a consequence, household income was reported partly in exact values, partly in bands. In order to make consistent the two different types of data, I have to impute to respondents who gave the approximate range a correspondent exact value.

According to the income imputation methodology followed by the Australian Bureau of Statistics in 2001, I proceed as follows. After converting all exact values in monthly amounts, I consider the income distribution of them and I divide them into the corresponding bands. I then calculate the median for each bracket from the matching distribution of the exact values and I take such medians as imputed income values.

Once imputation is completed, I divide households into quintiles, according to their income: each quintile represents 20%, or one fifth, of all households.

Education. I use three categories for representing main education levels attained: primary, secondary and higher. Such categories are outlined according to the structure of the Georgian educational system. In short, it can be divided in two parts: pre-higher and higher education. The former includes two cycles: primary and secondary. The first is compulsory and starts at age 6 and lasts until age 14. It consists alternatively of elementary (age 6-12) plus basic school (age 12-14) or elementary plus technical/vocational elementary school (age 12-14). The secondary cycle lasts three more years and consists of secondary or vocational secondary school (age 14-17). Concerning higher education, there are different obtainable credentials, depending on the type of institution attended: University, Institute, Academy or Conservatory.

The ideational approach is characterized by being a very complex and prismatic theory. That is also demonstrated by the fact that Lesthaeghe and Surkyn (2002) used 80 variables in their analysis of ideational data.

The GGS does not offer such a wide choice of items, even though the “Value Orientations and Attitudes” section collects rather extensive information on attitudes, norms, and values. In particular, it includes dimensions of a value system that either pertain directly to intergenerational and gender relations or that have proven to be important in the literature on demographic behaviour. Among them, there is an item that I consider fundamental in the

ideational approach: the dichotomy between materialism and post-materialism. The rationale for applying this dimension rests on the work of Inglehart (1977), who in turn drew on Maslow's previous work. Inglehart's thesis is that advanced industrial societies have been undergoing an almost linear trend from a materialistic to a post-materialistic value-orientation. The associated index, a measure of the extent to which a society adheres to "post-modern" (i.e. post-materialistic), rather than modern or "pre-modern" (i.e. materialistic) attitudes have been used since 1970 in the Eurobarometer-series and since the early 1980s in the World Values Survey (WVS).

Post-Materialism Index. Although the creation of the Inglehart's Index was followed by huge controversies about its validity, it has had widespread success and remains even today a valid tool of analysis. This is the reason why the Georgian GGS makes use of that index, even if in a slightly modified version, adapted to the new context, that is: *"People sometimes talk about what the aims of this country should be for the next 10 years. Above are listed some of the goals which different people would give top priority. Would you please say which one of these you, yourself, consider the most important? And which would be the next most important?"*

- a) *A stable economy*
- b) *Progress toward a less impersonal and more human society*
- c) *Progress toward a society in which ideas count more than money*
- d) *The fight against crime".*

I develop the variable by using the four possible combinations of the two answers. I define as "post-materialist" those who chose b) and/or c) in both answers; "mid-high post-materialist" those who chose b) or c) in the first and a) or d) in the second; "mid-low post-materialist" those who opted for a) or d) first and b) or c) next; "materialist" who chose a) and/or d) in both.

In the GGS, the couple approach and the modules including the division of household and caring tasks, income, resources, decision-making patterns, satisfaction with the partner's collaboration, disagreement and violence in the partnership, provide an opportunity to study the relationship between gender differences, changing gender roles and their impact on demographic behaviour.

I focus on the satisfaction level of women concerning the division of domestic chores with their partners. That item highlights the fundamental, subjective aspect of the gender equity

approach, that is, the possible burden and the consequent dissatisfaction of women resulting from a strong inequality and asymmetry in the role-set within the family.

Satisfaction of chores' division. I compute a dichotomous variable (satisfied or not satisfied) by using answers to the following question in the survey: “*How satisfied are you with the division of household tasks between you and your partner/spouse?*”.

Finding a variable that could effectively represent the multiform concept of anomie is very problematic, especially because it refers to emotions and feelings that are hardly identifiable and measurable. Nevertheless, in the section “Health and Well-Being” the Georgian GGS offers well-established tools for measuring subjective well-being, that can be used as measures of anomie. In particular, the shortened version of the loneliness-scale, developed and tested by De Jong Gierveld (De Jong Gierveld and Kamphuis, 1985) is particularly useful. The model is based on the so called cognitive theoretical approach to loneliness. Characteristic of this approach is the emphasis on the discrepancy between what one wants in terms of interpersonal affection and intimacy, and what one has: the greater the discrepancy, the greater the loneliness. Background characteristics (such as marital status, sex and living arrangements), descriptive characteristics of the social network, number and frequency of contacts with network members, and personality and health were identified as important loneliness-provoking factors. Other factors found to be of crucial importance included social norms and values, expectations of support associated with certain relationships, and the positive or negative evaluation of the network of relationships-as-realized.

Considering that loneliness, or subjective social isolation, is defined as a situation experienced by the participant as one where there is an unpleasant or inadmissible lack of (quality of) certain relationships, the importance of social perceptions and evaluations of one's personal relationships is emphasized. In this way, this scale partly considers and measures also the role of the social capital and the importance of social ties.

Anomie Index. The shortened version of the scale consists of the following selected items:

- a) There are plenty of people that I can lean on in case of trouble*
- b) I experience a general sense of emptiness*
- c) I miss having people around*
- d) There are many people that I can count on completely*
- e) Often I feel rejected*
- f) There are enough people that I feel close to”.*

According to the different answers (“yes”, “more or less” and “no”) I give a different score, I then sum the scores of all the considered items and standardize the sum. In this way, the index is equal to one when the level of anomie/loneliness is maximum, and it is equal to zero when the degree is null.

5. Results

Table 3 presents the model results in terms of odds-ratios (the reference category is denoted by 1). The distribution and categorization of the sample by each considered variable is shown in the Appendix, Table A1.

Variables	Now	Within 3 years	Ever
Age:			
18 – 24	8.29***	22.83***	57.31***
25 – 29	11.57***	10.43***	19.08***
30 – 34	12.82***	12.35***	17.78***
35 – 39	5.05***	3.71**	3.50**
40 – 45	1	1	1
Household income quintiles:			
1 st quintile	0.45*	0.62	0.60
2 nd quintile	0.46*	1.15	0.65
3 rd quintile	0.49*	0.76	1.25
4 th quintile	0.61	0.79	0.74
5 th quintile	1	1	1
Education:			
Primary	1	1	1
Secondary	0.42**	0.28**	0.41**
Higher	0.65	0.70	0.97
Post – materialism Index:			
Post – materialist	0.82	1.70	0.88
Mid – high post – materialist	0.87	0.97	0.68
Mid – low post – materialist	1.2	0.84	1.01
Materialist	1	1	1
Satisfaction of chores’ division:			
Not satisfied	0.55*	0.64	0.48*
Satisfied	1	1	1
Anomie Index	0.25**	0.20**	0.27

*** p<0.01; ** p<0.05; * p<0.1.

Table 3: Odds-ratios for determinants of intention to have the second child now, within 3 years and ever. Results of applying a binary logistic regression on complete sample.

Source: My estimation based on the Georgian GGS.

Before analyzing the effects of each explanatory variable, it is easier to note that the regression model applied to data on the intention to have the second child now has a larger number of statistically significant variables. I cannot exclude a possible endogeneity of determinants in that decision-making process. Indeed, the intention to have another baby now actually is not properly an intention, but already a sort of decision or choice, considering the narrow period of time between the “intention” and its actual enactment. Such a decision

concerning the present is inevitably influenced by the contingent situation and status of the decision-maker, that is, by factors which compose and characterize, as endogenous, such a present reality. Differently, intentions that concern the future might be affected by today's factors, but their weight could be cushioned by others, such as uncertainty, expectations and attitude towards the future.

Regarding the effect of age, while women aged 30-34 are more likely than all the other age groups to intend to have the second child now, younger respondents, aged 18-24, are the most disposed to have another baby within three years, followed again by those aged 30-34. Therefore, looking at the intention to ever have the second child, it is not surprising to note that the younger the respondent, the greater is the likelihood of intending to have another baby. Present data cannot be used to investigate whether intentions change with age, but it might be argued that a relatively advanced age can play an important role in having the second child soon.

The positive correlation between income and fertility intentions seems to be verified, at least on intention to have the second child now: the lower the level of household income, the lower the childbearing intention is. Postponement of the second child could be associated with better expectations concerning future household income.

Concerning education, women who attended secondary school are always less likely, compared to those with primary education, to intend to have the second child, regardless of when. Such data could be explained by an orientation of these women towards their further education. Present data do not seem to confirm the theory that claims that higher educated women are less disposed to have another child, being more oriented towards career. Though that might be true, a higher educational level is also associated with a higher income, which is, in turn, linked to a greater likelihood of intending to have the second child. Moreover, to this end, Perelli-Harris' study (2005) about the Ukraine provides some interesting idea. According to her, post-Soviet women have had to face discrimination and inequality in the labour market. In addition, current economic conditions have provided few opportunities for female career development. In such an environment, once they have completed their education, women might prefer to dedicate themselves to the family and maybe to having another child, instead of pursuing a long-term, professionally fulfilling career that will probably not be available to them.

Adherence to post-materialist values does not seem to have any effect on the fertility intentions considered. This lack of significance may be explained by the very small number of "post-materialist" respondents (around 8%). However it is difficult to say if such a finding

is a result of a real lack of correlation between post-materialism values on fertility intentions, or a consequence of selecting that variable as a measure of ideational changes.

Women dissatisfied with the involvement of partner in domestic chores are less likely to intend to have the second child now. The same happens with general, long-term intentions. What is difficult to explain is the lack of such a correlation in intention to have another baby within three years. Maybe an excess of optimism somehow plays a role in this kind of intention, whereas in long-term plans optimism could be overshadowed by awareness of impossibility of changing such a deep-rooted gender role-set within the family. To this end, Weinstein (1980) found that intentions are often excessively optimistic, particularly among young adults. In the specific case of fertility decision-making, these young adults might underestimate the effects of factors that will inhibit childbearing or over-estimate their ability to control such factors. That could be a further explanation of the lack of significant effect of household income on intentions oriented towards the future. Moreover, that theory could be useful also to explain the effect of anomie. This variable, in fact, is significant on intentions to have the second child now and within three years, but not in the long-term (ever). Indeed, according to data in table 3, odds-ratios show that women who feel alone or disoriented are less likely to intend to have another baby today as well as in the near future. However, hope for a better future may play an important role in lessening that anomie's effect in the more distant time.

6. Conclusion

I undertook this study with the purpose of enriching the current debate on the reasons for the abrupt fertility decline in Central and Eastern European countries. In particular, I focus on Georgia, one of the least studied countries of the region, investigating the determinants of the fertility drop experienced since the start of the transition.

Using data of the Georgian Generations and Gender Survey carried out in 2006, I showed that the postponement of first birth does not significantly account for the decline in childbearing. In a country characterized by a maintained young age at first birth and by a low level of voluntary childlessness, the fertility decrease is primarily due to a reduction or postponement of second-order births. I therefore examined the determinants of intentions to have a second child, considering three different timings: now, within three years and ever. The separated analysis of fertility intention by timing of desired birth allows the observer to see if the determinants' effect differs in short-term intentions compared to long-term ones.

Indeed, in this way, factors could be distinguished that affect the likelihood of having the second child now, soon or later/ever respectively.

I found that only the education variable has an effect in each different type of intentions: women with secondary education are always less likely to have the second child than those with primary education. According to the economic approach, it might be argued that women who have attended secondary school are more oriented towards the completion of education and maybe towards career. However, since this datum does not hold for higher educated women, it could also be hypothesized that, once they have reached a higher education, fertility intentions could change in favour of childbearing and family in relation to career. A discriminatory and unequal labour market towards women could also play a decisive role in such a change.

The other explanatory variables have only a timing-specific effect on fertility intentions. In particular, there is some evidence of the influence of the economic factor on intentions concerning the present: higher household income is associated with a greater likelihood of intending to have the second child now.

Women's dissatisfaction concerning the division of domestic chores within the couple seems to negatively affect fertility intentions about the present and in the long term (ever), but not the intention to have the second child within three years. I suggested that an excess of optimism could play somehow a role in shaping intentions concerning the upcoming future. However, further studies would be required to understand the dynamic of that relationship.

The anomie variable, that is the measure of loneliness and psychological well-being of respondents, appears to be among the factors that distinctly reduce the likelihood of intending to have the second child soon. Indeed, the greater the anomie index, the lower is the probability of having another child now or within three years. Put another way, disorientation and loneliness could lead to postponement of the second birth. The non-significant effect of anomie on more general and long-term intentions could be related to an optimistic view of the future.

Ideational changes are here represented by an index that measures the adherence of respondents to post-materialistic values. That variable does not seem to have any effect on fertility intentions. Such a finding could also be due to the fact that only a small minority of the sample declared to adhere to these new values.

It is important to underline that all these findings has to be considered as tentative. I am well-aware of the three main limitations of my analysis. First, the selection of the explanatory variables could be not completely appropriate. The choice of such variables is

subjective and leads inevitably to an approximation. Therefore I cannot assert that they validly represent the explanatory approaches that guided me in developing my study. Second, the dichotomous nature of the three dependent variables cannot express the nuances of the intentions. Third, the size of the sample could be too small for such a wide and complex analysis.

Nevertheless, I think that my study can provide a useful contribution in more than one area. Indeed, it enriches information about demographic behaviour in Georgia, giving some ideas and input for further studies. Moreover, it could provide a contribution to the debate concerning the nature of fertility intentions. In the end, it may support the more recent, and therefore less established, explanatory approach, that underlines the importance of anomie in the recent fertility fall in Central and Eastern Europe.

References

- Agresti A. (1996). *An Introduction to Categorical Data Analysis*. John Wiley and Sons, Inc.
- Australian Bureau of Statistics (2002). *2001 Census of Population and Housing-Fact Sheet: Income Imputation, 2001*.
- Becker G. S. (1960). *An economic analysis of fertility*. Princeton: Princeton University Press.
- Bianchi M. (2000). Maternal employment and time with children; dramatic change or surprising continuity. *Demography*, 37(4): 401-414.
- Billari F., Frejka T., Hobcraft J., Macura M. and van de Kaa D. (2004). Discussion of paper 'Explanations of the fertility crisis in modern societies: A search for commonalities', *Population Studies* 57(3): 241–263, by John Caldwell and Thomas Schindlmayr. *Population studies*, 58(1): 77-92.
- Blossfeld H. P., Golsch K. and Rohwer G. (2007). *Event History Analysis with Stata*. LEA.
- Bongaarts J. and Feeney G. (1998). On the Quantum and Tempo of Fertility. *Population and Development Review*, 24: 271-292.
- Buehler C. and Philipov. D. (2005). Social capital related to fertility: theoretical foundation and empirical evidence for Bulgaria. *Vienna Yearbook of Population Research*. Vienna: Austrian Academy of Sciences: 53-82.
- Bühler C. and Fratzak E. (2004). *Social Capital and Fertility Intentions: The Case of Poland*. Max Planck Institute for Demographic Research Working Paper, 2004-012.
- Casella G. and Berger R. (2002). *Statistical Inference*, Second Edition. Duxbury Advanced Series.
- Chesnais J. C. (1990). Demographic transition patterns and their impact on the age structure. *Population and Development Review*, 16(2).
- Coltrane S. (1996). *Family man. Fatherhood, housework, and gender equity*. New York, Oxford University Press.
- Cooke L. P. (2003). *The South revisited: The division of labour and family outcomes in Italy and Spain*. Iriss Working Paper Series, 2003-12.
- Council of Europe (2004). *Recent demographic developments in Europe*. Council of Europe Publishing.

- Cromton R. (2004). Women's employment and work-life balance in Britain and Europe. Keynote speak at the International Conference "Work and Time Balance across the life-course", Edinburgh, 29 June-2 July 2004.
- Di Giulio P. and Carrozza S. (2003). Il nuovo ruolo del padre, in Pinnelli A., Racioppi F. and Rettaroli R. (eds). *Genere e Demografia*. Bologna, Il Mulino.
- Fisher K., McCulloch A. and Gershuny J. (1999). *British fathers and children; a report for Channel 4 "Dispatches"*. Technical report, Institute for Social and Economic Research, Colchester, UK.
- Genov N. (1998). Transformation and anomie: problems of quality of life in Bulgaria. *Social Indicators Research*, 43: 197-209.
- Gustafsson S. (2001). Optimal age at motherhood. Theoretical and empirical considerations on postponement of maternity in Europe. *Journal of Population Economics*, 14(2): 225-247.
- Hallberg D. and Klevmarcken A. (2001). *Time for children: A study of parents time allocation*. Technical report, Uppsala University, Department of Economics.
- Hill R. C., Griffiths W. E. and Judge G. G. (1997). *Undergraduate Econometrics*, Second Edition. John Wiley & Sons, Inc.
- Hochschild A. (1989). *The second shift. Working parents and the revolution at home*. Viking, New York.
- Inglehart R. (1971). The Silent Revolution in Europe: Intergenerational Change in Post-Industrial Societies. *The American Political Science Review*, 65(4).
- Inglehart R. (1977). *The Silent Revolution: Changing Values and Political Styles Among Western Publics*. Princeton: Princeton University Press.
- Islam M. and Bairagi R. (2003). Fertility intentions and subsequent fertility behaviour in Matlab: do fertility intentions matter? *Journal of Biosocial Science*, 35: 615-619. Cambridge University Press.
- Jong Gierveld, J. and Kamphuis, F.H. (1985). The development of a Rasch-type loneliness-scale. *Applied Psychological Measurement*. 9: 289-299.
- Knijn T. and Selten P. (2002). Transformations of fatherhood: the Netherlands, in B. M. Hobson (ed.). *Making Men into Fathers: Men, Masculinities and the Social Politics of Fatherhood*. Cambridge University Press, Cambridge, UK.
- Kohler H. P. and Philipov D. (2001). Variance effects in the Bongaarts-Feeney formula. *Demography*, 38(1): 1-16.

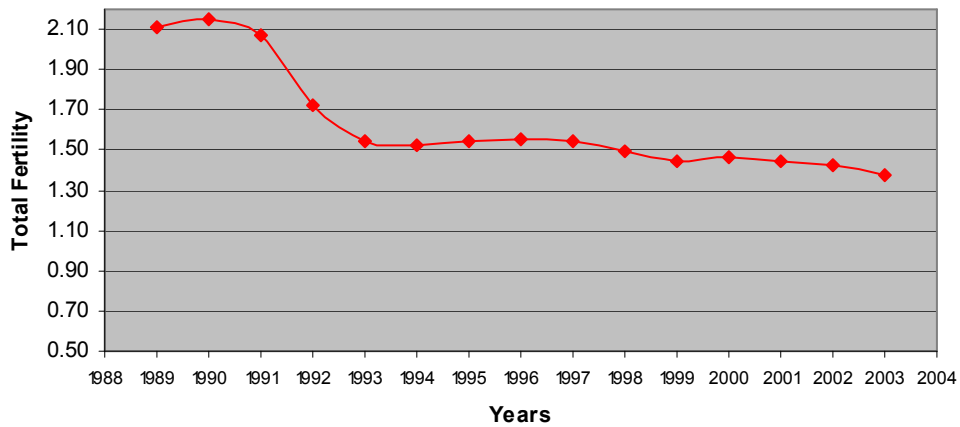
- Kohler H. P., Billari F. and Ortega J. (2002). The Emergence of Lowest-Low Fertility in Europe During the 1990s. *Population and Development Review*, 28(4).
- Kotowska E. (1999). *Demographic change in Poland during the 90s in the light of the second demographic transition* (in Polish). Szkola Glowna Handlowa w Warszawie.
- Lehrer E. and Nerlove M. (1986). Female labour-force behaviour and fertility in the United-States. *Annual Review of Sociology*, 12: 181-204.
- Lesthaeghe R. and Surkyn J. (2002). *New Forms of Household Formation in Central and Eastern Europe: Are they related to newly emerging Value Orientations?* Interuniversity papers in demography working paper, 2002-2.
- Lesthaeghe R. and van de Kaa D. (1986). “Twee demografische transitities?” (Two demographic transitions?) in Lesthaeghe & van de Kaa (eds). *Bevolking - Groei en Krimp*, Mens en Maatschappij, Van Loghum Slaterus, Deventer, 1986: 9-24.
- Lundberg S. and Pollak R. (1996), Bargaining and distribution in marriage. *Journal of Economic Perspective*, 10(4): 139-158.
- Matthews B. (1999). The Gender System and Fertility: An Exploration of the Hidden Links. *Canadian Studies in Population*, 26(1): 21-38.
- McDonald P. (2000). Gender equity in theories of fertility. *Population and Development Review*, 26(3): 427-439.
- Menard S. (1995). *Applied Logistic Regression Analysis*. Sage Publications. Series: Quantitative Applications in the Social Sciences, No. 106.
- Mencarini L. and Tanturri M. L. (2006), Childcare involvement of Italian Fathers. *Paper presented at the PAA meeting*, Los Angeles 2006.
- Micheli G. and Bernardi L. (2003). *Two theoretical interpretations of the dissonance between fertility intentions and behaviour*. Max Planck Institute for Demographic Research Working Paper, 2003-009.
- Miller Torr B. and Short S. E. (2004). Second Births and the Second Shift: A Research Note on Gender Equity and Fertility. *Population and Development Review*, 30(1).
- Morgan S. P. (2003). Is Low Fertility a Twenty-First-Century Demographic Crisis? *Demography*, 40(4).
- Olah L. S. (2003). Gendering fertility: second births in Sweden and Hungary. *Population Research and Policy Review*, 22: 171-200.

- Olds and Westoff (2004). *Report on Abortion and contraception in Georgia and Kazakhstan.*
- Perelli-Harris B. (2005). The path to lowest-low fertility in Ukraine. *Population studies*, 59(1).
- Philipov D. (2002). *Fertility in times of discontinuous societal change: the case of Central and Eastern Europe.* Max Planck Institute for Demographic Research Working Paper, 2002-024.
- Philipov D. and Dorbritz J. (2003). Demographic consequences of economic transition in countries of central and eastern Europe. *Population studies*, 39. Council of Europe Publishing.
- Philipov D. and V. Shkolnikov (2001). Fertility intentions and social capital-based coping strategies: results from the Russian longitudinal monitoring survey. *Paper presented at the PAA meeting*, Washington D.C 2001.
- Philipov D., Spéder Z. and Billari F. (2006). Soon, later, or ever? The impact of anomie and social capital on fertility intentions in Bulgaria (2002) and Hungary (2001). *Population studies*, 60(3).
- Rabušic, L. and P. Mareš (1996). Is Czech Society Anomic? *Sociologicky Casopis* XXXII: 2, 175-187 (in Czech).
- Rieck D. (2006). *Transition to second birth - the case of Russia.* Max Planck Institute for Demographic Research Working Paper, 2006-036
- Rousselet K. (1994). Anomie, recherche identitaire et religion en Russie. *Social compass*, 41(1): 137-150.
- Schoen R., Kim Y., Nathanson C., Fields J. and Astone N.M. (1997). Why do Americans want children? *Population and Development Review*, 23(2).
- Serbanescu F., Imnadze P., Bokhua Z., Nutsubidze N., Jackson D. B. and Morris L. (2007). *Reproductive Health Survey Georgia, 2005, Final Report.* U.S. Department of Health and Human Services.
- Smith A. (2004). Who Cares? Fathers and the Time They Spend Looking After Children. *Paper presented at the Second International Conference EPUNET*, Berlin, 2004.
- Spéder Z., Paksi B. and Zs. Elekes (1999). Anomie and Satisfaction at the Beginning of the Nineties. In: T. Kolosi, I. Tóth and G. Vukovich (editors): *Social Report 1998.* Social Research Informatics Center, Budapest: 483-505.

- Srole L. (1956). Social integration and certain corollaries: an exploratory study. *American sociological review*, 6: 709-716.
- Thomson (1990). Two into one: Structural models of couple behaviour, in Draper C.W. e A.C. Marcos (a cura di), *Family variables: Conceptualisation, measurement and use*. Newbury Park, Ca, Sage.
- Thornton A. and Philipov D. (2007). *Family and Demographic Behavior in Central and Eastern Europe: Changing Influences of Developmental Idealism, Political economy, and Intergenerational Relationships*.
- Toulemon L. and Testa M. (2005). Fertility intentions and actual fertility: A complex relationship. *Population and Societies*, 415.
- Vikat A., Spéder Z., Beets G., Billari F. C., Bühler C., Désesquelles A., Fokkema T., Hoem J., MacDonald A., Neyer G., Pailhé A., Pinnelli A. and Solaz A. (2007). Generations and Gender Survey (GGS): Towards a better understanding of relationships and processes in the life course. *Demographic Research*, 17(14).
- Weinstein N. (1980). Unrealistic optimism about future life events. *Journal of Personality and Social Psychology*, 39(5): 806-820.

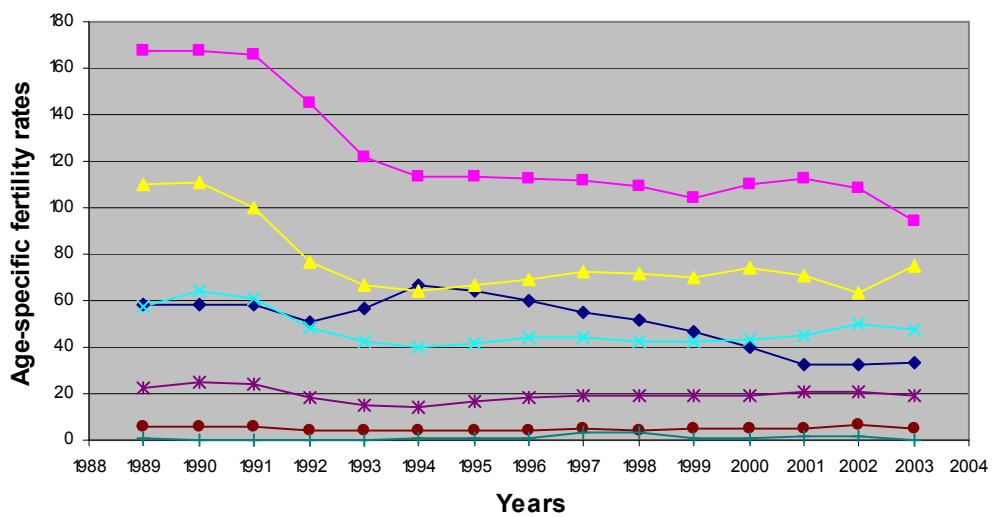
Appendix

Figure 1: Total fertility rate in Georgia between 1989 and 2003



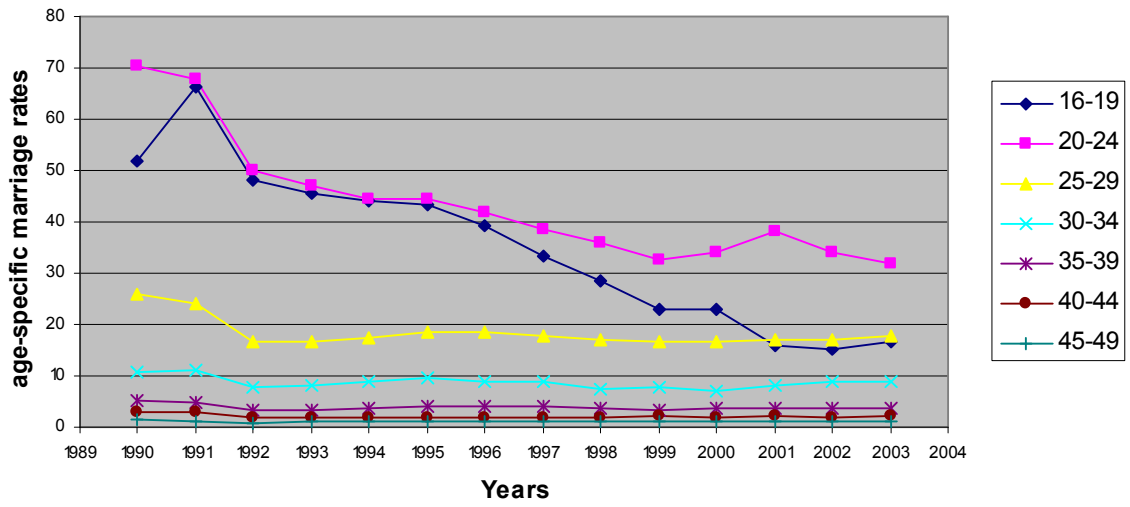
Source: The GGP contextual database.

Figure 2: Age-specific fertility rates between 1989 and 2003



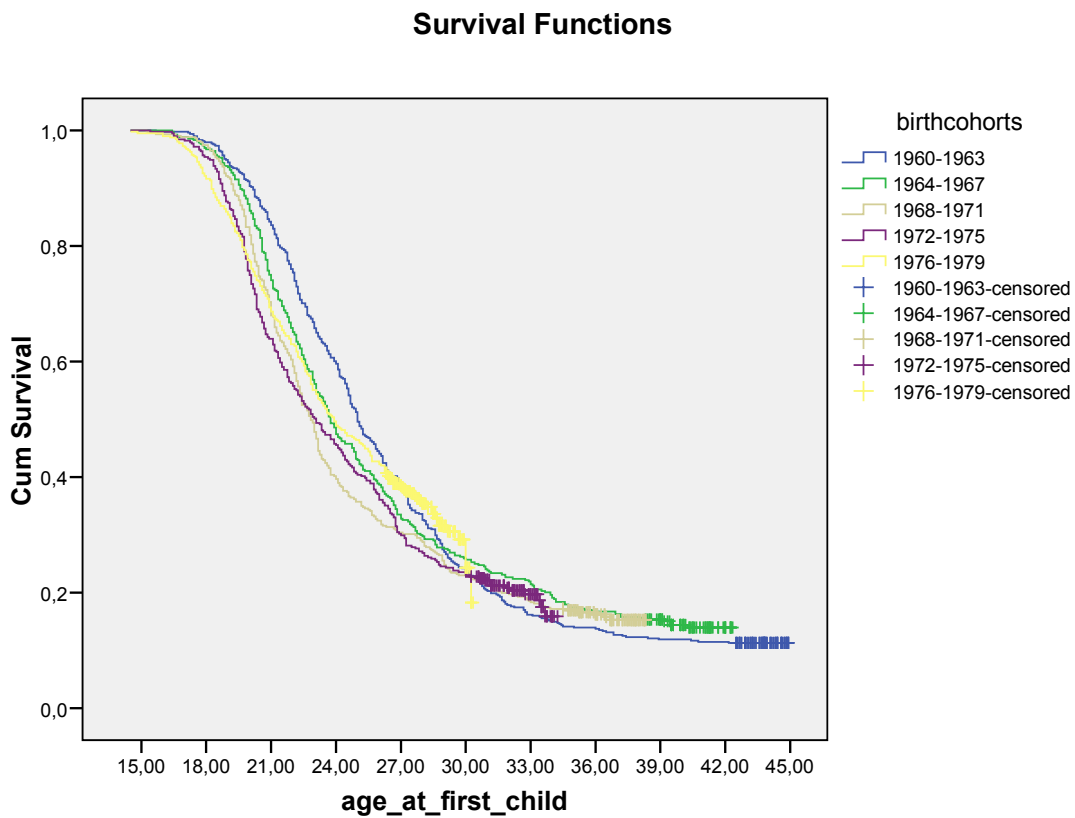
Source: The GGP Contextual Database.

Figure 3: First marriages by 1000 females by age group between 1990 and 2003



Source: The GGP Contextual Database.

Figure 4: Survivor functions of 4-years birth cohorts born between 1960 and 1979



Source: My estimation based on the Georgian GGS.

