Childbearing Trends and Policies in Europe: Is a new Demographic Disequilibrium Emerging?

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Note: This paper is a report on work in progress. It presents selected findings and conclusions of an international comparative research project which started in October 2005 and is sponsored by the Max Planck Institute for Demographic Research. The project involves 18 countries: Albania, Austria, Bulgaria, Czech Republic, France, Germany, Hungary, Italy, Lithuania, Netherlands, Poland, Romania, Russian Federation, Slovak Republic, Slovenia, Spain, Sweden and Ukraine. The results of the project will be published in 2007 in a book providing an in-depth analysis of fertility trends and patterns and family-related policies in the participating countries. The book will consist of nine (possibly more) summary chapters and 18 country chapters. Two out of nine summary chapters (IV. and VI.) were not sufficiently advanced for the abstracts and the abbreviated summary chapters to be included and uploaded on the 2007 PAA Annual Meeting website.

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A. Extended abstract

I. Contemporary levels and trends of fertility in Europe

In 2002, 16 out of 39 European countries recorded period total fertility rates (TFR) below 1.3 and 25 countries recorded period TFRs below 1.5. The 'lowest-low' fertility spread throughout Europe affecting countries with more than one half of the European population by 2002, up from nil in the early 1990s. This proportion subsequently declined as the TFR in several large countries reverted above the threshold of 1.3. The spread of such low period TFR levels has been closely linked to the postponement of

childbearing taking place in all regions of Europe. Almost three quarters of Europeans currently live in societies with the TFR below 1.5.

An analysis of cohort fertility trends revealed that whatever differences there may have been in the long-term trends between Western countries, the outstanding feature is that completed cohort TFRs were declining virtually in all these countries among the cohorts of the early to mid-1960s, i.e. the cohorts which are finalizing their childbearing early in the 21st century. The cohort fertility trends in the formerly socialist countries were close to replacement fertility from cohorts of the 1930s through those of the late 1950s. Without exception these were also declining among the cohorts of the 1960s.

Prevailing contemporary patterns of fertility behaviour are the following.

- In the past two to four decades, in virtually all European countries the postponement of parenthood was in progress and continues to be an ongoing process. Among the cohorts of the 1960s and early 1970s childbearing of young women has been declining virtually in all countries. This decline has been more obvious among second than among first births. In general, the rates of decline have been more pronounced in the countries of Southern, Central and Eastern Europe, and less so in Western and Northern Europe.
- There is a propensity to recuperate delayed fertility. Recuperation of second births tends to be weaker than that of first births. Recuperation is relatively strong in Northern and in some West European countries, but weaker in Southern, Central and Eastern Europe.
- Even though it is not known to what degree childbearing will be recuperated, it can be surmised but not proven conclusively that quantum declines are a part of the trends of fertility behaviour of women in the midst of their childbearing in a number, possibly a majority, of European countries.

In sum, underlying fertility levels early in the 21st century in North and West European countries were moderately below the replacement level in the range that could be sustainable for a prolonged period, namely at around 1.7 and above. The German speaking countries of Western Europe and South European countries had period TFRs from 1.3 to 1.4 births per woman. The TFRs of the formerly socialist countries fell to the lowest levels in Europe and reached 1.2 to 1.3 in almost all these countries. A considerable part of this decline was due to the intensive fertility postponement. Once this process slows down, a modest recuperation of the period TFR may be expected in most countries recording at present the lowest TFR levels. However, even if this modest rise were to happen, many European countries may retain low fertility levels which could lead to such rapidly declining and ageing populations which would be a demographic outlook that might well be judged unacceptable.

II. Changing parity distribution and family size

Women with two children were dominant among the cohorts of the 1950s and around 1960. Average proportion of parity 2 was 45 percent and about 30 percent of women have either remained childless or had only one child. Fewer than 25 percent of women

had 3 or more children. In almost all countries proportions of parity 2 women were increasing through the cohorts of the 1950s. Among the cohorts of the (late) 1950s and around 1960, proportions of two-child "families" started to decline. Even though the actual parity distributions for the cohorts of the late 1960s and the 1970s are not known, it appears reasonable to assume that the incipient decline in the proportions of the two-child family and the increase in one-child families or childless women are most likely continuing. These assumptions are in line with the facts that large families of three or more children were at best stable if not declining in practically all countries, and overall fertility was declining during the 1990s.

In sum, the 1990s and the early 21st century might have been the period when the two-child family ideal started its demise.

III. Birth regulation

The transition to the dominant use of modern contraceptives by the majority of populations, habitually referred to as "the contraceptive revolution", took place in Northern and Western Europe during the 1960s and 1970s. In Southern Europe this occurred mostly during the 1980s and 1990s and is still ongoing in the 2000s. In the formerly communist countries of Central and Eastern Europe major changes in contraceptive behavior got under way with the collapse of the authoritarian regimes. As of the 2000s, contraceptive prevalence was high in Northern and Western Europe compared to Eastern and Southern Europe and the use of modern contraceptives was almost universal in Northern and Western Europe. The use of modern contraceptives, although relatively low, increased substantially in Eastern and especially in Southern Europe in the last two decades.

Birth prevention behavior changed significantly during the 1990s and early 2000s following the collapse of the totalitarian regimes in the formerly socialist countries. The incidence of induced abortion decreased in all these countries together with a major shift to modern contraceptives. By the early 2000s, countries of central Europe with reliable abortion registration experienced levels close to those prevalent in Western Europe, but there was a number of countries where a considerable proportion of women were still resorting to induced abortion, particularly in the countries of the former Soviet Union and in the Balkans. The "abortion culture" had been deeply ingrained in these societies, social and economic conditions for specific social or economic strata of the population were improving unevenly and gradually, and it is taking time for birth preventing behavior to modernize. Throughout Western Europe, especially following the introduction of modern contraceptives in the 1960s and 1970s, levels of induced abortions were low and abortion was apparently employed to a large extent as a backup measure.

At least three overlapping, crucial developments are evident.

1. Modern contraceptives have greatly reduced the incidence of unwanted and mistimed pregnancies and births, and at the same time they have been instrumental in enabling women and couples to postpone childbearing to higher ages.

2. Modern contraception and liberal abortion legislation provided women with essential tools to have a much better control over their lives.
3. As elaborated by the theorists of the second demographic transition, modern contraceptive technology and liberal abortion legislation were an inherent component of the factors changing the demographic and family landscape of the late 20th century in the advanced countries. Modern contraception and easy access to induced abortion facilitated childbearing postponement and a more effective disconnection between sex and childbearing enabling profound changes in partnership patterns and family behaviour.

IV. Changing family and partnership behavior

To be completed

V. Childbearing during the societal transition in Central and Eastern Europe

Central and East European countries experienced a set of specific determinants of family formation and fertility determinants during their transition following the sudden collapse of the autocratic, centrally planned systems. These were unlike any experienced elsewhere in Europe, at least in their intensity. Some were beliefs and norms inherited from the socialist systems. To name a few, these included the initial economic crisis; massive inflation; high male and usually even higher female unemployment; a disarray in family policies; a tightening job market; rising job insecurity; a lack of housing coupled with increasing costs of housing; shifts in the income distribution with segments of the population becoming impoverished; extant, possibly increasing discrimination of women in the economy and persisting traditional perception of gender roles in the family; feelings of deprivation and anomie.

Increasingly developments characteristic of the second demographic transition are taking hold. Educational levels are increasing substantially and education is considered a primary strategy to increase chances of finding stable high quality employment with above average income. Furthermore, standards of living are rising; the choice of career opportunities widening; employment is more flexible, but also less secure; birth regulating behavior is changing; a new culture of consumption is developing; last but not least "western" culture and ideas are spreading faster than before. Consequently, anti-authoritarianism and individualism are spreading and generally a less altruistic value system is evolving.

Family formation and childbearing patterns of the generations born in the mid-1970s are diametrically different from those born only 15 years earlier in the early 1960s. These younger cohorts form unions much later, frequently they do not marry, they have fewer children and much later, they are likely to have fewer large families, but probably also fewer families with two children, and more of them will remain childless or adopt a one-child family model. Their completed fertility is estimated considerably below replacement, around 1.6 – 1.7, in many countries leading eventually to declining populations.

VI. Progress of the Second Demographic Transition

To be completed

VII. The rising importance of migrants for childbearing in Europe

Births to immigrant women contribute considerably to the recorded total number of births: usually well above one tenth of all births are realised by immigrant women. This share is typically higher than the proportion of immigrants. As a consequence of rising numbers of immigrants in the late 1990s and the early 2000s, almost all the analysed countries recorded a steady increase in the share of immigrant (foreign) births since the mid-1990s.

Whatever definition is used, immigrant women, when analyzed together, have considerably higher fertility than native women. The TFR of all immigrant women typically ranges between 2.0 and 2.5 and is thus by 0.3-0.8 higher than the TFR among the native women.

Trends over time differ between countries, but typically indicate a gradual diminishing of differences between fertility levels of immigrants and foreigners on one hand and natives on the other. However, a case of a complete convergence has not been recorded thus far.

Most studies find that within a decade after their arrival migrants' fertility drops close to the level of fertility among native women. Also the expected fertility of immigrants has been found to converge to the expected fertility of the native women over time. However, some populations show a slower pace of this convergence. Specifically, women from Muslim countries often experience the slowest pace of fertility decline.

Most studies show that any realistic level of migration cannot stop population ageing and can only have a relatively modest impact on slowing down this process. However, migration is likely to have considerable (positive) effect on the size of the labour force as well as on the total population size. The inclusion of the recently recorded higher migration rates into population projections also postpones the likely start of the future population decline in the EU-15 countries, Norway, Iceland, and Switzerland after the year 2050.

Finally, our knowledge about the impact of temporary and long-term emigration on fertility remains rudimentary at best. Two chapters that directly address this issue suggest that temporary labour emigration, typical of these societies, has above all a disrupting effect on family formation, which contributes to the ongoing postponement of childbearing.

VIII. The impact of public policies on European fertility

Professional opinion is polarized concerning the possibility of fertility politics to affect childbearing behavior. An innocent belief in the ability of public policies to correct for recent fertility decreases stands against the attitude that such pronatalist policies as are conceivable in modern democratic societies are both expensive and ineffective. The latter attitude has long been held by many professional demographers.

It turns out that public policies can have a strong impact on a country's fertility development, whether intended or not. The discrepant readings of the facts may be rooted in different understandings of what aspect of fertility one should focus on and which public policies one should count. In addition, even well-founded empirical studies of policy effects are up against a number of difficulties, mainly connected to (i) endogeneity, (ii) context, (iii) methodology, and (iv) the (im)possibility of providing antifactual counterexamples:

(i) Endogeneity may pester any investigation of cause-and-effect. It should not be forgotten that even when policies influence behavior, demographic behavior may conversely influence public policies.

(ii) Family policies do not operate in a societal vacuum; the effect of a given policy may be strongly dependent on the social environment in which it is implemented. In particular there is an important impact of economic trends; these interact closely with family policies in influencing fertility. The symbolic meaning of public policies should also be taken into account in addition to the specification of concrete policy parameters.

(iii) The choice of a dependent variable can be problematic. In particular, despite its well-know weaknesses, the period TFR (or some modern variant of it) is often used as the outcome variable in many investigations. When more adequate data are available, different birth orders are analyzed separately and fertility variables are based on cohort data, such as cohort-based age-specific fertility rates cumulated up to strategically chosen ages or until the end of childbearing (CFR). Actually, demographers disagree about the absolute supremacy of cohort data over period data. The analysis of period data revealed that the rigidity in the Swedish family-policy rules, together with ups and downs in economic growth created great swings in Swedish period fertility while in neighboring Finland the swings may have been avoided through countervailing effects of a home-care allowance that does not exist in Sweden. Such waves may have unpleasant consequences for society, e.g., when the school system has to adjust to greatly varying cohort sizes. Note that policy impacts on fertility have more dimensions than merely ultimate cohort fertility. Total concentration on the CFR may lead to a different fallacy, namely to fixation on the lifetime end product of childbearing (the "quantum of fertility") and to disregarding timing effects.

(iv) The analyst rarely has any antifactuals at hand to demonstrate effects. If an antifactual is not available, one cannot know what would have happened if a policy had not been implemented, or if it had been formulated in a different manner. A pronatalist policy can easily be judged ineffective when in reality it may have counteracted a fertility decline that would have occurred without it, in which case it should have been counted as a success.

It seems that a reversal in current ultimate-fertility trends can best be attained by a coordinated use of public policies in a range of interlocking areas (economic policy, employment policy, education policy, housing policy, gender policy, core family policy, and more), and that fertility regulation will be but an ephemeral goal where such coordination is lacking. Generous parental leave, child benefits, and childcare arrangements may be considered as desirable in their own right, but such policies alone are unlikely to succeed in raising the fertility level; they must be embedded in a family-friendly culture deliberately nurtured by the state. Developing such a culture takes time, so any government that wants to increase ultimate fertility, needs to realize that it faces a long-term commitment to broadly conceived policies that go far beyond core family policies alone.

IX. Is Europe entering a new demographic disequilibrium?

In the course of most of its history human population was increasing at a moderate pace. This was due to almost equal mortality and fertility which were both at high levels. Though moderate, population growth was not monotonous. Periods of increase were interspersed with declines caused by exceptionally high mortality in times of epidemics, wars and famines. It was during the 19th century that humanity, especially in Europe and in countries with a majority of European origin populations, experienced a significant mortality decline. With a certain time lag fertility also set forth on its secular decline. The difference in timing of the decline of these two basic demographic attributes brought about rapid population growth. The first extensive demographic disequilibrium commenced.

Around the middle of the 20th century it was generally accepted and believed that humanity was aiming for a new demographic equilibrium of low mortality and low fertility resulting again in negligible population growth. Contrary to expectations, towards the end of the 20th century and at the onset of the 21st, at first in most Western countries and after the collapse of the authoritarian communist regimes also in central and Eastern Europe fertility declined considerably below replacement levels. At about the same time, countries in East and South-East Asia were following along a similar path. A large number of European countries around the turn of the centuries have been experiencing negative rates of natural increase (some were losing population) and other ones were poised to follow. This appears to be the beginning of a new demographic disequilibrium.

As of 2004, 17 out of 38 European countries with over 100,000 inhabitants, 45 percent, had negative rates of population growth. This is a very recent phenomenon. In 1990 there were only three such countries. In some countries the negative rate of natural increase is offset by immigration. Nevertheless, 14 of the 38 countries had negative rates of population growth.

The findings of this project are validating what others anticipated. In 1933 Landry concluded in his theory of the *la révolution démographique* that in a third pattern "there is no longer an equilibrium." In 2001 Chesnais reminded us that Landry "envisaged a scenario of 'permanent disequilibrium' "… and stated that "(T)here are strong arguments

in favor of the eventual globalization of the birth deficit" … in which "(T)he long-term downward trend seems irreversible." In 2003 Van de Kaa reflected that "(P)erhaps it is now time for someone to start thinking about writing a … volume entitled: 'The Post-modern Decline of Population'. For Europe's demographic future appears to be a thing of the past." This volume is the initial attempt to write such a book. It is an assessment of whether humanity is facing a new demographic disequilibrium.

B. Abbreviated summary chapters

I. Contemporary levels and trends of fertility in Europe

1. Background

In contemporary Europe fertility levels and trends are of grave concern and for good reasons. The long-term sustainability of populations and the seriousness attached to the adoption of conceivable policy measures to work towards this sustainability depend significantly on the perception and understanding of what are the true levels and trends of childbearing early in the 21st century.

With the possible exception of Albania there was not a single European country in 2004 with fertility at or above the replacement level (Council of Europe 2006). Sustained fertility at or below 1.5 births per woman would lead to such a rapidly declining and ageing population that as a demographic outlook it "might well be judged unacceptable" (Demeny and McNicoll 2006:281). The resulting proportions of the old and very old would require exceedingly costly medical care, and any influx of immigrants large enough to offset the very low fertility would be of dimensions likely to make their integration very difficult and could cause serious social and political tensions and problems.

There is a general consensus among scholars that "maintaining fertility at a level that does not fall much below a two-child average – say, around 1.7 – 1.8" (Demeny and McNicoll 2006:281) could be sustainable for a prolonged period.

It is within this framework that the present project has set out to assess and discuss levels, trends and prospects of childbearing in Europe. To provide a comprehensive picture of the current fertility levels period fertility, adjusted period fertility and cohort fertility analyses are combined.

2. The spread of very low period fertility in Europe

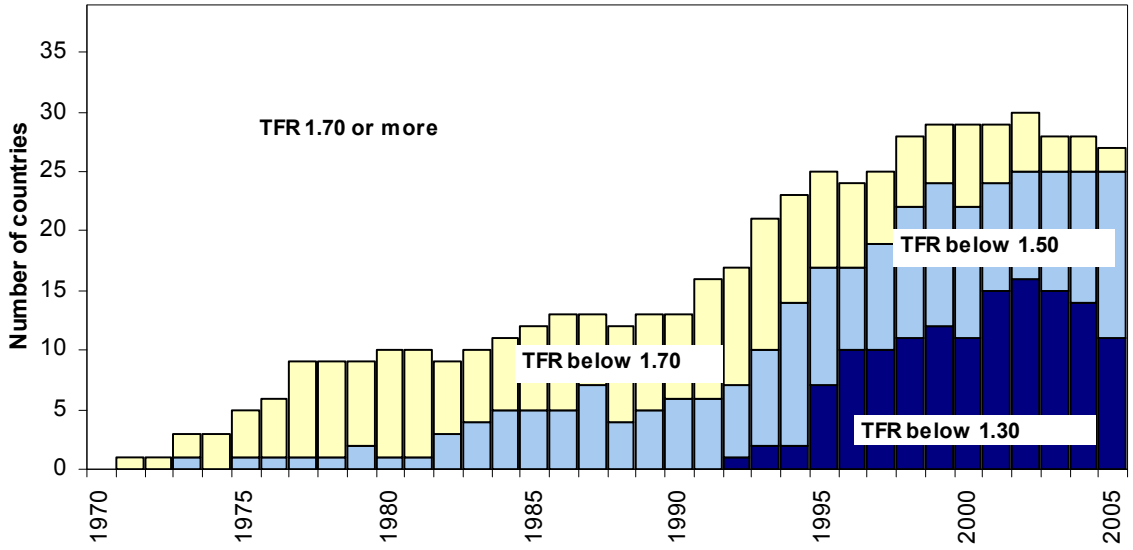
As a consequence of declining desired numbers of children combined with the postponement of parenthood, many European countries have experienced a decline of the period TFR to 'very low' (below 1.5) or 'lowest-low' (below 1.3) levels. This process has been particularly rapid during the 1990s, when most post-socialist societies of Central and Eastern Europe joined the latter group during their complex social transformation. In 2002, 16 out of 39 European countries with population above 100,000 (excluding

Turkey) recorded period TFRs below 1.3 and 25 countries recorded period TFRs below 1.5 (Figure 1). The 'lowest-low' fertility – analysed first extensively by Kohler, Billari and Ortega (2002) who also proposed this term – spread throughout Europe affecting countries with more than one half of the European population by 2002 (Figure 2), up from nil in the early 1990s. This proportion subsequently declined as the TFR in several large countries reverted above (Italy, Spain) or fluctuated around (Russia) the threshold of 1.3. Almost three quarters of Europeans currently live in societies with the TFR below 1.5 (Figure TS2); this very low fertility area includes all populations of southern Europe, almost all societies of central and eastern Europe and the German-speaking countries (Austria, Germany, and Switzerland). An extended period of the 'lowest-low' fertility may result in a rapid population decline – a stable population with no external migration experiences annual population decline of 1.5 percent when total fertility remains fixed at 1.3.

McDonald (2006) has proposed that contemporary fertility differences in Europe are linked to a 'cultural divide' between countries with very low fertility and those with 'moderately low fertility', where the total fertility rate of 1.5 constitutes a dividing threshold. Without fully subscribing to this explicit threshold, Lutz et al. (2006) propose that once falling below certain threshold, fertility decline may become self-reinforcing and almost impossible to reverse. These arguments have some inherent limitations. First, they are usually based on (distorted) period measures rather than on the completed fertility of specific cohorts: as Figures 5 and 6 show, relatively few countries are likely to reach soon completed fertility below 1.5. Furthermore, there does not exist any theory on why certain threshold like 1.5 should be more important than any other (1.3 or 1.7, say).

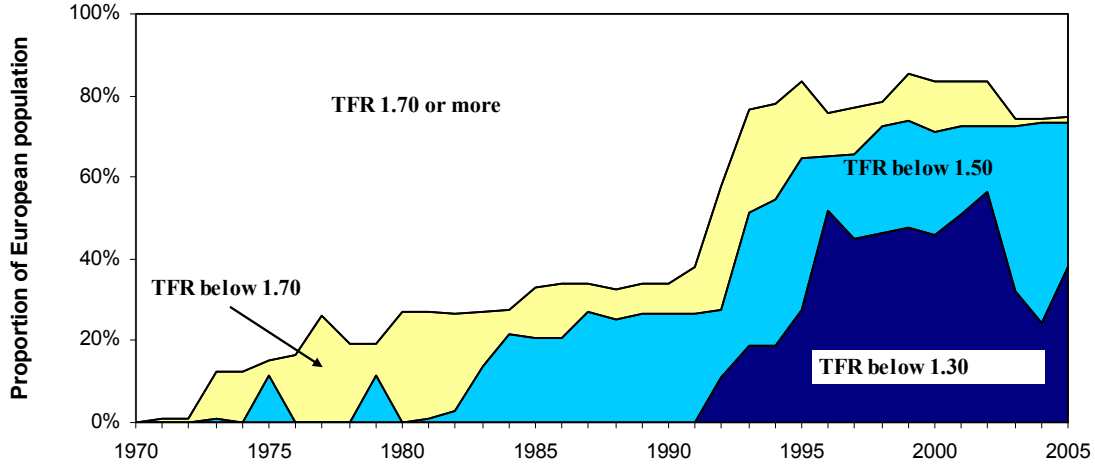
There is a general agreement among researchers that low fertility (i.e., below-replacement fertility) is likely to persist for the coming decades (see Lesthaeghe and Willems 1999). However, very low levels of the period TFR are typically linked to tempo effects (i.e., distortions caused by the changes in the timing of childbearing) and may thus be in many societies a temporary phenomenon – although in this case 'temporary' could also mean several decades (see also below). Even such time-limited rapid fall in the period TFR to very low levels has direct consequences for the society as it usually brings a distinct fall in the number of births and thus affects the future generation size and creates imbalances in the age structure of the population. In addition, as progressively smaller cohorts of women born in the 1970s and later reach their prime childbearing years, the total number of births is likely to decline in most countries even if the period TFR remains stable or increases moderately (see Sobotka, Lutz, and Philipov 2005).

Figure 1: Number of European countries with the period TFR below 1.7, 1.5 and 1.3 (out of 39 countries with population above 100,000 in 2006)



Source: Authors' computations based on Council of Europe (2006) and Eurostat (2006, 2007).
Note: Montenegro counted as a part of the former republic of Serbia-Montenegro

Figure 2: Proportion of Europeans living in countries with the period TFR below 1.7, 1.5 and 1.3



Source: Authors' computations based on Council of Europe (2006) and Eurostat (2006, 2007).

3. Delayed childbearing and tempo distortions in period fertility rates

Delayed entry into parenthood has become a universal feature of European fertility trends (Kohler, Billari and Ortega 2002; Sobotka 2004a; Frejka and Sardon 2006 and 2007)) and one of the hallmarks of the second demographic transition (Lesthaeghe and Moors 2000). By the early 2000s practically all European societies, including the countries of the former Soviet Union, experienced the onset of fertility postponement (Figure 3). In many societies of western, northern and southern Europe, including Italy, the Netherlands and Sweden, women enter motherhood close to age 29 years on average, up from age 24-25

in the early 1970s. Spanish women have become the oldest first-time mothers in Europe (mean age of 29.3 in 2005; see the chapter on Spain in this volume). Women in the post-communist countries of central and eastern Europe have children at an earlier age, but especially central European countries have seen an intensive postponement of childbearing since the mid-1990s.

This trend is reflected in the changing patterns of fertility rates by age. Teenage childbearing has become relatively marginal and the share of fertility below age 25 has fallen drastically; in many countries fewer than one fifth of births are realised by women at that age (Figure 4). In parallel, the peak of childbearing is shifting to ages 30-34 in many populations. In Italy and Spain close to 60 percent of childbearing is realized by women past age 30.

Figure 3: Mean age of women at first childbirth in selected countries and regions of Europe, 1960-2004 (arithmetic averages)

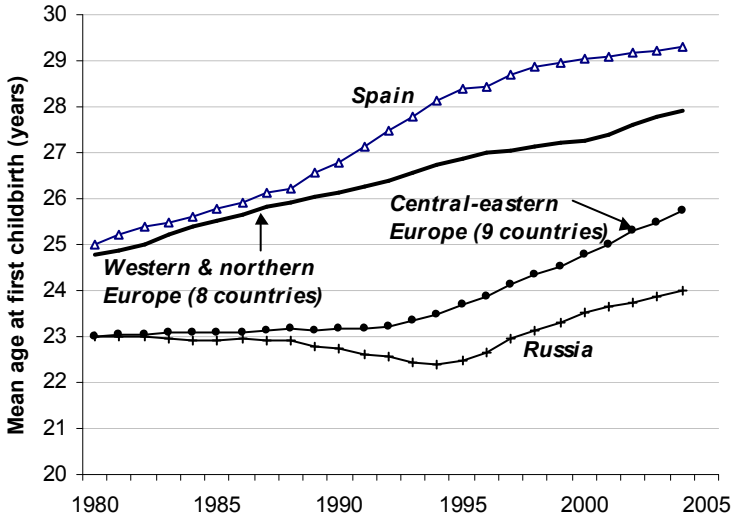
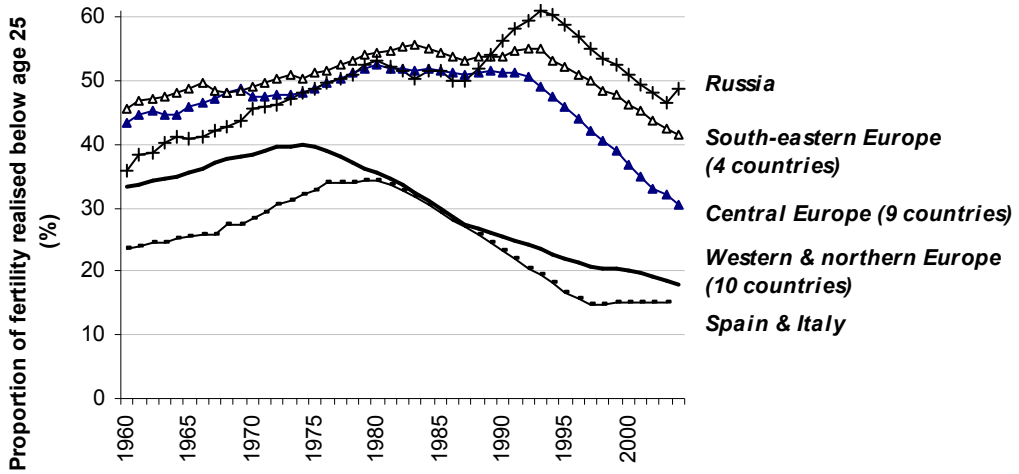


Figure 4: Proportion of childbearing realized by women below age 25 in selected countries and regions of Europe, 1960-2004 (arithmetic averages)



Source: Authors' computations based on Council of Europe (2006) and national vital statistics data.

The ongoing shift towards later parenthood has had a negative effect on the commonly used period total fertility rates. Various methods have been proposed to correct the shortcomings of the conventional TFR and provide a measure of the 'underlying' period fertility quantum. Such exercises (not presented here) confirm that even if tempo distortions are taken into account, all European regions have sub-replacement fertility; a considerable heterogeneity between countries and regions prevails.

B. Cohort fertility levels and trends

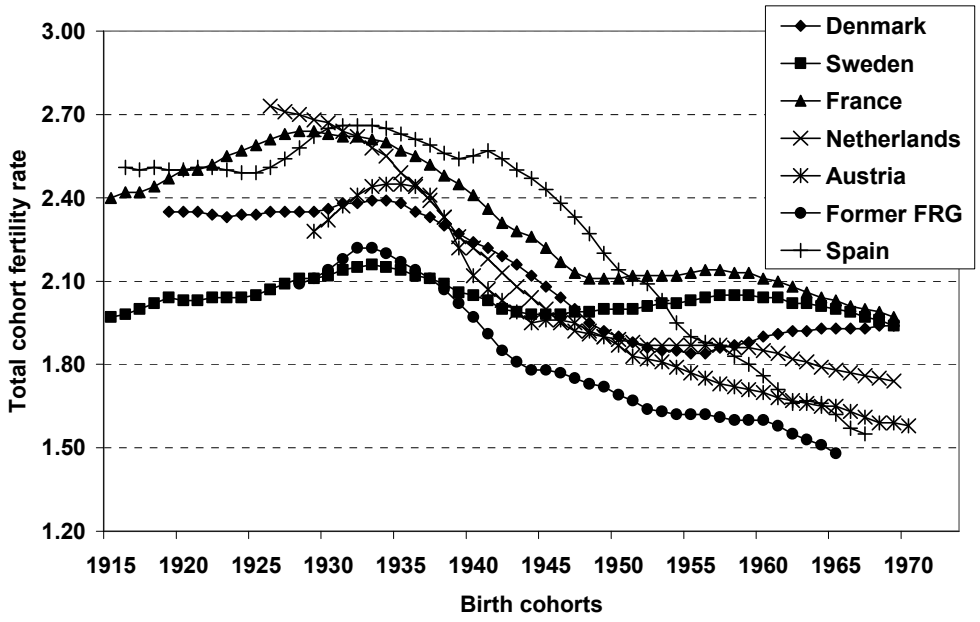
1. The completed cohort fertility message

We now turn to the exploration of cohort fertility in the search for additional, complementary knowledge. The main shortcoming of investigations based on TCFRs, namely that it relates past fertility, can be overcome by analyzing cohort fertility patterns of generations that are in the middle of their childbearing years. Recent studies (e.g., Frejka, Sardon 2004; Sobotka 2004a) have proven that such research can provide useful insights about contemporary fertility behaviour.

Two broad groupings of countries of almost equal size provide an appropriate illustration of long-term cohort fertility trends in Europe during the past half century: Western Europe and the formerly socialist countries of central and Eastern Europe (these two broad groups correspond to the sum of the first four and the last three categories in table TS1, respectively).

Whatever differences there may have been in the long-term trends, the outstanding feature is that completed cohort fertility was declining virtually in all Western countries among the cohorts of the early to mid-1960s, i.e. the cohorts which are finalizing their childbearing early in the 21st century. The one exception with TCFRs not declining among the 1960s cohorts was Denmark.

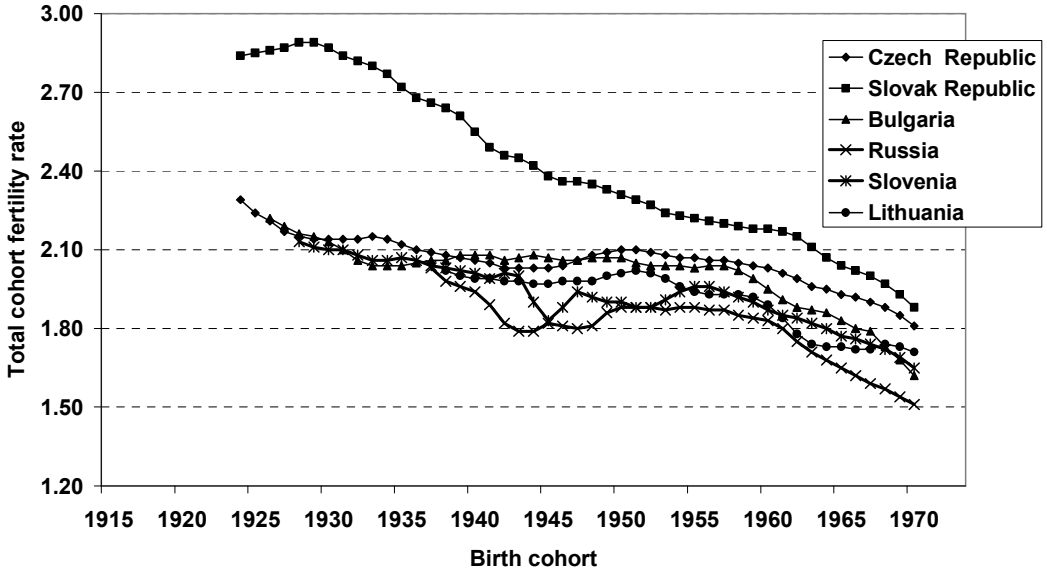
Figure 5 - Total cohort fertility rates, selected WestEuropean countries, birth cohorts 1915-1970



Source: Observatoire Démographique Européen

The cohort fertility trends in the formerly socialist countries were more homogeneous (Figure TF 2). In most of these countries the total cohort fertility rates were stable, close to replacement fertility from cohorts of the 1930s through those of late 1950s. Without exception the TCFRs were declining among the cohorts of the 1960s.

Figure 6 - Total cohort fertility rates, selected Central and East European countries, birth cohorts 1924-1973



Source: Observatoire Démographique Européen

Regional averages of completed fertility of the 1965 cohort ranged from a high of 2.1 in Northern Europe to lows of 1.7 in Southern and Eastern Europe (Table 1). A number of countries had TCFRs at 2.0 and above; the larger ones where France (2.03), Ireland (2.19), Norway (2.07), Poland (2.00) and Slovakia (2.04). The lowest 1965 TCFRs were found in Germany (1.51), Austria (1.65), Switzerland (1.66), Italy (1.51), Spain (1.62), Belarus (1.62), Ukraine (1.64) and the Russian Federation (1.65). The important thing to realize is that all these values were within a context of TCFR declining trends.

Table 1: Total cohort fertility rate, European regions, birth cohort 1955 and 1965

	Total cohort fertility rate	
	Cohort 1955	**Cohort 1965**
Western Europe	2.03	1.92
Northern Europe	2.07	2.06
German-speaking countries	1.73	1.60
Southern Europe	1.94	1.68
Central-eastern Europe	2.00	1.88
South-eastern Europe	2.22	2.02
Eastern Europe	1.87	1.72

Source: Council of Europe 2006

Notes: Countries are grouped into regions as follows:
Western Europe: Belgium, France, Ireland, Luxembourg, the Netherlands, and the United Kingdom
Northern Europe: Denmark, Finland, Iceland, Norway, and Sweden
German-speaking countries: Austria, Germany, and Switzerland
Southern Europe: Greece, Italy, Portugal, and Spain
Central-eastern Europe: Croatia, Czech Republic, Estonia, Hungary, Latvia, Lithuania, Poland, Slovakia, Slovenia
South-eastern Europe: Bulgaria, Macedonia, Montenegro, Romania, Serbia & Kosovo
Eastern Europe: Belarus, Moldova (excluding Transnistria), Russian Federation (including Asian part), Ukraine

2. The message revealed by cohorts in the midst of childbearing

There is no doubt that parenthood postponement has been a crucial factor in fertility trends in the past several decades in the advanced countries (cf. all chapters in this volume, Kohler et al. 2002, Sobotka 2004, Frejka and Sardon 2004, 2006, 2007). In the latter part of the 20th century and early in the 21st century the demographic mechanism determining fertility trends is the interaction of fertility postponement and recuperation. In the Western countries this process started among the cohorts born during the 1940s (basically during the late 1960s). In the formerly socialist countries this process was initiated much later, among the cohorts of the 1960s.

The main objective of the present project is to understand contemporary, i.e. late 20th century and early 21st century fertility levels and trends. For that purpose fertility patterns of cohorts that are in the midst of their childbearing years are explored. While such an investigation is insightful, it has an unavoidable shortcoming. The younger the cohort, by definition less is known about its lifetime childbearing behaviour. The 1960 cohort was approaching the end of its reproductive years early in the 21st century, however, for instance, the 1970 birth cohort was only 33 years old and the 1975 cohort only 28 in 2003, which was the last year for which data were available for all countries at the time of our analyses.

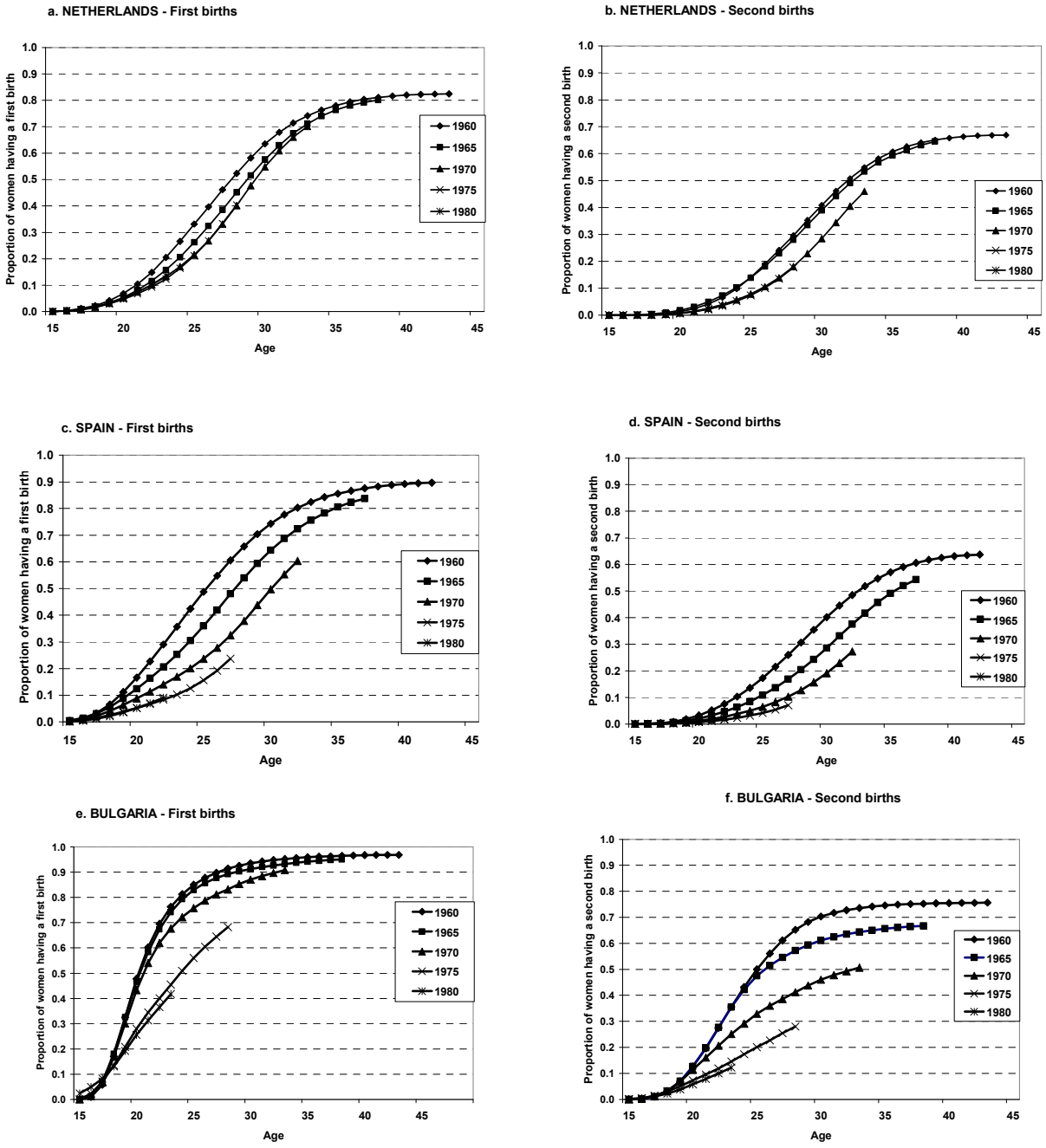
Figures 7 and 8 display developments in three countries of the interplay of timing and quantum trends. These countries were selected because many of the typical developments

occurred here and can be well demonstrated. The investigation of first and second births is utilized, because this provides clearer insights than the investigation of all birth orders lumped together. Investigation of higher order births could be added, however, the additional acquired knowledge would be marginal because of the relatively small proportion of these births. In 1995-1996 the proportion of first and second births was 84 percent of all births in advanced low-fertility countries (Frejka, Ross 2002), and since then this proportion might have increased.

In the *Netherlands* about 82 percent of women in the 1960 cohort were having first births and the following cohorts were aiming for comparable levels. Women of the 1960s birth cohorts were delaying their childbearing moderately, however all the delayed births were later recuperated at least among the cohorts of the 1960s (Figures 3a and 8a). Women of the 1970s birth cohorts were no longer delaying their childbearing – the curves of the 1970, 1975 and 1980 cohorts are almost identical (as far as the data were available). At the present time it is not known whether these women will recuperate the foregone births (compared to the cohorts of the early 1960s), because these women are still in the initial stages of their reproductive period. Close to 70 percent of women in the 1960 cohort were having second births and the delaying as well as the recuperating propensities of subsequent cohorts were of a similar nature as with first births (Figures 7b and 8b). These processes find their expression in the levels and trends of the period fertility measures of birth orders and of the TPFR. As delaying of parenthood ceased, the TPFR increased during the late 1990s from 1.5 in 1996 to 1.7 births per woman in 2000 and remained at that level through 2005.

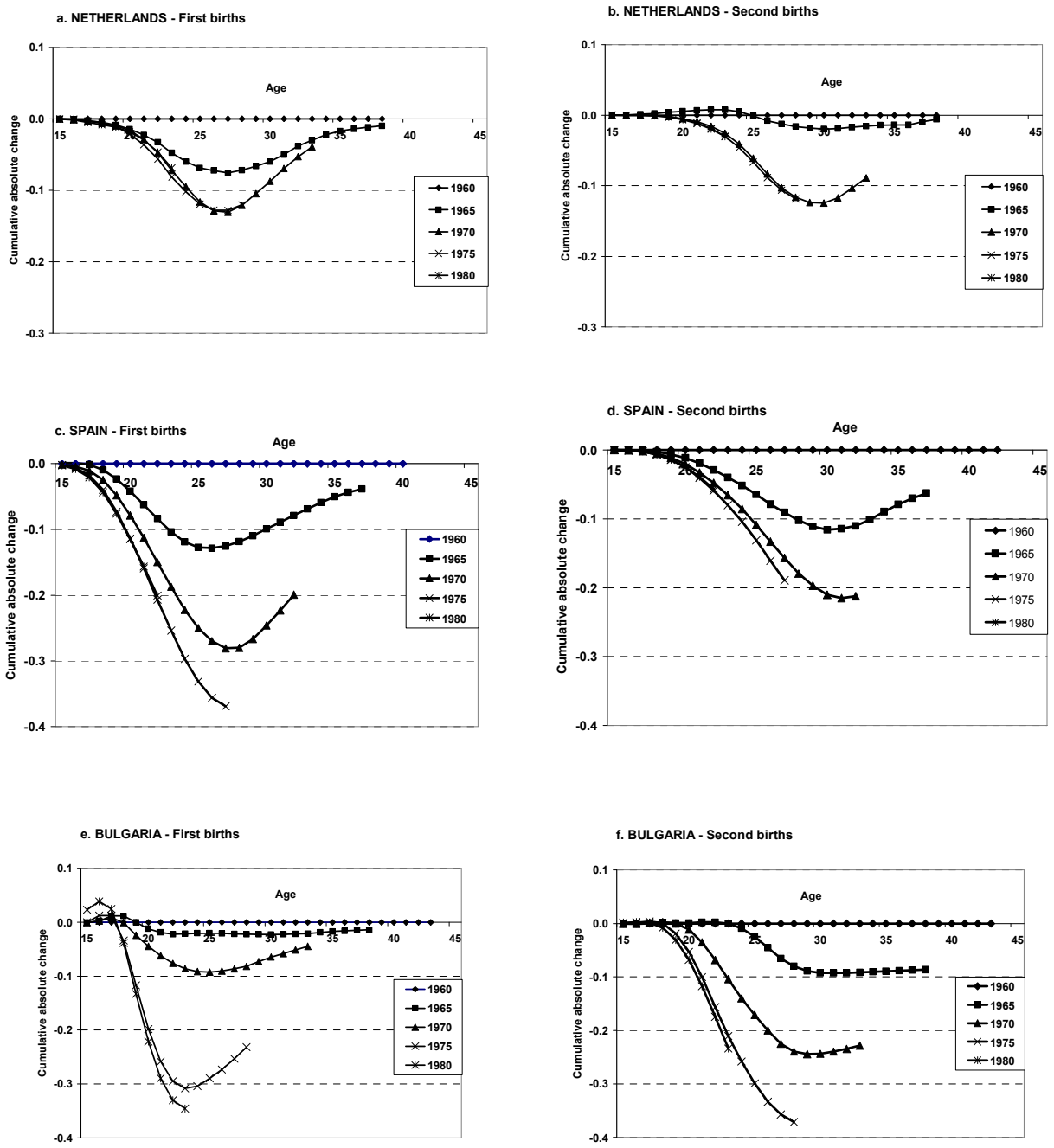
In *Spain* 90 percent of women of the 1960 birth cohort had a first birth by age 42. Each subsequent cohort of the 1960s and 1970s had fewer children when these women were in their early to mid twenties (Figures 7c and 8c). For instance, by age 27 women of the 1975 cohort had borne 0.37 fewer first births than the 1960 cohort. It appears that in Spain childbearing delay came to a halt among the cohorts of the late 1970s. The curve for the 1980 cohort is equivalent to the 1975 curve, although this is difficult to distinguish in Figure 7c. Women when older had a propensity to recuperate foregone first births, however so far it cannot be conclusively determined the extent to which full recuperation is achieved. – Sixty-four percent of Spanish women in the 1960 cohort had a second birth by age 42. Second births were also being delayed when women were young. By the time women of the 1970 cohort were in their early thirties they had had only about half as many second births as the cohort ten years older. Just as with first births, second births were no longer being delayed among the cohorts of the late 1970s. The propensity to recuperate the foregone births was also evident, but the eventual outcome unknown. Period fertility in Spain had declined to its lowest level by 1999, when the TPFR was at 1.13 births per woman, and it has been gradually rising since then reaching 1.35 in 2005. This increase was directly related to the ceasing delay in childbearing.

Figure 7 – Cumulative progression rate to first and second births, birth cohorts 1960, 1965, 1970, 1975 and 1980, Netherlands, Spain and Bulgaria



Source: Observatoire Démographique Européen

Figure 8 – Cumulative change in first and second birth progression rates by age, birth cohorts 1960, 1965, 1970, 1975 and 1980, Netherlands, Spain and Bulgaria (benchmark cohort 1960)



Source: Observatoire Démographique Européen

In *Bulgaria* 97 percent of women of the 1960 cohort had had a first birth by age 43. Although a moderate delay in first births was taking place among the 1960s cohorts clearly more than 90 percent of women in these cohorts will eventually have a first birth. There was a notable decline of first births among the 1970s birth cohorts; particularly among young women born early in the 1970s (Figures 7e and 8e). While the 1970s cohorts were maintaining early childbearing patterns with peak fertility at ages 19 to 20, they were also showing a clear propensity to recuperate at least some of the births foregone when younger (Figure 8e) and consequently their fertility when in their late twenties was higher than in previous generations (not shown here). For example, the childbearing deficit of the 1975 compared to the 1960 cohort was – 0.31 births, but was narrowed to – 0.23 births by age 28 (Figure 8e). Seventy-six percent of the 1960 cohort had second births. The proportions having second births were declining considerably in subsequent cohorts, especially among those of the late 1960s and the early 1970s. For instance, only 28 percent of women in the 1975 cohort had had a second birth by age 28 compared to 57 percent in the 1965 cohort at that age, a difference of 50 percent. And apparently the propensity to recuperate second births later in life was weak (Figure 8f). At the same time the delaying of parenthood was slowing down. The fertility age trajectories of the 1975 and the 1980 cohorts were getting closer to each other than in previous cohorts. The rapid pace of childbearing delay combined with quantum declines among the cohorts of the late 1960s and early 1970s was reflected in the period rates. The period TFR declined from 1.82 births per woman in 1990 to its lowest level of 1.09 in 1997. It increased moderately to 1.30 in 2000 and remained in the 1.20 to 1.30 range during the period 2000-2005 reflecting the slowdown in fertility postponement.

These three examples together with evidence presented in the country chapters and other literature (Kohler et al. 2002, Sobotka 2004a, Frejka, Sardon 2004, 2006, 2007) illustrate prevailing contemporary patterns of fertility behaviour. The main features are the following.

- In the past two to four decades, in virtually all European countries the postponement of parenthood was and continues to be an ongoing process. The almost universal prevalence of childbearing postponement is confirmed in individual chapters. Among the cohorts of the 1960s and early 1970s childbearing of young women has been declining virtually in all countries. This decline has been more obvious among second than among first births. In general, the rates of decline have been more pronounced in the countries of Southern, Central and Eastern Europe, and less so in Western and Northern Europe. The cessation of childbearing postponement observed in the Netherlands among the cohorts of the 1970s was the exception thus far; incipient signs of postponement coming to an end can be detected elsewhere, such as among the cohorts of the late 1970s in Spain and Bulgaria (Figures 7 and 8).

- There is a propensity to recuperate delayed fertility. Recuperation of second births tends to be weaker than that of first births. Recuperation is relatively strong in Northern and in some West European countries, but weaker in Southern, Central and Eastern Europe (Frejka, Sardon 2007).

- A crucial yet unanswerable question is the extent to which foregone births of the 1970s cohorts will be recuperated when women will be older. The experience of

the recent past portrayed in the chapters in this book and from other sources indicates higher rates of recuperation in Northern and Western Europe (excluding German-speaking countries) than elsewhere. Also, the outlook for a relatively high degree of recuperation appears better for first than for second births, as exemplified in Figures 7 and 8.

- Even though it is not known to what degree childbearing will be recuperated, it can be surmised but not proven conclusively that quantum declines are a part of the trends of fertility behaviour of women in the midst of their childbearing in a number, possibly a majority, of European countries. For instance, the developments in Bulgaria (Figure 7e and 8e and even more so 7f and 8f) illustrate these presumed quantum declines. Especially among second births the curves for each subsequent cohort are below preceding ones (Figures 7d and 7f) and data available to date illustrate that propensities to recuperate foregone births appear weak (Figures 8d and 8f). Similar trends occurred in Poland, the Slovak Republic, Slovenia, Romania, Italy and other countries.

C. Combining period and cohort fertility analysis

Frejka and Sardon (2005) provided alternative projections of TCFRs for the 1975 birth cohorts of low-fertility countries. Three alternatives differed from each other by assuming that the amount of foregone births of the 1975 compared to the 1965 cohorts[1] would be recuperated in full, by 50 percent or not at all. Based on the analysis of fertility behaviour in these countries the authors argue that

> "the '50 percent recuperation' option or even somewhat less than that for the 1975 birth cohort appears as the most likely option for the Western countries" and that
>
> "it is reasonable to conclude that the 1975 birth cohorts in the formerly socialist countries are likely to wind up with TCFRs probably above the 'no recuperation' projections, and almost certainly below the '50 percent recuperation' projection."

For the sake of simplicity and justified by this argumentation, Table TF2 lists the projected TCFRs of the 1975 cohorts based on the "50 percent recuperation" assumption only. For comparison the 2004 period total fertility rates are also provided. These two sets can legitimately be compared as the cohort rates are lagged approximately by the average age of childbearing (29 years), i.e. childbearing of the 1975 birth cohort is centered around the first years of the 21st century. In the North and West European countries the differences are less tan 0.1 birth, namely below 5 percent. In France and the Netherlands the differences are very small, because births are no longer being postponed. In the German speaking countries and in Southern Europe the differences are up to 10 percent. In the formerly socialist countries the differences between the projected 1975 TCFRs and the 2004 TPFRs are about 0.3 – 0.4 births, i.e. between 15 to 25 percent.

[1] These were actual amounts of foregone births of the 1975 compared to the 1965 cohorts of women up to the age of 27.

The closeness of the values of the 2004 TPFRs and the 1975 projected TCFRs for the North and West European countries imply that the underlying fertility level is relatively well represented by these numbers. On the other extreme are the formerly socialist countries with the large differences between the period and cohort rates. As has been demonstrated, a considerable postponement of childbearing was taking place during the 1990s in the cohorts born during the 1970s and apparently birth postponement was continuing in the early 21st century. At the same time propensities for recuperation were present, albeit moderate. It is therefore reasonable to assume that in the near future the period TFRs may have a tendency to increase and the cohort fertility rates may level off or could experience a further slight decline. Here we are faced with some uncertainty because the parenthood and childbearing postponement and recuperation process started only in the early or even mid 1990s. The circumstances shaping childbearing behaviours of young generations are in a considerably more volatile state of flux in these countries. Also, demographic conditions, such as relatively low ages of childbearing and lower ages of union formation, contain the potential for continued birth postponement and further quantum declines.

Table 2 - 1975 projected total cohort fertility rates and 2004 total period fertility rates, selected European countries

Country	***1975 TCFR assuming 50% recuperation***	***2004 Total period fertility rate***	***Difference between 1975 TCFR and 2004 TPFR***	
			Absolute	***In percent***
Denmark	1.84	1.78	-0.06	-3.3
Sweden	1.83	1.75	-0.08	-4.4
England & Wales	1.81	1.76[a]	-0.05	-2.8
France	1.90	1.92	0.02	1.0
Netherlands	1.72	1.73	0.01	0.6
Austria	1.53	1.42	-0.11	-7.2
Italy	1.35	1.33	-0.02	-1.5
Spain	1.47	1.32	-0.15	-10.2
Czech Republic	1.62	1.22	-0.40	-24.7
Hungary	1.70	1.28	-0.42	-24.7
Bulgaria	1.55	1.29	-0.26	-16.8
Romania	1.61	1.29	-0.32	-19.9
Slovenia	1.50	1.25	-0.25	-16.7

Note: a – United Kingdom
Sources: Frejka, Sardon 2005; Council of Europe 2006

In sum, underlying fertility levels early in the 21st century in North and West European countries were moderately below the replacement level in the range that could be sustainable for a prolonged period, namely at around 1.7 and above (Tables 2 and 3). The German speaking countries of Western Europe and South European countries had period TFRs from 1.3 to 1.4 births per woman. The TFRs of the formerly socialist countries fell

to the lowest levels in Europe and reached 1.2 to 1.3 in almost all these countries. A considerable part of this decline was due to the intensive fertility postponement. Once this process slows down, a modest recuperation of the period TFR may be expected in most countries recording at present the lowest TFR levels. However, even if these modest rises were to happen, many European countries may retain low fertility levels which could lead to such rapidly declining and ageing populations which would be a "demographic outlook (that) might well be judged unacceptable".

Table 3 - An overview of 1975 projected total cohort fertility rates, European regions

Region	***Average total fertility rate***	***Range of country TFRs***
Northern Europe	1.9	1.8 – 2.0
Western Europe	1.9	1.7 – 1.9
Central Europe-German speaking	1.5	1.3 – 1.6
Southern Europe	1.6	1.5 – 1.7
Central Europe and Baltic States	1.7	1.5 – 1.8
South-East and Eastern Europe	1.7	1.5 – 2.1

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II. Changing parity distribution and family size

The topic of changing parity distribution and family size, i.e. actual developments as well as norms, is of interest and importance not only for demographers, sociologists and other social scientists, but also to the general public.

It has proven to be difficult to establish the relationships, apparently endogenous, between actual developments, perceptions of levels and trends, and family size norms. Goldstein et al. (2003:479) report that after decades of stability "the two-child ideal may be beginning to change in several European countries." The significance of this finding becomes obvious in the context of the consequences for actual developments and policy-making. In one of the chapters, for instance, the concern is raised that "(W)ith the fall in desired fertility, a barrier could have been formed in Germany which even prevents birthrates increasing in the longterm." (p. 29).

Parity 2 women were dominant among cohorts of the 1950s and around 1960. Average proportion of parity 2 was 45 percent with about 30 percent of women of parity 0 and 1, and less than 25 percent of women with 3 or more children (Frejka and Sardon 2004: 336-337; 362-365).

The prevailing trends among 20 to 30 cohorts of the 1930s, 1940s and 1950s were the following:

- Proportions of women with three or more children were declining across the board

- In most countries the proportions of women of parity 0 and 1 were increasing

- In almost all countries proportions of parity 2 women were increasing through the cohorts of the 1950s. Among the cohorts of the (late) 1950s and around 1960, proportions of two-child "families" started to decline.

- Even though the proportions of the two-parity women are declining, their proportions are generally a multiple of the proportions of one-parity women. Usually there are 2 to 3 times as many. The exceptions were in Romania where there were almost as many one-child as two-child families in the 1965 cohort. On the other extreme were the 1960 cohorts in the Czech and Slovak republics with 3.6 and 3.5 times two- compared to one-parity women, respectively.

- The actual parity distributions for the cohorts of the late 1960s and the 1970s are not yet known, nevertheless it appears reasonable to assume that the incipient decline in the proportions of the two-child family and the increase in one-child families or childless women are most likely continuing. These assumptions are in line with the facts that large families of three or more children were at best stable if not declining in practically all countries, and overall fertility was declining during the 1990s.

In sum, the 1990s and the early 21st century might have been the period when the two-child family ideal started its demise.

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III. Birth regulation

Contraception and induced abortions were the principal means of regulating fertility in Europe in recent decades. Both were known already in the ancient cultures of Egypt, Greece, Rome and other countries (Himes 1936; Van de Walle 1999), but were not widely practiced prior to the 19th century.

In addition to abstinence, the most widespread contraceptive method of the 19th and early 20th centuries was *coitus interruptus* – withdrawal (see, e.g., contributions in JIH 2003). The practice of induced abortion was also widespread. With time other contraceptive methods were increasingly used, namely the douche, rhythm (also known as *calendar method* or *periodic abstinence*) and condoms. The first intrauterine devices (IUDs) were introduced in the 1920s, but were not in general use before the 1960s. The U.S. Food and Drug Administration approved the "pill" in 1960; this marks the initiation of the era of

truly modern contraception. The generally accepted contemporary classification of modern contraceptives includes sterilization, condoms and barrier methods in addition to the IUDs and various forms of hormonal contraception, such as the pill, injectables and implants. (We will use this terminology even though the characterization "modern" is historically inaccurate.) Rhythm, withdrawal, prolonged abstinence, breastfeeding and douching are considered traditional methods. One reason for distinguishing between modern and traditional methods is the difference in their effectiveness in preventing conception. Modern methods when properly administered are very effective whereas traditional methods tend to have high failure rates. When a modern contraceptive method is used consistently for 12 months, less than one pregnancy per 100 women-years will materialize compared to 14 – 26 pregnancies when traditional methods are used[2] (United Nations 2000).

In the second half of the 20th century several European countries had legal restrictions on the use of contraceptive methods, reflecting the position and influence of religion. For instance, in the Netherlands "it was forbidden to sell or advertise contraceptives" in the 1960s and "[I]n 1969 the [Dutch] government removed the statutory prohibition on contraceptives" (Netherlands chapter). In principle, none of these restrictions are any longer in force early in the 21st century.

Abortion laws can be classified into five broad categories, reflecting various degrees of restrictiveness: (1) strict prohibition or abortion only allowed to protect the woman's life; (2) also to protect a woman's physical health; (3) abortion permitted to protect a woman's physical and mental health; (4) permitted on socioeconomic grounds; and (5) permitted on demand during a prescribed period of the pregnancy without restriction as to reason. Induced abortions were almost universally illegal in the first half of the 20th century. After 1950 laws were liberalized in most European countries, at first in the formerly socialist countries of Central and Eastern Europe in the mid-1950s, and gradually elsewhere. As of the early 21st century, induced abortions are permitted without any restriction as to reason in almost all European countries (Rahman et al. 1998), although there are a few countries that have some legal constraints, and there are two significant exceptions. The most restrictive laws are still in force in Ireland. In Poland abortion was permitted on socioeconomic grounds in 1956, however the law was revised in 1993 to permit abortion only when a pregnancy threatened the woman's life or health and on juridical and fetal impairment grounds (see Kulczycki 1995).

The legal status of abortions may affect associated health risks. Where restrictive laws are in force such risks can be considerable, because there is a greater risk that induced abortions will not be performed in optimal hygienic conditions with advanced medical procedures. The increase in maternal mortality following the severe 1966 restrictions on induced abortions in Romania is a case in point (Baban 1999). Even with liberal legislation the quality of abortion services may differ from one country to another, with differential effects on women's reproductive health.

[2] Although the male condom is called a modern method its effectiveness is low: the probability of failure is 14 pregnancies per 100 women during 12 months of use.

Contraceptive use

One can get a general idea of levels and trends in contraceptive use in the four main regions of Europe in the past two decades from Table 1[3].

Table 1
Contraceptive use and use of modern methods, by region, as reported in 1998 and 2005, but reflecting years prior to these dates.

Region[a]	***Year reported***	***Percentage of couples using***		***Percentage of users employing modern methods***
		any method	***modern method***	
Eastern Europe	1998	69	31	44
	2005	62	36	58
Northern Europe	1998	78	77	98
	2005	79	75	95
Southern Europe	1998	69	31	46
	2005	69	49	71
Western Europe	1998	75	71	94
	2005	74	70	95

Sources: United Nations 2000, 2006
Note: a - as defined in United Nations publications

The main observations that can be drawn from these data:

- Contraceptive prevalence was high in Northern and Western Europe compared to Eastern and Southern Europe;
- The use of modern contraceptives was almost universal in Northern and Western Europe;
- The use of modern contraceptives although relatively low increased substantially in Eastern and especially in Southern Europe in the last two decades.

The transition to the dominant use of modern contraceptives by the majority of populations, habitually referred to as "the contraceptive revolution" (Westoff & Ryder 1977), took place in Northern and Western Europe during the 1960s and 1970s. In Southern Europe this occurred mostly during the 1980s and 1990s and is still ongoing in the 2000s (see country chapters). In the formerly communist countries of Central and Eastern Europe major changes in contraceptive behavior got under way with the collapse

[3] The United Nations Population Division periodically provides an overview of contraceptive use around the world. Nationally representative sample surveys of women of reproductive age (usually restricted to women who are married or in a union) conducted by governments and international organizations are compiled and regional averages are estimated. The two most recent global overviews refer to 1998 and 2005 (United Nations 2001 and 2006), but reflect developments preceding those years, because national surveys are conducted irregularly.

of the authoritarian regimes (For examples see Table 2 and the chapters on the Czech Republic, Poland, Russia, and Slovakia).

Table 2
Use of selected contraceptive methods, selected countries, 1971-1999

Country	*Year*	*Any method*	*Prevalence of modern methods*					*Withdrawal*	*Percentage of users employing modern methods*
			Total	*Female Sterilization*	*Pill*	*IUD*	*Condom*		
Czech Republic	1991	78	53	2	7	17	27	25[a]	68
	1993	69	45	3	8	15	19	22	65
	1997	72	63	7	23	14	13	7	88
Romania	1978	58	5	..	1	0	3	26	9
	1993	57	15	1	5	11	4	34	26
	1999	64	30	3	8	7	9	29	47
Finland	1971	77	54	0	20	3	31	16	70
	1977	80	78	4	11	29	32	2	98
	1989	77	75	15	11	26	20	1	97
Spain	1977	51	20	0	13	1	5	22	39
	1985	59	38	4	16	6	12	16	64
	1995	81	67	12	15	8	24	11	83
France	1972	64	21	0	11	1	8	33	33
	1978	79	48	5[b]	27	10	6	22	61
	1988	81	67	7	30	26	4	7	83
	1994	75	69	8[b]	36	20	5	3	92

Sources: United Nations 2000, 2006
Notes: a – includes rhythm
b – includes male sterilization

There was a considerable variation between countries in the use of specific contraceptive methods and in their trends of use over time. Taking into account that specific contraceptive methods tend to be used differentially depending on age (mainly age of women), there has been an almost universal increase in the use of the more effective methods, sterilization and the pill (Table 2). Conversely, the use of traditional methods has declined across the board as exemplified by the trends in the use of withdrawal.

Further, there is a clear distinction between countries in the mix and trends of use of specific contraceptives where the contraceptive revolution has run its course, on the one hand, and where it is still in progress, on the other. By definition, in the former the use of traditional methods is now almost zero. In a number of countries, such as the Czech Republic and Spain, change in the use of contraceptives was progressing rapidly during the 1990s, and the patterns of use are now coming close to the countries with a completed transformation. Romania is an example of a country where changes in contraceptive use still have a long way to go. Despite a significant ongoing metamorphosis less than half of all couples were using modern contraceptives in 1999, but the transformation no doubt continued during the 2000s (Romania chapter).

Induced abortions

"Abortion culture" is the phrase succinctly characterizing the nature of birth regulating behavior in the formerly socialist countries of Central and Eastern Europe for the four decades of the 1950s – 1980s (Stloukal 1999). Liberal abortion legislation coupled with health systems advancing curative rather than preventive medicine made induced abortions easy to obtain and socially acceptable. With the exception of Hungary, GDR, and parts of the former Yugoslavia modern contraceptives, especially the pill, were difficult to obtain and most couples were using traditional ineffective contraception (Stloukal 1995; Sobotka 2003). Withdrawal, and to a lesser extent rhythm and condoms, was being employed by a majority of users (Frejka 1983; David 1999).

There were major differences between these countries in the incidence of induced abortions. For the most part, on average women had one to two life-time abortions, but in the Soviet Union and Romania the total induced abortion rate around 1960 was in the order of 5 to almost 8 lifetime abortions per woman (Frejka 1983).

Birth prevention behavior changed significantly during the 1990s and early 2000s following the collapse of the totalitarian regimes in the formerly socialist countries, although some reshaping was seeping in prior to that. The incidence of induced abortion decreased in all countries (Table 3) together with a major shift to modern contraceptives (Tables 1 and 2). The real decline of induced abortions might not have been quite as impressive as official data depict due to likely incomplete registration. By the early 2000s, countries of central Europe with reliable abortion registration experienced levels close to those prevalent in western Europe, but there was a number of countries where a considerable proportion of women were still resorting to induced abortion, particularly in the countries of the former Soviet Union and in the Balkans (Sobotka 2003). The "abortion culture" had been deeply ingrained in these societies, social and economic conditions for specific social or economic strata of the population were improving unevenly and gradually and it is taking time for birth preventing behavior to modernize.

Table 3
Legal induced abortions, rates (per 1000 women of reproductive age) and total abortion rates, selected countries, 1980 - 2004

Country	*Rates of legal induced abortion*				*Total induced abortion rate*[c]			
	1980	*1990*	*1996*	*2004*[d]	*1980*	*1990*	*1996*	*2004*[d]
Croatia[a]	50.3	40.1	12.9	4.8	1.5	1.2	0.4	0.1
Czech Republic	32.3	47.7	20.7	10.9	1.0	1.4	0.6	0.3
Hungary	36.3	41.2	34.7	21.1	1.1	1.2	1.0	0.6
Romania[a]	u	181.7	78.0	34.0	u	5.5	2.3	1.0
Russian Federation[a]	[123.1]	[109.3]	68.4[f]	46.6[h]	3.7	3.3	2.0[f]	1.4[h]
Russian Federation (see chapter)						3.4[e]	2.5	1.6
Finland	20.4	11.1	10.0	9.3	0.6	0.3	0.3	0.3
Sweden	20.7	21.3	18.7	17.2	0.6	0.6	0.6	0.5
Spain[a]	u	4.3	5.7	7.4h	u	0.1	0.1	0.2[h]
Germany	u	8.5	7.6	6.6	u	0.3	0.2	0.2
France[a]	15.3	13.5	12.4[f]	14.3[h]	0.5	0.4	0.4[f]	0.4[h]
France (see chapter)	19.0[j]	14.0[e]	14.2	14.1[h]	0.6[j]	0.5[e]	0.5	0.5[h]
Netherlands[b]	6.7	5.2	6.5	8.7[g]	0.2	0.2	0.2	0.3[g]

Sources: Henshaw et al. 1999; Council of Europe 2006; papers in this volume
Notes: a – Incomplete or of unknown completeness; b – Residents only; c – Estimates based on rates per 1000 women of reproductive age or cited in papers of this volume; d – Authors' calculations based on Council of Europe data; e – 1991; f- 1995; g – 2002; h – 2003; i – 2004; j – 1981; u – Unknown.

Throughout western Europe, especially following the introduction of modern contraceptives in the 1960s and 1970s, levels of induced abortions were low and abortion was apparently employed to a large extent as a backup measure. The total induced abortion rates (TIARs) were generally below 0.6 abortions per woman (Table 3) with no major fluctuations over time; if anything, a decline tends to be the rule. A high level of induced abortions is not necessarily taken as problematic in a particular country. The fact that France has one of the highest TIARs in the West (at the level of 0.5 to 0.6) appears to be accepted as normal (France chapter). In Sweden TIARs are equally high, which can be attributed to about 20 percent of couples using traditional methods of contraception; this proportion has remained stable for several decades. Even though there are efforts to increase the use of modern contraceptives in Sweden, these have not been very successful. Yet apparently authorities are not much concerned, possibly because "[C]urrently more than half of the induced abortions are performed before the 7th week of pregnancy" (Sweden chapter). On the other hand, in Spain the TIAR was much lower than in France and Sweden, however, as the numbers of induced abortions and thus their incidence had been increasing since decriminalization in 1985, the level of induced abortions is perceived as high, especially among young people and it "may be regarded to be a consequence of shortcomings in sex education, for these subjects are not included in school curricula" (Spain chapter).

Effects

The widespread availability of modern contraceptive methods and their extensive application as well as the reasonably easy general availability of induced abortions are phenomena of the second half of the 20th century. Presumably this could imply that they have had a profound impact on fertility levels and trends. Was that the case? What would the course of fertility have been towards the end of the 20th century without modern contraceptive technology and without liberal abortion legislation? If the absence of the latter features would have been the only aspect of societal developments that had been different over the past half century, fertility trends might not have been much different than they were in reality. Remember that over half of Europe's population was reproducing at below the replacement level in the 1920s (Kirk 1946), and that this was brought about by employing mainly withdrawal, condoms and illegal abortions. Restricted childbearing motivation was the critical factor. For a more modern setting, let us note that Poland in the 1990s provides a direct example that legislative changes may have only negligible visible fertility consequences, if any. The rescinding of liberal abortion legislation in 1993 apparently had only a marginal effect on declining fertility[4].

According to this line of reasoning, liberal abortion legislation and improved contraceptive technology may have facilitated a behavior that people found preferable in any case, and this may have been its main effect. At least three overlapping, crucial developments surface when childbearing trends of the past 50 years are examined in greater detail.

- Modern contraceptives have greatly reduced the incidence of unwanted and mistimed pregnancies and births, and at the same time they have been instrumental in enabling women and couples to postpone childbearing to higher ages. Postponed fertility clearly connotes lower period fertility and is frequently associated with declining lifetime childbearing.

- Modern contraception and liberal abortion legislation provided women with essential tools to have a much better control over their lives (Presser 2001; Sobotka 2004). It was easier for couples and women of recent generations than for their parents/mothers to time the arrival of their children, to regulate their numbers, and to time their educational and employment activities.

- As elaborated by the theorists of the second demographic transition, modern contraceptive technology and liberal abortion legislation were an inherent component of the factors changing the demographic and family landscape of the late 20th century in the advanced countries. Van de Kaa (2001) stated: "if one develops an overview of the demographic sequences constituting the second demographic transition, the facilitating role of efficient modern contraception … supplemented … by legislative changes allowing sterilization and/or making

[4] However, the 1966 Romanian experience can serve as an (extreme) example of a sizeable effect on fertility of enacting an unexpected and strictly enforced abortion ban under conditions of widespread abortion use and complete lack of modern contraceptives (Baban 1999).

abortion available .. is apparent." Modern contraception and easy access to induced abortion facilitated childbearing postponement and a more effective disconnection between sex and childbearing enabling profound changes in partnership patterns and family behaviour.

These developments can be considered as evidence that modern contraception and liberal induced abortion legislation have had unmistakable and highly significant fertility and broader social effects.

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IV. Changing family and partnership behavior

To be completed

V. Childbearing during the societal transition in Central and Eastern Europe

The abrupt termination of the autocratic and centrally planned systems, and the political, social and economic transitions from socialism to capitalism, from authoritarian to democratic societal institutions, from centrally planned to market economies were historically unprecedented. The changing political, social and economic environment generated rapid changes in family formation, living arrangements and childbearing. New, different sets of constraints and incentives emerged in the 1990s in contrast to the societal environment prior to the collapse of the autocratic, centrally planned "socialist" systems. Nevertheless, van de Kaa (2003:642) argues "that the tendencies to converge to a common European demographic regime [on both sides of the former Iron Curtain] are quite remarkable."

Societal factors and circumstances of the transition

There have been several attempts to understand and classify the forces shaping family formation and reproductive behaviour during this transition period.

1. *Basic joint capitalist and socialist family formation and fertility determinants*
Many of the factors shaping family formation and fertility in the West and the East prior to the 1989-1990 collapse were similar, possibly their bases were almost identical with roots in the European history of prior decades and centuries. The socialist and the capitalist welfare states were modern industrial societies with developed educational,

social security and health institutions which basically were not too dissimilar. In the West and in the East increasing numbers of young people were acquiring more than just a basic education, the broad employment structures of the economies were similar (a declining agricultural sector, a considerable manufacturing sector and an increasing service sector), growing numbers of women were entering the labor market, birth regulation was practiced intensively even though with more abortion and less modern contraception in the East. Consequently, large families of three or more children were disappearing and getting to be the exception and the two-child family was the prevailing reality and the norm in the West and the East. There were also significant differences determined by the contrasts in the political and economic systems, such as advanced and early family formation and childbearing in the East.

2. *Specific family and fertility determinants of the transition from socialism to capitalism*
The abrupt breakdown of communism spawned specific developments and conditions that were unlike any experienced elsewhere, at least in their intensity. These were either predominantly economic, or of a social and sociological nature, or mainly political. Many of these were imbalances, beliefs and norms inherited from the socialist systems.

3. *Factors of the Second demographic transition*
Finally, as socio-economic conditions change, as incomes and levels of education rise, as more options in education, employment and leisure activities become available, increasingly the developments characteristic of the second demographic transition, anti-authoritarianism, individualism and generally a less altruistic value system evolves.

Many of the specific circumstances which had a bearing on family formation and childbearing during the transition can be classified in two or even three of the above categories. Among them were the initial economic crisis; massive inflation; male and usually higher female unemployment; a disarray in family policies; rising costs of children for child care, education and health, an increasing part of which had to be borne by families; a tightening job market; rising job insecurity; a lack of housing coupled with increasing costs of housing; shifts in the income distribution with segments of the population becoming impoverished; extant, possibly increasing discrimination of women in the economy and persisting traditional perception of gender roles in the family; feelings of deprivation and anomie.

At the same time, various opportunities which had been restricted and limited under the old regime expanded considerably, such as international travel; university studies abroad, particularly in the West; temporary labor migration, legal and illegal. Some of these developments were relatively short-term, other are proving to be long-lasting.

Major societal changes which will have long-lasting effects are under way. Educational levels are increasing substantially, education is considered a primary strategy to increase chances of finding stable high quality employment with above average income; standards of living are rising; the choice of career opportunities is widening; the nature of employment is more flexible, but also less secure; birth regulating behavior is changing; a new culture of consumption is developing; last but not least “western” culture and ideas are spreading faster than before.

Affected cohorts

In principle different generations, because of their age were affected in different ways:

1. Those born in or prior to the early 1960s were affected only marginally, because they had already completed a major part of their family formation and childbearing prior to the central turning point around 1990.
2. Those born in the late 1960s were in the midst of their childbearing and some of them adopted strategies that differed from previous generations.
3. Those born in the early 1970s were starting out in their childbearing careers and their family formation and childbearing differed significantly from previous cohorts.
4. Finally, those born in the late 1970s and early 1980s were entering adulthood in the rapidly changing societal environment.

Practically all of the listed developments were common throughout the formerly socialist countries, however their specific characteristics were different from one country to another.

Changes in family formation and childbearing

While absorbing and coping with the changing and emerging societal changes, individuals and couples adjusted their family formation and reproductive behavior accordingly. The average age of childbearing has been increasing; the shares of extra-marital births have grown; parity distributions have been changing with shares of childless women and those remaining with only one child increasing; cohabitation is on the rise and unions are formed at a later age.

The overall outcome was a rapid decline of the total period fertility rates, especially during the 1990s; major changes in the age patterns of fertility; and considerable declines of fertility among young women and a postponement of fertility. There is no doubt that some of the postponed births will be recuperated and there is already evidence that this is happening. In almost all countries TPFRs have stabilized or are even slightly increasing, and fertility of older women in their thirties and forties in the first years of the 21st century was higher than previously. Nonetheless, the extent to which the fertility decrease among young women is an expression of a quantum decline or of a genuine postponement of childbearing which will be recuperated in the years to come remains unknown.

Early in the 21st century the TPFRs were among the lowest in Europe, on average 1.3 births per woman. The Bongaarts-Feeney adjusted TFRs were in the range of 1.5 to 1.7 births per woman. The 1965 total cohort fertility levels were still relatively high: Central-eastern Europe 1.9, South-eastern Europe 2.0 and Eastern Europe 1.7, because fertility of young women in the cohorts of the 1970s continues to be declining and in most countries there appears to be a weak propensity for childbearing recuperation the TCFRs of the cohorts born around 1975 are likely to wind up with values around 1.6 to 1.7 births per

woman. These rates would lead to rapid population declines, however, they would still be above those for Southern Europe and the German-speaking countries.

Qualification

Fertility trends are well documented, i.e. it is clear that fertility is at a low, substantially below replacement, level. However, practically all research into fertility determinants is of a qualitative nature and depends on the knowledge of experts. Rigorous quantitative analyses do not seem feasible. It has not been established which are the most powerful/important factors that have brought about the documented trends, presumably the joint effect of the various societal circumstances and the overall changes in the societal environment triggered and shape the family formation and childbearing changes and determine their low levels.

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VI. Progress of the Second Demographic Transition

To be completed

VII. The rising importance of migrants for childbearing in Europe

Concepts and data limitations

After 1990 migration has become the main engine of population growth in many countries of Europe. It is gradually transforming the European population in a manner unforeseen by various population projections (Coleman 2006). In 2004 the European Union (EU-25) recorded the highest population increase since 1972—0.54 percent—of which 0.38 percent were attributable to positive migration balance (Eurostat 2006a, 2006b). However, migration is also the most unstable and the least predictable component of population change (Alho et al. 2006). Spain provides a telling example of the unexpected effects of migration on population change: between 1999 and 2006 the total population of Spain has risen by 4.0 million persons, i.e., by 10.2 percent, of which 9.3 percent was due to migration (Eurostat 2006a, Council of Europe 2006; see also Spain chapter.)

Migration is linked to childbearing trends in a number of distinct ways. Therefore, considerable confusion exists about the effects of migration on fertility. Several conceptual issues outlined below are of paramount importance for an understanding of these effects.

- (1) Different definitions of migrants are used by various statistical agencies. With respect to immigrants, the most common distinction is made between foreign-born persons and persons with foreign citizenship. The latter category is problematic, as its size frequently depends more on the national legislation on acquiring citizenship of a country of residence (*naturalization*) rather than on the size of immigration streams. In addition, a study of the effects of immigration can be limited to the first generation of migrants, or it can also include the second and the third generation (see the Netherlands chapter).
- (2) The analysis of the effects of migration on childbearing trends commonly takes differential fertility of immigrants into account, but usually ignores the potential fertility differentials due to emigration. This is explained by the absence of information on childbearing patterns of emigrants coupled with the impossibility to assess how these emigrants would have behaved if they had stayed in their country of origin. Practically all the available research focuses on the effects of legal migration and disregards the effects of illegal migration.
- (3) Given these limitations, the research on the effects of migration on fertility is usually confined to legally resident immigrant women. Several types of analysis can be distinguished. First, the effect of (im)migration on the total number of births can be analysed from the data on births by the country of origin of the mother and/or the father. Second, a comparative analysis of period and cohort fertility for different groups of migrants sheds light on their heterogeneity in childbearing patterns. Third, the *net effect of migration* on the observed fertility rates can be estimated when comparing the observed fertility rates with those that would have been achieved in the absence of (im)migration. The analysis of migrants' period fertility rates is complicated by the interrelation between the event of migration and fertility, which distorts the commonly used period fertility measures. These are based on the assumption that fertility is a function of age, whereas immigrants' fertility rates are closely linked to the timing of migration rather than their actual age (Toulemon 2004; Andersson 2004; Østby 2002; see also France chapter).

This section scrutinizes contemporary evidence on the effects of immigration on childbearing trends in European countries. These effects have a growing relevance for the societies of western, northern, southern, and increasingly also central Europe. Focusing on these regions, we look at the contribution of migrants to the total number of births, differential fertility of migrants as contrasted to the native population as well as the heterogeneity between different migrant populations. Subsequently, we discuss the pace of 'assimilation' in migrants' fertility to the local fertility patterns and the net impact of migrants on period fertility rates. Finally, we outline a multifaceted impact of migration on childbearing trends and population change.

Contribution of immigrants to the total number of births

The proportion of births to immigrant women provides a basic indication of the importance of immigrants for childbearing. This measure is a function of the past immigration levels, the age composition of immigrants and their fertility rates. In

practice, most countries collect data on the proportion of births to women with foreign nationality (see also above). Since many women eventually obtain the nationality of their new host country, this statistics constitutes a downward-biased approximation of the extent of immigrant's contribution to the total number of births and should be interpreted with caution.

Table M1 summarises the percentage of births to immigrant or foreign women in ten European countries with a recent history of sizeable migration streams. Births to immigrant women contribute considerably to the recorded total number of births: except for Italy, well above one tenth of all births are realised by immigrant women, even when the incomplete data on foreign nationals are considered. This share is typically higher than the proportion of immigrants, since migrant women tend to be younger and more fertile than the native population (see also below). Births to immigrant women currently account for around one fifth of all births in England and Wales, the Netherlands, Sweden and Germany (German data are for foreign women only), whereas in Switzerland foreign women contribute by more than one quarter to the total number of births. When also the second generation of immigrants is considered, immigrant births account for more than one quarter of all births in the Netherlands.

As a consequence of rising numbers of immigrants in the late 1990s and the early 2000s, almost all the analysed countries recorded a steady increase in the share of immigrant (foreign) births since the mid-1990s. This trend was most prominent in southern European countries, especially in Spain, where the proportion of births to mothers with foreign nationality skyrocketed from 3 percent in 1996 to 15 percent in 2005 (see also chapters on Italy and Spain and Roig Vila and Castro Martín 2005). Overall, the share of births to immigrant women is highest in large cities, which traditionally serve as magnets for immigration. In major European cities the share of immigrant births approaches 50 percent (Coleman 2006: 427)

Table M1: Proportion of births to immigrant women and to parents of foreign nationality, selected years (different definitions)

	Period	Births to immigrant women (%)	Births to immigrant women, 1st + 2nd gen. (%)	Births to foreign mothers (%)	At least one parent foreigner (%)	Source
Austria	2000			13.5		Kytir 2006
	2005			11.7		Kytir 2006
Denmark	1999-2003	13.5		11.1		Statistics Denmark 2004
England and Wales	1980	13.3				Schoorl 1995
	1995	12.6				ONS 2006
	2005	20.8				ONS 2006,
France	1991-98	12.4				Toulemon 2004
	1998				14.5	Prioux 2005,
	2004				18.2	Prioux 2005
Germany	1980			15.0		Schoorl 1995
	1985			11.2		Schoorl 1995
	1995			16.2		Statistisches
	2004			17.6		Bundesamt 2006
Italy	1999			4.0		ISTAT 2006
	2004			8.7		ISTAT 2006
The Netherlands	1996	15.5	21.0 [1)]			CBS Statline 2006
	2005	17.8	25.5 [1)]			CBS Statline 2006
Spain	1996			3.3	4.5	INE 2006, Roig Vila and Castro Martín 2005
	2000			6.2	7.9	
	2004			13.7	16.9	
	2005			15.0		
Sweden	2005	19.5		11.8		Statistics Sweden 2006
Switzerland	1980			15.3		Coleman 2003
	2000			22.3		SFSO 2006
	2005			26.3		

Note: 1) Births to the second generation of immigrants are defined as births to women born in the Netherlands, whose one or both parents have immigrated to the Netherlands.

Differential fertility rates: immigrants vs. native women

Several authors have argued that the usually used period total fertility rate cannot serve as a reliable indicator of the level of immigrants' fertility (Andersson 2004; Toulemon 2004). Schoorl (1995: 103) argues that migrants' TFR reflects "various aspects of the migration process: selective migration and migration policies, disruption of the process of family formation due to migration, the degree to which migration is marriage migration, and—in time—adaptation or assimilation". This potential distortion in the TFR is particularly large for women with foreign nationality, who, depending on the process of naturalization, constitute a select group of women with a short duration of stay. Thus, the closer immigration is linked to childbearing and the faster the process of naturalization, the more biased is the period TFR for foreign women. However, with the exception of the

alternative estimates of the TFR for France adjusted for age at entry (Toulemon and Mazuy 2003, Toulemon 2004, see also France chapter), there are no other readily available alternative indicators of immigrants' fertility rates. Despite its drawbacks, the period TFR provides a basic picture on the major trends in fertility of immigrants, differences between immigrants from various regions and the overall impact of immigration on the observed TFR levels and trends.

Tables M2a and M2b provide a summary of recent data on the period TFR by migration and nationality status in twelve countries of western, northern, and southern Europe. Whatever definition is used, immigrant women, when analysed together, have considerably higher fertility than native women. The TFR of all immigrant women typically ranges between 2.0 and 2.5 and is thus by 0.3-0.8 higher than the TFR among the native women. Toulemon's (2004) estimate of the TFR in France adjusted for age at immigration fits this pattern, although it also shows a strong reduction in fertility differentials between immigrant and native women in France (see France chapter). The more problematic data for foreigners show higher variability in the TFR for foreign women, ranging from 1.9 (Switzerland in 1997) to 3.0 (Flanders in 2001-2005). In all cases, the TFR among foreign women also markedly exceeds the TFR of women with local nationality; foreigners in Italy and Flanders have twice as high TFR as women with Italian and Flemish nationality. Trends over time differ between countries, but typically indicate a gradual diminishing of differences between fertility levels of immigrants and foreigners on one side and natives on the other side (see the Netherlands chapter). However, a case of a complete convergence has not been recorded thus far (see Coleman 1994, Schoorl 1995, and the contributions in Haug, Compton and Courbage 2002 for an overview of trends).

Table M2a: Total fertility rate of native and immigrant women

Country	Period	TFR		Diff.	Source
		Native women	Immigrant women		
Denmark	1999-2003	1.69	2.43[1)]	0.74	Statistics Denmark 2004
England & Wales	2001	1.6	2.2	0.6	ONS 2006
France	1991-98	1.65	2.50	0.85	Toulemon 2004
	1991-98	1.70[2)]	2.16[2)]	0.46[2)]	Toulemon 2004
The Netherlands	2005	1.65	1.97	0.31	CBS 2006
Norway	1997-98	1.76	2.42	0.66	Østby 2002
Sweden	2005	1.72	2.01	0.29	Statistics Sweden 2006

Table M2b: Total fertility rate of women with local nationality and foreign women

Country	Period	TFR		Diff.	Source
		Nationals	Foreigners		
Austria	2001-5	1.29	2.03	0.74	Kytir 2006
Belgium	1995	1.49	2.13	0.64	Poulain and Perrin 2002
Flanders (Belgium)	2001-5	1.50	3.00	1.41	van Bavel and Bastiaenssen 2006
Italy	2004	1.26	2.61	1.35	ISTAT 2006
Spain	2002	1.19	2.12	0.85	Roig Vila and Castro Martín 2005
Switzerland	1997	1.34	1.86	0.52	Wanner 2002

Notes: 1) excluding immigrant women born with Danish nationality
2) Data adjusted by age at arrival to France

The heterogeneity in immigrants' fertility

These overall differences in the TFR hide a large heterogeneity between different groups of migrants. Migrants from certain regions, especially the Muslim countries and sub-Saharan Africa usually have the TFR far exceeding that of the native populations. This pattern appears to be consistent for the first generation of migrants across different countries. In contrast, migrants from other regions of Europe and the Caribbean display the TFR similar to the natives (e.g., Coleman 1994).

Table M3 provides an illustration of these contrasts for several European countries that publish statistics on the TFR of immigrants by the country of birth. It shows the TFR of two high-fertility groups of migrants (Somalians and Pakistanis) compared with the TFR of women born in Turkey, Iran and in (Western) Europe. The first two groups have the TFR that exceeds the TFR of the host country by a factor of two or more, ranging from 3.6 (Pakistani women in Denmark and Norway) up to 5.2 (Somalian women in Denmark and Norway). Turkish women have an elevated TFR level, which exceeds the TFR in their host country, but is also well below the TFR of Somalian, Pakistani, as well as Bangladeshi, Iraqi or Moroccan women (not shown here). European immigrants usually have TFR close or somewhat below that of the host country. This also applies to women from Iran, who reached very low TFR levels below 1.5 in the Netherlands and Sweden.

Table M3: TFR of immigrant women from Somalia, Pakistan, Turkey, Iran, and (western) Europe

Country residence	Period	Country (region) of origin: Somalia	Pakistan	Turkey	Iran	(Western) Europe[3)]	Source
Austria	2000-05[1)]			2.96			Kytir 2006
Denmark	1999-2003	5.21	3.58		1.84	1.57	Statistics Denmark 2004
England and Wales	2001		4.7				ONS 2006
France[2)]	1991-98			3.21		1.66	Toulemon 2004
The Netherlands	2005	4.4 (1999)		2.22	1.1 (1999)	1.45	CBS 2006; Fokkema et al. (this volume)
Norway	1997-8	5.2	3.59	3.09	1.92	2.02	Østby 2002
Sweden	2005	3.82		2.62	1.31	1.57	Statistics Sweden 2006

Notes: 1) Women without Austrian nationality
2) Data adjusted for age at immigration
3) Denmark: EU-15 countries; France: EU-15 countries except Italy, Portugal and Spain; The Netherlands: 'Western immigrants' (Europe, North America, Oceania, Indonesia and Japan); Norway: Western Europe; Sweden: EU-25 excluding Nordic countries.

We selected these examples in order to illustrate the heterogeneity in migrants' fertility that lies hidden in the summary data for all immigrants. Four interrelated factors are frequently identified to explain the very high TFR of some migrant groups (see Forste and Tienda 1996; Abbasi-Shavazi and McDonald 2002; and Roig Vila and Castro Martín 2005 for similar sets of explanations on ethnic and migrant differences in fertility). First, the *'social selectivity' explanation* points out that the social structure of many immigrant groups (such as their low educational level, low income, low level of integration, and high intermarriage) is conducive to higher fertility. Kahn (1994) reported that the higher

fertility of immigrants in the United States was explained by their socioeconomic and demographic characteristics. Second, the *'culture' explanation* emphasizes the effects of pro-natalist culture or religion in the region of origin, which is mirrored in reproductive behaviour of immigrants after their arrival to a new, low-fertility, setting. Some contributions point out that Muslim populations in Europe display the highest fertility and the slowest pace of fertility decline, owing in part to the disadvantaged position of Muslim women and Islam's pronatalism (e.g., Coleman 1994: 124; Østby 2002). However, the very low fertility of Iranian women (or Indonesian women in the Netherlands, Heering et al. 2002) shows some limitations of this argument. Third, the *'family formation' explanation* emphasises the interrelatedness of migration and family formation among many groups of migrants. This effect largely explains the common finding of elevated fertility of migrants during the first years after their arrival (Østby 2002, Toulemon and Mazuy 2003, Andersson 2004; see also France chapter). The family formation hypothesis contrasts with the *'disruption due to migration'* hypothesis that envisions lower fertility among the recent migrants linked to the disruption effect migration may have on partnership formation and childbearing. Some supporting evidence for this hypothesis was found, for instance, among European migrants to Australia (Abbasi-Shavazi and McDonald 2002). Fourth, the *'minority status' explanation* can be proposed to explain both rapid fertility limitation among some groups of migrants as a way of achieving higher social mobility (Forste and Tienda 1996) and the persistence of higher fertility as a defensive response among the more disadvantaged communities with strong ethnic or religious consciousness and slow adaptation of local fertility ideals (Coleman 1994, McQuillan 2004).

Immigrants often differ from the native population in many other fertility characteristics than fertility rates. Several contributions in Haug, Compton and Courbage 2002 documented an early start of childbearing among many groups of migrant women, especially those from Turkey (see also Italy chapter). Foreign-born women also frequently display markedly lower levels of childlessness (see Garssen and Nicolaas 2006 and the Netherlands chapter) and higher progression rates to third and higher-order births (see Austria chapter). This is also in part mirrored in their ideal family size, which is highest among migrants from Pakistan and northern Africa (Maghreb; Penn and Lambert 2002). A striking influence of the culture of the country of origin is demonstrated by vast differences in living arrangements, marriage patterns, and non-marital fertility among different groups of migrants (see Sweden chapter for the case of Turkish young adults in Sweden). Even in societies where non-marital childbearing has become common, immigrants from the more traditional, especially Muslim, societies, realise childbearing exclusively within marriage (different chapters in Haug, Compton and Courbage 2002). In 2005, only 2 percent of children born in England and Wales to women originating from Bangladesh, India, and Pakistan were non-marital, as contrasted with 49 percent of children born to native-born mothers (ONS 2006). On the other hand, non-marital births are frequent among women from Latin America, especially the Caribbean. In Spain, a high proportion of non-marital births among the growing population of immigrants from Latin America has largely contributed to the recent rapid rise in non-marital fertility in the whole country (Spain chapter). Finally, immigrant women also display different patterns of contraceptive use and abortion. Immigrants from less developed societies frequently rely on ineffective means of contraception and abortion. In the Netherlands, 60

percent of women undergoing abortion have ethnic minority background (the Netherlands chapter).

How rapid is the assimilation to local fertility patterns?

Because of the progressive assimilation of each subsequent generation of immigrants in their union formation and childbearing and, in a broader sense, their language and ethnic identity, the analysis of long-term effects of migration is very sensitive to the assumptions on migrants' assimilation and mixed-origin populations (see Coleman 2006: 413-417).

Most studies find that within a decade after their arrival migrants' fertility drops close to the level of fertility among native women (Schoorl 1995; Toulemon and Mazuy 2004). Also the expected fertility of immigrants has been found to converge to the expected fertility of the native women over time (Kahn 1994). However, some populations show a slower pace of this convergence. Specifically, women from Muslim countries experience the slowest pace of fertility decline by the duration of their stay (Østby 2002, Andersson 2004). Age at migration is an important determining variable of this process. Women immigrating at a young age, sometimes called as the '1.5 generation,' frequently display similar fertility rates as autochtonous women (Andersson 2004; Toulemon and Mazuy 2004). This 'assimilation' to local fertility patterns was also reported in the case of the incidence of early childbearing in Norway: Østby (2002: 43) found that women who arrived in Norway before age 7 became mothers before age 22 much less frequently than women who arrived at a later age. The Sweden chapter highlights two non-demographic factors—educational attainment and exposure to the Swedish society (as measured by neighbourhood composition)—which were important for an adaptation of family attitudes and behaviour of young adults from Poland and Turkey to the Swedish patterns.

A cohort analysis gives another view on the extent of fertility assimilation across cohorts and generations of migrants. As the Netherlands chapter shows, younger cohorts of women from the initially high-fertility groups usually display a marked decline in fertility when compared to their older counterparts (see also Alders 2004). This is in part a result of changes in reproductive norms and behaviour in their country of origin, but it is also a sign of the adaptation of their fertility to the conditions of the host country. Typically, fertility of immigrants from higher-fertility societies declines well below the fertility of women in their country of origin (see French chapter, Schoorl 1995). Due to the lacking data, fertility patterns of the second and third generation of immigrants are rarely researched. Dutch data suggest that fertility level of the second generation of migrants is closer to that of the native women than to the first generation of migrants with the same ethnic origin. For instance, Turkish and Moroccan women from the second generation have much lower levels of cumulated fertility and substantially higher levels of childlessness at ages 25-35 than their first-generation migrant counterparts (Alders 2004, Garssen and Nicolaas 2006). However, this may also partly reflect their difficulties in finding a suitable partner rather than their strong assimilation to the fertility patterns of the native women.

The impact of migrants' fertility on the total fertility rates

The aggregate net impact of migrants on the observed trends and levels in period fertility appears to be relatively small despite their fertility rates well exceeding those of the native population (chapters on Austria, France, the Netherlands, and Spain). In all eleven countries analysed in Table M4, fertility of immigrant (or foreign) women had a slight upward effect on the period TFR. Except for Switzerland, this effect was comparable across countries: it shifted the period TFR upwards by 0.05-0.10 (i.e., by 3-7 percent). In Switzerland, the net positive impact of foreign nationals on the TFR was larger and reached 0.14 in 1997, shifting the TFR upwards by 10 percent. The data for the Netherlands indicate that the inclusion of the second generation of immigrants (also used in the Netherlands chapter) considerably lowers the estimated impact of immigration on the TFR because their fertility patterns frequently converge to the native women (see above). A rough comparison of the table for all immigrant women (Table M4A) with the table for women with foreign nationality (Table M4B) suggests that the selectivity of foreigners (only those that were not naturalized are included) might provide an upward bias in the estimation of the net effect of migration on the period TFR. Since we do not have data on both 'immigrants' and 'foreigners' for any of the analysed countries, we cannot test this hypothesis (the Netherlands chapter).

Table M4A: 'Net effect' of immigrant women on the observed period TFR

Country	Period	TFR		Net effect	Source
		All women	Native women		
Denmark	1999-2003	1.760	1.685	0.075	Statistics Denmark 2004
England and Wales	1996	1.74	1.67	0.07	Coleman et al. 2002
France	1991-98	1.72	1.65	0.07	Toulemon 2004
The Netherlands	2000-2005	1.724	1.646	0.078	CBS Statline 2006
The Netherlands 1)	2000-2005	1.724	1.680	0.044	CBS Statline 2006
Norway	1997-98	1.81	1.76	0.05	Ostby 2002 (Lappegård 2000)
Sweden	2005	1.769	1.716	0.053	Statistics Sweden 2006

Table M4B: 'Net effect' of women with foreign nationality on the observed TFR

Country	Period	TFR		Net effect	Source
		All women	Nationals		
Austria	2000-2005	1.39	1.29	0.10	Kytir 2006
Belgium	1995	1.56	1.49	0.07	Poulain and Perrin 2002
Flanders (Belgium)	2001-2005	1.59	1.50	0.09	van Bavel and Bastiaenssen 2006
Italy	2004	1.33	1.26	0.07	ISTAT 2006
Spain	2002	1.27	1.19	0.08	Roig Vila and Castro Martín 2005
Switzerland	1997	1.48	1.34	0.14	Wanner 2002

Notes: 1) Including the second generation of immigrant women (mother born in the Netherlands, at least one of her parents born outside the Netherlands)

This analysis shows that immigration has played a relatively minor role in the recent upswing in the period TFR in some countries of Europe and that this upswing was mainly due to the rise in the TFR of the native women, probably associated with a slowing-down

of fertility postponement. The data for the Netherlands support this point: between 1996 and 2002, when the period TFR for all women increased from 1.53 to 1.73, the TFR among women born in the Netherlands rose even faster (from 1.47 to 1.69, data from CBS Statline 2006).

The multifaceted impact of migration on childbearing and population trends

Different studies, also in this monograph, frequently provide contrasting assessments about the actual and potential contribution of migration to fertility rates, total numbers of births as well as population growth and ageing. Although this partly reflects differences between countries, it is also a reflection of the fact that the evaluation of the importance of migration hinges critically on the specific questions asked. With some simplification, our review pertaining to western, northern, and southern Europe has shown that

- Despite their relatively rapid demographic assimilation, immigrants usually have markedly higher levels of period fertility than the 'native' populations;
- This effect differs widely by their country of origin;
- Immigrants contribute substantially to the total number of births; and
- The 'net effect' of the higher fertility groups of immigrants on total fertility of particular countries is relatively small.

An interaction between the numerical size of immigrants, their relatively young age structure (migration typically occurs at a young age) and their higher fertility implies that migration has a potentially strong and long-lasting impact on population growth and structure (e.g., Slovenia chapter). Immigrants are therefore one of the few population groups that records significant rates of natural growth across Europe (Compton and Courbage 2002).

As a result, immigration has increasingly become perceived as a potential means to prevent population decline, sustain the size of the labour force, and slow-down the pace of population ageing. A well-publicised UN report (UN, 2000) and a number of other studies (e.g., Coale 1988; Feld 2000; Lutz and Scherbov 2003; Beaujot 2003) addressed these issues, some of them referring to the notion of 'replacement migration' (i.e., migration that 'makes up' for the below-replacement fertility and enables thus countries to avoid population decline or even to prevent population ageing). Most studies show that any realistic level of migration cannot stop population ageing and can only have a relatively modest impact on slowing-down this process. However, migration is likely to have considerable (positive) effect on the size of the labour force (Feld 2000) as well as on the total population size (UN 2000). The inclusion of the recently recorded higher migration rates into population projections also postpones the likely start of the future population decline in the EU-15 countries, Norway, Iceland, and Switzerland after the year 2050 (Alho et al. 2006). Recent research by Dalla Zuanna (2006), focusing on the industrial triangle of northwest Italy and including the effects of internal (south to north) migration, has shown that significant and continuous waves of immigrants may slow population ageing and prevent population decline even in a region experiencing half a century of very low fertility levels. The open question remains whether many European regions with long experience of very low fertility can also attract and accommodate

similarly large migration streams necessary to achieve a relative stability in the size of their population and labour force.

The importance of immigration for childbearing trends and population change in many European countries implies the need to rethink the traditional concepts of replacement-level fertility (Smallwood and Chamberlain 2005). Calot and Sardon (2001) suggest that the 'net replacement rates' which reflect both mortality and migration are preferable to the widely used 'net reproduction rates' and their inclusion may change the evaluation of future population prospects. In addition, much research awaits to be done on various effects of immigration that have an indirect influence on fertility. The Spain chapter outlines one such channel: it suggests that migration may reduce imbalances on the marriage market, and, through increased marriage rates and partnership formation, it can also have a positive effect on fertility. Another contribution on Spain (Roig Vila and Castro Martín 2005) proposes that immigrants in Spain also positively contribute to fertility by filling the domestic 'caring gap.' Their frequent employment in the care about children and elderly partly substitutes inadequate childcare and social services and enables thus more Spanish women to have a child.

Finally, our knowledge about the impact of temporary and long-term emigration on fertility remains rudimentary at best. Two chapters that directly address this issue (Lithuania chapter and Slovakia chapter) suggest that temporary labour emigration, typical of these societies, has above all a disrupting effect on family formation, which contributes to the ongoing postponement of childbearing. The Lithuania chapter also points out other factors: the destabilization of the already created families, the weakening of the ties between family members, and an adaptation to a new lifestyle.

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VIII. The impact of public policies on European fertility

The massive recent decline in fertility and the subsequent stability of low-level fertility in many European countries have generated a new interest in means to counteract further declines and to induce fertility increase back toward the reproduction level. The discovery of these developments has served to concentrate people's minds, both in the media and among policy-makers.[5] In many countries one can detect a re-awakened willingness to adopt instrumental considerations and to pay less attention to the moral stance that previously used to dominate policy-maker attitudes in the shadow of past abuse by fascist and other authoritarian regimes.[6] There is now more talk about the need to prevent unhealthy population aging and less about how the unique sanctity of private life prevents policies that can raise fertility.

There seems to be a curious polarization of opinion concerning the possibility of fertility politics[7] to affect childbearing behavior. An innocent belief in the ability of public policies to correct for recent fertility decreases stands against the attitude that such pronatalist policies as are conceivable in modern democratic societies are both expensive and ineffective. The latter attitude has long been held by many professional demographers; the futility of using public policies as a tool to raise long-run fertility in Europe (and elsewhere) has been asserted particularly eloquently by Paul Demeny (1986, 2003, 2005). Western society would have been quite different if economists were equally timid in their opinion about the usefulness of economic policies.

This pessimism flies in the face of such basic facts as the systematic differences in fertility level and fertility trends in the various parts of Western Europe, differences that largely follow gender-based welfare-state typologies.[8] Surely the higher fertility in France and in the Nordic countries is not innate or a gift from heaven, but a product of their deliberate public policies, which are pronatalist in effect even if not always in stated intent.[9] Similarly the low fertility in the Mediterranean countries surely is in part a consequence of the lack of operational attention effectively paid to the need for

[5] See, e.g., the account in the chapter for the Netherlands in this book.

[6] See, for instance, the chapters for Germany, Spain, Italy, and Romania in this book. See also Przkawetz et al., 2006; Süddeutsche Zeitung 2006; Kühn and Palme, 2005; and Auth and Holland-Cruz, 2006).

[7] We have lifted this expression from a book title by Stein Ringen (1987).

[8] See Esping Andersen (1999), Lewis (1992), Gornick et al. (1997), Sainsbury (1999), Anttonen and Sipilä (1996), Castles (2003); for an overview, see Neyer (2003a).

[9] French public policies have long been explicitly pronatalist; see the chapter for France in this book. By contrast, policies in the Nordic countries have been motivated by considerations of gender equality and women's empowerment, and are pronatalistic in effect but not by stated intention; cf. the chapter on Sweden in this book. In both cases one gets a fertility end product (CFR) which is high by European standards..

systematic support of the family in a modern society.[10] The gloomy view of the impossibility of influencing fertility is all the more strange as the weight of evidence is that policies that are pronatalist in effect have had considerable impact, as is shown by reams of research contributions.[11] It turns out that public policies can have a strong impact on a country's fertility development, whether this is intended or not, and independently of whether such intention is admitted. It is possible that the discrepant readings of the facts may be rooted in different understandings of what aspect of fertility one should focus on and which public policies one should count. A further issue is how an impact should be measured.

Empirical investigations use a variety of data sources and a range of methodologies. Also, even well-founded empirical studies of policy effects are up against a number of difficulties. Let us spell out problematic issues connected to endogeneity, context, methodology, and the (im)possibility of providing antifactual counterexamples, as follows.

(1) One difficulty is that endogeneity may pester any investigation of cause-and-effect in demography. This means that even when a first-blush hypothesis is that policies influence behavior, one may need to also account for the possibility of a causal influence in the reverse direction, i.e., that demographic behavior may influence public policies. Thus one would assume that the availability and quality of public childcare influence childbearing behavior, as do the length and arrangement of parental leave and the amounts of maternity benefits. But conversely, regions with much childbearing may tend to develop more and better childcare institutions (Kravdal, 1996; Hank and Kreyenfeld, 2003). In addition politicians naturally cater to their constituencies, and regions with many children may be able to attract more political attention than other regions, with consequences for financial allocation. Forgetting about such two-way influences may cause biased conclusions.

(2) A second difficulty for empirical analysis is that family policies do not operate in a societal vacuum; the effect of a given policy may be strongly dependent on the social environment in which it is implemented. In particular there is an important impact of economic trends; they interact closely with family policies in influencing fertility. International comparisons of policy effects should therefore contain context indicators,[12] including indicators of public policies other than core family policies,[13] otherwise biased conclusions may again be reached. This problem is present whichever method of analysis one uses, whether plain verbal description, hazard or linear regression, or whatever else.

For a particularly strong emphasis on the need to also take the context into account, see Neyer (2003a, 2006ab). She also underlines the need to take the symbolic meaning of public policies into account in addition to the specification of concrete policy parameters.

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[10] Again see the corresponding chapters in this book.

[11] For overviews see McDonald (2002, 2006) or Neyer (2003b, Appendix). For additional contributions concerning the much-studied policy effects in Sweden and their contrasts with other countries, see Neyer (2006a), Neyer et al. (2006b), Andersson (2005), and Björklund (2006).

[12] Gauthier and Hatzius (1997) courageously include indicators of welfare-state type in their extensive regression analysis.

[13] We listed core family policies in item (1) above.

In a similar vein McDonald (2006) writes about the need for insecurity reduction, and says that it is incumbent on governments to work toward achieving this in its own right. This would cover policies to promote healthy labor arrangements and economic stability. Thus economic policy also becomes some kind of family policy, at least in the sense that it can function pro- or antinatalistically, depending on how it is formulated.

(3) A third major issue facing the analyst of policy effects is the choice of dependent variable. Here are some considerations:

(a) Despite the well-know weaknesses of a measure like the period TFR, this is used as the outcome variable in many investigations, in a tradition going back to the beginning of modern studies of the fertility-level/family-policy nexus.

(b) When more adequate data are available, different birth orders are analyzed separately and fertility variables of preference are based on cohort data (Frejka & Sardon, 2004), such as the cohort-based age-accumulated fertility rate (CFR). More complete analyses use age-partial CFRs (cohort-based age-specific fertility rates cumulated up to strategically chosen ages).

(c) Actually, demographers disagree about the absolute supremacy of cohort data over period data (Ni Bhrolchain, 1992). The analysis of period data has revealed that a certain ideologically motivated rigidity in the Swedish family-policy rules has created great swings in Swedish fertility (Andersson, 2005; Hoem 2005), while in Finland the swings may have been avoided through countervailing effects of a home-care allowance that does not exist in Sweden (Vikat, 2004). Such waves may have unpleasant consequences for society; just think of the need for the school system to adjust to greatly varying cohort sizes. It has not been shown that such swings are related to the ultimate level of fertility for a birth cohort, but at least it is apparent that policy regulations do influence other aspects of fertility. It is important to note that policy impacts on fertility have more dimensions than merely ultimate cohort fertility. In fact total concentration on the CFR may lead to a different fallacy, namely to fixation on the lifetime end product of childbearing (the "quantum of fertility") and to disregarding timing effects.

(d) If individual-level childbearing histories are available, the possibilities for analyzing impacts of family policies widen further. For instance, speed-premium effects have notably reduced birth intervals in Sweden.[14] In classical demographic reasoning this should work toward increasing ultimate fertility, or at least to help prevent a further decline.

(4) A fourth and final difficulty that I will mention is that the analyst rarely has any antifactuals at hand to demonstrate effects. If an antifactual is not available, one cannot know what would have happened if a policy had not been implemented, or if it had been formulated in a different manner. A pronatalist policy can then easily be judged ineffective when in reality it may have counteracted a fertility decline that would have occurred without it, in which case it should have been counted as a success. Fortunately,

[14] The latest contribution about this feature was given by Andersson, Hoem, and Duvander (2006).

natural experiments do occur, as when neighboring populations are subject to closely similar economic trends but have different public policies.[15]

The chapters in this book should be read on the background of such general considerations about the likely efficacy of public policies as instruments to steer developments of ultimate fertility, deliberately or without intention. It seems that a reversal in current ultimate-fertility trends can best be attained by a coordinated use of public policies in a range of interlocking areas (economic policy, employment policy, gender policy, core family policy, and more), and that fertility regulation will be but an ephemeral goal where such coordination is lacking. Generous parental leave, child benefits, and childcare arrangements are desirable in their own right, but such policies alone are unlikely to succeed in raising the fertility level; they must be embedded in a family-friendly culture deliberately nurtured by the state. Developing such a culture must take time, so any government that wants to increase ultimate fertility, needs to realize that it faces a long-term commitment to broadly conceived policies that go far beyond core family policies alone. Given the difficulty of pinpointing policy effects we may not even ever know in detail which particular policies are successful and which are not; what we can observe may be the effect of a whole package. This kind of understanding never stopped states from implementing public policies in other fields, however, so there should be no reason to be particularly reticent as regards support of the family.

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[15] For one case in point seen the comparison between Sweden and Finland mentioned in item 3c above. Differentials between social groups in reaction to the Swedish speed premium may be another. For a reference, see our previous footnote.

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IX. Is Europe entering a new demographic disequilibrium?

In the course of most of its history human population was increasing at a moderate pace. (Durand 1967, Biraben 2003). This was due to almost equal mortality and fertility which were both at high levels. Though moderate, population growth was not monotonous. Periods of increase were interspersed with declines caused by exceptionally high mortality in times of epidemics, wars and famines The secular demographic quasi-equilibrium eroded as capitalist economic institutions were replacing feudalism, science and technologies were advancing, general health conditions were improving, the Age of Enlightenment was unfolding, and political institutions modernizing. It was during the 19th century that humanity, especially in Europe and in countries with a majority of European origin populations, experienced a significant mortality decline. With a certain time lag fertility also set forth on its secular decline. The difference in timing of the decline of these two basic demographic attributes brought about rapid population growth. The first extensive demographic disequilibrium commenced. Similar developments on a much larger scale took place in Latin America, Asia and Africa after the Second World War. Some labeled this the population explosion. Many professionals (and politicians) considered the demographic developments in the Third World as likely impediments to social and economic progress and considerable efforts were made to lower fertility.

Around the middle of the 20th century it was generally accepted and believed that humanity was aiming for a new demographic equilibrium of low mortality and low fertility resulting again in negligible population growth. This, it was believed, would

constitute the end of the demographic transition. Mortality for the most part was continuing to decline. Western countries experienced a baby boom for one or two decades and then the secular fertility decline was resumed.

Contrary to expectations, towards the end of the 20th century and at the onset of the 21st, at first in most western countries and after the collapse of the authoritarian communist regimes also in central and eastern Europe fertility declined considerably below replacement levels. At about the same time, countries in East and South-East Asia were following along a similar path. A large number of European countries around the turn of the centuries have been experiencing negative rates of natural increase (some were losing population) and other ones were poised to follow. This appears to be the beginning of a new demographic disequilibrium. Generally mortality is low and is likely to continue to descend, however its rate of decline is of a different order of magnitude than the apparent fertility descent. In other words, the immediate driving force of the conceivable new demographic disequilibrium is the nature and magnitude of the ongoing fertility trends.

As of 2004, 17 out of 38 European countries with over 100,000 inhabitants, 45 percent, had negative rates of population growth (Council of Europe 2006). This is a very recent phenomenon. In 1990 there were only three such countries. To some extent the negative rate of natural increase can be offset by immigration. Nevertheless, 14 of the 38 countries had negative rates of population growth. All but one of these were formerly socialist countries.

There are numerous circumstances and reasons that have generated the fertility decline of the past decades: Some clear and unambiguous, other questionable; some common for all or many societies, other specific for one or a group of countries. Be that as it may, there is no question that contemporary low fertility has increasingly triggered a great deal of concern primarily among the elites and politicians. The concern is associated mainly with the consequences of the changing age structure and thus for social security systems and future healthcare of the elderly.

The findings of this project are validating what others anticipated. Landry (1933:738) concluded in his theory of the *la révolution démographique* that in a third pattern "there is no longer an equilibrium." Chesnais (201:255) reminded us that Landry "envisaged a scenario of 'permanent disequilibrium' "… and stated that "(T)here are strong arguments in favor of the eventual globalization of the birth deficit" … in which (T)he long-term downward trend seems irreversible." Van de Kaa (2003: 656) reflected that "(P)erhaps it is now time for someone to start thinking about writing a … volume entitled: 'The Post-modern Decline of Population'. For Europe's demographic future appears to be a thing of the past." This volume is the initial attempt to write such a book. It is an assessment of whether humanity is facing a new demographic disequilibrium.

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