# Fertility Patterns in Formerly Socialist Countries of Europe [FSCE]: Are They Converging with the West?

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## 1. Introduction and background

Low fertility in many parts of the world, the mechanisms by which it is generated, as well as consequences and policy implications continue to attract the attention of scholars, politicians and the general public (see, for instance: Frejka 2008; Frejka et al. 2010; Kohler et al. 2006; Lanzieri 2013; Sobotka 2004; Winter and Teitelbaum 2013). Moreover, insightful studies with new approaches are looking into the prospects for future fertility trends (Basten et al. 2013; Lutz and Scherbov forthcoming; Myrskylä et al. 2013). This body of literature in terms of illustrating and analyzing various aspects of the reality that "more than half of the global population lives where fertility is below replacement" (Wilson and Pison 2004). Not only is below replacement fertility firmly entrenched for the foreseeable future, it is almost certain to spread to additional populations (Basten et al. 2013; and Myrskylä et al. 2013). It is within this context that a new project focusing on fertility patterns in the formerly socialist countries of Europe is launched.

### *1.1. The launching of an international collaborative project to explore likely future fertility trends in the formerly socialist countries of Central and Eastern Europe*

Fertility throughout the region of the formerly socialist countries of Europe [FSCE] is significantly below replacement. Experience with the possible consequences of such fertility levels for individual countries in this region is scarce. Notably, this is the only region in the world where in the majority of countries population size has been declining in recent years in part due to low fertility. Thus it appears useful to assess future fertility prospects so that national governments and international institutions can act

accordingly, i.e. attempt to affect childbearing behavior or to adjust to the respective fertility levels. Furthermore, in a broader context, governments are concerned with the social wellbeing of their populations and are engaged in enacting a range of family policies which can also affect childbearing.

The project *Prospects for a fertility increase in the formerly socialist countries of Central and Eastern Europe* (CEE) is a collaborative undertaking of scholars from 18 formerly socialist countries in CEE to explore the likelihood of reversing recent trends of declining cohort fertility, i.e. of fertility quantum, with special attention to the effect of policy measures. The project is conducted under the aegis of the *Department of Social Policy and Intervention, University of Oxford*, UK.

The project has the following mutually complementing goals:

A. The principal goal of the project is to outline the likely direction of cohort fertility trends in the foreseeable future of one to two decades in individual formerly socialist countries of Central and Eastern Europe and possibly for the entire region. Is fertility likely to decline further, stabilize or increase? To this end the project will conduct analyses of fertility trends and important conditions affecting them with a distinct focus on family and population policies in 18 formerly socialist countries of Central and Eastern Europe.
B. The project will provide an overview of past and present efforts to affect fertility trends in the CEE formerly socialist countries.
C. The project is designed to evaluate the extent to which population and family policies have been effective in raising cohort fertility, in the past and at present.

The participating countries and the personnel working on the project are listed in Appendix Table 3. Project personnel are scholars employed at academic or research institutions, as a rule in the respective countries, exceptionally at international institutions with close ties to the country concerned. Country personnel assemble and analyse data and information for the respective country, and collaborate with project coordinators in preparing project-wide documents.

This is the first paper emanating from the project. The objective of this paper is to present an overview of the most important fertility developments of the recent past and, as specified in the subtitle, to establish whether fertility trends of the FSCE are converging with the West European capitalist countries. This may entail a period of as much as about half a century that could yield important insights. An international comparative analysis will be conducted. To a large extent this paper is restricted to a demographic perspective and will serve as a framework for future project activities. This paper should be considered as preceding the paper entitled *Fertility Patterns in Formerly Socialist Countries of Europe: The Role of Policies designed to increase Childbearing* to be presented at the *European Population Conference* (EPC) in Budapest, 25-28 June 2014.

### *1.2. The significance of cohort fertility change: A note for a broader audience*

In advanced countries governments tend to be concerned with fertility being too low and are interested in a fertility increase. Frequently policy measures may cause an increase in the period total fertility rate, i.e. an increase in the amount of childbearing in a particular year. Such increases may be the result of women/couples advancing some future births into current years and thus creating an illusion of increased fertility. A relatively large number of births are being accumulated in a current year. When these are compared with a previous year it appears as though fertility has increased. However, efforts to affect fertility are effective only if cohort fertility changes or if the fertility of generations changes, i.e. that means if the fertility of women born in the same years changes. That signifies a real quantitative fertility increase. There are two ways to establish whether such a real, i.e. cohort, fertility increase has occurred at the time when period TFRs are changing. Neither of these methods is totally accurate.

1. One can take a time series of several years of period total fertility rates (TFRs) and if following the initial increase, say of five years, the TFRs start to slacken off, this is an indication that cohort fertility has not increased.

2. A number of methods to calculate adjusted total fertility rates (AdjTFRs) have been developed, initially by Bongaarts and Feeney (1998) and more recently by Bongaarts and Sobotka (2012). The adjusted TFRs are designed to eliminate the effect of the timing shifts in childbearing. The levels of the adjusted TFRs tend to come close to eventual total cohort fertility rates. Thus a rise in adjusted TFRs indicates a real (cohort) fertility increase. However the adjusted TFRs are not accurate in depicting trends, because they are based on period data. If the adjusted TFRs are not much different from the current period TFRs, it is an indication of no or little change in real or cohort fertility.

Cumulated cohort fertility rates at around age 40 can inform about fertility levels and trends that occurred about 15 or more years earlier. For instance, Cumulated CFRs (40) calculated in 2010 for birth cohorts 1965-1970 will inform about real fertility trends in 1990-1995. In other words, conclusive evidence of real fertility change can be obtained only with about a 15 year time lag.

### *1.3. Data and regions*

The principal source of data used in this paper is the *Human Fertility Database* (HFD[1]) complemented by the *Eurostat Statistics Database - Fertility Indicators* and by some recently modified data supplied by country collaborators.

The presentation and analysis in this paper applies five groupings of European countries. The grouping of central interest is comprised of the formerly socialist countries of Europe. This region could be divided into sub-regions applying geographical, cultural, economic and other criteria; however the countries in this region are being analysed as a group because of their political heritage. In order to be able to conduct a meaningful international comparative analysis of fertility levels and trends, four other groupings of European countries are defined: 'Northern' Europe, 'Western' Europe, the German-speaking countries, and 'Southern' Europe. A consensus has developed to use these four regions in the analytical demographic literature of the recent past[2]. The following countries are included in our investigation.[3]

*Formerly socialist countries of Europe*: Belarus, Bulgaria, Croatia, the Czech Republic, Estonia, Hungary, Latvia, Lithuania, Montenegro, Poland, Serbia, Slovakia, Slovenia, Romania, the Russian Federation, Ukraine.
*Northern Europe*: Denmark, Finland, Norway, Sweden.
*Western Europe:* Belgium, France, the Netherlands, the United Kingdom.
*German-speaking countries*: Austria, Germany Switzerland.
*Southern Europe*: Greece, Italy, Portugal, Spain.

[1] The HFD is a joint project of the Max Planck Institute for Demographic Research (MPIDR) in Rostock, Germany and the Vienna Institute of Demography (VID) in Vienna, Austria, based at MPIDR.
[2] At times these four regions are referred to as a whole and labelled as West European populations or societies.
[3] Some relatively small countries or those with a lack of available data have been omitted.

### *1.4 A concise overview of fertility in the formerly socialist countries of Europe*[4]

During the four decades of state socialism prior to 1990 societal conditions in the authoritarian and centrally planned regimes had developed an environment that was favorable for early and relatively high rates of childbearing. When these regimes collapsed in 1989-91, the entire societal and institutional system was transformed. Incentives and constraints related to childbearing started to change and were being replaced by new societal conditions similar to those in Western societies. A full-fledged transition to capitalist political, social and economic conditions ensued. The political environment was no longer dominated by the unlimited power of the communist party and its bureaucracy. Multi-party systems began to function with varied success. Conditions in the labour market changed as enterprises became concerned with productivity and profitability. Employment was no longer guaranteed and job security diminished. Employment conditions became particularly difficult for women. Demand for highly qualified positions increased, which required a well-educated work force. Institutions of higher learning expanded, as did tertiary and secondary school enrolment rates. Professional and leisure time opportunities became more varied, and young people were taking advantage of them. Many of the entitlements of the previous socialist welfare state were curtailed or disappeared. Modern contraceptives became more readily available, and, for the most part, access to induced abortion was retained.

Family formation and childbearing patterns adjusted to the changing societal environment. Exit from the parental home, union formation and childbearing were being postponed, various forms of partnership arrangements became acceptable, and cohabitation became more popular.

In the 1950s, there was a significant level of heterogeneity between the socialist countries of Central and Eastern Europe. Looking at period TFR alone, Latvia and Estonia already had some of the lowest fertility rates in Europe, already around – or below – replacement levels. On the contrary, the southern areas of the Former Yugoslavia – Bosnia and Herzegovina, FYR Macedonia and Montenegro all had TFRs above 4.0. Albania was already an outlier among the future FSCE, with TFRs in the 1950s of over 6.0 births per woman. However, during the period 1945-1970, a convergence towards a relatively uniform system of reproductive behavior gradually developed based around a strong two-child family preference, universal and early marriage and low levels of childlessness, especially in the 1990s (Stankūnienė and Maslauskaitė 2008). While some differences did exist – not least within the former Yugoslavia – this 'Eastern European Reproductive Pattern' was seen both *across* countries and across different social groups *within* countries. This 'reproductive pattern' was closely linked to broader family patterns driven by: universal education and employment; the rhetoric of an egalitarian ideology; diminishing importance of private property lowering barriers to marriage; rapid secularization; high rates of women's labor force participation and high divorce rates (Sobotka 2011, 253). The 'reproductive health' landscape was also subject to shifts and differential accessibility. A combination of an 'abortion culture' with low uptake of the contraceptive pill in almost all FSCE led to many unwanted and mistimed pregnancies. At times government policy reacted by restricting access to abortion and family planning services with Romania in 1966 being the most notorious case. In combination with social and family policies typically including maternity leaves, birth allowances, expansion of childcare institutions and housing construction, often enacted within a pronatalist agenda, tended to generate short-lived baby booms (Sobotka 2011, 254).

This 'Eastern European Reproductive Pattern' remained in the ascendancy during the 1970s and 1980s, in stark contrast to the evolving patterns associated with the 'Second Demographic Transition' [SDT] seen in North- and Western-Europe over the same period (Lesthaeghe 1995). This difference was especially notable in early vs. late marriage and childbearing, almost universal childbearing in the FSCE, childbearing outside of marriage and cohabitation (see Sobotka 2011, Table 1, 255). Despite this overall

[4] In a critical contribution, Sobotka (2011) presented a *tour de force* of post-war trends in fertility in the formerly socialist countries of Europe (FSCE). The following section draws heavily on this analysis.

stability in the socialist countries of Central and Eastern Europe, there were some signs of gradual changes – some of which can be identified with those seen in North- and Western-Europe over the same period, but with a number of differences in terms of intensity and timing. For example, the spread of divorce and non- cohabitation did not lag behind Northern- and Western Europe in several CEE socialist countries while some other features (postponement of childbearing, sub-replacement fertility) did not develop (Council of Europe 2006; Katus et al. 2007; Puur et al. 2012). Indeed, to account for this heterogeneity, Lesthaeghe (2010: 225-226) has introduced a concept of types/subnarratives of the SDT which has been extended to the FCSE in Puur et al. (2012).

In the 1990s and 2000s, however, fertility in the FSCE has been generally characterized by a collapse followed by a moderate recovery in some countries. The initial collapse – most spectacularly in Eastern Germany – is characterized by Sobotka as a temporary 'freeze' on births, marriages and divorce as a rational response to both opportunities and challenges driven through huge economic and social upheaval (Conrad et al. 1996; Goldstein and Kreyenfeld 2011). By the early 2000s, the 'lowest-low' rates of period fertility became near universal in the FCSE (Kohler et al. 2005; Goldstein et al. 2009) – even if it did only last for just a few years in some countries. In the FSCE during the 1990s, the 'postponement transition' – to fertility at older ages – constituted the most important factor in shaping period fertility rates. The shift from the notable uniformity of early childbearing patterns to later ages in some of these countries was remarkable – in Slovenia the mean age at first birth in 1988 was 23.2 years rose to 28.2 years by 2008. Yet in this, and in many other trends, change was highly uneven. Take, for example, births outside of marriage, which were (with the exception of Eastern Germany and Slovenia) rare before 1990. By the end of the 2000s, such births accounted for around 60% of all births in East Germany and Estonia (up from 1990 rates of 30% and 27% respectively), over 50% in Bulgaria (up from 9% in 1990), and around 40% in the Czech Republic and Hungary – meanwhile much lower increases were seen in Poland and Croatia – with the latter having one of the lowest shares of such births within Europe (Sobotka 2011, 264). In Belarus, the percentage of births outside of marriage increased by 75% to compare with 1990. In 1990 the share of births outside of marriage was about 8.5 % of total number and in 2012 increased up to 18.2 % (Antipova and Fakeyeva 2013). Over the same period, marriages were generally postponed, modern contraceptive prevalence increased and abortion rates decreased – in Belarus, for example, by 55 % (Antipova 2012). Sometimes, as in the case of Poland, these decreases in abortion rates were driven by increased restrictions imposed by the state (Kulczycki 1995). In essence, an increased diversity between the FSCE re-emerged (Sobotka 2003).

During the 2000s, these trends generally continued (albeit to a less intense degree) with two important differences. Firstly, an increasingly marked 'recuperation' of births occurred at older ages which has played a significant role in switching the direction of period fertility rates (Goldstein et al. 2009). Secondly, increased heterogeneity by social status can be observed – particularly in relation to education, with more highly educated women and men postponing union formation and childbearing to older ages while those of a lower educational status beginning their family formation at an earlier age – in contrast to earlier uniformity (Kantorová 2004; Sobotka 2011). As of the early 2010s, while the main feature all FSCE share is low period fertility rates, Sobotka (2011, 286) suggests that "after two decades of intensive changes, reproductive behavior in [Central and Eastern Europe] is still in flux".

### *1.5. Thinking about convergence of fertility patterns in the formerly socialist countries of Europe with those of the West*

As already noted, following the collapse of the state socialist authoritarian and centrally planned regimes in 1989-91 the entire societal and institutional system was being transformed. Incentives and constraints related to childbearing changed, and were replaced by a new political, social and economic system that is based on analogous basic principles as institutional systems in Western societies. These evolving societal

systems have now been in place in the FSCE for over two decades. The question arises whether fertility patterns in the FSCE are converging with those in West European countries in general, and/or more specifically with regions sharing clear characteristics, such as countries of Southern Europe, the German-speaking countries, countries of Northern and Western Europe. This complex issue is the subject dealt with in the remainder of this paper.

## 2. Detailed fertility levels and trends

### *2.1. The global perspective*

Taking a global perspective, according to the 2013 World Population Data Sheet (PRB 2013) the region of "Eastern Europe" which is exclusively comprised of formerly socialist countries, i.e. from the Czech Republic in the West to the Russian Federation in the East, shares the distinction of having one of the lowest period total fertility rates (TFR) of 1.5 births per woman with Eastern Asia. Only Southern Europe has an even lower TFR equal to 1.4 births per woman. In contrast, Northern Europe's TFR equals 1.9 and Western Europe's 1.7 births per woman.

### *2.2. The 1990s fertility decline*

The precipitous period fertility decline in the formerly socialist countries of Europe (FSCE) of the 1990s (Figure 1 and Appendix 1) was not much different from the rate of decline than that of other regions of Europe earlier (Appendix 2). As elsewhere, it was the result of a quantum fertility decline combined with a rapid postponement of childbearing. Fertility declined considerably among the birth cohorts of the 1960s and early 1970s (Figure 2). In Romania, for instance, the cohort total fertility rate declined by 28 percent, in Poland by 26 percent, in Slovakia by 19 percent, in Hungary and Bulgaria by 17 percent between the 1960 and the 1975 birth cohorts (Myrskylä et al. 2013). Slovenia experienced only a moderate decline of eight percent between those cohorts, because its total fertility had declined more substantially earlier. At the same time a rapid postponement of childbearing was taking place.

### *2.3. Childbearing postponement*

There are several ways to illustrate the rapid childbearing postponement. One, albeit imperfect, indication of the rapid childbearing postponement was the steep increase in the mean age of birth (MAB[5]). As sufficiently long time series of the cohort MAB, even at age 40, are not yet available for the FSCE (Figure 4, panel A[6]), the period MABs are used (Figure 3). The increases in the PMAB in the FSCE between the early 1990s and around 2010 were much faster than comparable increases that had occurred earlier in Western countries between the late 1970s and 2010 (Figure 4, panel B). The increases in the FSCE were almost twice as fast as in the West. For instance, in the Czech Republic the PMAB grew from 24.7 to 29.7 in the 20 year period from 1991 to 2011, i.e. by a full 5 years. In comparison, during an equally long 20 year period from 1976 to 1996 the PMAB in the Netherlands increased by only 2.8 years.

The distinct difference in the way childbearing postponement was taking place in the FSCE compared to the West is also illustrated in changes of cohort childbearing *age* patterns in Figure 5. For instance, in the Netherlands the cohort age patterns were changing gradually from one cohort to the next between the

[5] It would be more appropriate to use the mean age at childbearing for first births, but statistics are available only for a smaller number of countries.

[6] Figure 4, panel A shows that cohort mean ages of birth were starting to increase among the mid to late 1960s birth cohorts.

1945 and the 1965 birth cohorts (Figure 5, panel E). Essentially childbearing postponement was concluded by the 1970 birth cohort (panel F). In Austria the childbearing postponement process was also gradual, although it got under way later, i.e. it started slowly with the birth cohorts of the 1960s (panel G) and continued orderly with the late 1960s and 1970s birth cohorts (panel H). In contrast, once childbearing postponement started, major changes occurred rapidly in the age patterns of fertility, especially among the birth cohorts of the 1970s and early 1980s as illustrated for Russia and the Czech Republic in Figure 5 (panels B and D).

Yet another way of analyzing childbearing postponement is to illustrate in the period perspective how childbearing was shifting from young to older women (Figure 6). In the Netherlands a decline in the fertility of young women up to age 26 was occurring up to the mid-1990s (panel C). By about 1991 women below the age of 27 were bearing fewer than 0.5 births per woman. Fertility of older women above age 27 was increasing from the early 1980s through 2010, reaching almost 1.5 births per woman. In contrast, in the Czech Republic childbearing of young women started to decline abruptly only after 1990 (panel B) and quickly reached a level of below 0.5 births per woman. The recuperation of childbearing took off around 2000 among older women. In Russia a relatively rapid fertility decline was taking place starting in the late 1980s among the young and the older women (panel A).

### *2.4. The period fertility increase in the 2000s*

In the 2000s period fertility increased in the FSCE as well as in the Western countries (Figure 1, Appendices 1 and 2). At first this was perceived as a "real" increase in childbearing, however detailed analyses revealed the fact that this increase was for the most part caused by various changes in the timing of cohort childbearing (Bongaarts and Sobotka 2012, Frejka 2011). In the FSCE the initial childbearing decline of young women in the 1990s had slowed down in the 2000s whereas a vigorous recuperation of fertility among older women was taking place. This was the main cause for an overall increase in period fertility, although some quantum fertility increase might have been taking place at the same time. In the Western countries the almost exclusive reason for the period fertility growth was a cessation of fertility decline among young women, whereas some recuperation of childbearing among older women was still in progress.

### *2.5. Parity distribution*

Available data in Figures 8 and 9 indicate that changes in the parity distributions of women born during the 1960s and early 1970s, i.e. those concluding their childbearing in the early 21st century[7], were considerably more pronounced in the FSCE compared to Western countries. It was the shares of low parity women, i.e. zero and one, that were growing in the FSCE (Figure 9, panels A-D) and were relatively stable in the West (Figure 9, panels E-H). In particular, shares of women with one child were increasing faster in the FSCE compared to West European countries among women of the 1960s birth cohorts. In Bulgaria and Romania, for instance, these shares were reaching around 40 percent among the early 1970s birth cohorts (Figure 8, panel A).

Parity 2 women were still prevailing everywhere (Figure 9). Much more so in the FSCE where among women born in the mid to late 1960s between 45 to 55 percent were having two children. In the West these shares were smaller with only around 40 percent of women winding up with 2 children. Shares of higher parity women were declining in most of the FSCE except for Hungary. These were still relatively stable in the West with the exception of Spain.

[7] It should be kept in mind that information pertaining to parity distributions is based essentially on completed cohort behavior and thus not as up-to-date as might be desired.

## 3. Convergence, or lack thereof, of FSCE and Western fertility patterns

As of the early 2010s, most FSCE have period total fertility rates in the range of 1.4 – 1.6 births per woman (Appendix 1) and an average PTFR of around 1.5 births per woman (Figure 1). PTFRs in the Western countries are in two clusters. In Northern and Western Europe PTFRs were around 1.8 - 2.0 with an average of close to 1.9. In a second cluster PTFRs were between 1.3 and 1.5 births per woman (Appendix 2). These are the German-speaking countries and those of Southern Europe with an average PTFR close to 1.4 (Figure 1). In reality the period fertility levels in the FSCE have been converging with those of Southern Europe and the German-speaking countries.

Not surprisingly convergence of a similar nature is occurring with cohort fertility rates. The range of the cohort total fertility rates of the FSCE among the birth cohorts of the late 1970s is estimated to be around 1.5 – 1.7 births per woman (Myrskylä et al. 2013) with an average of close to 1.7 births per woman (Figure 2). Western CTFRs are again in two clusters; 1.4 – 1.7 in Southern Europe and the German-speaking countries with estimated CTFRs of 1.5 and 1.6 births per woman, respectively. The range for the CTFRs of Northern and Western (narrowly defined) Europe is 1.8 – 2.1 (Myrskylä et al. 2013) with estimated averages of close to 2.0 births per woman. (Figure 2).

In terms of fertility levels, period and cohort, the FSCE appear to be converging with the German-speaking countries and the countries of Southern Europe. Note that altogether there is a great deal of variation.

To the extent that information is available, parity data reflect fertility levels and trends. As fertility was declining, an increase in parity one women in the West was occurring in Southern Europe and in the German-speaking countries among the birth cohorts of the late 1940s and the 1950s. The increase in parity one women in the FSCE among the 1960s and early 1970s cohorts is actually a convergence with the earlier trends in Southern and German-speaking Europe.

Interestingly, some signs of convergence are emerging with regard to childbearing patterns. As the period mean ages of birth for the FSCE populations have been increasing faster than earlier in Northern and Western Europe, the PMAB in a number of the FSCE around 2010 came close to their levels of 30 years of age. Actually the PMAB around 2010 was even slightly higher in the German-speaking countries with an average of 30.4 years. In 2009 the PMAB for Slovenia was 29.9 years of age, for Estonia in 2010 it was 29.4, and for the Czech Republic it was 29.7 in 2011. It is likely that the increases in the mean ages of birth are likely to continue in the FSCE and might soon catch up with the Western countries.

It also appears that cohort age patterns of childbearing might be getting similar to Western ones in a number of countries (Figure 7). In this figure the progress of cohort age patterns of childbearing for five FSCE populations are followed in successive cohorts with the respective pattern for the Netherlands serving as a base for comparison. In Figure 7, panel A all the Eastern countries have young age patterns of childbearing with peak ages in the early twenties, whereas the Netherlands already has a late cohort childbearing pattern with a peak at age 29. Not much change can be observed for the 1970 birth cohort (Figure 7, panel B). However, the curves for the 1975 birth cohort of the Czech Republic, Hungary and Slovenia the peaks of what is known of the cohort childbearing pattern has clearly shifted to age 29 (Figure 7, panel C). Furthermore, for the 1980 and the 1985 birth cohorts (panels D and E) the known parts of the cohort age patterns of childbearing are very similar to that of the Netherlands. On the other hand, childbearing patterns in Russia and Bulgaria continue to be very different from those of the Netherlands. These observations are quite reliable, nonetheless caution is advised, because these are data only for young women whose proportions of overall births are small and diminishing.

In sum, the data demonstrate that the childbearing postponement transition has progressed rapidly in many FSCE countries and age patterns of cohort fertility in most of these countries have become "older" and are converging to Western age patterns. Levels of period and cohort fertility have also changed rapidly in the past 20-25 years. These have declined from around replacement levels before 1990 to levels that in the early 2010s are 20 to almost 30 percent below replacement.

How should all this be interpreted? Is fertility likely to decline further, stabilize or increase in the FSCE in the foreseeable future? What kind of population and family policies were developed and implemented in the formerly socialist countries of Europe? What kind of goals did governments wish to achieve? What was the effect of population and family policy measures on childbearing levels and trends? And it might also be desirable to explore, albeit rather ambitious and challenging: What kind of population and family policies could be designed and implemented in coming years in the formerly socialist countries of Europe to reach desired goals?

These are issues we intend to explore over the next several months. Our preliminary results will be reported on in our next paper to be presented at the European Population Conference in Budapest in June 2014.

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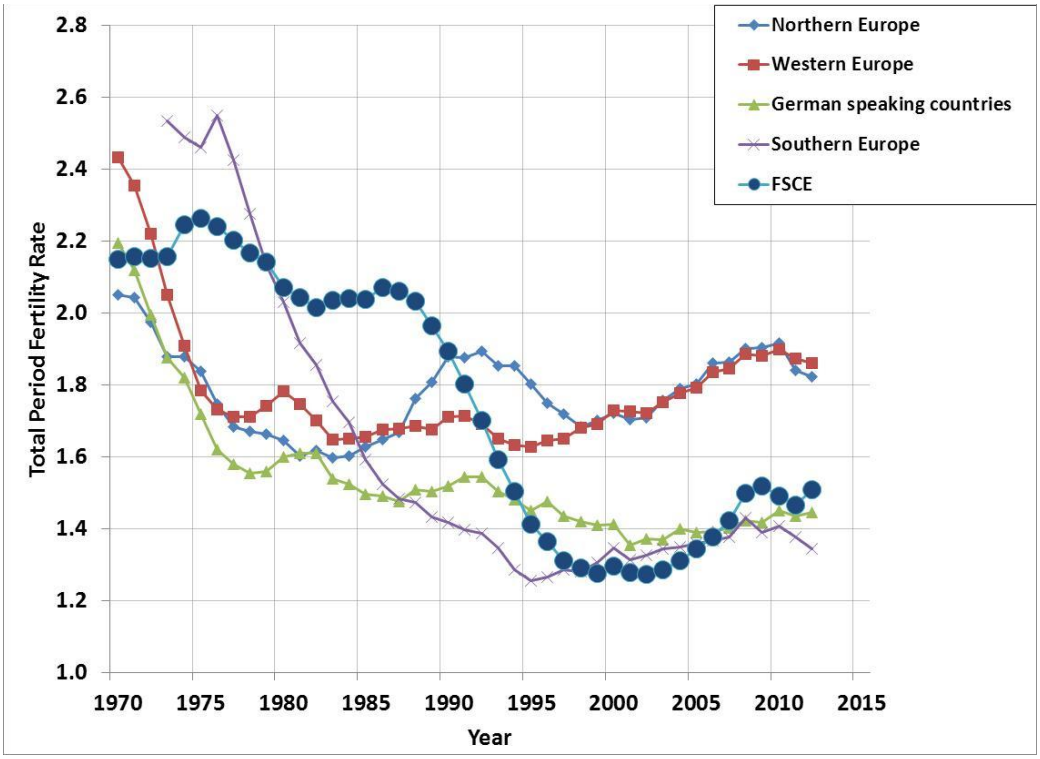
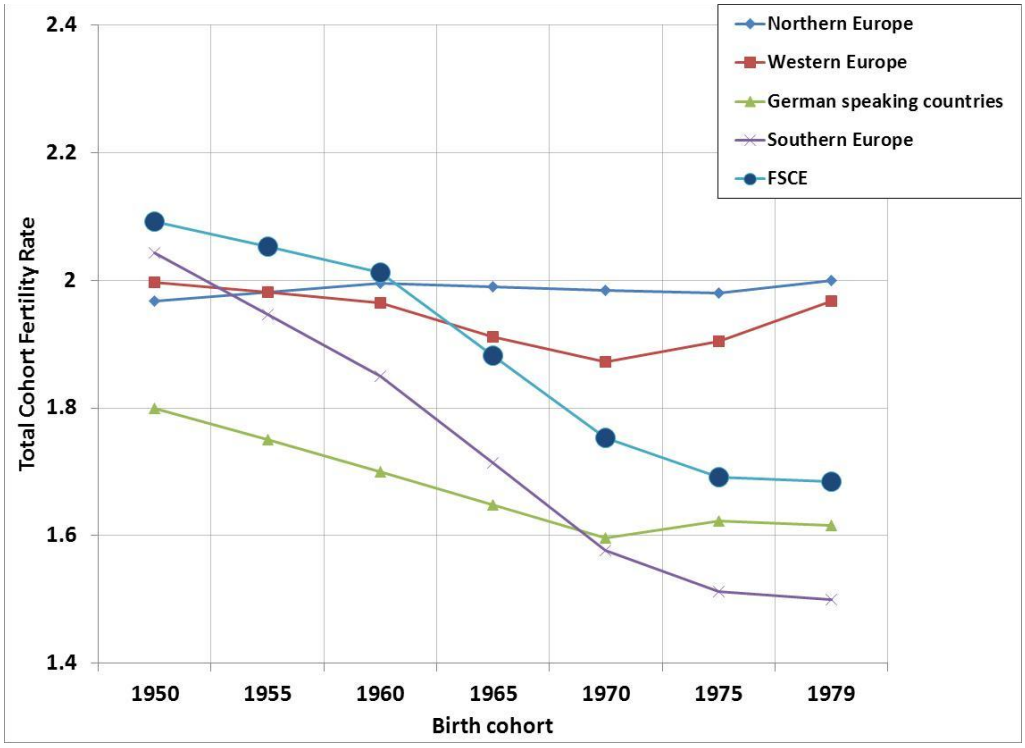
**Figure 1** – Period total fertility rates, Formerly socialist countries of Europe (FSCE), Northern, Western, Southern Europe and German-speaking countries, 1970-2012




*Sources*: HFD & Eurostat, 2014
*Note*: Cf. Appendix Tables 1 and 2

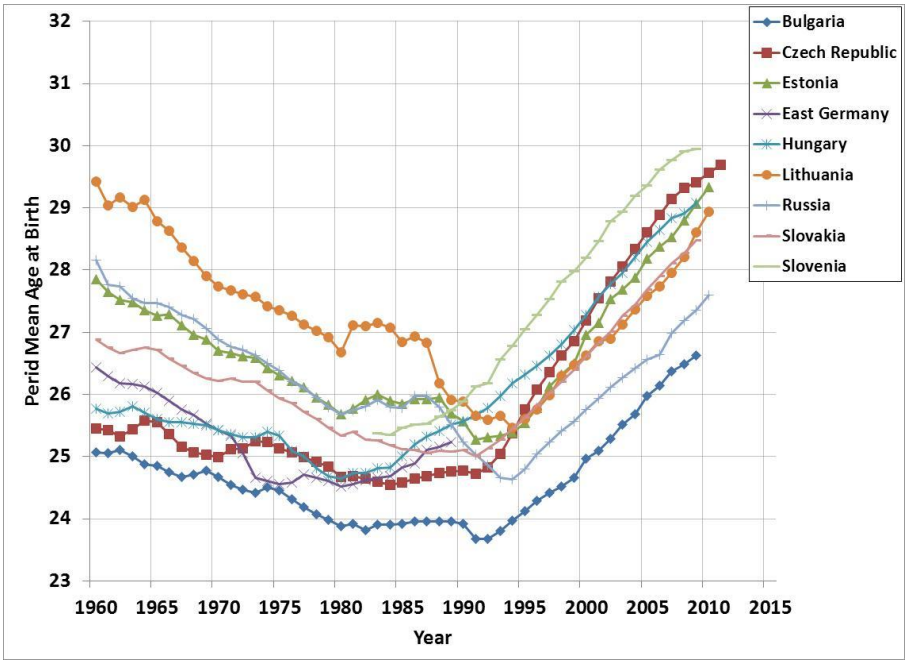
**Figure 2** – Cohort total fertility rates, Formerly socialist countries of Europe (FSCE), Northern, Western, Southern Europe and German-speaking countries Europe, 1970-2012



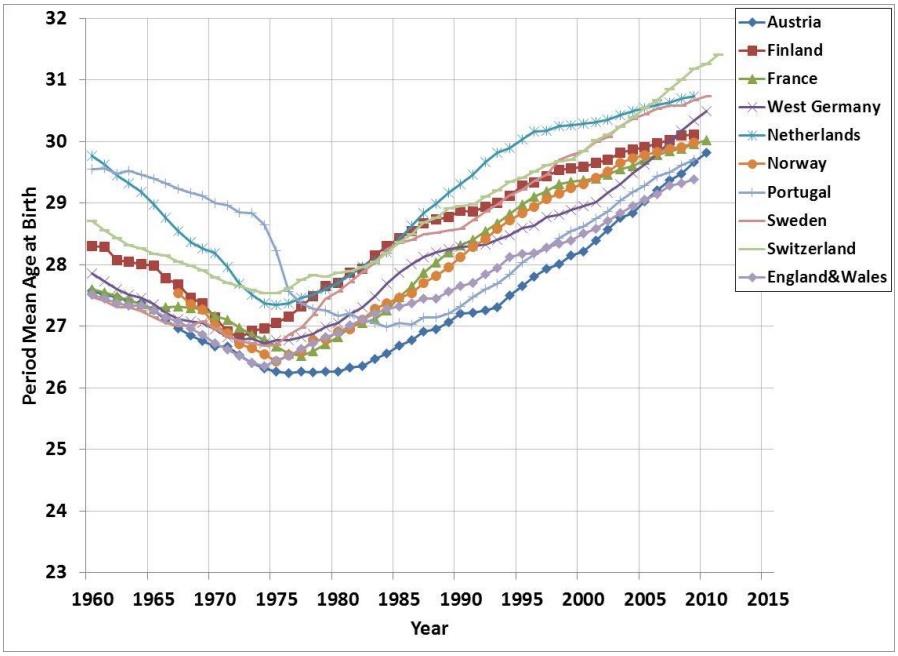

*Source*: Myrskylä et al., 2013

**Figure 3** – Period mean age at birth, Formerly European socialist countries and Western Europe, 1960-2011

A - Formerly European socialist countries



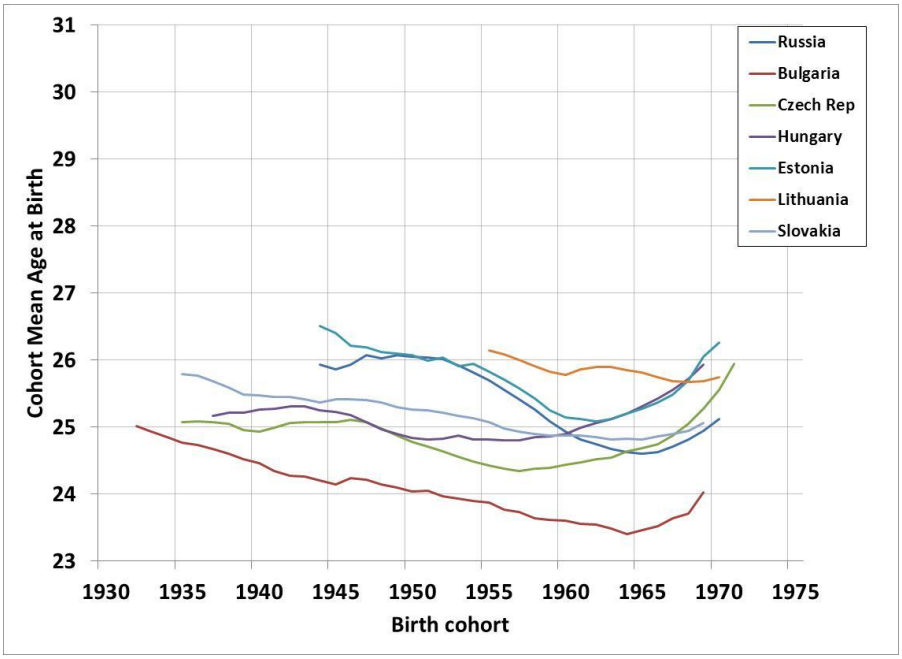

B – West European countries



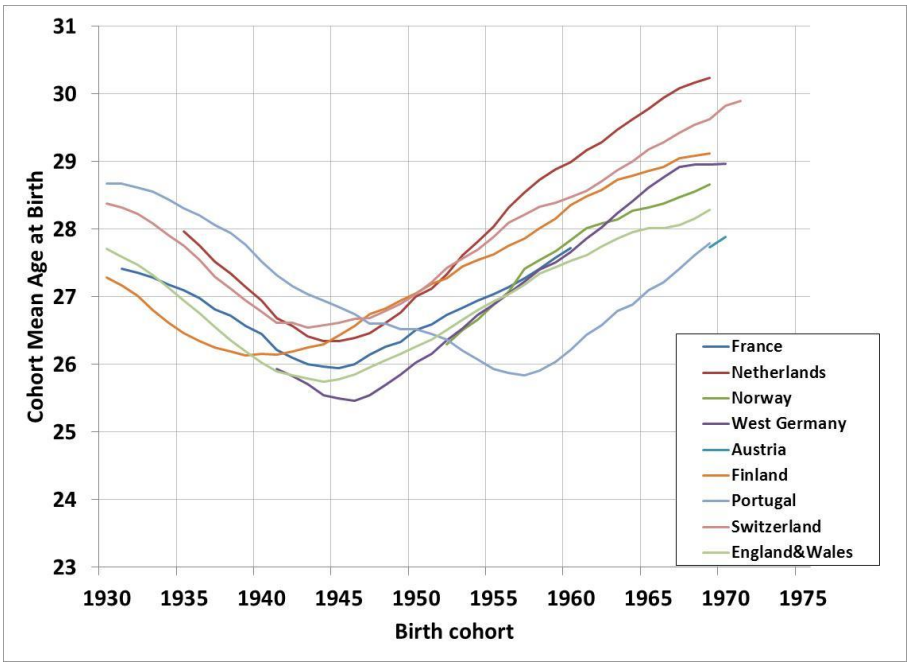

*Sources*: HFD

**Figure 4** – Cohort mean age at birth at age 40, Formerly European socialist countries and Western Europe, Birth cohorts, 1930-1971

A - Formerly European socialist countries



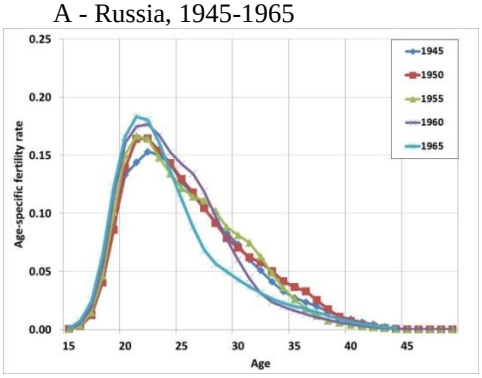

B – West European countries



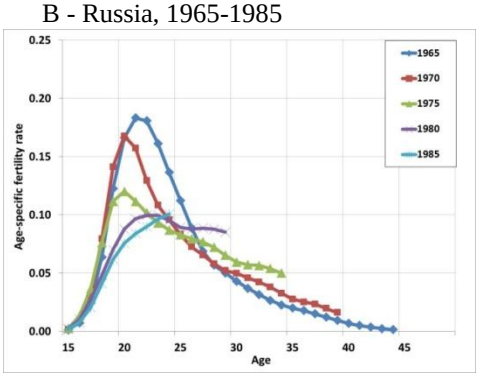

*Sources*: HFD

**Figure 5** – Cohort age-specific fertility rates, Russian Federation, Czech Republic, Netherlands and Austria, birth cohorts 1945, 1950, 1955, 1960, 1965, 1970, 1975, 1980 and 1985

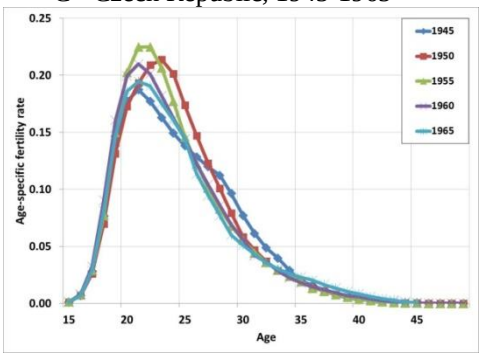
A - Russia, 1945-1965



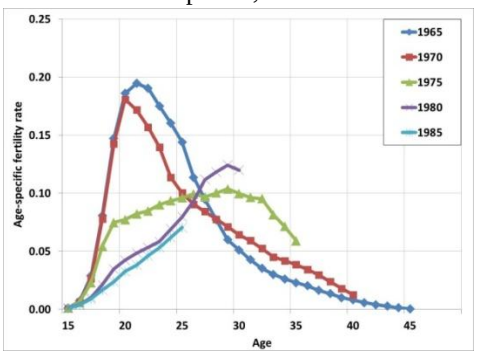

B - Russia, 1965-1985



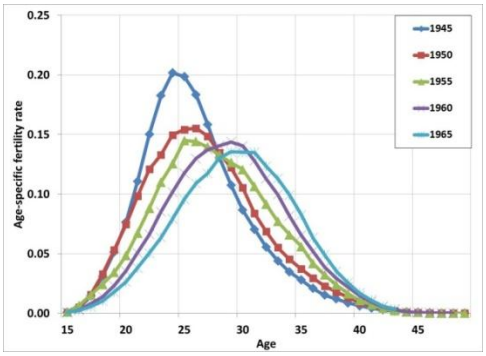

C - Czech Republic, 1945-1965



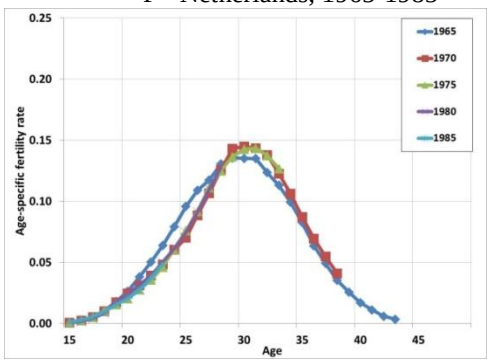

D - Czech Republic, 1965-1985



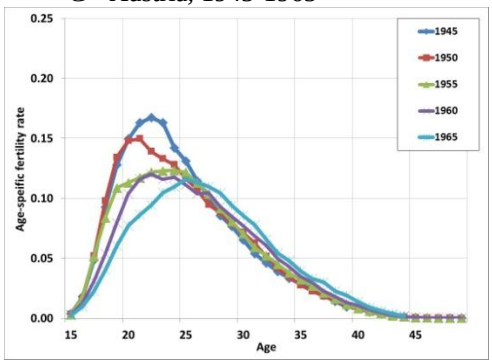

E - Netherlands, 1945-1965



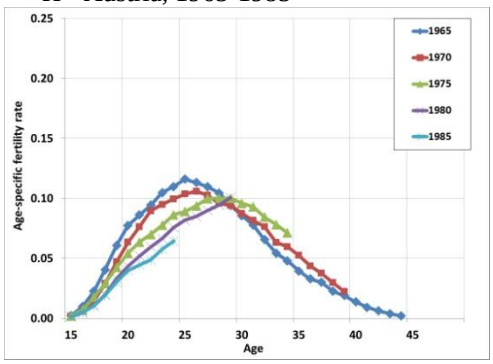

F - Netherlands, 1965-1985




G - Austria, 1945-1965



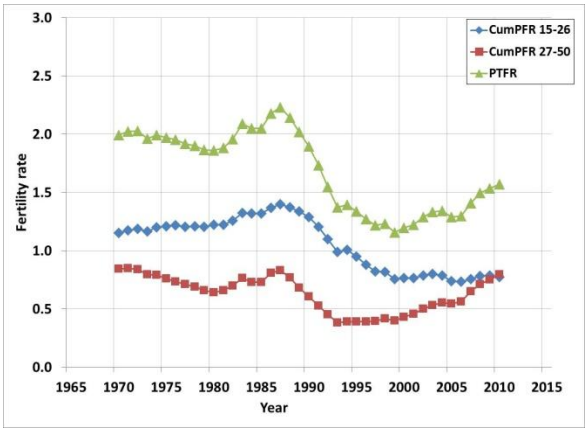

H - Austria, 1965-1985



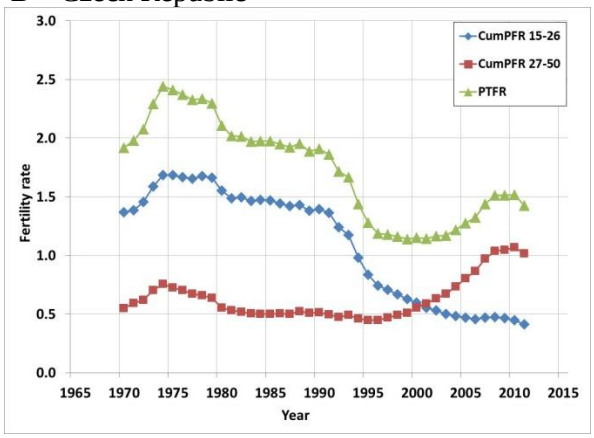

*Source*: HFD 2013

Figure 6 - Period total fertility rates (PTFR), cumulative period fertility rates 15-26 (CumPFR 15-26) and 27-50 (CumPFR 29-50), Russian Federation, Czech Republic, Netherlands and Austria, 1970-2011

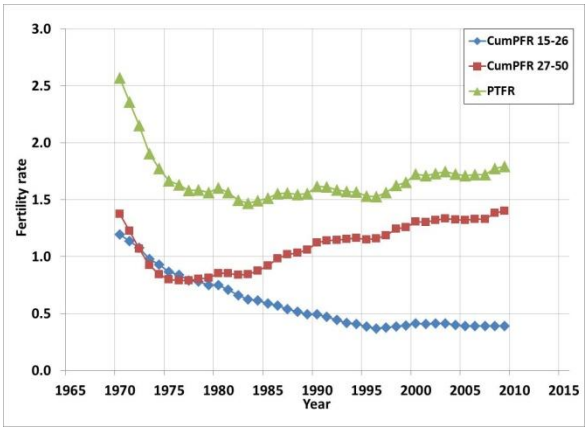
A – Russian Federation



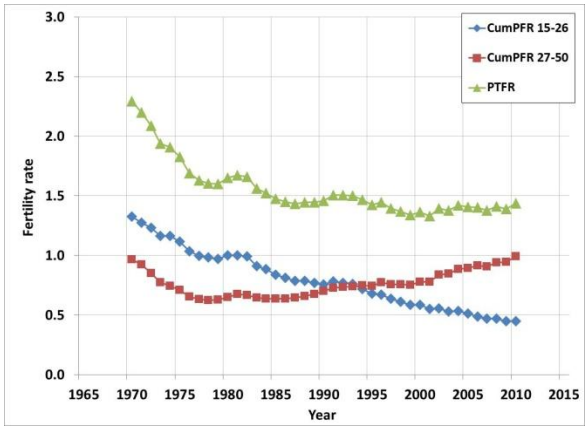

B – Czech Republic




C – Netherlands



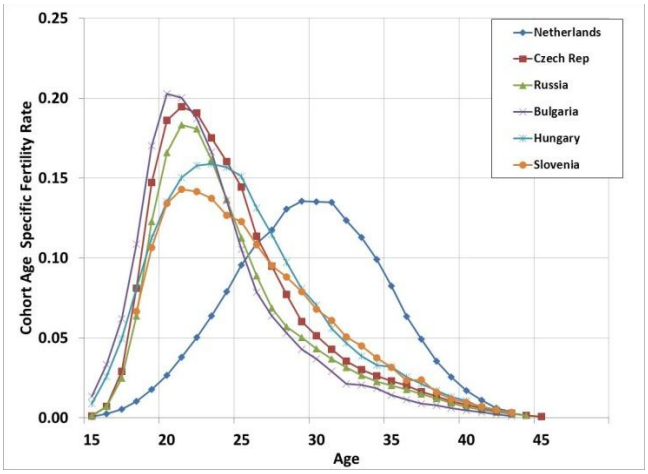

D - Austria



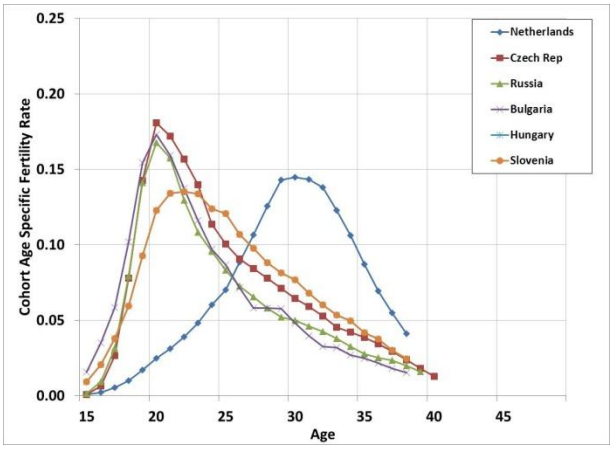

*Source*: HFD

**Figure** 7 - Cohort Age Specific Fertility Rates, Netherlands, Czech Republic, Russia, Bulgaria, Hungary and Slovenia, birth cohorts 1965, 1970, 1975, 1980 and 1985

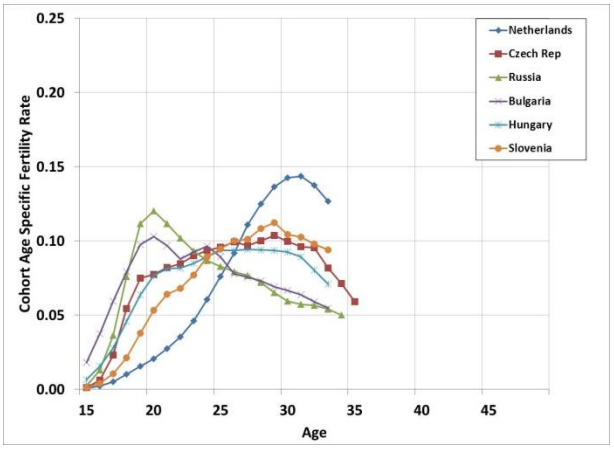
A – 1965 cohort



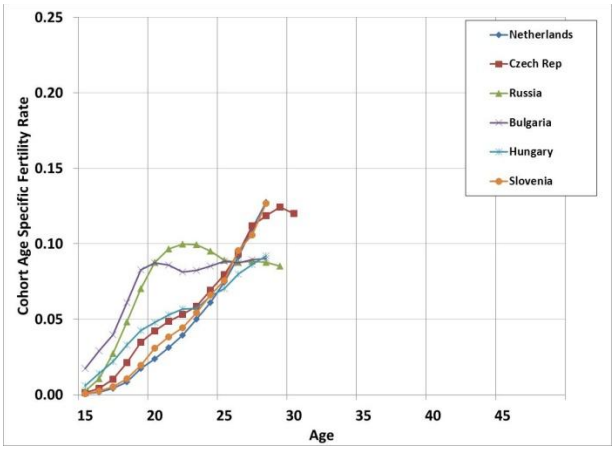

B - 1970 cohort



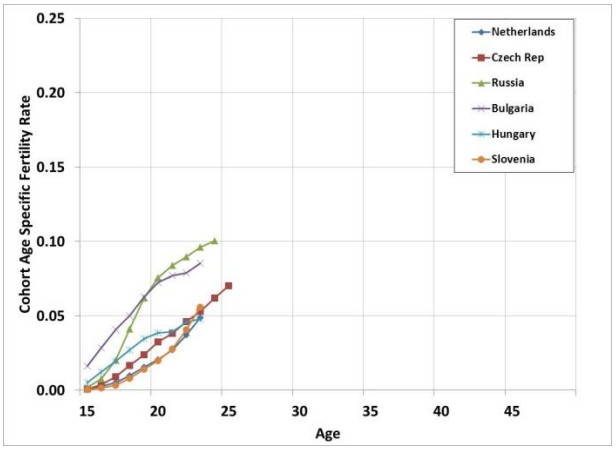

C – 1975 cohort




D – 1980 cohort



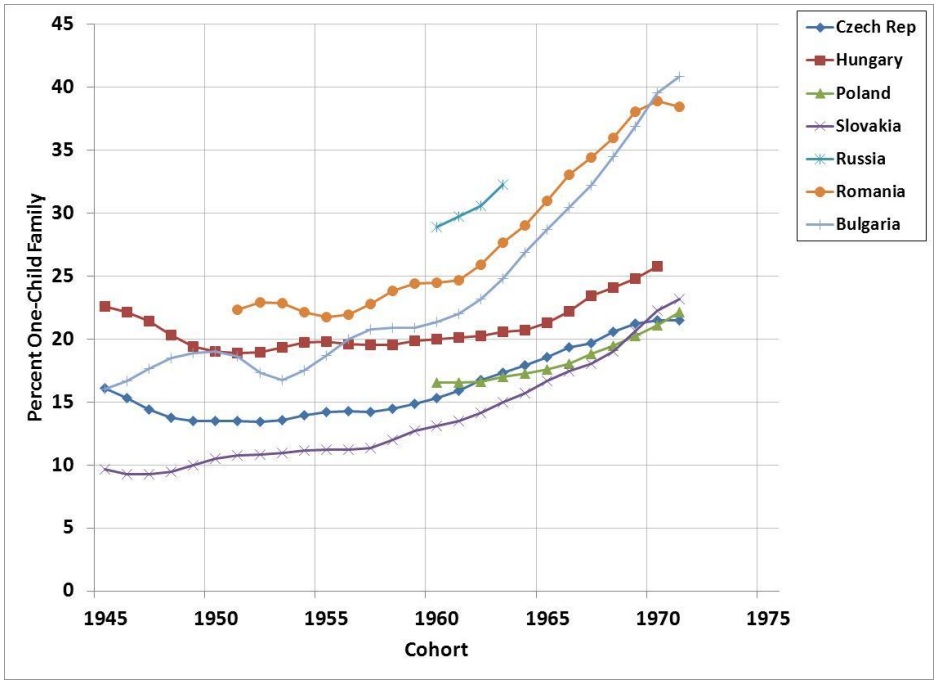

E – 1985 cohort



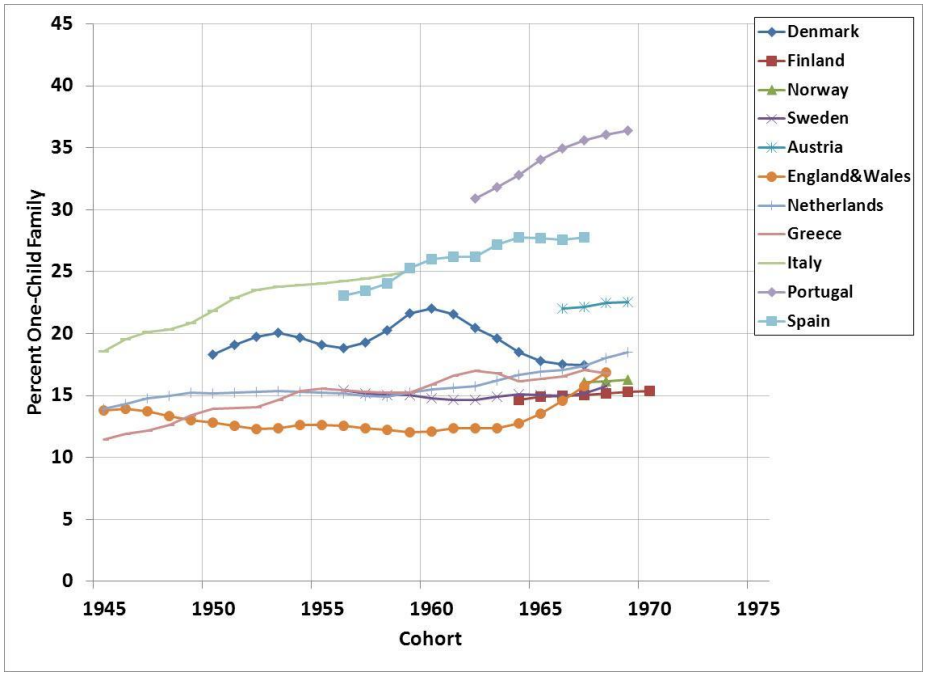

*Source*: HFD

**Figure 8** – Percent of parity one women, Formerly European socialist countries and West European countries, Birth cohorts, 1945-1971

A - Formerly European socialist countries



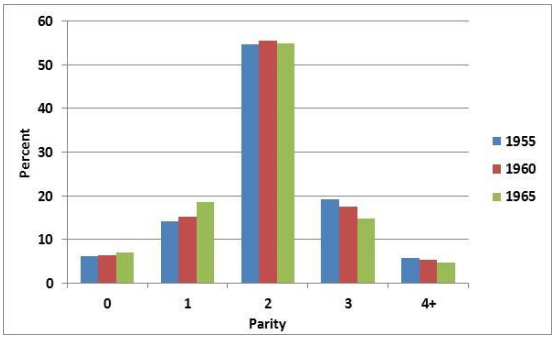

B – West European countries



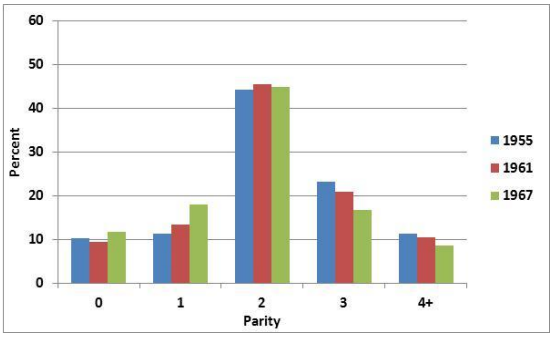

*Source*: ODE

**Figure 9** – Parity distributions, selected countries, Birth cohorts 1954-1968

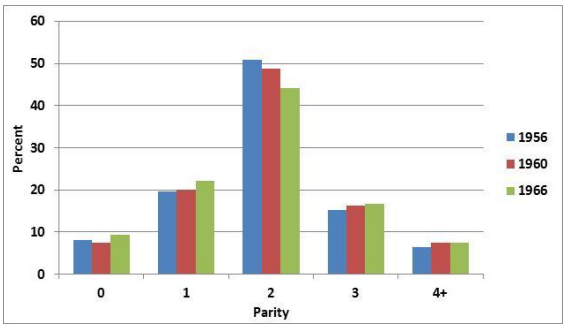
A Czech Republic



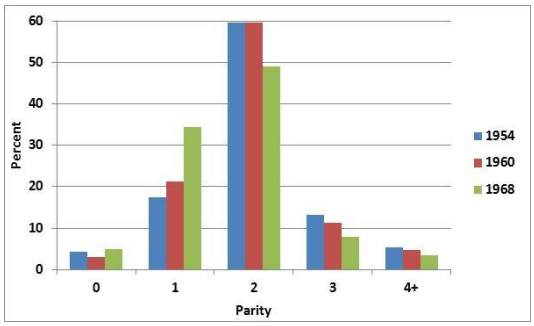

B Slovakia



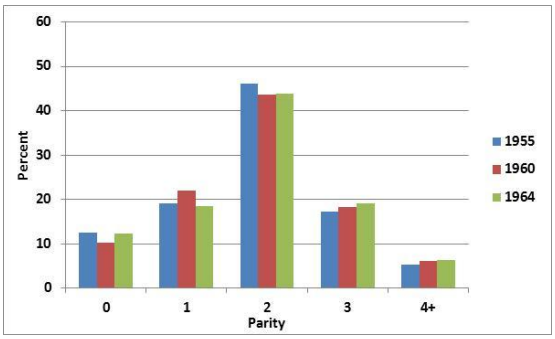

C Hungary



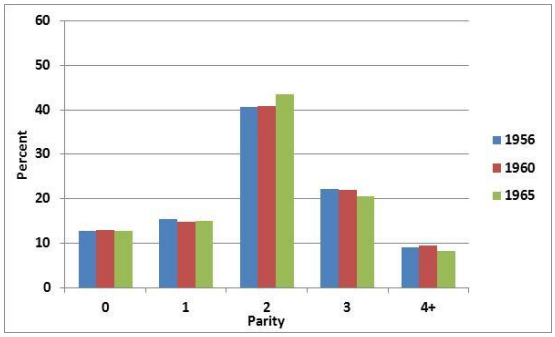

D Bulgaria



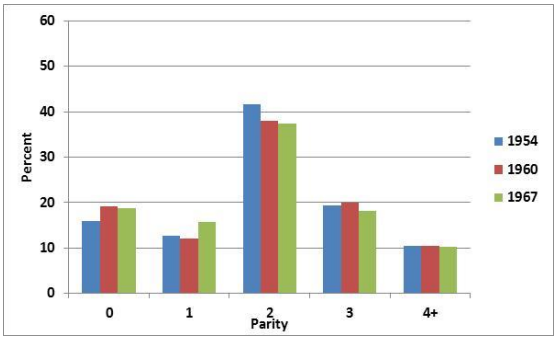

E Denmark



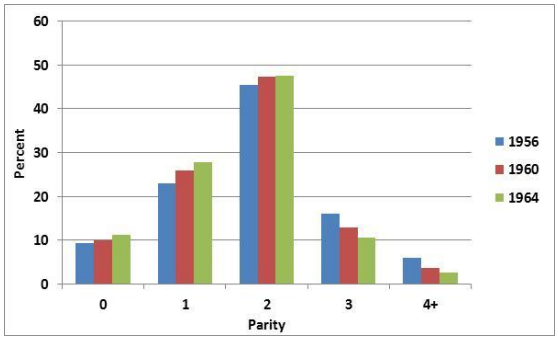

F Sweden




G England & Wales




H Spain




*Source*: ODE

**Appendix Table 1** - Period total fertility rates, Formerly socialist countries of Europe (FSCE), 1970-2012

| | Belarus | Bulgaria | Croatia | Czech Rep | Estonia | Hungary | Latvia | Lithuania | Monteneg ro | Poland | Serbia | Slovakia | Slovenia | Romania | Russia | Ukraine | FSCE average |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1970 | | 2.17 | | 1.92 | 2.19 | 1.99 | | 2.41 | | | | 2.43 | | | 2.00 | 2.11 | **2.15** |
| 1971 | | 2.10 | | 1.98 | 2.23 | 1.94 | | 2.43 | | | | 2.43 | | | 2.02 | 2.12 | **2.16** |
| 1972 | | 2.03 | | 2.08 | 2.18 | 1.94 | | 2.36 | | | | 2.48 | | | 2.03 | 2.13 | **2.15** |
| 1973 | | 2.15 | | 2.29 | 2.10 | 1.94 | | 2.23 | | | | 2.55 | | | 1.96 | 2.03 | **2.16** |
| 1974 | | 2.29 | | 2.44 | 2.09 | 2.29 | | 2.21 | | | | 2.59 | | | 2.00 | 2.06 | **2.25** |
| 1975 | | 2.23 | | 2.41 | 2.05 | 2.37 | | 2.18 | | | | 2.52 | | 2.59 | 1.97 | 2.05 | **2.26** |
| 1976 | | 2.24 | | 2.37 | 2.06 | 2.25 | | 2.17 | | | | 2.52 | | 2.54 | 1.95 | 2.05 | **2.24** |
| 1977 | | 2.21 | | 2.33 | 2.05 | 2.17 | | 2.13 | | | | 2.47 | | 2.57 | 1.92 | 1.97 | **2.20** |
| 1978 | | 2.15 | | 2.34 | 2.02 | 2.08 | | 2.08 | | | | 2.46 | | 2.52 | 1.90 | 1.96 | **2.17** |
| 1979 | | 2.16 | | 2.30 | 2.01 | 2.02 | | 2.05 | | | | 2.44 | | 2.49 | 1.87 | 1.94 | **2.14** |
| 1980 | | 2.05 | | 2.11 | 2.03 | 1.92 | | 1.99 | | | | 2.32 | | 2.43 | 1.86 | 1.94 | **2.07** |
| 1981 | | 2.00 | | 2.02 | 2.09 | 1.88 | | 1.99 | | | | 2.28 | | 2.36 | 1.88 | 1.90 | **2.04** |
| 1982 | | 2.01 | | 2.01 | 2.10 | 1.81 | | 1.98 | | | | 2.27 | 1.93 | 2.17 | 1.96 | 1.93 | **2.02** |
| 1983 | | 2.01 | | 1.97 | 2.18 | 1.76 | | 2.11 | | | | 2.27 | 1.81 | 2.06 | 2.09 | 2.10 | **2.03** |
| 1984 | | 2.01 | | 1.98 | 2.18 | 1.77 | | 2.08 | | | | 2.25 | 1.74 | 2.26 | 2.05 | 2.08 | **2.04** |
| 1985 | | 1.98 | | 1.97 | 2.13 | 1.87 | | 2.08 | | | | 2.26 | 1.71 | 2.31 | 2.05 | 2.02 | **2.04** |
| 1986 | | 2.02 | | 1.95 | 2.18 | 1.87 | | 2.12 | | | | 2.20 | 1.67 | 2.39 | 2.18 | 2.13 | **2.07** |
| 1987 | 2.08 | 1.97 | | 1.92 | 2.27 | 1.85 | | 2.11 | | | | 2.15 | 1.65 | 2.38 | 2.23 | 2.07 | **2.06** |
| 1988 | 2.03 | 1.97 | | 1.95 | 2.28 | 1.85 | | 2.01 | | | | 2.15 | 1.63 | 2.30 | 2.14 | 2.06 | **2.03** |
| 1989 | 2.03 | 1.89 | | 1.89 | 2.22 | 1.84 | | 1.98 | | | | 2.09 | 1.52 | 2.22 | 2.02 | 1.93 | **1.97** |
| 1990 | 1.91 | 1.79 | | 1.91 | 2.05 | 1.87 | | 2.03 | | 2.06 | | 2.10 | 1.46 | 1.83 | 1.89 | 1.85 | **1.90** |
| 1991 | 1.81 | 1.64 | | 1.86 | 1.80 | 1.88 | | 2.01 | | 2.07 | | 2.05 | 1.42 | 1.59 | 1.73 | 1.77 | **1.80** |
| 1992 | 1.76 | 1.54 | | 1.72 | 1.71 | 1.78 | | 1.97 | | 1.95 | | 1.93 | 1.33 | 1.51 | 1.55 | 1.67 | **1.70** |
| 1993 | 1.62 | 1.47 | | 1.67 | 1.49 | 1.69 | | 1.74 | | 1.87 | | 1.87 | 1.33 | 1.43 | 1.37 | 1.56 | **1.59** |
| 1994 | 1.53 | 1.38 | | 1.44 | 1.42 | 1.64 | | 1.58 | | 1.81 | | 1.67 | 1.32 | 1.40 | 1.40 | 1.47 | **1.50** |
| 1995 | 1.41 | 1.25 | | 1.28 | 1.38 | 1.57 | | 1.55 | | 1.62 | | 1.53 | 1.29 | 1.33 | 1.34 | 1.40 | **1.41** |
| 1996 | 1.34 | 1.26 | | 1.19 | 1.37 | 1.46 | | 1.50 | | 1.59 | | 1.48 | 1.28 | 1.30 | 1.27 | 1.34 | **1.36** |
| 1997 | 1.25 | 1.12 | | 1.18 | 1.32 | 1.38 | | 1.47 | | 1.51 | | 1.44 | 1.25 | 1.32 | 1.22 | 1.27 | **1.31** |
| 1998 | 1.30 | 1.15 | | 1.16 | 1.29 | 1.33 | | 1.46 | | 1.44 | | 1.38 | 1.23 | 1.32 | 1.23 | 1.21 | **1.29** |
| 1999 | 1.31 | 1.28 | | 1.14 | 1.32 | 1.28 | | 1.46 | | 1.37 | | 1.34 | 1.21 | 1.30 | 1.16 | 1.13 | **1.28** |
| 2000 | 1.32 | 1.32 | | 1.15 | 1.39 | 1.32 | 1.24 | 1.39 | | 1.37 | 1.48 | 1.30 | 1.26 | 1.31 | 1.20 | 1.12 | **1.30** |
| 2001 | 1.29 | 1.24 | 1.46 | 1.14 | 1.34 | 1.31 | 1.22 | 1.30 | | 1.31 | 1.58 | 1.20 | 1.21 | 1.27 | 1.22 | 1.09 | **1.28** |
| 2002 | 1.24 | 1.21 | 1.42 | 1.17 | 1.37 | 1.30 | 1.25 | 1.24 | | 1.25 | 1.57 | 1.19 | 1.21 | 1.27 | 1.29 | 1.13 | **1.27** |
| 2003 | 1.23 | 1.23 | 1.41 | 1.17 | 1.37 | 1.27 | 1.32 | 1.26 | | 1.22 | 1.59 | 1.20 | 1.20 | 1.31 | 1.33 | 1.17 | **1.29** |
| 2004 | 1.23 | 1.29 | 1.43 | 1.22 | 1.47 | 1.28 | 1.29 | 1.26 | | 1.23 | 1.57 | 1.24 | 1.25 | 1.35 | 1.34 | 1.22 | **1.31** |
| 2005 | 1.25 | 1.31 | 1.50 | 1.28 | 1.50 | 1.31 | 1.39 | 1.27 | 1.60 | 1.24 | 1.45 | 1.25 | 1.26 | 1.39 | 1.29 | 1.21 | **1.34** |
| 2006 | 1.34 | 1.38 | 1.47 | 1.32 | 1.55 | 1.34 | 1.46 | 1.31 | 1.63 | 1.27 | 1.43 | 1.24 | 1.31 | 1.40 | 1.30 | 1.30 | **1.38** |
| 2007 | 1.43 | 1.42 | 1.48 | 1.44 | 1.63 | 1.32 | 1.54 | 1.35 | 1.69 | 1.31 | 1.38 | 1.25 | 1.38 | 1.42 | 1.41 | 1.33 | **1.42** |
| 2008 | 1.49 | 1.48 | 1.55 | 1.51 | 1.65 | 1.35 | 1.59 | 1.45 | 1.77 | 1.39 | 1.40 | 1.34 | 1.53 | 1.53 | 1.49 | 1.45 | **1.50** |
| 2009 | 1.51 | 1.57 | 1.58 | 1.51 | 1.62 | 1.32 | 1.47 | 1.50 | 1.85 | 1.40 | 1.44 | 1.44 | 1.53 | 1.57 | 1.54 | 1.46 | **1.52** |
| 2010 | 1.49 | 1.57 | 1.55 | 1.52 | 1.63 | 1.25 | 1.36 | 1.50 | 1.69 | 1.38 | 1.40 | 1.43 | 1.57 | 1.54 | 1.57 | 1.43 | **1.49** |
| 2011 | 1.52 | 1.51 | 1.48 | 1.43 | 1.52 | 1.23 | 1.34 | 1.55 | 1.65 | 1.30 | 1.40 | 1.45 | 1.56 | 1.46 | 1.58 | 1.46 | **1.46** |
| 2012 | 1.62 | 1.50 | 1.51 | 1.45 | 1.56 | 1.34 | 1.44 | 1.60 | 1.71 | 1.30 | 1.45 | 1.34 | 1.58 | 1.53 | 1.69 | 1.53 | **1.51** |

*Sources*: HFD, Eurostat, collaborator provided

**Appendix Table 2** - Period total fertility rates, Northern, Western, Southern Europe and German-speaking countries, 1970-2012

| | Norway | Sweden | Finland | Denmark | **Northern Europe** | United Kingdom | Belgium | Netherlands | France | **Western Europe** | Austria | Switzerland | Germany | **German speaking countries** | Italy | Spain | Portugal | **Southern Europe** |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1970 | 2.50 | 1.92 | 1.83 | 1.95 | **2.05** | | 2.25 | 2.57 | 2.48 | **2.43** | 2.29 | 2.10 | | **2.20** | 2.38 | | | |
| 1971 | 2.49 | 1.96 | 1.68 | 2.04 | **2.04** | | 2.21 | 2.36 | 2.50 | **2.36** | 2.20 | 2.04 | | **2.12** | 2.40 | | | |
| 1972 | 2.38 | 1.91 | 1.58 | 2.03 | **1.98** | | 2.09 | 2.15 | 2.42 | **2.22** | 2.08 | 1.91 | | **2.00** | 2.35 | | | |
| 1973 | 2.23 | 1.87 | 1.49 | 1.92 | **1.88** | 2.04 | 1.95 | 1.90 | 2.31 | **2.05** | 1.94 | 1.81 | | **1.88** | 2.30 | | 2.77 | **2.54** |
| 1974 | 2.13 | 1.87 | 1.61 | 1.90 | **1.88** | 1.92 | 1.83 | 1.77 | 2.11 | **1.91** | 1.91 | 1.73 | | **1.82** | 2.28 | | 2.70 | **2.49** |
| 1975 | 1.98 | 1.77 | 1.68 | 1.92 | **1.84** | 1.81 | 1.74 | 1.66 | 1.93 | **1.78** | 1.83 | 1.61 | | **1.72** | 2.17 | | 2.75 | **2.46** |
| 1976 | 1.86 | 1.68 | 1.70 | 1.75 | **1.75** | 1.74 | 1.73 | 1.63 | 1.83 | **1.73** | 1.69 | 1.55 | | **1.62** | 2.04 | 2.79 | 2.82 | **2.55** |
| 1977 | 1.75 | 1.64 | 1.68 | 1.66 | **1.68** | 1.69 | 1.71 | 1.58 | 1.86 | **1.71** | 1.63 | 1.53 | | **1.58** | 1.93 | 2.66 | 2.69 | **2.43** |
| 1978 | 1.77 | 1.60 | 1.64 | 1.67 | **1.67** | 1.75 | 1.69 | 1.58 | 1.82 | **1.71** | 1.60 | 1.51 | | **1.56** | 1.84 | 2.54 | 2.45 | **2.28** |
| 1979 | 1.75 | 1.66 | 1.64 | 1.60 | **1.66** | 1.86 | 1.69 | 1.56 | 1.86 | **1.74** | 1.60 | 1.52 | | **1.56** | 1.73 | 2.36 | 2.31 | **2.13** |
| 1980 | 1.72 | 1.68 | 1.63 | 1.55 | **1.65** | 1.90 | 1.68 | 1.60 | 1.95 | **1.78** | 1.65 | 1.55 | | **1.60** | 1.64 | 2.20 | 2.25 | **2.03** |
| 1981 | 1.70 | 1.63 | 1.64 | 1.44 | **1.60** | 1.82 | 1.66 | 1.56 | 1.95 | **1.75** | 1.67 | 1.55 | | **1.61** | 1.58 | 2.04 | 2.13 | **1.92** |
| 1982 | 1.71 | 1.62 | 1.71 | 1.43 | **1.62** | 1.78 | 1.61 | 1.50 | 1.91 | **1.70** | 1.66 | 1.56 | | **1.61** | 1.56 | 1.94 | 2.07 | **1.86** |
| 1983 | 1.66 | 1.61 | 1.74 | 1.38 | **1.60** | 1.77 | 1.57 | 1.47 | 1.79 | **1.65** | 1.56 | 1.52 | | **1.54** | 1.51 | 1.80 | 1.95 | **1.75** |
| 1984 | 1.66 | 1.66 | 1.69 | 1.40 | **1.60** | 1.77 | 1.54 | 1.49 | 1.80 | **1.65** | 1.52 | 1.53 | | **1.53** | 1.46 | 1.73 | 1.90 | **1.70** |
| 1985 | 1.68 | 1.74 | 1.64 | 1.45 | **1.63** | 1.79 | 1.51 | 1.51 | 1.82 | **1.66** | 1.47 | 1.52 | | **1.50** | 1.42 | 1.64 | 1.72 | **1.59** |
| 1986 | 1.71 | 1.80 | 1.60 | 1.48 | **1.65** | 1.78 | 1.54 | 1.55 | 1.83 | **1.68** | 1.45 | 1.53 | | **1.49** | 1.35 | 1.56 | 1.66 | **1.52** |
| 1987 | 1.74 | 1.84 | 1.59 | 1.50 | **1.67** | 1.81 | 1.54 | 1.56 | 1.80 | **1.68** | 1.43 | 1.52 | | **1.48** | 1.33 | 1.50 | 1.62 | **1.48** |
| 1988 | 1.84 | 1.96 | 1.69 | 1.56 | **1.76** | 1.82 | 1.57 | 1.55 | 1.81 | **1.69** | 1.45 | 1.57 | | **1.51** | 1.36 | 1.45 | 1.61 | **1.47** |
| 1989 | 1.89 | 2.01 | 1.71 | 1.62 | **1.81** | 1.79 | 1.58 | 1.55 | 1.79 | **1.68** | 1.45 | 1.56 | | **1.51** | 1.33 | 1.40 | 1.57 | **1.43** |
| 1990 | 1.93 | 2.13 | 1.78 | 1.67 | **1.88** | 1.83 | 1.62 | 1.62 | 1.78 | **1.71** | 1.46 | 1.58 | | **1.52** | 1.33 | 1.36 | 1.56 | **1.42** |
| 1991 | 1.92 | 2.11 | 1.79 | 1.68 | **1.88** | 1.82 | 1.66 | 1.61 | 1.77 | **1.72** | 1.51 | 1.58 | | **1.55** | 1.30 | 1.33 | 1.56 | **1.40** |
| 1992 | 1.88 | 2.09 | 1.85 | 1.76 | **1.90** | 1.79 | 1.65 | 1.59 | 1.73 | **1.69** | 1.51 | 1.58 | | **1.55** | 1.30 | 1.32 | 1.54 | **1.39** |
| 1993 | 1.86 | 1.99 | 1.81 | 1.75 | **1.85** | 1.76 | 1.61 | 1.57 | 1.66 | **1.65** | 1.50 | 1.51 | | **1.51** | 1.25 | 1.27 | 1.52 | **1.35** |
| 1994 | 1.87 | 1.88 | 1.85 | 1.81 | **1.85** | 1.74 | 1.56 | 1.57 | 1.66 | **1.63** | 1.47 | 1.49 | | **1.48** | 1.21 | 1.20 | 1.45 | **1.29** |
| 1995 | 1.87 | 1.73 | 1.81 | 1.80 | **1.80** | 1.71 | 1.56 | 1.53 | 1.71 | **1.63** | 1.42 | 1.48 | | **1.45** | 1.19 | 1.17 | 1.41 | **1.26** |
| 1996 | 1.89 | 1.60 | 1.76 | 1.75 | **1.75** | 1.73 | 1.59 | 1.53 | 1.73 | **1.65** | 1.45 | 1.50 | | **1.48** | 1.20 | 1.16 | 1.44 | **1.27** |
| 1997 | 1.86 | 1.52 | 1.75 | 1.75 | **1.72** | 1.72 | 1.60 | 1.56 | 1.73 | **1.65** | 1.39 | 1.48 | | **1.44** | 1.21 | 1.18 | 1.47 | **1.29** |
| 1998 | 1.81 | 1.50 | 1.70 | 1.72 | **1.68** | 1.71 | 1.60 | 1.63 | 1.78 | **1.68** | 1.37 | 1.47 | | **1.42** | 1.21 | 1.16 | 1.47 | **1.28** |
| 1999 | 1.85 | 1.50 | 1.73 | 1.73 | **1.70** | 1.68 | 1.62 | 1.65 | 1.81 | **1.69** | 1.34 | 1.48 | | **1.41** | 1.23 | 1.19 | 1.50 | **1.31** |
| 2000 | 1.85 | 1.54 | 1.73 | 1.77 | **1.72** | 1.64 | 1.67 | 1.72 | 1.89 | **1.73** | 1.36 | 1.50 | 1.38 | **1.41** | 1.26 | 1.23 | 1.55 | **1.35** |
| 2001 | 1.78 | 1.57 | 1.73 | 1.74 | **1.71** | 1.63 | 1.67 | 1.71 | 1.90 | **1.73** | 1.33 | 1.38 | 1.35 | **1.35** | 1.25 | 1.24 | 1.45 | **1.31** |
| 2002 | 1.75 | 1.65 | 1.72 | 1.72 | **1.71** | 1.63 | 1.65 | 1.73 | 1.88 | **1.72** | 1.39 | 1.39 | 1.34 | **1.37** | 1.27 | 1.25 | 1.46 | **1.33** |
| 2003 | 1.80 | 1.71 | 1.76 | 1.76 | **1.76** | 1.70 | 1.67 | 1.75 | 1.89 | **1.75** | 1.38 | 1.39 | 1.34 | **1.37** | 1.29 | 1.30 | 1.44 | **1.34** |
| 2004 | 1.83 | 1.75 | 1.80 | 1.78 | **1.79** | 1.75 | 1.72 | 1.72 | 1.92 | **1.78** | 1.42 | 1.42 | 1.36 | **1.40** | 1.34 | 1.31 | 1.40 | **1.35** |
| 2005 | 1.84 | 1.77 | 1.80 | 1.80 | **1.80** | 1.76 | 1.76 | 1.71 | 1.94 | **1.79** | 1.41 | 1.42 | 1.34 | **1.39** | 1.34 | 1.33 | 1.41 | **1.36** |
| 2006 | 1.90 | 1.85 | 1.84 | 1.85 | **1.86** | 1.82 | 1.80 | 1.72 | 2.00 | **1.84** | 1.41 | 1.44 | 1.33 | **1.39** | 1.37 | 1.36 | 1.37 | **1.37** |
| 2007 | 1.90 | 1.88 | 1.83 | 1.84 | **1.86** | 1.86 | 1.82 | 1.72 | 1.98 | **1.85** | 1.38 | 1.46 | 1.37 | **1.40** | 1.40 | 1.38 | 1.35 | **1.38** |
| 2008 | 1.96 | 1.91 | 1.85 | 1.89 | **1.90** | 1.91 | 1.85 | 1.77 | 2.01 | **1.89** | 1.41 | 1.48 | 1.38 | **1.42** | 1.45 | 1.45 | 1.39 | **1.43** |
| 2009 | 1.98 | 1.94 | 1.86 | 1.84 | **1.91** | 1.89 | 1.84 | 1.79 | 2.00 | **1.88** | 1.39 | 1.50 | 1.36 | **1.42** | 1.45 | 1.38 | 1.34 | **1.39** |
| 2010 | 1.95 | 1.98 | 1.87 | 1.87 | **1.92** | 1.92 | 1.86 | 1.79 | 2.03 | **1.90** | 1.44 | 1.52 | 1.39 | **1.45** | 1.46 | 1.37 | 1.39 | **1.41** |
| 2011 | 1.88 | 1.90 | 1.83 | 1.75 | **1.84** | 1.91 | 1.81 | 1.76 | 2.01 | **1.87** | 1.43 | 1.52 | 1.36 | **1.44** | 1.44 | 1.34 | 1.35 | **1.38** |
| 2012 | 1.85 | 1.91 | 1.80 | 1.73 | **1.82** | 1.92 | 1.79 | 1.72 | 2.01 | **1.86** | 1.44 | 1.52 | 1.38 | **1.45** | 1.43 | 1.32 | 1.28 | **1.34** |

*Sources*: HFD, Eurostat, collaborator provided

**Appendix Table 3** - Participating countries and personnel working on project *Prospects for a fertility increase in the formerly socialist countries of Central and Eastern Europe*

| ***Country*** | ***Collaborators*** |
|---|---|
| Albania | Arjan Gjonca |
| Belarus | Ekaterina Antipova, Tatyana Pronko & Liudmila Fakeyeva |
| Bulgaria | Elena von der Lippe & Dora Kostova |
| Croatia | Ivan Cipin, Anđelko Akrap and Marin Strmota |
| Czech Republic | Tomáš Sobotka & Kryštof Zeman |
| Estonia | Luule Sakkeus, Allan Puur, Martin Klesment &Liili Abuladze |
| Hungary | Julia Mikolai |
| Kosovo | Arjan Gjonca |
| Latvia | Peteris Zvidrins & 1 |
| Lithuania | Vlada Stankuniene, Aiva Jasilioniene & Ausra Maslauskaite |
| Montenegro | Arjan Gjonca |
| Poland | Irena Kotowska, Krzysztof Tymicki & Anna Rybińska |
| Romania | Cornelia Muresan & Ionut Foldes |
| Russia | Anatoly Vishnevsky & Sergei Zakharov |
| Serbia | Mirjana Rasevic, Mirjana Bobic & Vasic Petar |
| Slovakia | Michaela Potančoková & Branislav Sprocha |
| Slovenia | Jože Sambt & Nada Stropnik |
| Ukraine | Iryna Kurylo, Svitlana Aksyonova & Boris Krimer |
| Project coordinators | Stuart Basten & Tomas Frejka |