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Where have all the children gone?

A study of the social determinants of fertility postponement: The case of Hungary since 1988

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Abstract

What are the main social factors that help us to understand Hungary's fertility trend as reflected in the total fertility rate (TFR) since 1988?

Since its democratic transition in 1989, Hungary's fertility trend has been characterized by rapid fertility declines. Coupled with a significant rise in mean age at childbearing by birth order, this indicates a trend of fertility postponement. Outlining various fertility measures, this essay uses demographic methods based on the total fertility rate (TFR) to explore the changing fertility rate of Hungary since 1988. Switching to a sociological viewpoint, the essay explores how the problems and changing social context of a post-transitional Hungary can help us to understand this trend. This essay finds that large-scale change in further education enrolment and evidence of a society burdened by anomie (lack of social norms), coupled with a chronic lack of social capital, are likely to be the main social factors responsible for its fertility trend. Hungary's fertility history is compared with other former socialist countries with "lowest-low" (TFR<1.3) fertility levels, where common themes of social and economic turmoil are observed. Based on these findings and assuming long-term political stability, this essay concludes that Hungary's ageing population is unlikely to reach replacement level again in the near future, with minority integration playing a key part in Hungary's demographic and social future.

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Chapter 1 Introduction

The decision to have a child, which—in the developed world—is arguably one of the biggest turning points in every person's life, is influenced by a multitude of variables. Increasingly, women in industrial countries are deciding to postpone their childbearing or even opt out of childbearing entirely, a process never before witnessed to such extent in the evolutionary history of our species and with substantive economic implications (cf. Becker et al. 1960, Bradshaw & Hatland 2006). The question of reproduction transcends time and space, and its implications are far-reaching. Added together, these individual decisions have huge social, political, and economic implications on future populations, which are explored here through a case study of Hungary.

Social sciences such as sociology and demography are limited in their ability to conduct experiments in laboratory settings, and instead study human interaction in day-to-day settings, making it difficult to reach definitive conclusions. However, rare circumstances, such as extreme political transitions and turmoil, lend themselves to social experiments—one large variable is changed, leaving one to observe various consequences. As such, the political and social transitions in numerous Eastern European countries in the last decade of the 20th century are a suitable setting for the present analysis, whose transitions from socialist to free market economies were characterized by rapid political, economic, and social change, inevitably followed by shifts in values and consequent lifestyle changes.

This essay addresses the question: What are the main social factors that help us to understand Hungary's fertility trend as reflected in the total fertility rate (TFR) since 1988? Hungary, one of the former communist "Eastern Bloc" countries, was one

of the most liberal of its Eastern contemporaries, its political system often being referred to as "goulash communism" or Kádárism for its elements of free market economy and lax "live and let" philosophy (Lendvai 1988:66). Since the transition to capitalism in 1989, the already low fertility rates of Hungary have dropped from an average of 1.97 live births per woman in 1991 down to 1.24 in 2011 (Pongrácz 2012)—the lowest fertility rate ever to be recorded in Hungary's history.

The historical context of Hungary's fertility trend, combined with a relatively rich and accurate data set, makes Hungary a valuable case study, and findings from this essay may be applicable to other Eastern European low-fertility countries. Where previous international research in this area has been predominantly limited within disciplines (as in Becker 1981, Carlson & Klinger 1987, Philipov & Kohler 2001, Frejka & Calot 2001, Billari & Kohler 2004), the interdisciplinary approach to studying fertility patterns proposed in this essay suggests a multi-angle approach to fill these knowledge gaps, perhaps leading to more reliable findings.

The essay aims to explore fertility first from a predominantly demographic perspective, using and adjusting Hungarian fertility data, to see and understand the trend. Breaking it down into its parts, the essay begins by taking a brief look at Hungary's history to put its fertility history into context (*Chapter 2)*, then discusses the scope, methodology and limitations of the quantitative and qualitative data and analyses (*Chapter 3)*. The essay then outlines Hungary's fertility trend through various methods uses the Hungarian dataset for novel calculation and graphical representation of fertility rates, which are presented in *Chapter 4*.

For the second part, the essay switches to a predominantly sociological perspective to analyse the demographic trends as the outcome of the state of the Hungarian society since 1988. Turning form the "what?" to the "why?", the essay

explains why it is useful to explain the trend through a sociological perspective (*Chapter 5*), giving a review of the literature before applying models of "new home economics," education, "anomie" (lack of social norms—"normlessness") and lack of social capital (investment in others) to Hungary as the main social explanatory variables for its fertility decline and postponement. It then examines how these may also apply to other former socialist "lowest-low" fertility (TFR<1.3) countries. The essay explores possible current social dynamics and trends influencing fertility to make a prediction about future fertility trends in Hungary (*Chapter 6*).

The conclusion integrates demographic and sociological approaches, showing that demography and sociology are fundamentally linked, and only when brought together shed light on the complexity of the study of fertility patterns around the world. The essay concludes (*Chapter* 7) that the fertility trend observed in Hungary since 1988 is the combined result of a large shift in the social environment to necessitate increasing education, with the unintentional side effect and consequence of fertility postponement, coupled with nation-wide anomie (normlessness) and a lack of social capital, something which can also be observed in other former socialist countries. This provides much scope for future research, some suggestions for which are outlined in the conclusion.

Chapter 2 History of Hungary: The Data in Context

A landlocked country East of Hajnal's line (Hajnal 1965), Hungary has had a unique history marked both by Eastern and Western fertility patterns, characterised by a relatively early start to the first demographic transition (defined below). Today, as a member of the EU, Hungary is a fully industrial country with one of the lowest fertility rates worldwide (Human Fertility Database 2011). Despite fitting a general trend of "lowest-low" fertility [observed where fertility rates (TFR) fall below 1.3 (Kohler et al. 2002)] in most parts of Europe today, it is necessary to put Hungarian fertility trends into an international and historical context by taking a brief historical tour of Hungary before 1988.

"In traditional societies, fertility and mortality are high. In modern societies, fertility and mortality are low. In between, there is the demographic transition" (Demeny 1968:502). This statement, a broad generalisation of the first demographic transition, is an oversimplification of a much more complex mechanism, but it describes its general path. The first demographic transition, beginning in the 18th century in Europe, was characterised by a universal wave of declining death and birth rates due to economic and social development into 'modern times' where death and (in theory) birth rates were again balanced (Coleman 2007:8). Though at different times, this decline in fertility was universally observed across the developed world (Coleman 2007:8). Hungary's fertility decline was scattered: originating and developing in and among the peasantry, it subsequently spread through geographic diffusion (Démeny 1968:519). Despite an absence of any fundamental modernization of the underlying socio-economic structure, Démeny (1968) found this early fertility decline to result from a combination of increasing degrees of voluntary control of

marital fertility combined with a delay and avoidance of marriage, quite untypical of a country East of Hajnal's line, which are usually characterised by early marriage (519).

In the period after World War II, the total fertility rate stabilized below replacement level at an average of around 1.9 children per woman (Klinger 1991:215). After World War II, Soviet troops occupied Hungary, which subsequently became a satellite state of the Soviet Union. A Hungarian uprising in November of 1956 to overthrow the communist regime failed, leaving over 25,000 Hungarians dead (Jenkö et al. 1999:350). After the unsuccessful revolution, the Soviets elected János Kádár from the Socialist's Worker Party as the next Prime Minister of Hungary, who relaxed many of the central planning policies (Lendvai 1988). These political changes also reflected in changes in fertility.

During this time, between 1950 and 1982, the marriage rate decreased significantly and an overall decrease in fertility rates could be observed (Klinger 1991:221). In 1953, the government introduced new explicitly pro-natalist social policies to "develop the protection of mothers and children" (David 1999:147), which increased the medical provisions for pregnant women and improved social benefits, all in an attempt to influence reproductive behaviour positively through administrative measures (David 1999:147). The ideal fertility model within the communist area was "early marriage and childbearing with two children" (Spéder & Kamarás 2008: 599), so when these measures, though fostering economic growth and improving living standards, didn't yield any increases in fertility and instead increased the labour force participation of women, the government decided to resort to more drastic measures. This occurred in the form of a ban on previously extremely liberal abortion policy, and with it came a temporary 20% increase in fertility (Klinger 1991:213), largely due to the severe penalties threatened for performing illegal abortions (David 1999:144).

However, following severe negative public reaction, these restrictions were relaxed again in 1954, followed by a sanctioning of abortions on request two years later (David 1999:147).

In 1958, Hungary became the first country whose fertility level declined below replacement level, dropping to very low levels even in world comparison by the early 1960s (Klinger 1991:221). In response to this constant decline, increasingly considering the demographic component in societal planning, the government introduced a childcare allowance in 1967 (GYES), which allowed mothers 24 weeks of maternity leave with normal wages (Pongrácz 2012). This had the effect of increasing fertility moderately in the second half of the 1960s (Klinger 1991:213), though to date, it has never come close to reaching replacement level again.

In 1968, Hungary was the first Eastern European country to relax its central economic planning, and with a deepening economic crisis over the next decade, this economic liberality steadily increased. Additional complex pronatalist policies were implemented in 1973 (GYED), increasing maternity allowance and providing young people with improved housing benefits if they married—a significant benefit during a time of severe housing shortages (David 1999:150). The previously almost unlimited access to abortions was somewhat controlled—being allowed only in exceptional circumstances for social and medical reasons (David 1999:150). This caused a enormous temporary spike in the fertility rates observed between 1973 and 1974 (Spéder & Kamarás 2008). The Hungarian Demographic Research Institute found that the effect of these measures influenced cross-sectional (observing many subjects at one point in time) and completed fertility (total fertility attained at the end of the reproductive lifespan) positively by no more than 10% (Pongrácz 2012: 1).

By the mid-1980's, Hungary was only formerly still a communist state (David 1999:145). Oral contraceptives were made freely available, countering all fertility-increasing effects (David 1999:146). Additionally, in the second half of the 1980s, the declining economic situation became ever more apparent, and rapid inflation greatly devalued any family allowance and other monetary government incentives that came with having children (Klinger 1991:223).

Reforms continued and paved the way for a political liberalization, which was successfully achieved in 1989, when a multiparty system was first set up, and finalised in 1990, when the election result ousted the communist regime (David 1999:146). The last Soviet Soldier left Hungary on June 19th, 1991, a national holiday thereafter called "A Független Magyarország Napja", or "Day of the Independent Hungary" ("Terror" 2010). Since then, Hungary's total fertility rate has consistently remained well below replacement level, despite continued government efforts to positively influence birth rates to at least stabilise at replacement level (David 1999:146)—a goal that this essay will argue seems increasingly unattainable from year to year.

Chapter 3 Scope, Data, Methods and Limitations

This essay will use novel analysis of quantitative demographic data as an aid in understanding qualitative social observations, with both subjects having different methodologies. All fertility data used is based on Hungarian fertility data taken from the Human Fertility Database (http://www.humanfertility.org), a database of freely available cohort and period fertility data for a range of countries around the world. Since the establishment of the independent Hungarian state in 1918, the Központi Statisztikai Hivatal [Hungarian Central Statistical Office, or HCSO] was established, acting as the main governmental body to collect population data of Hungary, and consequently, Hungary is home to some of the best and most complete fertility records in the world (Kamarás & Zeman 2011:1). As a result, Hungarian demographic developments are unusually well documented and continuous vital statistics are available for the past 100 years (David 1999:146). As a standard, these fertility data are collected in terms of women in their childbearing years, which has been assumed to be aged 15-49 as a set standard for statistical purposes. However, it is important to note that fertility patterns are changing, with young women having children earlier and reproductive technology allowing women to have children later in life. Therefore, the fertility data may not include all births, a limitation which could be explored in the future.

Additionally, the fertility data used assumes the same parity progression (number of offspring born) of immigrant women and native women of the same age (Kamarás & Zeman 2011:2). This may have introduced error as immigration could be a very relevant factor for Hungarian fertility as during the 1990s, as there were large waves of immigration from other Eastern European countries, especially in the form

of return migration of ethnic Hungarians from Romania and war refugees from former Yugoslavia (Radnóti & Jasilionis 2011:1).

Within fertility analysis, the total fertility rate (TFR), defined in *Chapter 4*) is one of the most useful measures to compare the fertility between countries, as it simplifies a complex measurement to one simple comparable number. However, it is crucial to remember that as a synthetic measure, the TFR does not give a correct measure of the number of actual births per women throughout their reproductive years, and it is completely independent of the age structure of the population, with equal weights given to each age group. A more long-term measure of fertility can be calculated by looking at cohort fertility levels, which reflect level changes in period fertility of a cohort (Schoen 2004:801). This may be useful to measure the completed fertility of a cohort of women born in the same year/year group using, for example, the completed fertility rate (CFR) statistic, which is the actual average number of births per woman at the end of her childbearing years (Bongaarts 2002:421). However, this measure has the drawback of only being useful as a retrospective study rather than measuring current fertility levels. As most of the cohorts of women of childbearing age since 1988 have not yet completed their fertility, this measure is not appropriate for the analysis at hand.

Once the data were collected, it was then adjusted using the TFR'/adjTFR formula outlined in *Appendix 1*. Schoen (2004) criticised the adjTRF's lack of accounting for a cohort effect, and the adjTFR's assumption that "an increase in the mean age at childbearing that is observed over a single period persists year after year throughout the reproductive lifespan of a hypothetical cohort…[as] by perpetuating a timing change observed in a single period, it may well magnify the tempo distortions rather than remove them" (Schoen 2004:805). Despite these criticisms, the TFR'

measure has continued to enjoy much popularity, as several papers have modified and adjusted the Bongaarts-Feeney TFR' formula, such as Kohler and Ortega (2002), who derived a more general postponement relationship, with the Bongaarts-Feeney formula as a special case, and extended this idea further into a more general tempo-adjusted period parity progression measure (Schoen 2004:805).

Besides practical criticisms, the TFR' data cannot show the full picture, and although it is a good statistical indicator of fertility postponement nationally, does not show some variables such as differences between the fertility trend of migrants and locals and regional differences, which demonstrate a marked trend in regional postponement differences which are not visible on the national level. For example, Wilson et al. (2010), looking at the role of migration as a possible compensation for fertility decline, came up with an *overall replacement ratio* (ORR), which assesses how far migration alters the extent of replacement for a birth cohort as it ages. The authors conclude that net migration has become a key factor in the population trends during the last decades, which may have also played a part in recent years in Hungary.

Having looked at the limitations of the demographic analysis, what limitations does the sociological analysis of the birth rate data have? As with any hypothesis in the sciences, it is extremely difficult to come up with a conclusion that can explain 100% of the fertility variation. It is the combined influence of a multitude of interplaying variables on numerous societal levels that determines the fertility rate of a country. In order to come to some more definite conclusions, survey data were used from the European Value Study, especially the Atlas of European Values (http://www.atlasofeur opeanvalues.eu/). Using survey data help to support the social theories this essay proposes with a high reliability, but this survey data also has several weaknesses, including being limited by the questions asked in the survey, being

inflexible, assuming subjects answer honestly, and information only being available in selected years—in this case, 1990, 1999, and 2008.

This study is restricted to examining four social variables that have been individually found to be major contributors to fertility decline, positing that only when combined do these main social factors help to paint a clearer picture of understanding fertility trends in Hungary. Other social variables that have also been found to influence fertility decisions internationally include, but are not limited to (not in order of importance): life setting (urban/rural) (Rindfuss & Sweet 1975, Yusuf & Rutherford 1981, Shapiro & Tambashe 2000), gender (in)equality (Becker et al. 1994, Caucutt et al. 2002), (lack of) capital (Bradshaw & Hatland 2006), (un)employment (Adsera 2005), income—which has been argued to be directly dependent on education and consequent employment (Philipov et al. 2006, Gábos and Szivós 2002), religion (degree of religiosity and denomination) (Blossfeld 1995), and social class (Blossfeld and Huinink 1991).

Other variables, such as economic (in)security, are also certain to have a large influence on fertility rates, and have been explored in depth from various angles (Micevska 2001, Bhaumik & Nuget 2002). Besides social and economic factors, politics and laws, briefly discussed in *Chapters 2* and *4*, have an impact on fertility rates internationally (Adsera & Menedez 2006). In Hungary, after the temporary ban on abortion was relaxed in Hungary in 1954, the artificially high TFR declined by 40% over the next eight years, showing the drastic effect political decisions can have on fertility behaviour (Klinger 1991:213). It is this political change that is being used as the independent variable, so this is not a problem in the present analysis.

Chapter 4 Fertility: Recording the Trend

Why is fertility such an important measure for a country? As this chapter will demonstrate, a country's fertility rate does not simply reflect the measured performance of births in a certain year; it may also affect a country's financial stability, social security and educational attainment.

Fertility originates from the Latin *fertilis*, meaning fruitful. Today, it has come to mean the measured performance of births. Fertility is a demographic measure that fluctuates over time. The most common standardized measure of fertility, the period total fertility rate, or TFR, of a country, is defined as "the average number of births a woman would have if she were to live through her reproductive years and bear children at each age at the rates observed in a particular year or period" (Bongaarts and Feeney 1998:271). A "replacement level" of fertility is 2.1 children per woman given the death rate is very low, as this level would keep the population at an identical level for the next generation. However, it is important to note that this is not a fixed measure. The TFR is the calculated sum of the age specific fertility rates (ASFRs) of women in five-year age groups multiplied by 5:

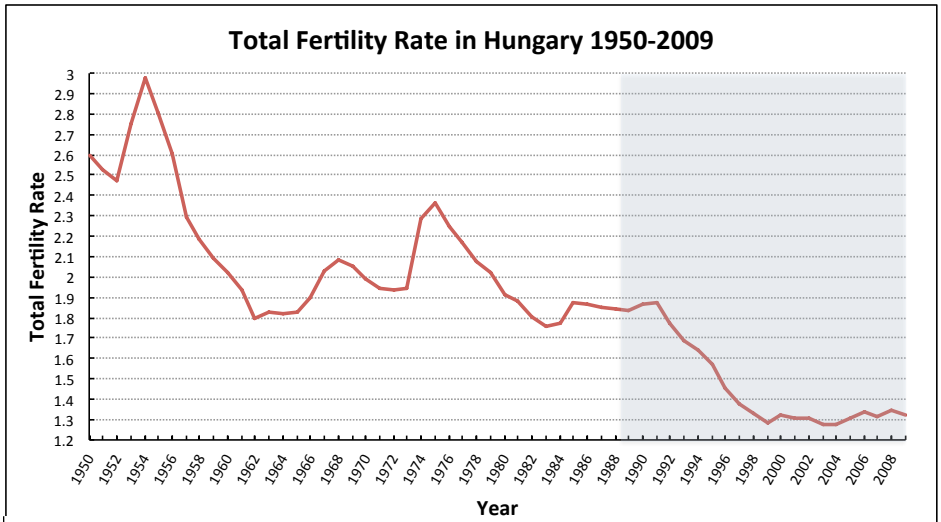
$$(\Sigma \text{ASFR}) \text{ x } 5$$

The ASFR, in turn, is calculated by:

$$\frac{B_x}{P_x} \, x \, 1{,}000$$

Where B_x is the number of live births at age x and P_x is the number of resident women at age x. *Figure 1* shows the calculated TFR of Hungary between 1950 and 2009, with post- political transitional fertility data shaded in grey.

Figure 1: *Hungarian TFR between 1950-2009*

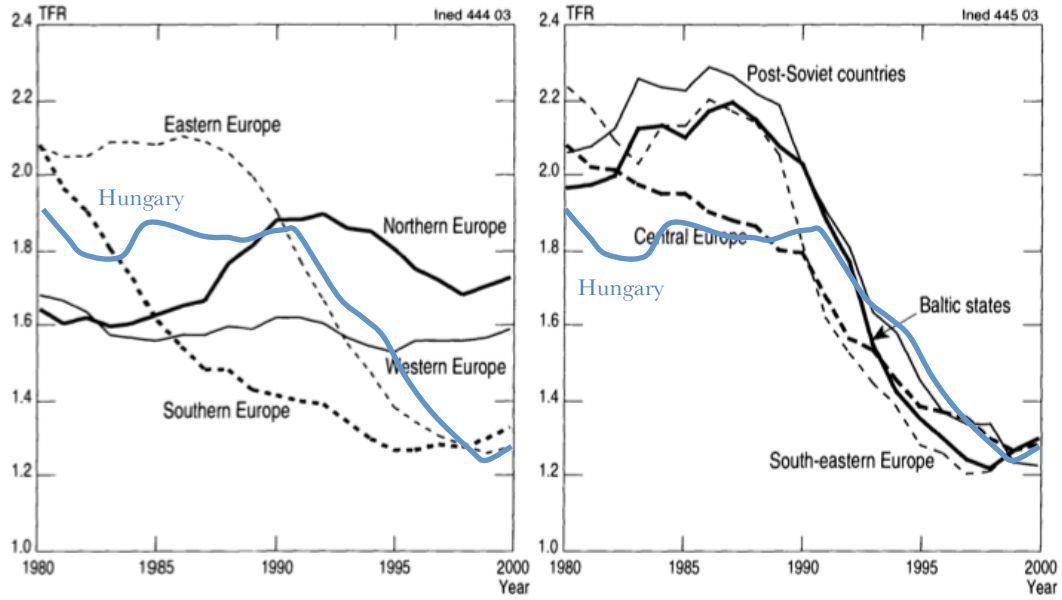


Source: Based on raw data from the Human Fertility Database

Since 1950, the Hungarian fertility rate has undergone some severe periods of fluctuation. From a TFR high of 2.975 in 1954 to a lowest-low level of fertility of 1.24 in 2011 (Pongrácz 2012), Hungary's fertility pattern contrasts starkly with a Western European Pattern.

Because of its early fertility decline to below replacement level fertility, with 16.9% (2011) of its population over the age of 65, Hungary currently has the "oldest" population of any of the formerly socialist countries (CIA World Factbook: 2011). *Figure 2* contrasts Hungarian fertility with that of other European countries, showing an interesting pattern compared with the rest of Europe until the shift away from socialism in 1989/1990, after which Hungary follows a similar pattern to the other Eastern European countries.

Figure 2: *Total European Fertility Rates 1980-2000*



Total fertility rate in European and eastern European regions, 1980-2000

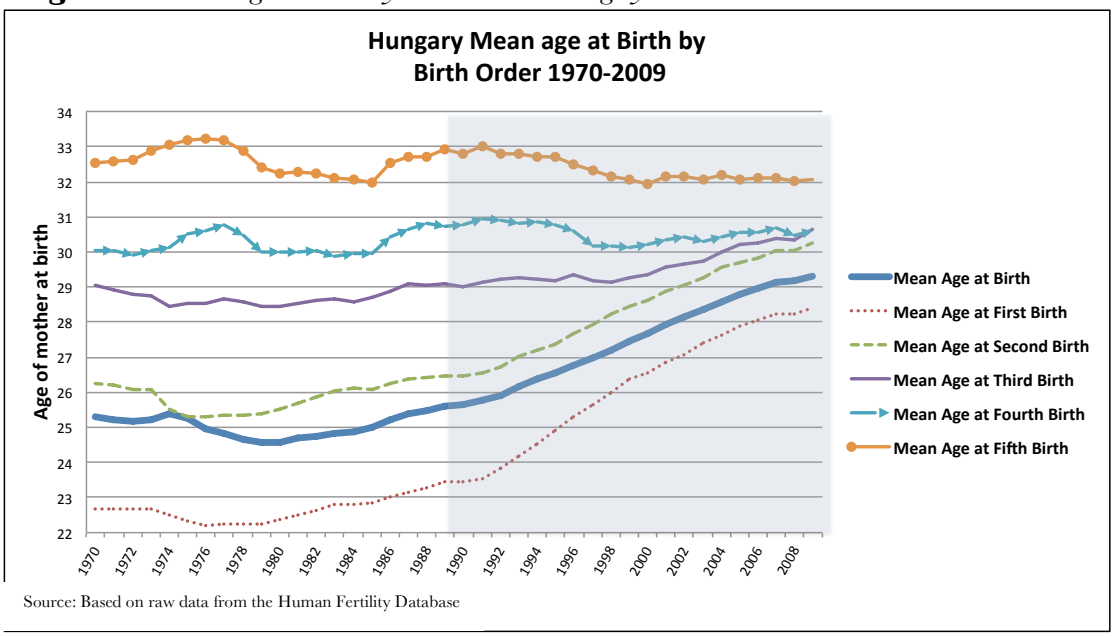
Source: Graphs adapted from Sobotka 2003:455

Since the political transition in Hungary in 1990, fertility rates have been declining visibly—this trend has stagnated somewhat, but fertility rates continue to decrease to.

So far, we have focused on fertility rates in the present or past, but as this essay is focused on fertility postponement, it is worth examining if the TFR measure allows us to control statistically for postponement. The focus is on more recent fertility levels, and as the TFR brings with it the advantage of giving up-to-date information on fertility trends, this may be a useful starting point (Bongaarts and Feeney 1998:271). The TFR is a reflection of the interplay between two components: *tempo* (timing) and *quantum* (level) of fertility (Sobotka et al. 2010:1). When childbearing is postponed, the tempo component of the TFR is affected. This is also reflected in the increasing mean age at birth (*Figure 3*), especially first birth, which can be seen to be increasing in Hungary from a low of 22.2 years in 1976 to an all-time high mean age of 28.4 years

in 2009, and which, if trends continue, will increase further in the future—an indicator of fertility postponement.

Figure 3: *Mean Age at Birth by Birth Order: Hungary between 1970-2009*



Source: Based on raw data from the Human Fertility Database

The shift to later childbearing can temporarily distort measurements such as the TFR, as the number of births in a certain period may decrease, and temporarily depress the period TFR, even if the total number of children a cohort of women have over their fertile life course does not change. This effect of delayed childbearing reflected in measurements is called the tempo effect, which can also be understood in terms of "an expansion of the interval between generations during which fewer births fall into each calendar year" (Sobotka et al. 2010:1).

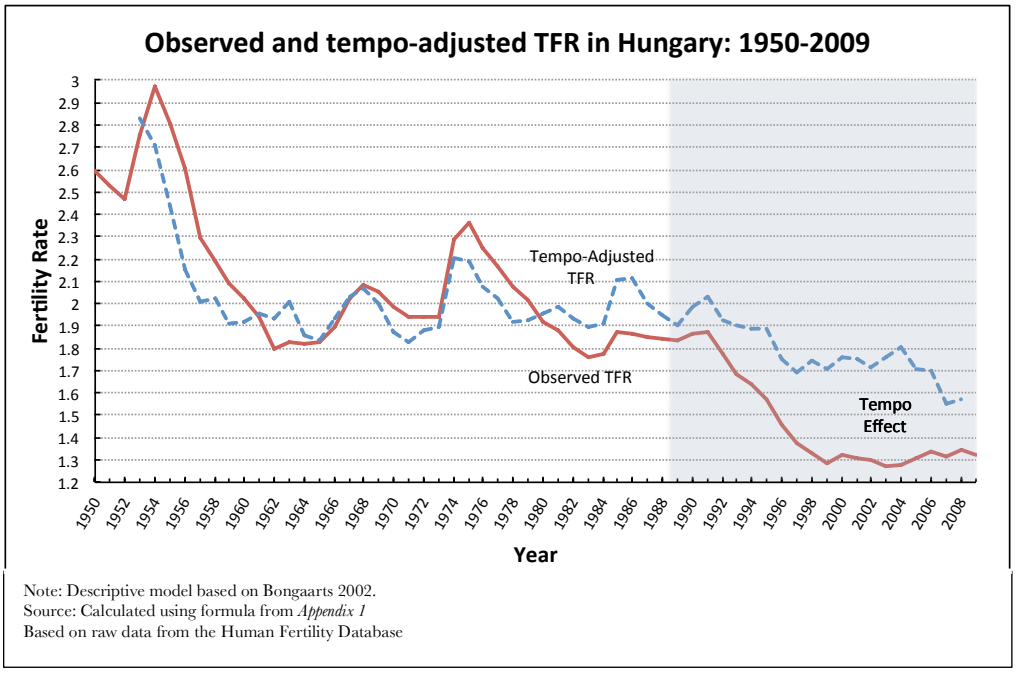
The fact that the current TFR and long-term fertility trends need not be aligned has been frequently observed historically. In the mid-twentieth century, Norman Ryder (1980) was the first demographer to publish a series of articles on this lagging trend, explaining how period fertility is temporarily lower than cohort fertility when the mean age at childbearing rises, such as is the case in Hungary, and vice

versa. This was a significant development as the effect of postponement is hugely influential, as "one year's worth of births are lost/gained for every one year rise/decline in the timing of childbearing during a specific interval of time" (Bongaarts and Feeney 1998:428). Fertility timing effects have since been more concretely defined as "level changes in period fertility that do not reflect chances in the completed fertility of cohorts" (Schoen 2004:801).

In order to try to take into account the tempo distortion in TFR measurements, in 1998, Bongaarts and Feeney first proposed a simple way of calculating a TFR that accounts for timing effects. The co-authors found a strong inverse relationship between the tempo effect and the change in mean age at birth, and proposed a mechanism for removing the tempo effect from the TFR, coming up with an equation to calculate this adjusted TFR, the tempo-free total fertility rate, or TFR'/adjTFR, the calculations of which are outlined in *Appendix 1*.

Figure 4 shows Hungary's TFR and adjusted TFR between 1950 and 2009:

Figure 4: *Observed and Tempo-Adjusted TFR in Hungary: 1950-2009*



Note: Descriptive model based on Bongaarts 2002.
Source: Calculated using formula from *Appendix 1*
Based on raw data from the Human Fertility Database

The calculated tempo effect (difference between observed and tempo-adjusted TFR in *Figure 4*) raised the TFR significantly over the last few decades, clearly showing postponement as the difference between the observed TFR and the adjusted TFR. In addition, there remains an overall declining fertility trend observable in Hungary since 1988. Having looked at and calculated the historic fertility trends and levels of postponement, as well as established a measure for postponement, it is now time to see what social turmoil and changes occurring in Hungarian society at the time can help to explain this trend.

Chapter 5 Explaining The Trend

Can sociology explain a demographic trend? Why did the fertility rates in Hungary after 1988 remain so low, decreasing further in the mid-1990s? Hungary is unique in being the only Eastern European country where the fertility rate slightly increased directly after the transition. Pongrácz (2012) explains to be due to the stability of family policy system and consistency of social allowances, which only changed in 1994-5 with the return of the socialist party, whose changing ideologies and introduction of poverty policies which excluded many middle-class families from receiving support (2). Though this policy was reversed only two years later, the impact was lasting Hungary's fertility trend hasn't reversed since (Pongrácz 2012:2). These factors considered, it is clear that the fertility trend was largely influenced by non-financial factors.

Instead, this essay will argue that the trend was caused by the psychological insecurity, instability and societal unrest created by the realization that decade-long stable family policies could be overturned at the drop of a hat, combined with changing a social environment necessitating increased education, outweighing and overtrumping any financial incentive to increase fertility.

Since the emergence of the discipline, sociologists have taken an in interest in population change, and it continues to be a relevant area of research in the field today. Reviewing the general literature in the form of four main sociological hypotheses ("new home economics" model; increased educational attainment; anomie [normlessness]; social capital) resulting in fertility declines and postponement and their relevance to the case of Hungary since 1988, this chapter will conclude by observing how these sociological factors might also be transferred/applicable to other

'lowest-low' post-communist countries with a similar fertility trend. This discussion structure is illustrated in *Figure 5*:

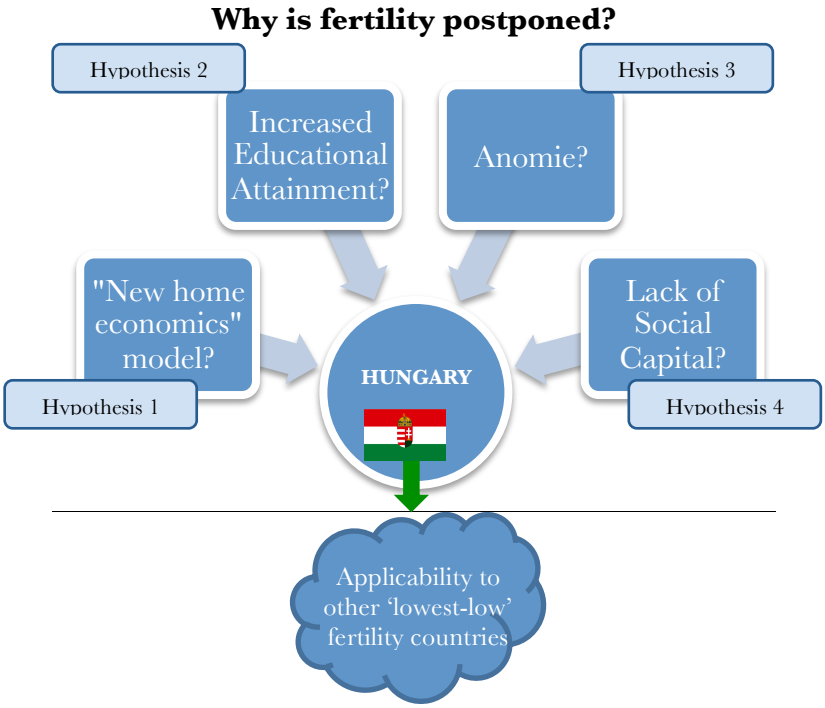


Figure 5: *Breakdown of Explanatory Variables to explain Fertility Postponement*

Hypothesis I: "New Home Economics" Model

The sociological "New Home Economics" model was historically the first to explain the phenomenon of fertility postponement. This theory posits that it is women's growing economic independence that largely accounts for delays in childbearing (and marriage) in industrialized societies (Blossfeld and Huinink 1991:143). Some sociologists have argued that traditional sex-role division is functional for the stability of a family, and, on a greater scale, society itself (Ibid). This theory has an underlying assumption based on the "traditional" conjugal nuclear family, with defined rigid roles for the man as the breadwinner and woman as the housewife and mother (giving each a comparative advantage in their field of specialisation) (Blossfeld 1995:10). The functionalist Émile Durkheim (1969) first presented the idea that sexual division of labour in the family and the labour market creates familial interdependence and organic solidarity (Blossfeld 1995:xi). Goode (1964), and Parsons (1956) consequently supported this approach, emphasizing traditional sex-role differentiation as a vital factor for family formation and stability of modern society itself in their studies. Specifically, Talcott Parsons (1956) stated that the sexual division of labour is a protective mechanism to prevent disruptive conflict between the spouses.

In order to explain fertility decline in post World War II America, Gary Becker (1973,1981) developed an economic approach to studying family formation, basing his theory on the assumption that "individuals maximize their utility from basic preferences that do not change rapidly over time" (Becker 1981:ix). Becker believed that the sex-specific specialization of labour in our society and the resulting dependence it produces between the sexes is a major marital incentive in society (Blossfeld and Huinink 1991:145). Becker noticed that there were rapid changes in

family formation patterns, caused by "growth in the earning power of women as the American society developed…[thereby] raising the forgone value of time spent at nonmarket activities" (1981:245). Becker built on the work of Durkheim, Goode, Parsons and others to officially postulate the "new home economics" hypothesis. Seeing the family as an economic unit, Becker claimed that the growth in earning power of women in modern societies was *the* most important factor in determining the long run decline of marriage and fertility (Blossfeld 1995). He explained that by working, earning wages increases the value of a potential mother's time, thereby increasing the relative costs (opportunity costs) of having children, consequently decreasing their demand. More recently, Gustafsson (2001) linked the postponement of maternity with the lower costs of a later birth, accumulated through a lifetime of work (Philipov et al. 2006:291). He claimed that the mother's career costs (and, to a lesser extent the father's) were the most important factors influencing postponement (Philipov et al. 2006:291).

Is women's rising earning power really one of the underlying factors of fertility postponement? Such hypotheses are difficult to test since the correlations do not clarify causality. Becker's theory has not gone unquestioned, and its popularity has declined sharply over the past two decades. The assumption that women's growing economic independence has had a critical and presumably irreversible impact on the family system in modern societies has proven false in numerous empirical studies (Blossfeld 1995:xi). Though looking at the economics of work may be one approach to studying the family, Becker did not consider that women may have already been far from happy with the traditional arrangement. One major opponent to the economic trade-off approach is Hans Peter Blossfeld (1995), who criticised Becker's theory on the grounds that "trends in family formation cannot be understood exclusively in

terms of individual-level investments, if only because the institutional context in which these investments may be realized is cross-nationally quite variable" (Blossfeld 1995:ix). Educational investments and consequent employment may not necessarily depress rates of family formation as there is much variability within the world, where the economic payoff of having children may differ greatly between societies. Instead, Blossfeld (1995) found that the extended schooling of successive birth cohorts was the most important factor responsible for the change in the process of family formation (Blossfeld 1995:xii).

How applicable is the new home economics model to Hungary? During communism, women were workers just as men, and it was only *after* the shift away from state socialism that women were not forced to participate in the world of work in the same way as previously (Takács 2011:10). Looking at the employment rate of women in Hungary since 1985 in *Table 1* below (Takács 2011:11), the female employment in Hungary, which had soared above European levels before the shift away from socialism (1985), has dropped to the European average or below ever since. Fertility has continued to *decline* while the percentage of women working has also declined, which may provide grounds for disproving the "New Home Economics" model. An argument to be made is that perhaps, without two earners, children cannot be afforded?

	Average Percentage Female Employment Rate 1985-2007			
	1985	**1995**	**2000**	**2007**
Hungary	44.7%	32.2%	49.6%	50.9%
European Mean	29.1%	32.3%	53.6%	58.3%

Table 1: *Female Employment Rates in Hungary and Europe: 1985-2007*

However, it is impossible to control all variables and this result is only valid given that other variables remain constant, which is seldom the case in human studies, so this finding must be treated with caution.

Blossfeld et al. (1995) also criticised this economic approach for its "inability to differentiate between effect of accumulation of human capital over the life course and the effect of school enrolment in keeping women out of the marriage market and causal difficulties" (Blossfeld 1994:xii). Finally, like in most contemporary industrialized countries, many argue that the "traditional" conjugal nuclear family is long out-dated and must be considered along with "patch-work" families and single-family households, so a theory based exclusively on the nuclear family model may no longer be applicable. It can therefore be concluded that this model is presently not supported by current evidence.

Hypothesis II: Increased Educational Attainment

Instead of the level of labour-market related human capital investments of women having the greatest impact on women's childbearing decision, Blossfeld et al. (1995) found that it is the time it takes to acquire qualifications, needed for finding work and independence that is the driving force behind the process of changing family formations in a sample of industrial countries around the world. Blossfeld & Huinink (1991:143) showed that women's extended participation in schooling delays their transition into adulthood, which is associated with the normative expectation that young women are 'not ready' to enter into marriage and motherhood. Under this hypothesis, inevitably there is a dynamic, yet unintentional negative effect of women's increased educational and career investments on the timing of family events. The majority of young adults are dependent on parental financial support for the duration of their education, and therefore have not reached full "adult" status (Blossfeld & Huinink 1991:147). Sociologically speaking, young people in education are not "at risk" of childbearing. Additionally, the roles of students and bringing up a child are so demanding that one is expected to complete the former before embarking on the latter. Featherman, Hogan & Sørensen (1984) also found that education is an important prerequisite before entering into adulthood and marriage. Another important factor is that schooling has never been so important: the opportunity cost of dropping out early is very severe, including unemployability and a high risk of poverty, further obstacles to increased fertility.

Globally, education is one of the strongest correlates of fertility (Michael 1975), but is this also the case in Hungary? In Hungary, once education is completed, this is generally associated with an end of economic dependence and entry into adulthood status, and a sociological increased "risk" of having children (Blossfeld & Huinink

1991:158). It can thus be deduced that attending school, a vocational training program, or obtaining a university degree has an overall negative effect on entry into motherhood, as proposed in *Figure 6* below.

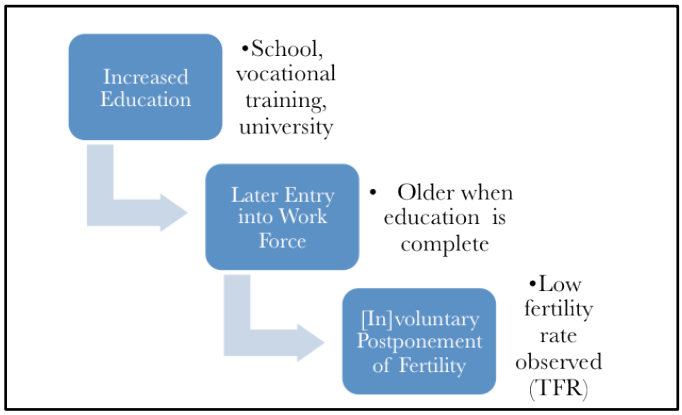


Figure 6: *Proposed Knock-on effect of Increased Education on Fertility Postponement*

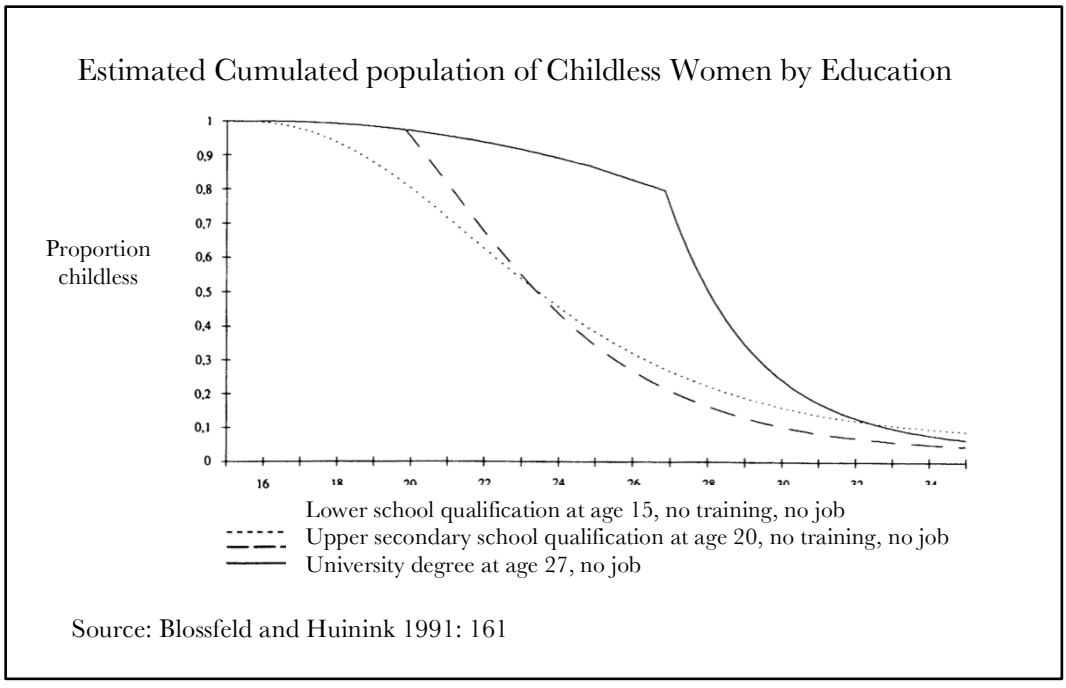
Developed from Blossfeld & Huinink

Blossfeld and Huinink (1991) conclude that marriage and consequent childbearing is postponed "because women postpone their transition from youth to adulthood and not because women acquire greater quantities of human capital, thereby increasing their labour-force attachment" (158). During the socialist era, Hungary's state-specified higher education capacities determined the number of secondary school graduates who were allowed to enter higher education, at a rate of about 10% (Spéder & Kamarás 2008:632). Female education played a key role, with female educational participation outnumbering that of men by the 1980s (due mainly to the diminishing marginal returns on income with increasing education) (Ibid). Between 1991 and 2006, there was an increate in the ratio of full time students at age 20 from 15% to 50% (Spéder & Kamarás 2008:633). This is a significant finding as the full-time education involves the 20-24 year-old generation: the very same generation who used to be the most active child bearers during communism (Ibid).

It is important to note that increased educational attainment is not associated with a lower completed fertility rate, as, once the educational training is completed, these women may "catch up" their fertility (*Figure 7*). Women with lower school

educational qualifications, though tending to have children the earliest, are also predicted in this model to remain with the highest proportion of childless by the age of 34. In contrast, women with a university degree at age 27 tend to postpone childbearing until the end of their education, but are thereafter quick to catch up on fertility (Blossfeld and Huinink 1991:161). However, it is important to remember that this is a model, and therefore may not accurately predict the actual outcome of fertility rates in present-day Hungary.

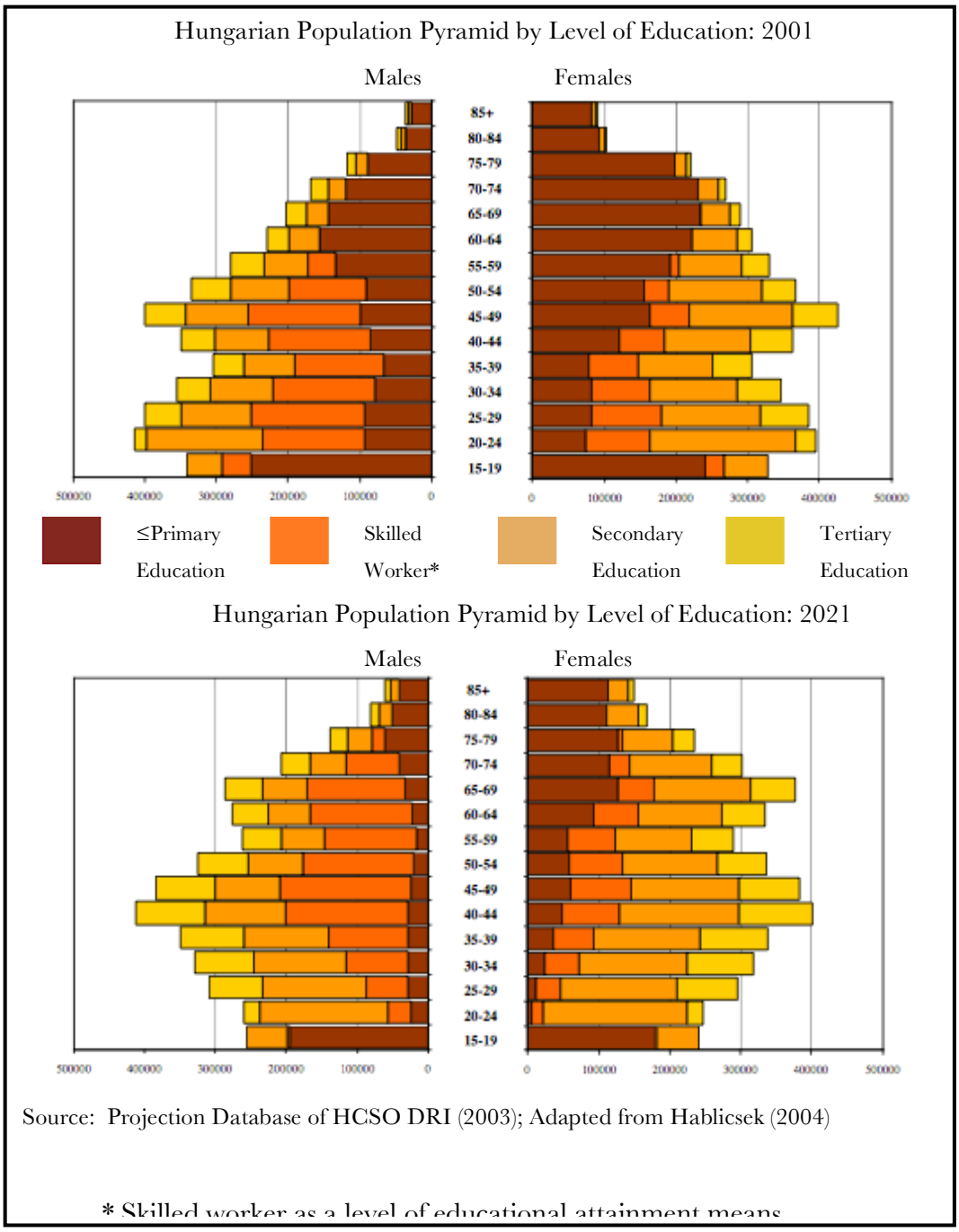
Figure 7: *Estimated Cumulated Population of Childless Women by Education*



Source: Blossfeld and Huinink 1991: 161

Despite this limitation, education is an explanatory factor for fertility postponement in Hungary. This points to evidence of a shift in social values emphasising the importance of female education, brought on by the necessity of further qualifications for employment. Looking at the age pyramid of Hungary in 2001 (*Figure 8*), there is a significant change in educational attainment between the younger and older cohorts, with a great rise in attainment.

Figure 8: *Hungarian Population Pyramid by Level of Educational Attainment: 2001 & 2021*



Source: Projection Database of HCSO DRI (2003); Adapted from Hablicsek (2004)

* Skilled worker as a level of educational attainment means

These data could suggest a joint importance of ideological and economic factors influencing a postponement of childbearing. However, it is important to note that education is tightly linked to work and employment, so increased education is also to have a knock-on effect of future lifestyle and income, and hence fertility.

As the economic situation in Hungary was uncertain during the transition, women returned to university to gain further education (observable by the increase in student enrolment during the transition period) which led to postponement of births—a sign of change in social norms (Kohler et al. 2002). However, by itself, education does not sufficiently explain fertility postponement, as other less obvious social factors and norms that apply regardless of social class and background must also be considered.

Hypothesis III: Anomie

In addition to increased education, rapid social change, such as that which occurs during an overthrow of a totalitarian regime, can often lead to disorientation and uncertainty, which may have triggered fertility postponement in Hungary (Philipov et al. 2006:289). The condition of anomie has been suggested to occur when an individual is not integrated and/or restrained enough by society, consequently feeling directionless and 'normlessness' (Durkheim 1987).

Durkheim predicted that when a society is in a state of anomie, the power of social norms decreases, and consequently, individuals may experience a deterioration of mental well-being, in extreme cases even becoming depressed and questioning the meaning of life, and suicide (Philipov et al. 2006:293). In 1949, the American sociologist Robert Merton adapted Durkheim's approach to anomie from into a broader framework of cultural values and social structure. Merton modified anomie to refer to the concept of 'strain' put on individuals' behaviour when accepted norms conflict with social reality (Merton 1949). He was able to apply this theory to the construction of American society and so explain the deviance present within the society by it. In this way anomie can be seen to be a by-product of a lack of opportunities and socially constructed aspirations for a conditioned idea of success (Merton 1949). In a changing society, social structure may fail to provide the means of attaining the goals set by society, and as these transformations can lead to rapid increases in prosperity and poverty through processes such as privatisation, leaving people with a lack of orientation, uncertainty, powerlessness, loneliness and psychological discomfort (Philipov et al. 2006:294). Consequently, under the influence of anomie, people become indecisive about life-changing decisions, and decisions about childbearing are likely to be postponed, if not abandoned completely.

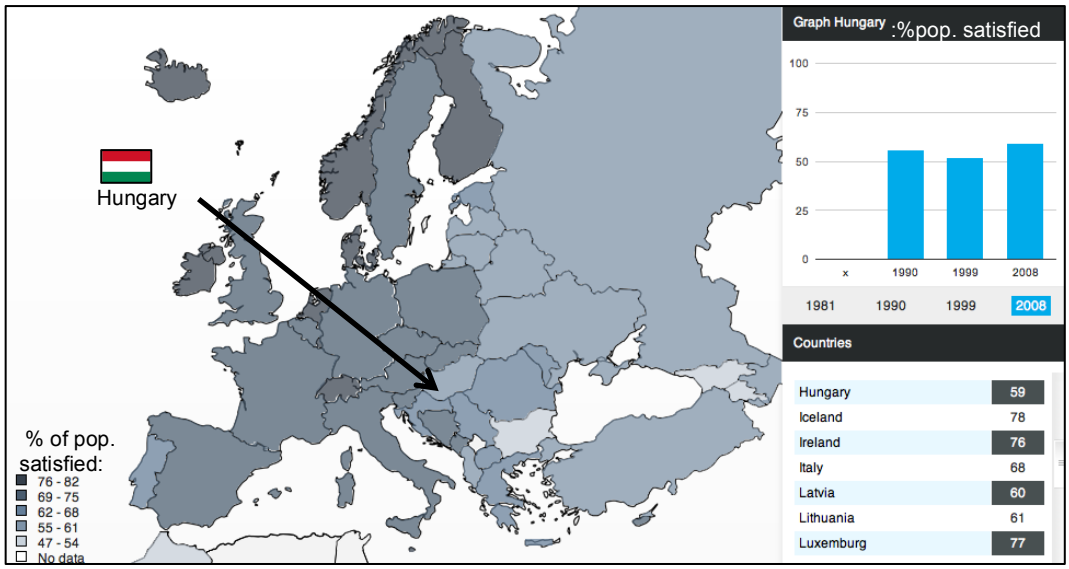
Durkheim's theory of anomie can therefore be generalised as a possible explanation for the decline and postponement of fertility.

The period observed between the end of the old societal communist system and its replacement by a new one observed in Eastern Europe was one of normlessness and anomie (Philipov et al. 2006:293). At such times of social turmoil, when the economy and life-cycle prospects are uncertain, people's lives and income are unpredictable, therefore making it more difficult to make long-term decisions such as planning to have children, which would help to explain the fall in birth rate following the 1989/1990 transition (Philipov et al. 2006:292).

How is it possible to test whether Hungary's society was indeed affected by anomie? Though it is quite difficult to measure quantitatively the rather flexible condition of anomie, social surveys take records of Hungarian society at different time intervals.

Hungary has a low rate of self-reported happiness compared with the rest of Europe with 68% of the population reported to be happy in 1990, 71% in 1999, and 79% in 2008, as well as lower values for degrees of satisfaction with one's life (*Figure 9* below), 56% satisfied in 1990, 78% satisfied in 1999, and standing out in Europe with only 59% satisfied in 2008. Though this percentage had been increasing until 1999, there has more recently been a drop back to almost 1990 levels

Figure 9: *Hungary's Degree of Satisfaction with one's life (in percentage of population satisfied) compared to the rest of Europe in 2008*



Source: European Value Study:-
http://www.atlasofeuropeanvalues.eu/new/europa.php?ids=10&year=2008

Anomie focuses on the dissatisfaction of individuals within society, an important factor in explaining Hungary's fertility trend. During its transition to the free market, the Hungarian population was very much left alone as there was an ideological change. Due in part to this uncertainty, people may have put off, or forewent entirely, having children, as observed in the TFR calculated in *Chapter 4*. Having looked at dissatisfaction of the individual, can we go a step further to whether Hungary's fertility trend is a reflection of social interactions and support, or a distinct lack thereof?

Hypothesis IV: Social Capital

Fertility may be postponed for reasons of social interaction. A relatively novel approach of social networks has been identified in relation to fertility postponement, positing that the involvement and participation in groups can have positive consequences for the actor and the community. Bourdieu (1985) first defined social capital as "the aggregate of the actual or potential resources which are linked to possession of a durable network of more or less institutionalized relationships of mutual acquaintance or recognition" (Bourdieu 1985:248). This idea captures social integration in terms of relationships between people, which facilitate interactions and build a network of knowing and trusting, where a breach of this trust leads to complete ostracism and, as this essay suggests, anomie. Unlike economic capital ('things') or human capital ('individual persons'), social capital involves an investment in groups of people. It is a two-way process, which is more about *who* you know rather than *what* you know.

In the context of Hungarian fertility postponement, this theory potentially becomes especially important in times of political turmoil when the state does not have as many resources left for social support, and as such individuals must rely on the support of relatives, friends, neighbours and colleagues (Philipov 2006:294). The amount of help (which can come in the form of money loans, employment, child care, counselling, supply of important information) an individual gets will depend on their friend network and "social capital" (Philipov 2006:294). Their "social capital", in turn, is dependent on their social network, and their ability to trust, be trusted, reciprocate, and provide help to other members of the network when needed (Philipov 2006:294). Social capital can reduce anomie, as the network may ease personal uncertainty, while a lack of social capital can have a detrimental effect.

How are social ties developed? It has been established that children help their parents to establish new relationships and increase their social capital (see, for example, Small 2009). People with more social capital may feel more at ease and secure, and are ultimately more likely to intend to have a child or another child (Philipov et al. 2006). People with lower social ties are more likely to be at greater risk of anomie, less likely to have a child, and therefore less likely to increase their social capital—a downwards spiralling feedback loop.

This may have been the case in recent years in Hungary. With fewer resources given for social support by the government after 1995, people are left to find their own networks. If these are not well-established to begin with—something that was unnecessary in a socialist system—people are more likely to feel more lost and not have a sufficiently large social network to avoid a negative spiralling effect. Looking at the European Value Study of the years 1990, 1999, and 2008, across Europe, Hungary has had some of the lowest percentages of people who say that friends and acquaintances are very or quite important in their lives. In 1990, only 72% of Hungarian people thought friends/acquaintances were important (the lowest figure in all of Europe!), in 1999 this rose to 82%, and most recently the figure increased to 91% (European Value Study). The increase in percentages over time may be seen as evidence supportive of the theory that over time, and with less government trust, social capital between friends and acquaintances has become increasingly necessary.

Though one could argue that this could be a sign of increasing values of self-realization and individualization, the reason for this is *not* changing intention: people are not intending to have smaller families than previously (Pongrácz 2012). Consequently, it is very likely that a lack of social capital was a contributing explanatory variable to explain Hungary's lowest-low fertility trends.

Summary of Hypotheses

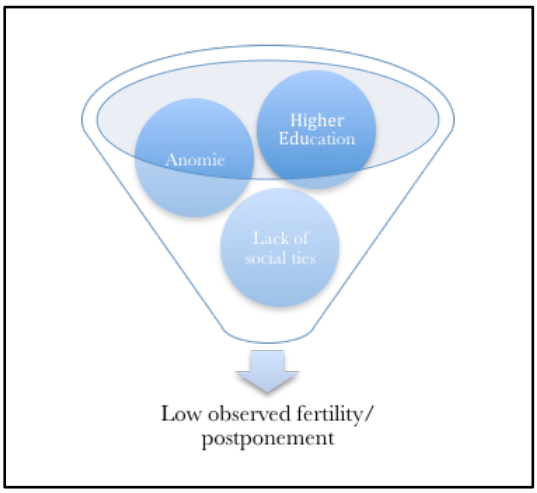
What can we conclude about the interplay of the different social factors to explain the fertility and postponement trend in Hungary since 1988? Having established that there was no stated attitude change towards children and rejecting the "New home economics" hypothesis, all three remaining hypotheses presented here apply to the Hungarian context, as seen in *Table 2*:

Table 2: *Summary of research results and provisional conclusions of the social factors driving fertility decline and postponement in Hungary*

Rationale for fertility decline?	Hypothesis Name	Hypo thesis No.	Rationale for fertility decline?	Cons	Conclusion (with confidence level)	Data Deficiency: required steps for more conclusive results
Economic independence of women	**New home economics**	1	Economic independence of women	Difficult to rule out confounding factors	Rejected (medium confidence)	Specific data on family formation patterns and roles; longitudinal yearly surveys on family attitudes
Education delays transition to adulthood and hence childbearing	**Higher education**	2	Education delays transition to adulthood and hence childbearing	Difficult to prove if recuperation behaviour evens out fertility deficit	Accepted (high confidence)	Demographic data on fertility rates of students over time; attitude survey data
Ostracism from social norms and lack of integration	**Anomie**	3	Ostracism from social norms and lack of integration	Difficult to prove conclusively with current data	Accepted (medium confidence)	Survey data on political attitudes; longitudinal crime rate study
Lack of social support from friends, neighbours and colleagues	**Lack of social capital**	4	Lack of social support from friends, neighbours and colleagues	Difficult to prove conclusively with current data	Accepted (low confidence)	Attitude surveys to determine belongig to groups & networks, trust, and social inclusion

This essay proposes that Hungary's postponement trend is consistent with a large-scale change in social norms regarding further education, and evidence of a society burdened by anomie and a chronic lack of social capital, coming together as shown in *Figure 10* below.

Figure 10: *Proposed of factors driving fertility decline and postponement in Hungary*



Can the putative causal factors in Hungary's fertility decline be generalised across Eastern Europe? Hungary's post-transitional fertility pattern is relatively similar to that of the rest of Eastern Europe's "lowest-low" fertility. Sobotka (2007) concluded that Eastern European countries faced with lowest-low fertility rates had different-sized tempo effects occurring at different times, making it difficult to compare the social factors influencing fertility across the countries. However, similar trends of fertility postponement have been observed in these countries by demographers (see Kohler, Billari and Ortega 2002). Similar social determinants of fertility, especially anomie and social capital, were concluded to be important in Bulgaria, another former socialist country by Philipov, Spéder, and Billari (2002).

Chapter 6 Future Predictions and Implications

What will Hungary's future look like? Below, *Figure 11* shows Hungary's population pyramid for 1900, 2000, and predictions for 2100 (given fertility stabilization at a stable TFR of replacement level[1] of 2.1). However, Hungary's TFR of 1.24 (Pongrácz 2012) today does not seem to be heading back towards replacement level fertility (last observed in the early 1970s), so this presents an unrealistic of Hungary's future population size and structure.

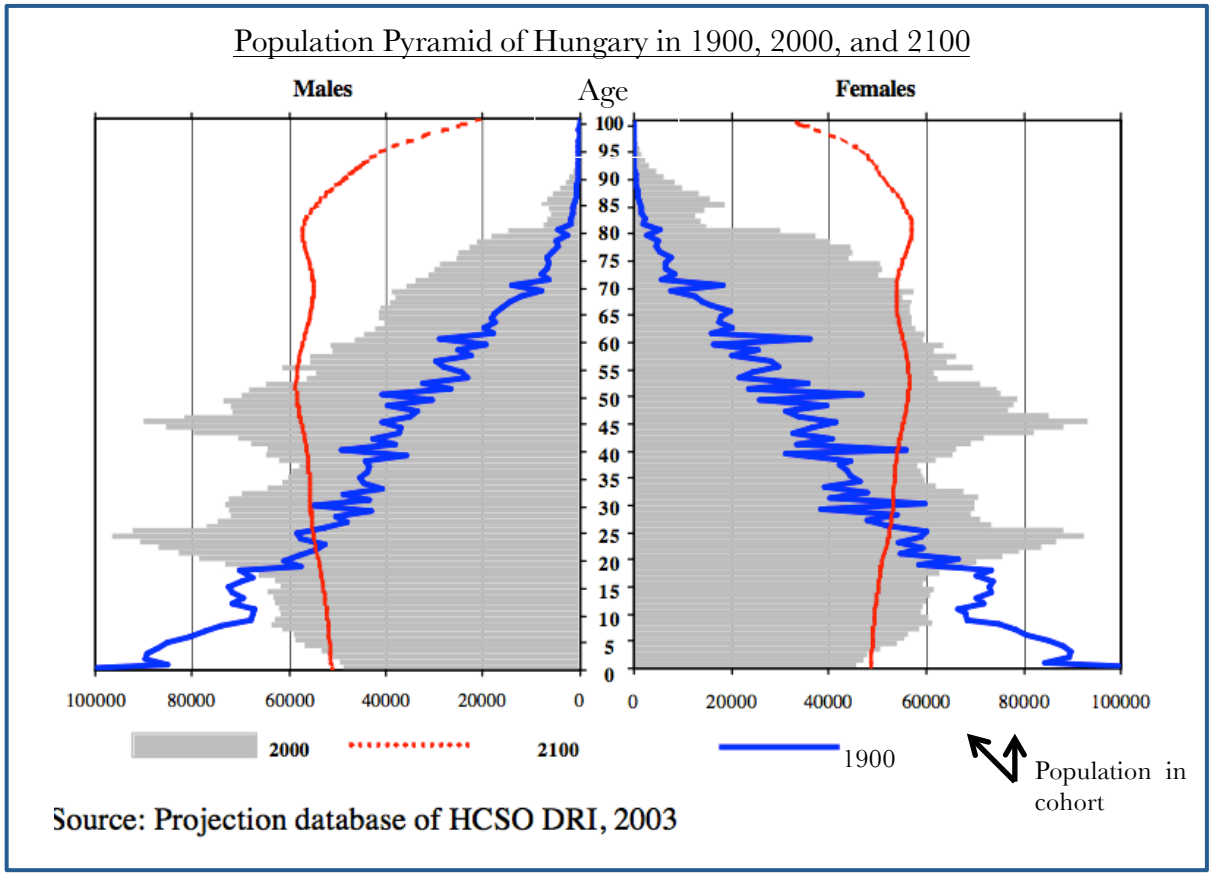


Figure 11: *Population Pyramid for Hungary: 1900, 2000, and 2100*

[1] Given consistantly low mortality rate

Hungary's population, previously (in 1900) expanding, is currently undercut due to a significant deficit in the child age groups arising from a recent decline in the birth rate, and, if the TFR were to remain constant, will become much more stable in the future (2100), keeping a slightly negative momentum (Rowland 2003). The stabilisation prediction also shows a gradual fading out of the tempo effect. Hungary is an ageing population, and public pension schemes will need to be re-considered, as the size of the working population may not be large enough to support the increasing numbers of ageing dependents. This phenomenon of population ageing, and possible lack of enough future population in the working age can be directly counteracted by increasing the size of the population at younger ages. In such a situation, Bongaarts (2004) proposed on national economic grounds to either (a) encourage higher fertility—the long-term option, or (b) permit more immigration—the short-term alternative (14). Increasing fertility raises the size of the youngest cohort, which, in 15-20 years, will reduce old-age dependency ratio (defined as the ratio of the population aged 65 years and older relative to those in the "working population" (aged 15-64) and the number of pensioners per worker (Bongaarts 2004:2).

Trying to solve the perceived problem of population ageing through encouraging higher fertility may work to a certain degree, but as this method has proven rather unsuccessful historically in Hungary, it is unlikely to prove more successful in the future. If Hungary intends to act on population ageing by means of increased fertility, it may have to alter its strategy. Purely financial incentives may not be a major incentive for working, highly educated women.

To fill the gap between the desired and actual number of births, the government could devise more creative solutions and "maternity packages" directed to the needs of different classes. State-funded full day kindergartens and schools,

guaranteed job upon return from maternity leave, and having the choice of paternity leave are just a few of the many options available to the Hungarian government. One known major individual difficulty, given that the first three years of raising a child present the largest problem in trying to solve the work-child balance, is a shortage of crèches. Places in crèches are limited—currently only 9.4% of "crèche-aged" children attend crèches, with crèches already filled to above capacity (Pongrácz 2012:3). If the government does not provide these, a social acceptance of voluntary childlessness and consequent value shift in towards individualisation as well as a decline of traditional values is likely to spread throughout Hungary (Pongrácz 2012:4). Already, the Demographic Research Institute in Budapest has started to observe this shift in urban parts of the country (Pongrácz 2012:4).

Additionally, women have been pushing back their births to the latest possible ages, but, having reached their maximum, the tempo effect may be starting to wear off. The tempo effect is by nature contemporary. It will only exist as long as mean age of childbearing rises, which can only increase until the end of childbearing years at around age 49, a biological endpoint.

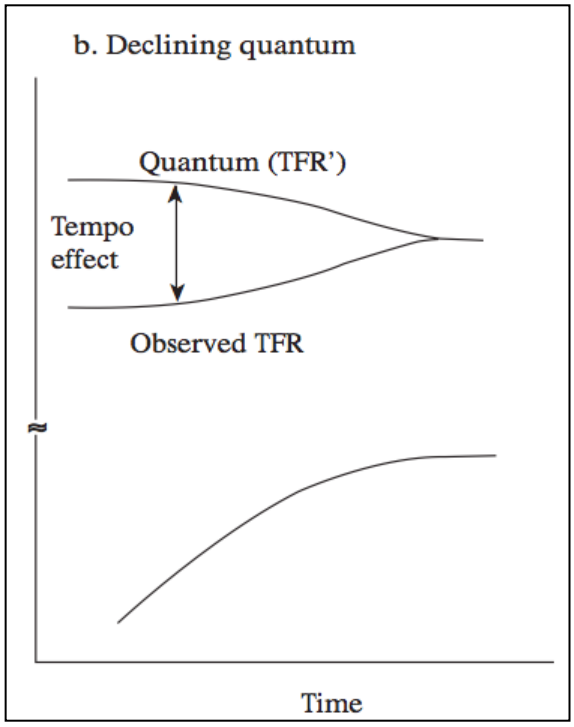


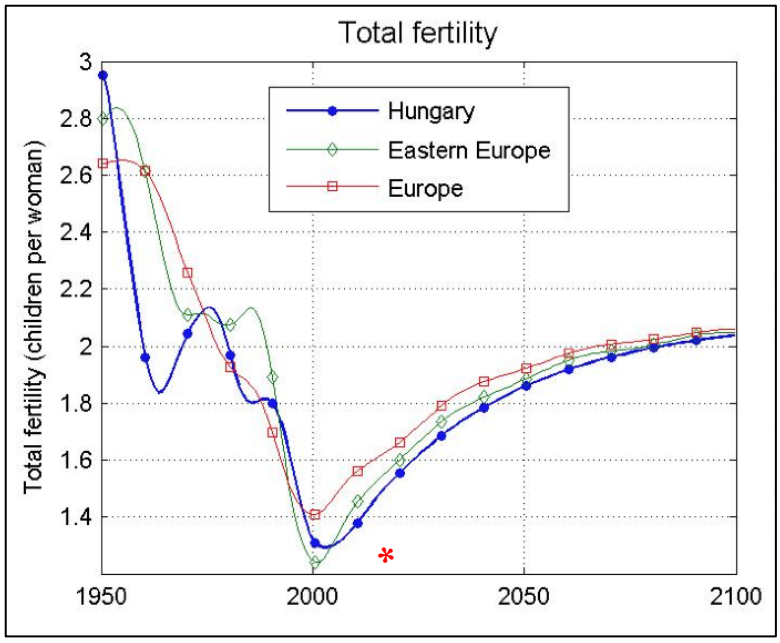
Figure 12: *Diminishing Tempo Effect over Time*

Even if the mean age at childbearing remains high, the tempo effect will eventually become zero, provided that childbearing age becomes constant (Bongaarts 2002:437). What does this say

for the future? Though the adjusted TFR measures will never exactly predict future trends, Bongaarts (2002:437) predicted a possible future scenario for a country such as Hungary where the quantum of fertility looks to continue to decline over time, summarized in *Figure 12*. This figure accounts for the fact that the mean age of childbearing cannot increase forever, and eventually, when it stabilizes, it will put upward pressure on the observed TFR. Looking at the United Nations World Population Prospects (2010) (*Figure 13),* Hungary's fertility is in fact predicted to increase steeply over the next century. However, already the predictions are proving optimistic, as indicated below in the red asterix (*).

Figure 13: *Hungary's Observed and Predicted Total Fertility 1950-2100*

Source: Adapted from http://data.un.org/CountryProfile.aspx?crName=HUNGARY



Therefore, it is doubtful that the fertility level is likely to continue to increase to replacement levels—at least in the near future. The consequences of this scenario are inevitably population ageing on a large scale, which will then stabilize over longer time.

Of the four hypotheses presented to explain fertility trends, which one is most likely to affect Hungary in the future? Education is likely to continue to play an

important role as it will continue to be a highly regarded value in the future whilst the childbearing taboo during education does not appear to be subsiding. Women, especially more educated women, are beginning to see their work as an opportunity for personal development through pursuing a career rather than a functional necessity, resulting in the increased need to consider both men and women in family decisions (Takács 2011:19). However, the recent conservative government has been trying to re-emphasize the traditional family values and division of labour within the family, making it difficult for women to realize their potential, and due to their dissatisfaction, this measure is highly unlikely to increase fertility.

As Hungary continues to adapt to its democratic political system, a somewhat consistent new set of values will have given the population a sense of social belonging, reducing anomie. The government, which is in charge of the social wellbeing of the population, has now developed a new system, necessitating the population to make more social ties and focus on social capital. In the future, once anomie has been eliminated to a large extent, it will be the combination of increased education and a high value of social capital that are likely to remain as social norms.

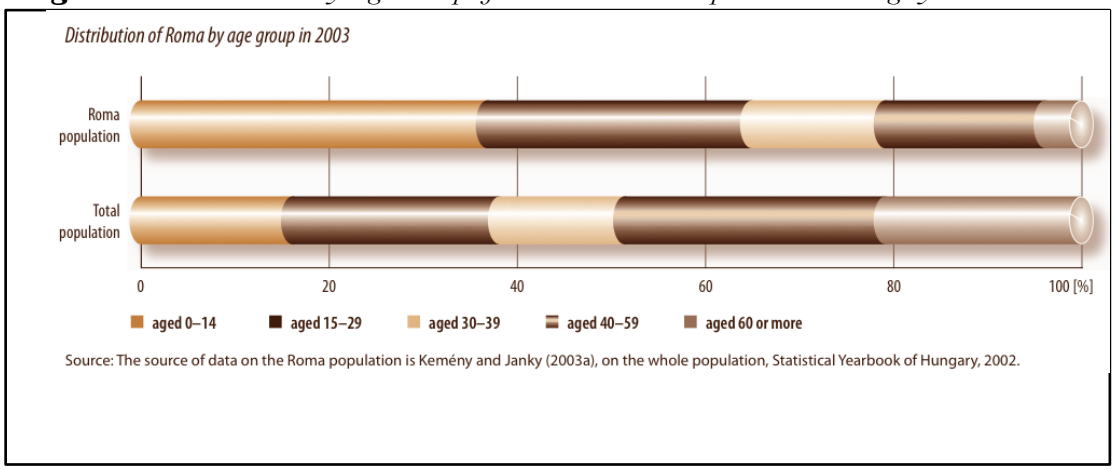
However, these predictions assume relatively stable variables, especially a stable political system, which is currently not the case in Hungary.

Having spent almost two decades trying to adjust to a democratic system, the current conservative political party in power, *Fidész*, who won by a two-third majority, is led by Victor Orbán, a conservative prime minister leaning towards nationalist policies. Orbán's leadership is reportedly very unpopular in the rest of Europe, his leadership having been described as "authoritarian" by the European Parliament (Castle 2012:1), feeling that the free Hungarian democracy is under threat. Along with nationalising media and condemning certain minority groups and instating a new

controversial constitution effective as of January 1st 2012 with tighter regulations on abortions, perhaps the progress made away from anomie and towards increasing social capital will now backtrack, reversing years of development of social wellbeing. Conversely, perhaps the Hungarian state will find itself uniting against the political party in control and in the process of having a common goal, finds social cohesion and consequent security—and consequently, more children.

Minority integration could also be a key player in helping to increase fertility in the future. The largest Hungarian minority—the Roma—suffer from racism and discrimination, often not seen as "real" Hungarians. Looking at the age distribution of the Roma population when compared to the rest of the Hungarian population (*Figure 14*), it is clear that in the future, when the group of people currently aged 0-14 enter the working age, the Roma population will retain a higher proportion of people in the "working population" (people aged 15-64).

Figure 14: *Distribution by Age Group of Roma vs. Total Population in Hungary: 2003*



With a significantly higher fertility rate than the rest of the population, the Roma in Hungary are characterized by having generally poor chances in the labour market due to low levels of education, living in segregated settlements, and with the highest incidence of poverty (UNDP 2004:20). By 2015, the estimated Roma

population is predicted to be between 700,000 and 800,000, while Hungary's 'native' population is estimated to be between 9-10 million (Kemény, 2003:66). Roma will make up some 7-8% of the Hungarian population. Instead of spending money on pronatalist policies, it would be an effective use of resources to capitalize on the Roma's fertility and economic potential. Mobilising and integrating the Roma is by no means an easy feat, undoubtedly involving long-term planning and large state expenditures. Combined with an unsegregated, focused educational system, capitalizing on the future Roma population is arguably one of the greatest potential economic assets Hungary currently has, and yet a negative prejudice towards this minority might conflict with population growth. Based on the conclusions of this analysis, it is clear there is much potential in Hungary's future—it is a matter of changing priorities and finding new, creative solutions to an ageing (!) problem.

These projections must be approached with some caution, as projections are, in their nature, uncertain. A few of the many other major variables which may also have a large effect on Hungary's—and the rest of the world's—fertility include a change in preference to "natural capital", religion, and immigration. As the industrial economics of a country change, the motivation for retaining a large population may no longer be accurate, and be replaced by the idea of "natural capital" (Hawken et al. 1999), where the global economy is dependent on a rapidly declining supply of natural resources which countries must try to use sustainably, and this model may favour a smaller optimum population size. Major changes in religion may also cause large changes in fertility behaviour (see, for example, McQuillan 2004). Finally, large-scale migration (eg. seasonal migration) may dominate fertility patterns, consequent population growth, and policy (see, for example, Cohen 2003).

Chapter 7 Conclusion

What are the main social factors that help us to understand Hungary's fertility trend as reflected in the total fertility rate (TFR) since 1988? The material marshalled addressed this question from a demographic and sociological perspective. By integrating the two fields of study in order to better understand one social phenomenon, this essay was able to gain a unique insight into the complexity of the phenomenon and explain it from different angles. The analysis presented suggests that no one social factor is responsible, but rather an interplay between the individual psyche, social attitudes, and governmental environment influence fertility rates. Particularly focusing on four main hypotheses, it was found that the fertility trend in Hungary since 1988 is likely the combined result of a large shift in the social environment to necessitate increasing education coupled with nation-wide anomie (lack of social norms—"normlessness") and a lack of social capital, something which can also be observed in other former socialist countries. However, unlike other 'lowest-low' fertility countries in Eastern Europe, Hungary's value system has remained constant, with children reportedly remaining a very important value, something which is only starting to change now. Only by bringing together these two inevitably linked field in the social sciences was this essay able not only to observe a trend, but also explain it in a wider social context.

With these findings as a foundation, there is much scope for further research in this field, including:

1.) Comparing the Hungarian fertility trends of those with other Eastern European countries with different fertility policies over time to see if their fertility trends were influenced by similar social trends or whether the political context is

much more significant. This would help to test the impact of institutions on various demographic aspects including fertility. However, rather than comparing countries or explaining their differences, these studies would be to test if findings in one country can be replicated in another (Philipov et al. 2006:290).

2.) Investigating to what degree fertility patterns in *non*-post-Socialist lowest-low fertility countries (including Hong Kong, Singapore and Taiwan) can be explained by these social factors, and what common factors lead to ideological changes of the value of children.

Unlike many sciences, it is often not possible to study humans through 'trial-and-error' hypothesis testing and manipulation. Instead, our populations are 'natural experiments', where changed circumstances are exploited as experiments. Though we can make educated predictions about what will happen, only time will tell if minority integration does work after all in the long run, how many people a region or our planet can support, and if the children lost due to postponement will be born after all—simply later than expected.

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Appendix 1

The adjTFR/TFR' equation uses fertility data which is specified by the age of the mother and birth order of the child (Sobotka and Philipov 2010:2). For the birth order *i* in a certain year *t*, the adjusted TFR (*adjTFR*) can thus be calculated as:

$$adjTFR_i(t) = \frac{TFR_i(t)}{(1 - r_i(t))}$$

In this equation, $r_i(t)$ equals the change in the mean age at childbearing of birth order *i* between the beginning and the end of year *t* (adapted from Sobotka and Philipov 2010: 2). In turn, $r_i(t)$ can be calculated as:

$$r_i(t) = \frac{MAC_i(t+1) - MAC_i(t-1)}{2}$$

Here, $MAC_i(t)$ equals the mean age of childbearing of birth order *i*, calculated from age- specific fertility rates (*ASFRs)*. The overall tempo-adjusted total fertility rate for all birth orders in a given year is computed as the sum of the adjusted order-specific total fertility rates (Sobotka & Philipov 2010:2).