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FERTILITY, FAMILY FORMATION
AND DISSOLUTION: COMPARING POLAND
AND ESTONIA 1989–2005

INTRODUCTION

A comparative analysis of changes in fertility, family formation and dissolution, in Poland and Estonia, is the aim of this article. The time period covered is mostly the years 1989–2005. In the past both countries were members of the socialist bloc and launched changes in their political and social systems at the end of the 1980s. Using basic demographic indicators and the position of Poland and Estonia among the countries of Europe, the changes in fertility and family processes are analysed in the context of transformation of these processes in European countries. Consequently an answer will be given to the question, of how Poland and Estonia compare to the present demographic situation in Europe. Not of least importance is the fact, that both countries belong to different regions of the continent. Estonia belongs to Northern Europe, geographically referred to as Baltoscandia, Poland to the region of Central and Eastern Europe. Therefore, rating and comparing transformations of fertility and family in the two countries, in the context of different societal and welfare systems, may be helpful while interpreting changes.

The paper consists of two parts. The first one presents an assessment of changes in fertility. In addition to general indicators, the authors reflect on the measurement of the tempo and quantum effect by the application of the Bongaarts–Feeney formula, in the interpretation of changes in fertility during the period of rapid fertility transformation. Similarities and differences between the countries are discussed. The second part of the paper includes a comparative analysis of changes in family formation and dissolution. Once again, the countries present different patterns of the process of family and union formation and dissolution.

Both parts of the paper consider the current situation of Poland and Estonia in the broader European perspective. The applied graphic formula, with the use of maps to illustrate the location of Poland and Estonia on the demographic map of European countries, reveals the similarities and differences in fertility and family patterns.

CHANGES IN FERTILITY

The post-transitional fertility pattern has been prevailing, even among the pioneering nations of demographic transition, for not longer than three generations, and in most other cases has a much shorter history. From the theoretical perspective, it is definitely a too short period of time for a comprehensive understanding of the modern fertility development. Data from much lengthier periods are needed to analyse such questions as timeframe and the mechanism of return to replacement fertility, evolution of relationship between marital, sexual and reproductive behaviour, etc. It was however fertility that underwent the most dynamic changes in scale and range, both in Poland and Estonia, particularly during the past decade and a half¹. Moreover, these recent changes can hardly be understood without first considering the longer time perspective.

Fertility transition and its timing in Europe has been most comprehensively studied within the framework of the Princeton Project (Coale and Watkins, 1986). Measuring fertility with the specifically defined set of indices (fertility rates, standardised to the Hutterites fertility schedule), the province-level analyses cover most of the European countries, including the territories of Estonia and Poland (Coale, Anderson and Härm, 1979). Additionally, several country case-studies have been carried out, using the same methodology as in the Princeton Project, including Estonia (Katus, 1994). The Princeton fertility indices have proved to be highly useful in highlighting the long-term fertility development, particularly in comparisons during the transitional stage.

Starting from the late 19th century, the Princeton indices are available for both Estonia and Poland. At that time, overall fertility was about 40% lower

¹ The transition period covers the years 1989–2005.

in Estonia, indicating an earlier onset of fertility transition. That difference had a tendency to grow in the following decades, reaching more than 60% by the 1930s. This was the period when the difference between Baltoscandia and Central and Eastern Europe was relatively large, not only from a quantitative but also from a qualitative point of view. In Estonia, fertility dropped below replacement before WWII (starting from the late 1920s) but remained above replacement in Poland.

In Estonia, below-replacement fertility prevailed throughout the war years and the 1950s and the 1960s (Katus, Puur and Põldma, 2002). Against the background of a relatively stable level, the pattern of fertility timing altered significantly. Relatively old fertility, with the mean age at childbearing above 28, gradually decreased over several decades starting from the 1940s and became younger than the Polish time pattern as shown below. In Poland, the compensatory mechanisms took fertility back to the level above replacement in the 1950s, and also in the following decades, fertility featured stronger fluctuations as compared to Estonia. At the same time, fertility timing appeared relatively stable, changing mostly due to the shift in the parity structure.

GENERAL FERTILITY TRENDS

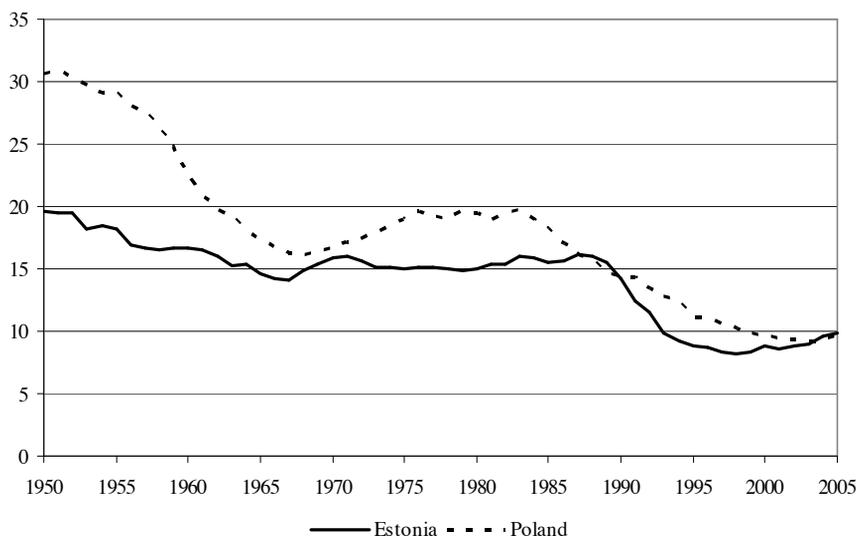
In the following section, changes in fertility are assessed by means of crude birth rates, age-specific and total fertility rates as well as the share of extra-marital births. Graphic presentations of the observed changes can be found in Figures 1 to 7. Two indicators – crude birth rate (CBR) and total fertility rate (TFR) – cover the period of 1950–2005. Undoubtedly, the economic, social and cultural processes, which we have been witnessing since the late 1980s, have intensified the transition of family and fertility patterns in Poland and Estonia, as well as in many other countries of Central and Eastern Europe².

The observation of the value of the CBR for Poland and Estonia (cf. Figure 1) shows, that greater fluctuations of this measure took place in Poland. In Estonia the value of the measure in the years 1950–1990 stayed within 15–20‰, it can even be said that the crude birth rate in the years 1960–1990 was relatively stable compared to Poland and oscillated at the level close to 15‰. A different situation, with large fluctuations of this indicator, characterised Poland. The CBR dropped in the years 1950–1970, then an upward trend followed till the mid-1970s, and stood at its highest till the end of the decade, only to fall again. Such a pattern of changes is known in demography as a cycle of booms and busts. In Poland, the post-war boom involved generations born in the years 1947–1961, with a peak at 793,800 births in 1955. In the years 1964–1972, CBR decreased in Poland. The second boom is at least partly an echo of the first boom and covers the years of late 1970s and 1980s. The highest number of children

² More information on the change in fertility in the other countries of Central and Eastern Europe can be found in Sobotka (2004a, b); Philipov (2001, 2002); Philipov and Dorbritz (2003).

born – 723,600 – was observed in 1983. It is noteworthy, that both countries, Poland and Estonia, featured a similar level of CBR 14–15‰, on the eve of societal transition. From that time, almost a linear decline in the crude birth rate begins in both countries, although the fall of CBR was deeper in Estonia than in Poland, in the first half of the 1990s. Currently both countries represent a relatively similar value of CBR, about 10 live births per 1,000 population. However, considering the longer period, in the years 1950–2005, the crude birth rate dropped nation-wide from 30.7‰ to 9.9‰ in Poland (a decrease of 68%) and, respectively, in Estonia from 19.6‰ to 9.6‰ (a decrease of 51%).

Figure 1. Crude birth rate, 1950–2005



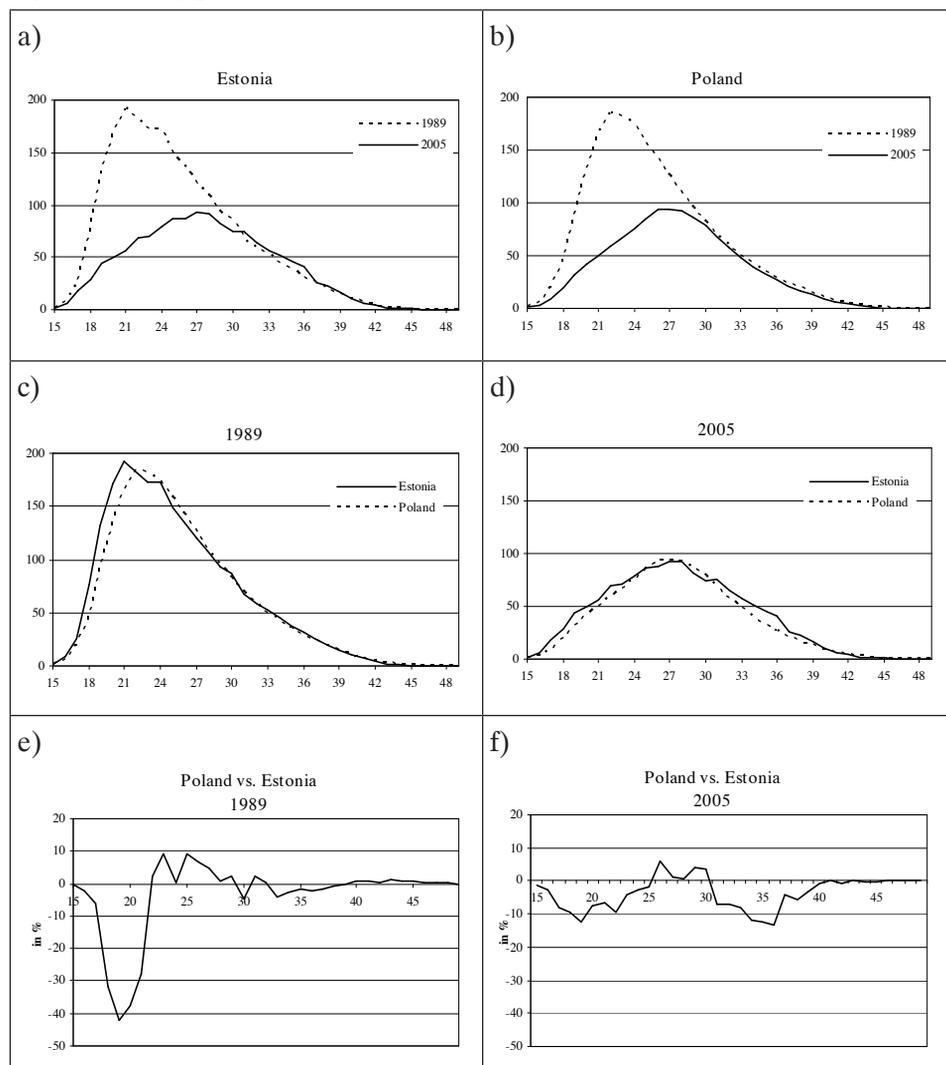
Source: Authors' elaboration based on vital statistics.

The dynamics in the age-specific fertility pattern is analysed for the period of rapid change, since the late 1980s (Fig. 2a–2f). Changes in the fertility pattern in the years 1989–2005, for both countries, should be regarded as noteworthy and significant. The characteristic features of the changing fertility patterns include:

- 1) declining level in all age groups;
- 2) age-specific dynamics of fertility decrease;
- 3) shift in the age of maximum fertility (21 in Estonia and 22 in Poland in 1989, and 27 for both countries in 2005, respectively);
- 4) increase in the share of age group 25–34 in total fertility rate;
- 5) flatness of distribution curve and the change in asymmetry of distribution describing the fertility pattern, which produces modified values of distribution parameters;

One may conclude, that the changes of the age-specific fertility pattern in both countries were similar, and at present Poland and Estonia display a relatively close pattern of fertility timing. The differences in fertility pattern, which appeared at the beginning of the period of transformation are presented in Figures 2e and 2f.

Figure 2. Fertility patterns, 1989 and 2005



Source: Authors' calculations based on vital statistics.

Differences refer to the youngest age group of 15–19 years. In 1989, the intensity of births among women aged below 20 years, was higher in Estonia than in Poland. For example, in Poland the level among women aged 18 years

in the year 1989 was lower by 41% compared to Estonia. At present these differences are not large and refer to the age group 30–39 years, for which the level is slightly higher in Estonia compared to Poland.

Changes in the fertility pattern caused a decline in the number of births and total fertility rate. In Poland, during the years 1950–2005, the measure declined from 3.75 in 1950 to 1.24 in 2005, which is a drop by 66.9%. It should be emphasised that the TFR below 2.1 has been reported in Poland in urban areas since 1963. After its temporary growth in the 1970s and the early 1980s (until 1982) up to 2.14, the total fertility rate has been systematically decreasing ever since. In Poland's rural areas, the TFR settled below 2.1 in 1995, after a systematic decrease that started in 1983.

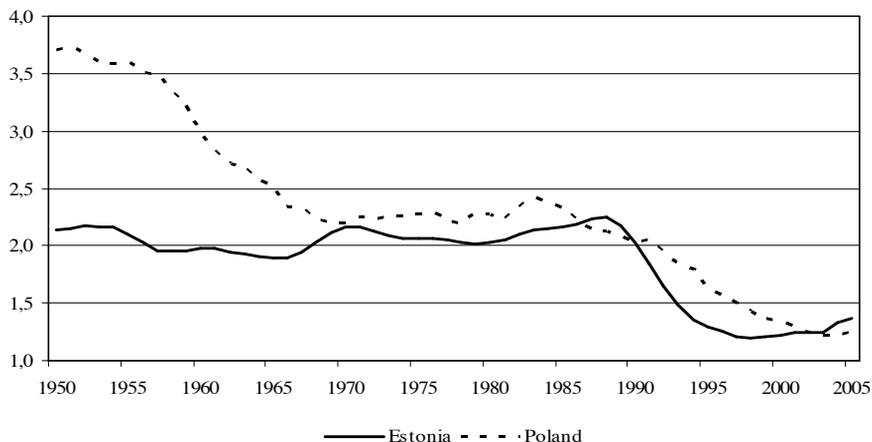
In Estonia, during the years 1950–2005, the value of TFR declined, from 2.13 in 1950 to 1.36 in 2005, which is a drop by 35.8%. In Estonia the below-replacement fertility was first recorded in 1928, and fertility stayed below replacement until 1968 (with the exception of a few years in early 1950s, reflecting an intensive in-migration to the country).

A comparison of the trajectory of changes in the value of the TFR for Poland and Estonia, reveals both similarities and differences. In the year 1950, the value of the TFR in Poland was at the level of 3.7 against Estonia's 2.1 – a difference of 1.6 children more per woman in Poland compared to Estonia. Principal changes in the level of the TFR, i.e. the completion of fertility transition, in Poland took place in the years 1950–1970, when the value of the TFR dropped from 3.7 to 2.2 children per woman. In the year 1970, for the first time since the onset of fertility transition, Poland and Estonia represented a similar level of the TFR. It is worth underlining that the TFR for Estonia in the years 1950–1990 was relatively stable and oscillated around the replacement level, periodically below or above, but there were no significant deviations from that level. During the 1970s and 1980s Poland again featured a somewhat higher fertility. Estonia and Poland reached a similar value of the TFR in 1989 (2.1) and from this year onwards both countries experienced a very intensive decrease in fertility. In Poland the change in the TFR value has displayed a gradually linear decline since 1990, while Estonia in the first half of 1990 witnessed a sharper decrease, which ended in the late 1990s. In the effect of intensive transformation of fertility, Estonia already in 1995, had the value of TFR at 1.29. In Poland the value of TFR below 1.3 was reached in the year 2001 (1.29), 6 years later than in Estonia. At present, in both countries fertility started an upward trend in 2004.

Another characteristic feature of fertility in Poland, as compared to many other countries, is still strong, although gradually weakening, correlation between fertility and nuptiality, which is reflected by a relatively high share of marital fertility. For several decades, non-marital births stood at the same level and their proportion oscillated around 5%. During the period of societal transformation, a significant increase in non-marital births has been observed,

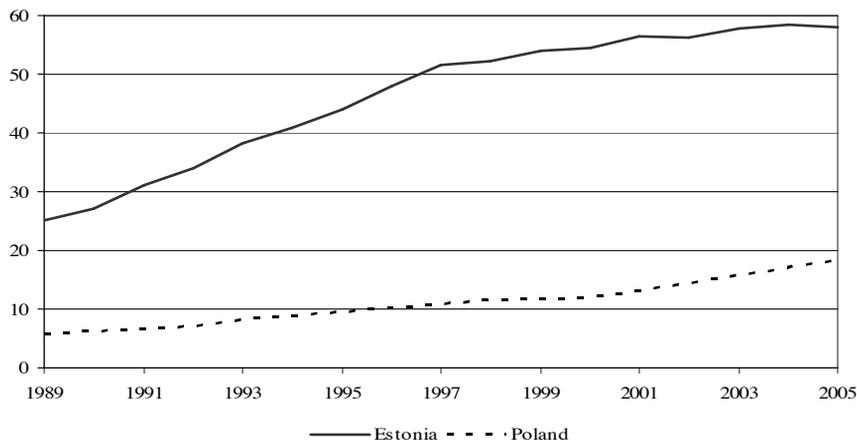
from 5.8% in 1989 to 18.5% (Figure 4), partially supported by the shift towards the lower end in parity distribution.

Figure 3. Total fertility rate, 1950–2005



Source: Authors' calculations based on vital statistics, Poland, Estonia.

Figure 4. Share of non-marital fertility (%), 1989–2005



Source: Authors' elaboration based on vital statistics.

The non-marital fertility level was and is different in Estonia. In the late 1980s, the share of non-marital births in Poland was at the level of 5.8%, while in Estonia it had already reached the level of 25.2%, four times higher than in Poland, after a continuous growth since the 1960s. In 1989–2005 the share of non-marital births in Estonia reached the level of 58%, and in Poland 18.5%. This means that more than half of the births in Estonia in 2005, took place

outside the formal marriage, while in Poland the situation was dramatically different – over 80% of all births took place in the formal marriage. So, both countries actually represent different forms of family formation and different range of the relationship between fertility and nuptiality.

In the case of Poland, the prevailing opinion has been voiced by Bolesławski (2001, p. 26): “... regardless of the scale of the phenomenon, illegitimate births are one of the important social problems, and for those concerned – mothers and their children – a source of many strains in life. Only a small proportion of mothers who decide to have a child out of wedlock, consciously and deliberately choose such life path. Traditional family is still the most desirable life model.” Increases in the absolute number of illegitimate births and of their share in the total, confirm the progressing changes in the forms of family in Poland. This means that besides the traditional family, based on marriage, new families emerge, that are based on the principle of consensual union (cohabitation), or a woman decides to have and then bring up a child on her own (the so-called voluntary lone motherhood). However, it should also be presumed, that the number of couples (people) who choose to be child-free is growing. But because there are no relevant nation-wide data, it is impossible to precisely recognise either the range of the phenomenon, or its effect on changes in fertility and family³.

Assessment and interpretation of changes in fertility patterns in both countries are complex. The mechanism underlying the changes, depends on many processes, very often co-occurring. Therefore, the explanation of changes should be primarily based on the cause-and-effect mechanism, which necessitates permanent multidisciplinary monitoring of the processes and their transition. The assessment of changes should also refer to the theory as well as the timing effects.

ANALYSIS OF THE TIMING EFFECTS

For both countries, the change in fertility timing has been particularly extensive in the 1990s. In the following analysis the Bongaarts-Feeney formula is applied while assessing the effects of timing on fertility. The essence of the formula proposed by Bongaarts and Feeney, is measuring the quantum effect by eliminating the distortion generated by the tempo effect from the cross-sectional TFR. The result of quantum effect measure is called ‘tempo-adjusted TFR’, which can also be called an ‘adjusted cross-sectional total fertility rate’⁴.

³ More information on other, alternative forms of married-family life in Poland can be found in Slany (2002). For Estonia, further information can be found in Katus, Puur and Põldma (2002).

⁴ Tempo-adjusted TFR, at the assumption that timing of childbearing does not change in a given year, can be estimated by dividing the observed TFR for i -th birth order by $(1-r_i)$, where r_i is a change (in years) in mean age at childbearing at order i during the calendar year. A detailed

In this framework, the construction of the cross-sectional TFR comprises the following constituents:

- 1) quantum component, defined as a TFR which would be observed, if no changes occurred in distribution of childbearing timing over the period for which the rate is measured;
- 2) tempo component, measuring distortion related to changes in distribution of childbearing timing; it is expressed through changes in the mean age at a given birth order.

Application of this formula to the general TFR and TFR in the breakdown of birth order, allowed to define and measure the tempo effect. In other words, we have obtained an answer to the question, what the hypothetical TFRs would be if childbearing were not postponed. Relevant results have been presented for both Poland and Estonia, in Figures 5, 6 and 7.

Since the Bongaarts-Feeney formula allows to measure the tempo effects on TFR value basing on changes in the mean age at childbearing (MAC), the observed trends in MAC should be analysed first. The mean age at childbearing in Estonia was lower than in Poland for the years 1989–2003. The highest difference was observed in the years 1991–1997, since 1997 the difference has been diminishing. In 2003, the mean age in Estonia was only 0.16 years lower. Since early 1990s, the mean age at childbearing has been increasing in both countries. The increase in MAC was more dynamic in Estonia (from 25.3 to 27.7 – ca. 2.4 years) as compared to Poland (from 26.1 to 27.9 – ca. 1.8 years) (see Figure 5c).

The decrease in the TFR, as observed in Estonia, was steeper in the years 1990–1998 than in Poland, but after 1997 the TFR in Estonia stagnated while in Poland it has been decreasing further (see Figure 5a). After an adjustment of changes in tempo distortions, the TFR in Estonia fluctuates between 1.6–1.8, while in the observed TFR there was a drop from 2.0 to 1.2 (see Figure 5b). In Poland the situation is different because changes are bigger. The adjusted TFR reaches the level of almost 2.4 in the years 1991–1993 and after that drops to the level of 1.4. Nevertheless, what is obvious that in neither country the elimination of tempo distortions does not keep the TFR above replacement level. It is also important to note that the process of fertility changes is not yet over in these countries. Especially in Poland the decrease in the TFR level is observed even after the elimination of tempo distortions. And last but not least, the account revealed by the TFR adjustment, is not a full picture of fertility changes, because the formula rests on strong assumptions that are not always fulfilled.⁵

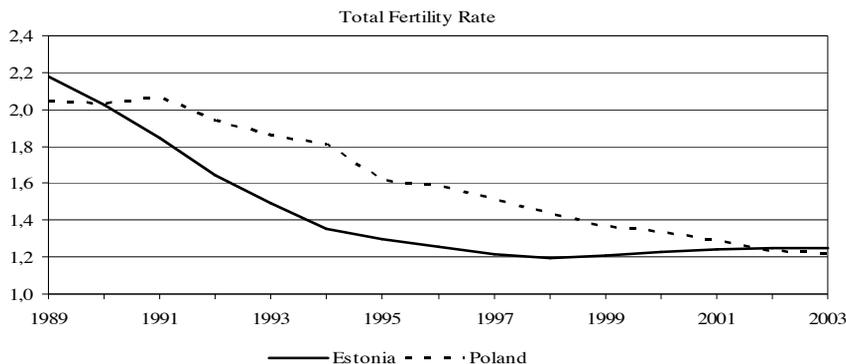
description of the method can be found in works by Bongaarts and Feeney (1998); Frątczak and Ptak-Chmielewska (1999); Sobotka (2004a).

⁵ Kim and Schoen (1999) discussed the advantage of mean cohort fertility measure compared to the Bongaarts-Feeney formula based on period fertility rate. The next proposal was by Van Imhoff and Keilman (2000) to replace TFR with OER (occurrence exposure rate) which is a better measure to assess tempo effects. Kohler and Ortega (2002) propose to use tempo-adjusted index of period fertili-

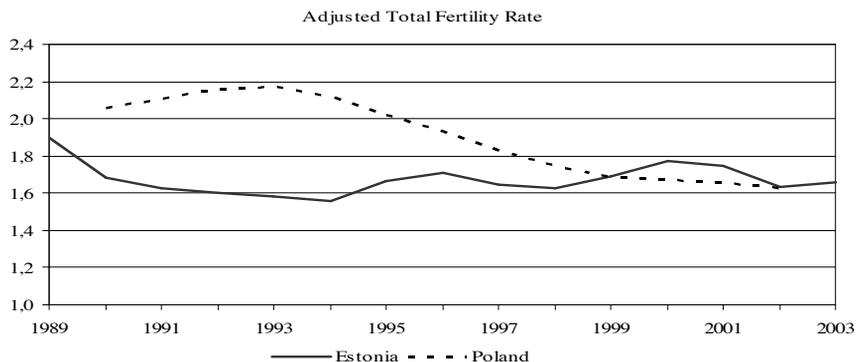
Interpretation of adjusted measures may also be considered, in comparison with cohort (completed) fertility measures. The closer adjusted values stand to observed synthetic measures, the smaller are the tempo distortions and the smaller the difference between period and realized (completed) fertility measures. Another important application of adjusted measures relates to their predicting value in the framework of demographic projections.

Figure 5. Bongaarts-Feeney's formula – all births, 1989–2003

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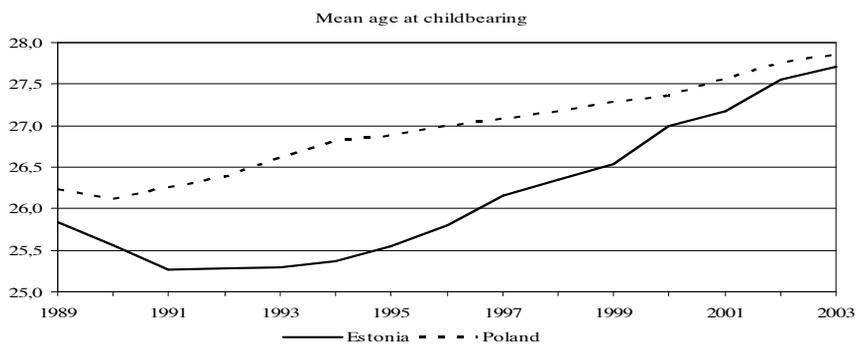


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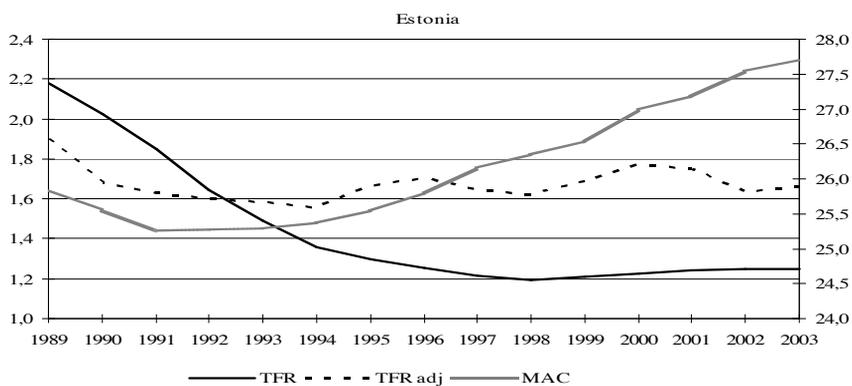


ty. The next problem discussed by Kohler and Philipov (1999), and Winkler, Dworak and Engelhardt (2004) was the variance and non-linearity effects in women age at childbearing. They proposed to modify the Bongaarts-Feeney formula. Their arguments followed a better adjustment of the measure (TFR) to assess the tempo effects and a better forecasting ability. The next assumption in Bongaarts-Feeney model was a lack of cohorts effects, meaning assumption about no change in reproductive behaviour between subsequent cohorts of women. This assumption was the most criticised among all assumptions. Kohler and Philipov (1999), relying on Hungarian, Russian, Italian, Spanish and Swedish data, showed that this assumption was violated and cohorts effects could not be ignored while measuring the tempo effects. Sobotka (2004b; 2005) proposed a few variants of decomposition methods, allowing to measure tempo effects, quantum effects and mean generation size.

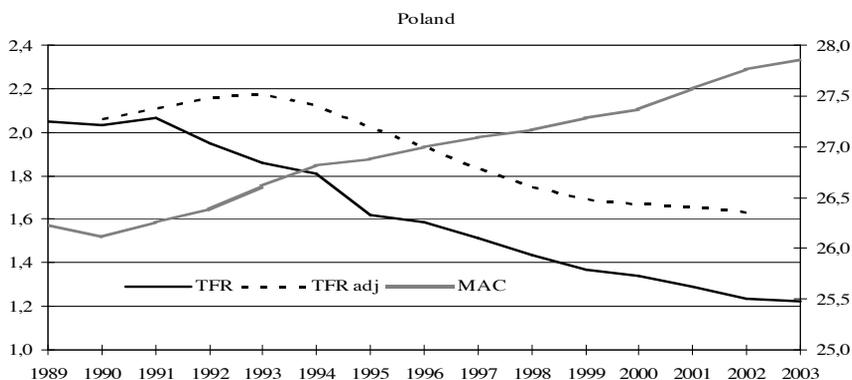
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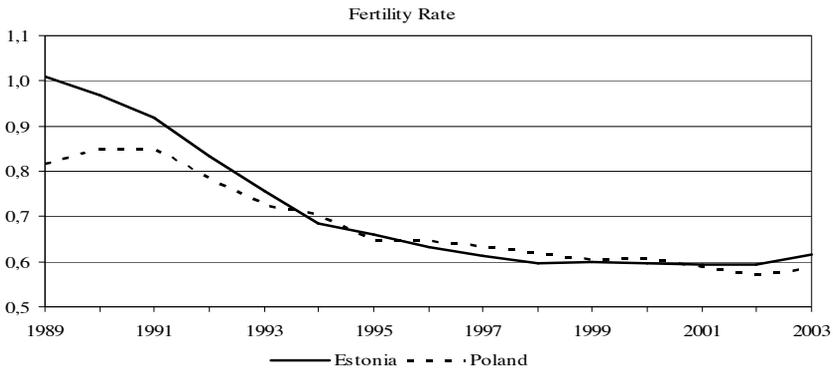
Source: Authors' calculations based on vital statistics.

For almost all the analysed years, the value of adjusted TFR was higher than the value of observed TFR. This situation confirms the ongoing postponement of fertility in both countries, particularly for the first and second births. The

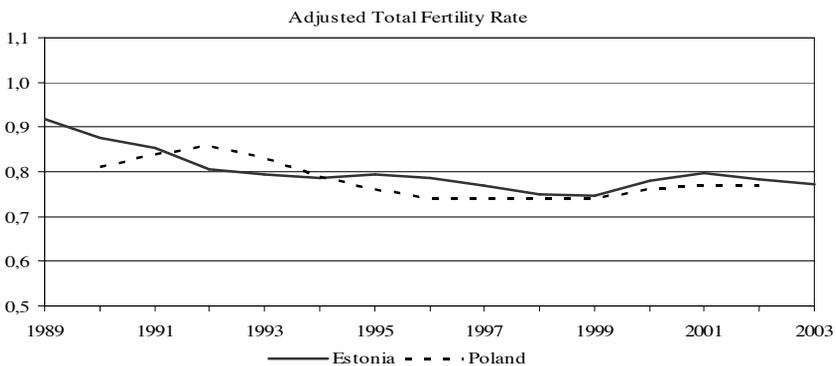
pattern of changes in first births is very similar for both countries. The biggest differences in the observed TFR value appear at the turn of the 1990s (see Figure 6a). The total fertility rate for the first births is almost at the same level, for the years 1993–2003, in both countries. More persistent differences appear for the mean age at first birth. The mean age for Poland is higher for the entire period. The difference is at the 0.5–1.0 year level. The mean age for Poland decreased from 1989 to 1990, and has been steadily increasing since 1990 – from 23.30 years in 1990 to 25.25 in 2003 (an increase of about two years). For Estonia almost the same increase is observed, but over a somewhat shorter period (from 22.75 in 1992 to 24.75 in 2003 – see Figure 6c). Estonian women decide to have their first child at an earlier age, compared to Polish women, but the difference is very small. Due to small differences in the mean age and in total fertility rate levels for first births, the adjusted TFR is very similar for both countries (see Figure 6b). Even higher differences in the observed TFR during the first 3–4 years decrease for the adjusted TFR. It can be said that the postponement process started in Poland about 1–2 years earlier than in Estonia, and from a higher age of childbearing as a starting point (see Figure 6d and e).

Figure 6. Bongaarts-Feeney's formula – 1-st birth, 1989–2003

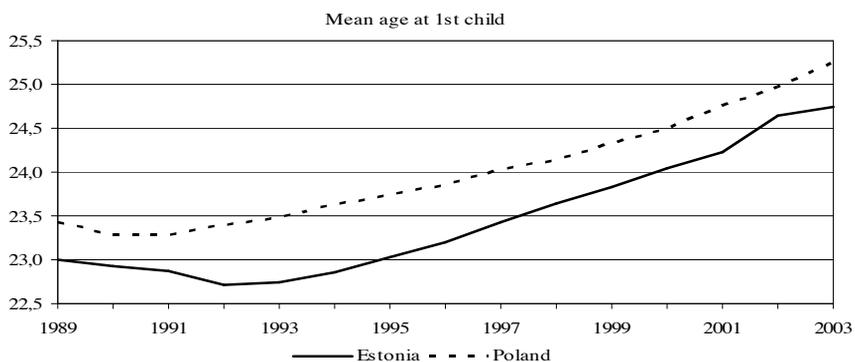
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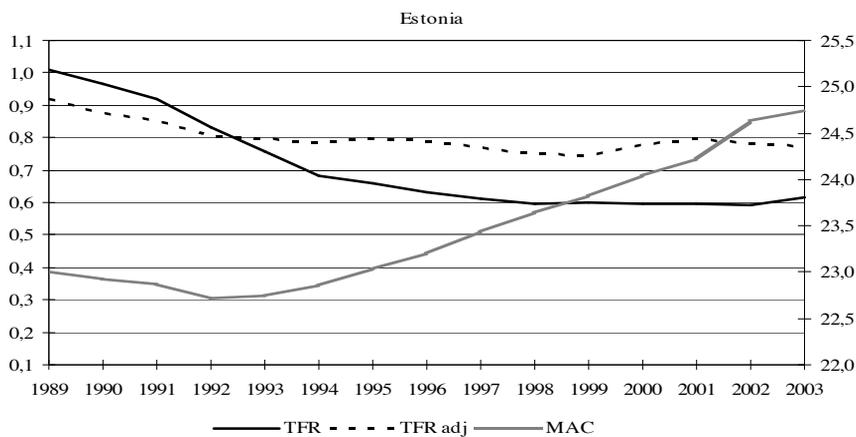
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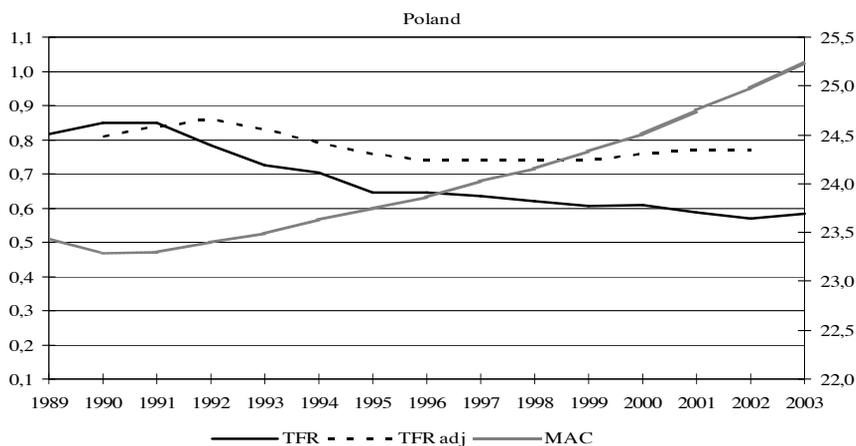
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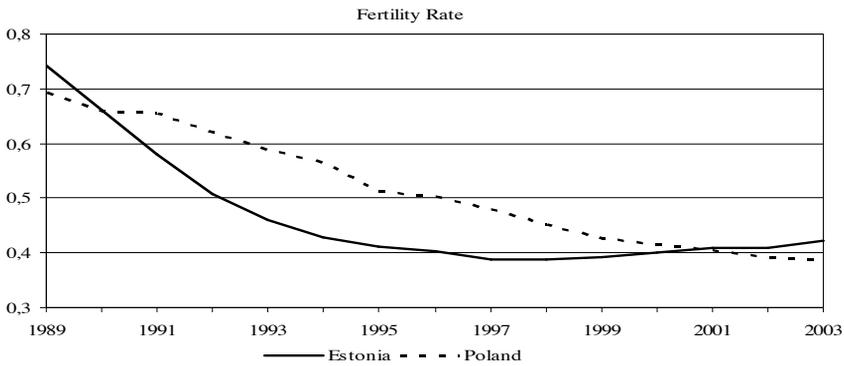


Source: Authors' calculations based on vital statistics.

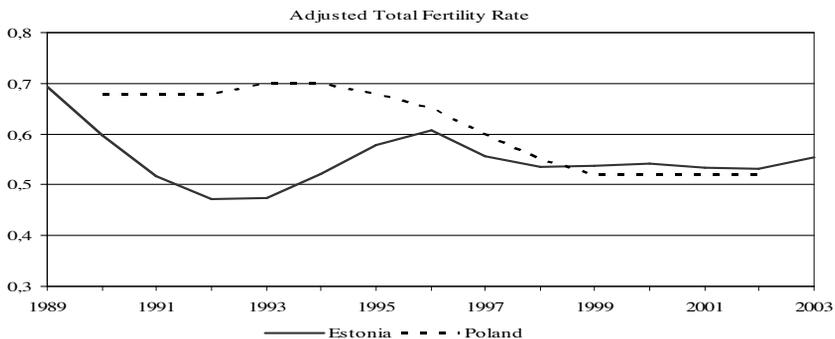
Changes in the second births' process, due to tempo distortions, are also fairly similar for both countries (with some small differences). The observed TFR for second births was a little lower for Poland in 2003 compared to Estonia, but for the whole period of 1990–2001 it was higher. The shape of the trendline of the TFR observed for these years is more linear for Poland and closer to exponential curve for Estonia. The process of second births' decrease in Poland was less dramatic because it took eleven years (1990–2000) to reach the level of 0.4 (from 0.66 in 1990), while in Estonia this process lasted only seven years (1990–1996). In Estonia the TFR for second births, has been slightly increasing since 1997, while in Poland it is still decreasing monotonously (see Figure 7a). Changes in mean age at second child are very similar for both countries. In Estonia the changes are not linear (some fluctuations are observed) while in Poland the trend appears almost linear in the years 1991–2003 (see Figure 7c). These fluctuations (distortions) in the mean age increase, as well as almost exponential trend in the observed TFR, explain non-monotonous changes in adjusted TFR in Estonia (see Figure 7d). The difference between observed and adjusted TFR does not disappear in the end of the analysed period, which suggests that the postponement of the second births is still in progress, in both countries.

Figure 7. Bongaarts-Feeney's formula – 2-nd birth, 1989–2003

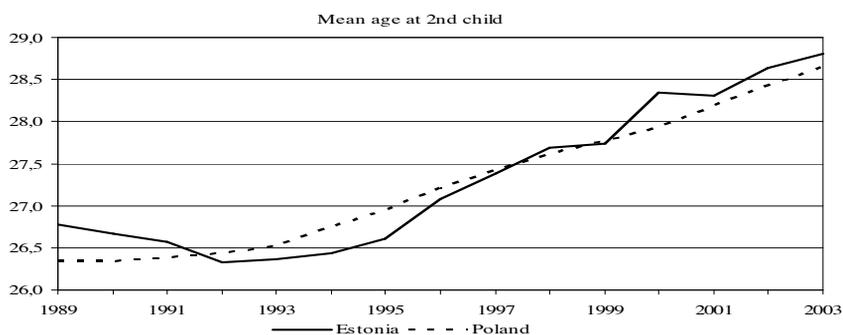
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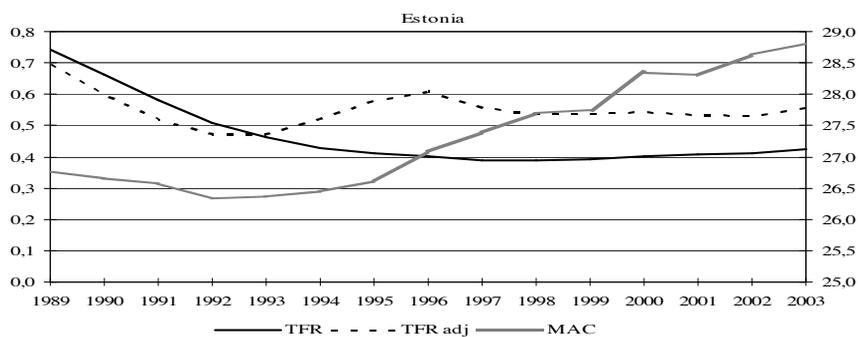
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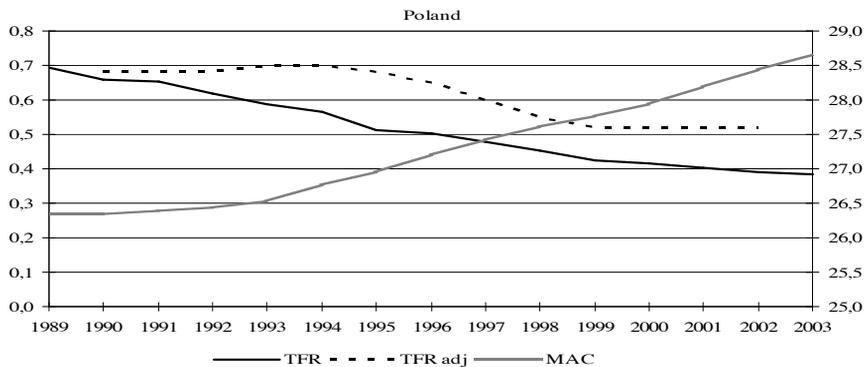
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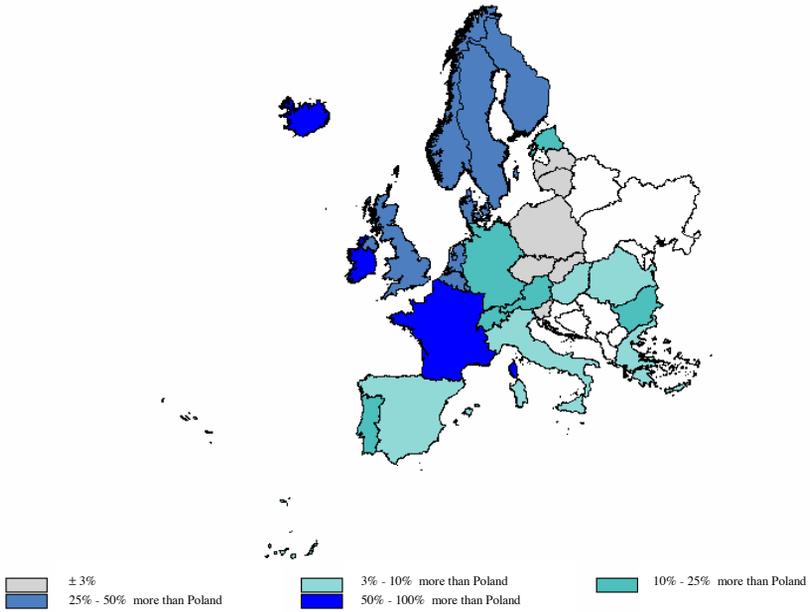


Source: Authors' calculations based on vital statistics.

SPATIAL COMPARISON

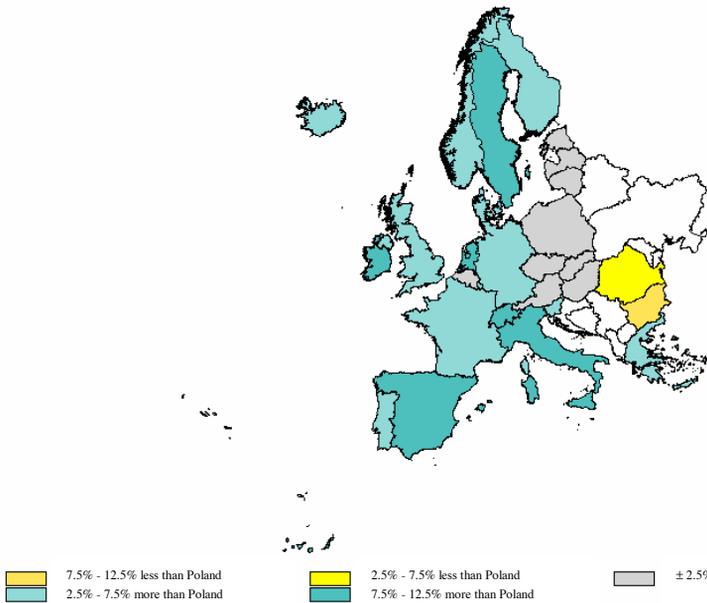
Finally, we present an answer to the following question: Where is Poland and Estonia with respect to fertility ranking among other countries of Europe?

Map 1. Total fertility rate (EU 2004)



Source: Authors' calculations based on the *Recent Demographic Developments in Europe 2005*, Council of Europe Publishing, Strasbourg.

Map 2. Mean age at childbearing (EU 2004)



Source: Authors' calculations based on the *Recent Demographic Developments in Europe 2005*, Council of Europe Publishing, Strasbourg.

Maps, number from 1 to 4, are very helpful in addressing this issue. Every map contains a legend, with the description of the scale applied. Simultaneously, each map points to the similarities and differences among larger groups of countries⁶.

Map 1, presents current values of the total fertility rate and clearly illustrates the current fertility level in Europe⁷. The lowest TFR values in Europe, are observed in the Central and Eastern European countries. A TFR value very similar to the Polish one (labelled as “lowest low fertility”, where TFR ranges from 1.23 to 1.26) is observed in the following countries: Latvia, Lithuania, the Czech Republic, Slovakia and Slovenia. The next group of countries where the TFR is up to 10% higher as compared to Poland, is mainly represented by countries of Southern Europe: Spain, Italy Greece, but also Hungary and Romania. The TFR value higher by 10–25% than in Poland, is observed in the following countries: Germany, Portugal, Estonia, Austria, Bulgaria, Cyprus, Malta. The TFR values higher by over 25% characterise countries of Western and Northern Europe.

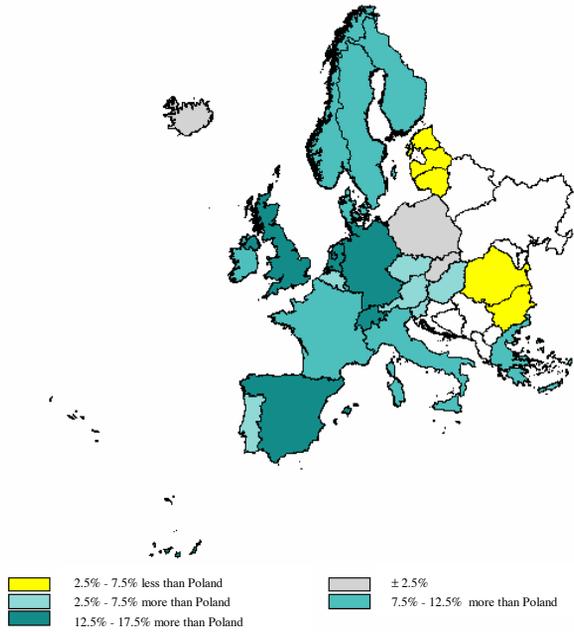
Therefore, the map of Europe presents a picture of four groups of countries representing similar TFR values, compared to the reference base, which comprises of the lowest TFR values in Eastern Europe, in the group of countries that Poland belongs to. At the same time, the map shows differences in the TFR values between Poland and Estonia. As a result of recent recovery of the TFR, Estonia has recently joined the group with second highest fertility in our analysis.

The next two maps (2 and 3) present similarities and differences in the mean age at childbearing and mean age at first birth. Mean age at first birth, which is very close to the value characterizing Poland, is found in two countries: Slovakia and Iceland. There are relatively few countries in Europe, that are characterised by a mean age at birth of the first child lower than Poland (i.e. 25.6 years), among which are Bulgaria, Romania, Estonia, Latvia, Lithuania. Other Southern, Western and Northern European countries have a higher value of this measure compared to Poland. Even a more obvious split between the groups of countries, is shown on Map 2, which presents the mean age at any birth. The group of countries that are characterised by a similar or lower than Poland’s value of mean age at birth are in the region of Central and Eastern Europe. Countries from other regions are characterised by a higher mean age at childbearing than in Poland. It should be noted, that many countries of Central and Eastern Europe have witnessed the continuation of a systematic upward trend in the mean age of childbearing over the recent years. Nevertheless, this change has not yet been sufficient, to remove the evident division line between the eastern and western parts of Europe, which are still characterised by different patterns in terms of the timing of childbearing.

⁶ All data presented in maps show the situation in 2004.

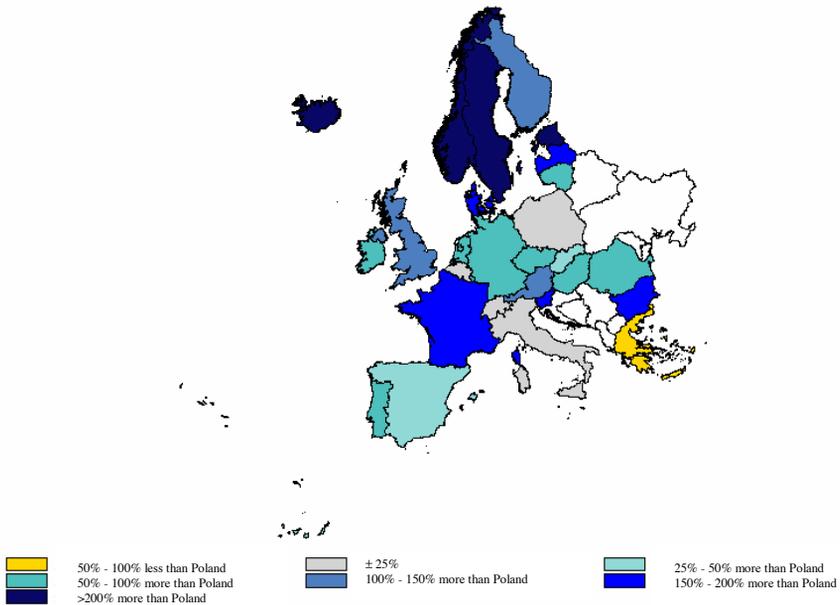
⁷ More information on the subject of changes in fertility in Europe in the historical context is presented in the work of E. Frątczak (2004).

Map 3. Mean age at first birth (EU 2004)



Source: Authors' calculations based on the *Recent Demographic Developments in Europe 2005*, Council of Europe Publishing, Strasbourg.

Map 4. Share of non-marital fertility (EU 2004)



Source: Authors' calculations based on the *Recent Demographic Developments in Europe 2005*, Council of Europe Publishing, Strasbourg.

The share of non-marital births, not only shows the scope of fertility divided into marital and non-marital, but also provides information about the changes in family forms. For many years Poland was among the countries with a very low percentage of non-marital births, which oscillated around the level of 5–6%. The years of societal transformation brought forth changes; compared to the year 1989 (6% level). The growth was significant and the proportion of non-marital births amounted to 17% in 2004. Nevertheless, it is still considered relatively low under European circumstances. A level similar to Poland is displayed by Malta and Italy. Only two countries – Greece and Cyprus – have still a lower value of this indicator. All other countries are characterised by higher and significantly higher levels of extramarital births than Poland. Estonia belongs to a group of countries with the share of extramarital births higher by about 200% than in Poland. In this respect Estonia represents a pattern similar to the Scandinavian countries.

The presented picture of similarities and differences between Poland and Estonia reflects also the positions of these two countries on the demographic map of Europe. Both countries belong to the same group of Central and Eastern European countries in respect of mean age at the birth of the first child, and a child of any order. However, they are different as regards the values of TFR and extramarital births. Poland's indicators are closer to the countries of Southern Europe, such as Italy and Spain. The values of these measures for Estonia are close to the Scandinavian countries. In order to explain these differences, further analyses is needed.

CHANGES IN FAMILY FORMATION AND DISSOLUTION

About half a century ago, John Hajnal (1965) identified the European marriage pattern, characterised by an advanced age at first marriage and a high proportion of people who never marry. According to Hajnal, the mean age of marriage was above 23, for females (usually above 24), and the proportion of never-married by the end of fertile age above 10%, in the areas of the European marriage pattern.

With regard to geography, an approximate dividing line of the European marriage pattern runs from St. Petersburg (Narva), at the Baltic Sea, to Trieste at the Mediterranean. The areas west of this line, shared the European marriage pattern, whereas the populations on the eastern side of the line did not develop similar features.

Turning to the two countries addressed in this paper, historical sources indicate, that the emergence of the European marriage pattern, dates back to the early 18th century (Palli, 1988; 2004). The situation is less clear-cut in the case of Poland, as well as the Central and Eastern Europe in general. The Hajnal line seems to cross Poland, but corresponding studies are more than difficult to accomplish, because of large-scale border changes since the 18th century, up to

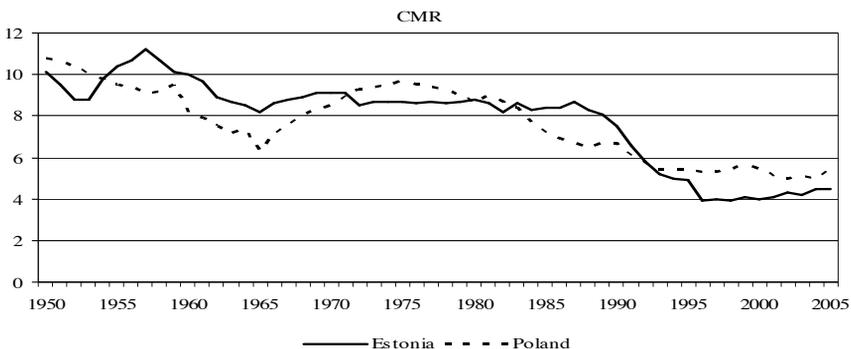
the end of WWII. One of the few studies, analysing the spread of the European marriage pattern in Central and Eastern Europe, has been conducted by June Sklar (1974). According to this study, the boundary line crosses the Polish territory. Although the European marriage pattern did not emerge in Eastern part of the country, the European pattern was almost reached for the country as a whole in the end of the 19th century. The evidence of features, characteristic for the European marriage pattern in Poland, is particularly clear in comparison with Bulgaria, Romania and Belarus (and Russia). Compared to Estonia, however, the European marriage has been less pronounced in Poland.

It is generally agreed, that the European marriage pattern paved the way towards a subsequent, more radical move, the switch to controlled marital fertility. In a broader framework, attention has also been drawn to the impact on socio-economic modernisation, family relations and the status of women (Hajnal, 1965; 1982).

FAMILY FORMATION

The period of WWII and the following decades marked a major break in nuptiality. The European marriage pattern vanished everywhere, and the disappearance of the pattern proves essential, for understanding the nuptiality trends up to the 1970s. In Poland and Estonia, disappearance of the European marriage pattern, and a shift towards earlier and more universal (first marriage shaped the dynamics of nuptiality indices in the early postwar decades. At the beginning of the 1950s, crude marriage displayed indeed very high levels – 10 or more per thousand – in Poland as well as Estonia (Figure 8). The term ‘marriage boom’ was introduced by the contemporaries, to emphasise the suddenness of the decrease in the age of marriage and a sharp rise in the proportion of those who would eventually marry during their childbearing years – no one, examining preceding demographic trends, had foreseen such a course of development.

Figure 8. Crude marriage rate, 1950–2005



Source: Authors' calculations based on vital statistics.

Understandably, it was impossible to sustain such high levels over a longer period of time, and accordingly, the crude marriage rate turned to decline in the following years. Against that background, it is interesting to notice a temporary increase of crude marriage rate in Estonia after 1955. This fluctuation could be explained by certain normalisation of societal conditions after the death of Stalin and the return of a large number of Estonian population from prison camps and from Siberia. Many of these people who had been forced to postpone family formation, had the possibility to get married after returning. Also, in-migration evidently helps to explain a somewhat higher crude marriage rate in Estonia up to 1970 compared to Poland. Since the end of WWII Estonia experienced voluminous immigration, and as migration flows were heavily dominated by young men and women of marriageable age, this made a noticeable positive contribution to crude marriage rate in the country.

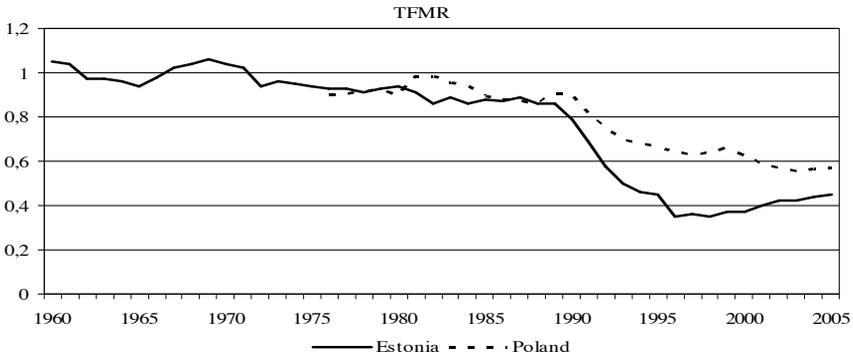
For about two decades – from 1965 up to 1985 – the crude marriage rate in Estonia was rather stable, with the average level 8.6 per thousand. On average, Poland was characterised by almost similar level of crude marriage rate (8.5 per thousand), however, with considerable fluctuations within the period, ranging from 6.3 to 9.7 per thousand. Most of these fluctuations stem from the changes in age structure of the population (Holzer and Kowalska, 1997). In the first half of the 1980s the levels converged and for a few years, both countries featured crude marriage rates closely similar to each other, with the level slightly above 8 per thousand.

A new turn in the trend – often ascribed to the emerging societal transition – became apparent somewhat earlier in Poland. Judging from the crude marriage rate, the shift towards a significantly reduced incidence of marriage began in the middle of the 1980s and followed a relatively smooth trajectory. In Estonia, the crude marriage rate maintained its previous stable level of more than 8 per thousand for a few years longer and it was only after 1988–1989 that the decrease started. Differently from Poland, however, the decrease appeared steeper and took marriage rate to much lower level. During seven years, starting from 1989, crude rate dropped more than twice, reaching 3.9 per thousand 1996. During last decade the crude marriage rate in Estonia has slightly recovered, but is still maintaining at the lower level compared to Poland.

The evidence based on the crude marriage rates, presented above, should be treated with certain caution, because this measure is significantly affected by the variations in the size of cohorts passing the prime age of marriage. To overcome this limitation, the change in marriage behaviour is followed on the basis of the total first marriage rate (TFMR) and the mean age at first marriage (MAFM) for the female population up to 50, the two indices that are widely used in comparative analyses of nuptiality. The first indicator measures primarily the quantum, and the second – the tempo of transition from single to married population during a given period, but their values are not independent of each other. As it is well known, the postponement of first marriages to a later age increases the mean age at first marriage but pushes the total first marriage rate

downwards at the same time. And inversely, advancement of first marriages that results in a decline in the MAFM, will cause the TFMR to increase. The data on these interrelated measures are available from 1960 for Estonia and 1970 for Poland (Figure 9 and 10).

Figure 9. Total first marriage rate of females up to 50, 1960–2005



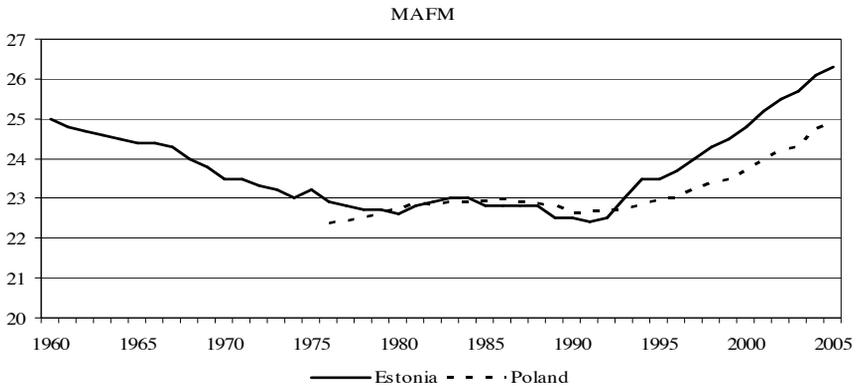
Source: Authors' calculations based on vital statistics.

In the first half of the 1960s, the level of TFMR was high all over Europe, characteristic of the so-called 'golden age of marriage', and Estonia formed no exception in this respect. The level accounted for 1.05 at the beginning of the 1960s, it was followed by a slight decline that took the total first marriage rate to a local minimum in the middle of the decade. Unlike other countries, the emerging downward trend was interrupted by a temporary increase, which peaked in 1969 at the level of 1.06. The formal interpretation of TFMR often used in practice says, that the measure represents the proportion of women who will eventually marry by age 50, if they were subject to the age-specific rates of first marriage observed during the year under consideration. However the level of TFMR for Estonia, in the 1960s, contradicts such interpretation due to an extensive shift in the timing of first marriage. Figure 10 reveals a rapid decrease in the mean age of first marriage in the country, from 25.0 years in 1960 to 23.5 years in 1970, which evidently started already in earlier decades. The decrease noticeably accelerated after 1967, which explains the upsurge of first marriage rate in the second half of the decade, above the level 1.0. Hypotetically, the level of TFMR above 1.0 is possible when the process of changes in nuptiality calendar (tempo effects) is not completed.

Following the fluctuations referred to above, the general trend of TFMR in Estonia, in the 1970s and 1980s, was that of slow decline from the preceding very high level. In the late 1980s, the total first marriage rate revealed relatively little change in the country, with fluctuations between 0.86 and 0.89. The relative stability of the marriage rate was corroborated by the cessation of long-term shift towards more universal and earlier marriage. The mean age at first marriage bottomed in 1980 at 22.6 years for women, however, it was not followed by any

substantial increase – until the end of the decade the female MAFM in Estonia ranged between 22.8–23.0 years.

Figure 10. Mean age at first female marriage, 1960–2005



Source: Authors' calculations based on vital statistics.

In Poland, the trends in the total first marriage rate and mean age at first marriage followed a largely similar pattern. At the beginning of the 1970s, the female TFMR stood at 0.91 and relatively high and stable level above 0.90 was maintained throughout the decade. The early 1980s witnessed a short-term rise in marriage rate – for three years the marriage rate grew to 0.97–0.98. This was followed by a slight reduction of TFMR below 0.90 during the second half of the decade. Relative stability of marriage rate was paralleled by the absence of major change in the timing of marriage. For the 1970s, the data reveal a minor decline of the female MAFM from 22.8–22.9 years at the beginning of the decade to the level of 22.6–22.7 years at the end of the decade. Except for a minor upswing around 1981, also among Polish women the 1980s did not feature any noticeable change in the age of marriage.

Figures 9 and 10 indicate that, leaving aside the country-specific fluctuations described above, the levels of total first marriage rate and mean age at first marriage appear very close to each other in the 1970s and 1980s. With respect to TFMR, the resemblance is emphasised by the repeated crossovers of the lines representing Estonia and Poland in the graph. As regards MAFM, the timing of first marriage seems to be slightly higher in Estonia, especially in the beginning of the time-span for which parallel data is available for both countries. It is likely that the referred difference was even more pronounced in the 1950s and early 1960s as – according to the Council of Europe demographic database only two countries in Europe Ireland and Spain featured higher female MAFM than Estonia (Council of Europe, 2006). It can be hypothesised that a relatively slow departure from the European marriage pattern in the country, stems from the prolonged societal discontinuity, which in the immediate postwar decade involved armed resistance, arrests, deportations, etc., i.e. the conditions that

obviously discouraged family formation. As discussed in the previous section on fertility, this assertion was supported by the fact that among the nations, which had reached low fertility before WWII, Estonia and Latvia formed the only exceptions where the postwar baby boom never occurred (Coale, 1994; Katus, 1997)⁸.

The relatively high marriage rates and low age at marriage, observed in Estonia and Poland in the 1970s and 1980s, exemplified the general pattern typical for the countries of Eastern Europe in that period. In a comparative perspective, this marked the emergence of new regional differentiation, which was later conceptualised as a new East-West divide in marriage regime (Ni Brolchain, 1993).

Following the shift towards earlier and more universal marriage, west of the Hajnal line, around 1970 the nuptiality differences across countries and regions reached the lowest point in Europe. However, the convergence proved relatively short-lived and in the 1970s the diversity was on the rise again. Marriage rates in most areas of the west European nuptiality pattern turned to decline, marking an end of the post-war golden age of marriage. Younger generations started to marry less and for those who married, the trend has been to do so, at older ages than was common amongst their recent predecessors. The corresponding shift began in the mid-1960s. In the countries of Central and Eastern Europe, that had historically experienced the European marriage pattern – including Estonia as well as Poland – the relatively early marriage and high nuptiality rates persisted, which led to a new differentiation of nuptiality regime, this time along the postwar political borders rather than along the line drawn by Hajnal.

The new turn in marriage trend coincided with the onset of societal transformation in the 1990s. As discussed above, Estonia and Poland featured closely similar nuptiality levels at the eve of the transition – in 1988 TFMR stood at 0.86–0.87 and MAFM was 22.6–22.8 years among women. In subsequent years both countries experienced a rapid decrease in marriage rate and a corresponding shift towards a later entry into marriage. At the same time, however, the trajectory of the changes reveals country-specific features.

Figure 9 shows that in Poland the TFMR noted a slight increase, which took the marriage rate above 0.90 in 1989–1990. The initial change was followed by a rapid decrease in the TFMR, and in a few years the marriage rate fell below 0.7. During the second half of the 1990s the decrease smoothened, however, the turn of the century brought a new step downward and in recent years the

⁸ The somewhat later timing of first marriage in Estonia is corroborated also by estimates for the native population. Andres Vikat showed in his Phd dissertation, that in 1978–1979 the female MAFM among the latter accounted for 23.4 years and exceeded the corresponding figure for the total population by 0.7 years (1994). The difference stems from the presence of sizeable foreign-origin population in the country which renders the estimates for the aggregate of two rather divergent and contrasting elements. The heterogeneity inherent in such estimates tends to bias the picture, particularly with respect to international comparisons. In the case of Estonian FFS it required the parallel presentation of the results for the native and foreign-origin populations (Katus et al., 2000).

marriage rate has shown signs of stabilisation at the levels somewhat below 0.6. As elsewhere in Europe, the trend in the MAFM has followed the opposite direction. The rise started after 1990, and since some acceleration in 1993–1994, it has followed a rather steady profile. According to the latest statistics in 2005 the female mean age at first marriage is about 25 years in Poland, which implies a rise of about two and half years during 15 years.

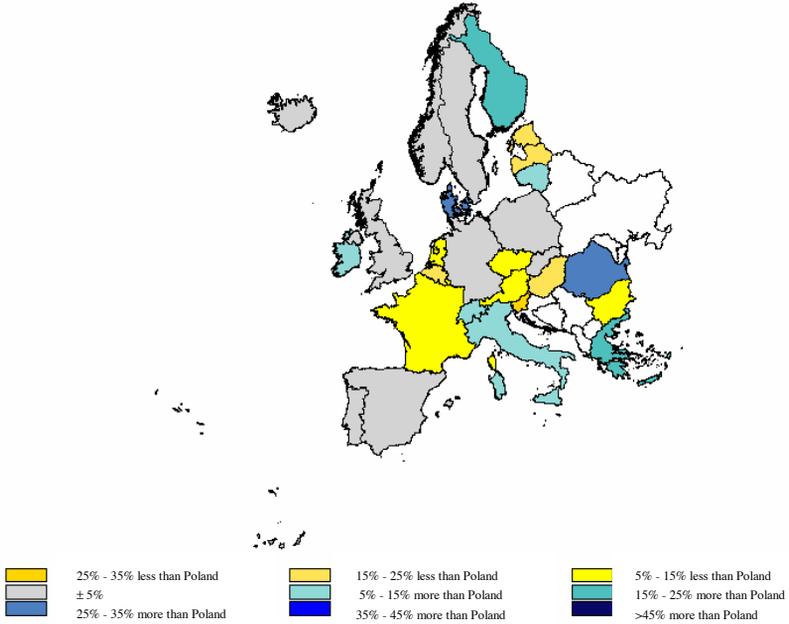
In Estonia, nuptiality changes have been considerably steeper in the same period. Unlike Poland, there was no increase in TFMR at the beginning of transition and in the course of six-seven years, since its onset, the marriage rate dropped to half of the 1990 level – in 1996 the female TFMR reached 0.35, which was among the lowest in Europe. Though the years 1989–1991 marked a temporary decrease in the mean age at first marriage in Estonia, a shift away from the previous early marriage made a strong contribution to the observed decline in marriage rate. A steady and rapid increase started around 1992 and according to recent data, the female MAFM had reached 26.3 years in 2005⁹. Unlike Poland, the marriage trend entered a new phase. In 1998–1999 it started to recover from the very low levels recorded in the second half of the 1990s. In 2005, the female TFMR stood at 0.45 in Estonia but it is obvious that the ongoing postponement of marriage continues to push the TFMR downwards in both countries.

The mapping of TFMR and MAFM, on Map 5 and 6, reflects the current nuptiality situation in Estonia and Poland within the context of EU and EFTA countries. As elsewhere in the paper, the level of Poland is applied as a reference base. Among nearly 30 countries included in the comparison, Poland can be found in the middle of the distribution, in the same group with Germany, Norway, Portugal, Spain, Sweden and the UK. With the exception of Lithuania and Romania, majority of other new EU member states from Eastern Europe are ranked lower than Poland, in terms of TFMR. Estonia held one of the lowest positions, sharing the group with Belgium, Hungary, Latvia and Slovenia.

Although the postponement of marriage has been under way in Central and Eastern Europe for almost 15 years, the general pattern of MAFM on the second map still reveals a legacy of the divide in nuptiality patterns that emerged in the latter decades of socialism. Men and women in Central and Eastern Europe generally marry at lower age than their counterparts in other regions of the continent, with the female MAFM already exceeding 30 years in some Scandinavian countries. Against that background, Poland – together with Bulgaria, Latvia, Lithuania, Romania and the Slovak Republic – belongs to the countries where the postponement of marriage has proceeded at a comparatively slower pace. Estonia ranks somewhat higher with respect to marriage timing, being in the same group with the Czech Republic and Hungary. Among the new EU member states only in Slovenia women tend to marry on average later than in Estonia.

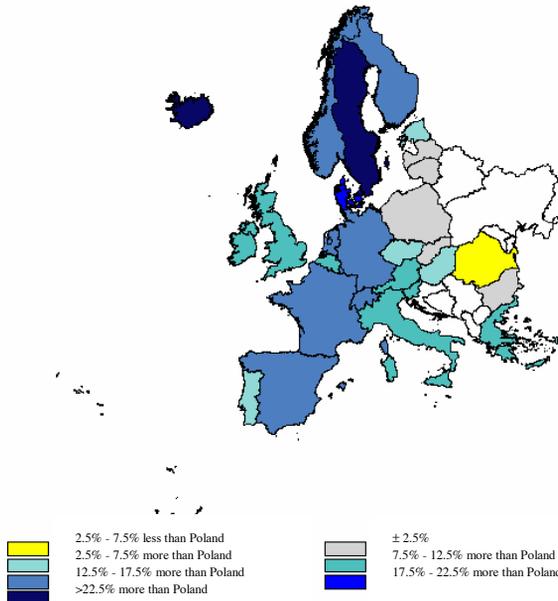
⁹ Among native population, a shift towards later marriage is more advanced and the corresponding figure stood close to 27 years (ESA, 2006).

Map 5. First marriage rate (EU 2004)



Source: Authors' calculations based on the *Recent Demographic Developments in Europe 2005*, Council of Europe Publishing, Strasbourg.

Map 6. Mean age at first marriage (EU 2004)



Source: Authors' calculations based on the *Recent Demographic Developments in Europe 2005*, Council of Europe Publishing, Strasbourg.

As regards the two countries in the focus of this article, the results of the comparison corroborate the notion, that the ongoing transformation of nuptiality pattern has progressed further in Estonia. The country experienced a swift drop in TFMR and a rise in the MAFM. Apart from Poland, the marriage rate has entered a recuperation phase in Estonia. At the same time, however, a note of caution should be taken that the generalisations offered in this section depend on the extent to which the applied indices capture the true levels of nuptiality. As mentioned earlier, under a conventional interpretation the TFMR refers to the proportion of the population that will eventually marry given the persistence of age-specific first marriage rates of the period in question. In case of our two countries this implies, that more than 50% of women in Estonia and slightly less than 50% in Poland would remain unmarried by the end of their fertile age-span. Of course, this evidently unrealistic prediction rests on the assumption of the stability of nuptiality schedule and overlooks the ongoing postponement of first marriage, which pushes down the observed values of TFMR. In the present paper, a more specific elaboration of the relationship between the quantum and tempo effects of recent demographic change is included in the section on fertility.

Another note relates to the question, to what extent the decline in TFMR and the rise in MAFM reflect an overall retreat from conjugal life or forming a union different from marriage. Accounts based on marriage registration do not provide an answer to this question but the evidence based on survey statistics has revealed a noticeable diversity in Europe in that respect (Schoenmaeckers and Lodewijckx, 1999; Pinelli et al., 2001). On the one hand, in Northern and Western Europe the decline in marriage rates was more or less compensated for by the simultaneous increase in the prevalence of non-married cohabitation. On the other hand, in Southern Europe the spread of consensual unions proved rather limited and implied a true retreat from union formation.

The countries of Eastern Europe in general, and Poland and Estonia in particular, seem to represent rather different experiences with respect to non-married cohabitation. The results of national surveys, carried out in the framework of the FFS programme in the 1990s, revealed that in the case of Estonia pre-marital cohabitation was on the rise already since 1960s. In the generations born in late 1940s and 1950s, pre-marital cohabitation became the mainstream route to family building, although the unions started as cohabitation were converted relatively rapidly into marriage and often followed by childbirth before the 1990s (Katus et al., 2000; 2002). The evidence from Polish FFS showed that the prevalence of cohabitation remained very low in the country – among the youngest cohorts covered by the survey only about 4% had started their first union as non-married cohabitation, somewhat higher prevalence of cohabitation was observed in second and higher order unions (Holzer and Kowalska, 1997). An indirect support for extensive differences in the spread of cohabitation between Estonia and Poland comes also from the findings on extramarital fertility in this section. Although a detailed analysis of consensual

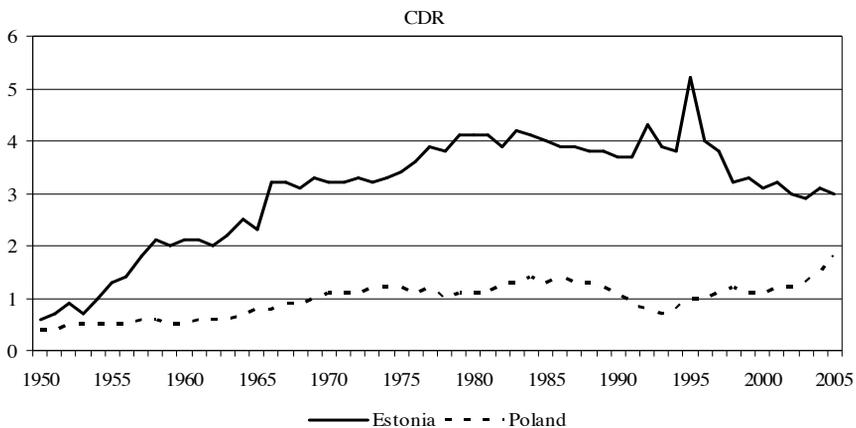
unions goes beyond the scope of this paper, clearly these differences should not be overlooked when interpreting the recent changes of nuptiality in the countries.

FAMILY DISSOLUTION

As regards family dissolution, the central development that has shaped the demographic scene after WWII, is the rise of divorce. Unlike today's low-prevalence and late marriage, high rates of divorce lack a parallel in the past. Historically the death of a spouse served as the main cause for the termination of married life. The gains from the prolongation of life expectancy during the demographic transition significantly reduced the risk of widowhood and contributed to the endurance of marital unions. The rise of divorce has implied the emergence and strengthening of a countervailing effect, although the stability of marital unions appears still higher when compared with the pre-modern demographic regime.

Figure 11 presents family dissolution in Poland and Estonia since the early 1950s by means of a crude divorce rate (CDR). This simple measure reveals a noticeable difference between the countries with respect to the tempo as well as the levels achieved. At the beginning of the 1950s, crude divorce rate was relatively low in both countries – in Estonia it accounted for 0.6 per 1000 population and in Poland the level was somewhat lower (0.4 per 1000). The following 15–20 years witnessed a rise in divorce but the tempo was markedly different. In case of Estonia, the crude divorce rate grew about five times in the 1950s and early 1960s.

Figure 11. Crude divorce rate, 1950–2005



Source: Authors' elaboration based on vital statistics.

In December 1965, a less complicated legal procedure was introduced in Estonia. The various sanctions that had been introduced during Stalin's era in the Soviet Union with an aim to consolidate marriage and discourage

couples from divorce – the prolonged two-stage legal proceedings, payment of disproportionately high fees, a mandatory public announcement of divorce in local newspaper etc – were abolished. Under the new regulation, if the couple had no children under the age of 18 and there was no material dispute between spouses, the marriage could be dissolved at Civil Registration Office on the basis of mutual consent. The change in legal proceedings resulted in a marked rise in divorce rate in the following year, reflecting the dissolution of marriages, which had occurred in the previous years but remained unregistered due to the strict procedure. After the upsurge, however, the upward trend did not stop but continued over the next 15 years and reached a peak in the early 1980s. In relative terms, the level above 4 per 1000 in the latter period translates into a sevenfold increase in the course of three decades.

In Poland, the growth of divorce rate has followed a less steep trajectory. As a legal institution, divorce was introduced in Poland in 1945. In late 1940s, the CDR was at a very low level and rose only moderately in the 1950s. A more significant growth took place in the 1960s, during that period the divorce rate more than doubled. In the second half of the 1970s, the rise slowed down for a few years but was then resumed again, taking the crude divorce rate to its peak around 1985. In these years, 1.4 divorces per 1000 population were registered annually in Poland, which implies an increase of about 3.5 times compared to early 1950s. As a result of a faster growth in divorce rate in Estonia, the difference between the two countries grew larger in the 1960s and 1970s.

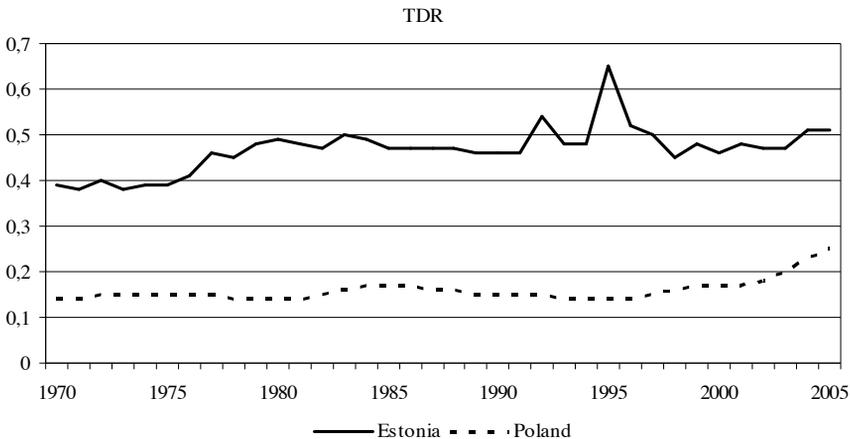
Apart from family formation and fertility, the onset of societal transformation did not introduce any major shift in marital dissolution in either country. In case of Estonia, the crude divorce rate featured a gradual decline that began in the early 1980s. This decline was interrupted by two short-term fluctuations in the first half of the 1990s. The particularly large upsurge in 1995 – the crude divorce rate peaked at 5.2 per thousand and the balance between registered marriages and divorces turned temporarily negative – was related to the change in registration procedures. According to the new procedure, the couples divorced in the court were no more obliged to register their divorce at the Civil Registration Office. Starting from 1995, the divorce took effect immediately upon the court decision. In other words, the upsurge can be attributed to the reduction of time lag between the actual divorce and its registration, which is reported in statistics¹⁰. Under the new circumstances, a number of couples who would have otherwise appeared in the divorce records of the following years, finalised all their legal proceedings within 1995. In the following year, 1996, the number of divorces returned to the previous level. Leaving aside short-term fluctuations, the crude divorce rate showed a gradual decrease in Estonia since the 1980s, which has brought the rate back to the levels observed in the early 1970s.

¹⁰ The extent of this time lag has been assessed on the data from the FFS on the timing of divorce. It appears that in 60% of cases spouses had separated more than three months before the registration of divorce. This time lag was more than a year in 37% of divorces, and in 15% of cases the formal registration was delayed for at least three years (EKDK, 1995).

In Poland, the trend reveals less sharp fluctuations in divorce rate. In the late 1980s and early 1990s the country experienced a gradual reduction of CDR that bottomed in 1993 at the level of 0.7 per 1000 population – previously such low divorce rate was reported nearly three decades earlier (1964). The absence of legal reforms in that period allows to rule out the impact of any change in divorce proceedings. Differently from Estonia, the crude divorce rate has risen over the past decade in Poland, particularly after the turn of the millennium. According to the latest statistics, in 2005 the CDR accounted for 1.8 per 1000 population, which appears to be the highest level ever recorded in the country. The described increase in divorce rate evidently reflects a behavioural change and a shift towards greater acceptance of divorce in Poland during the past decade.

The assertion of rising acceptance of divorce is supported by the evidence from the statistics of legal separations. Separation as a legal institution was introduced in Poland first in 1999, and the recent years have indicated a rapid growth of this mode of union dissolution. Between 2004 and 2005, for example, the number of registered legal separations doubled from 5.9 thousand to 11.6 thousand in the country. In relative terms, legal separations accounted for more than one sixth (17.2%) of the number of divorces registered in the previous year. The divergent trends in divorce rate over the past decade have implied a noticeable convergence in the levels of CDR between Poland and Estonia. In 2005, the crude divorce rate in Estonia exceeded that in Poland 1.7 times, which appears to be the smallest relative difference since the rapid rise in divorce rate started in the 1950s.

Figure 12. Total divorce rate, 1970–2005



Source: Authors' calculations based on vital statistics.

Due to the limitations of a crude rate as a statistical instrument, the findings described above are complemented with the observation derived from the total

divorce rate (TDR), which allows a more refined account of the population *resp* married couples exposed to the risk of divorce. Figure 12 presents the dynamics of total divorce rate for Estonia and Poland from 1970. With some details, the figure corroborates the general pattern of divorce trends and levels in both countries, discussed in the previous paragraph. Concerning Estonia, the total divorce rate confirms the stabilisation of divorce level in the 1980s, which was interrupted by short-term fluctuations in the following decade. Apart from that evidence, the TDR reveals only a major reduction in the level compared to the beginning of 1980s. Moreover, the statistics for a couple of most recent years suggest that the peak reached during the latter period may be slightly surpassed¹¹.

With respect to Poland, the decrease of total divorce rate appears less pronounced, what points the likely role of compositional factors in the dynamics of CDR. At the same time the TDR confirms the recent rise in divorce to ever-highest levels recorded in the country – in 2005 the total divorce rate accounted for 0.25 in Poland. This accounts for about 50% of the Estonian divorce rate observed in the same years, which translates into the smallest difference between the countries since the start of the rising divorce trend in the aftermath of WWII. In the 1980s, for example, the Polish TDR averaged less than one third of the corresponding Estonian figure.

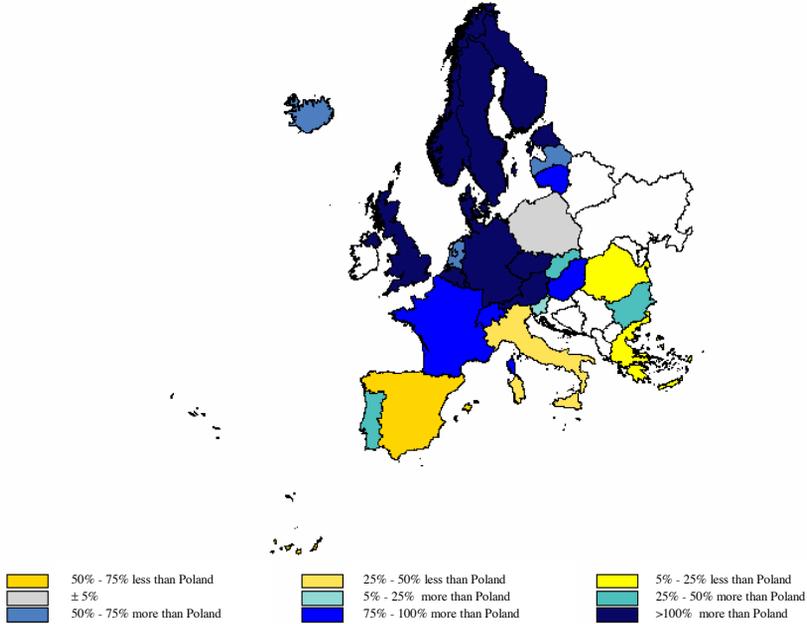
The map of TDR (see Map 7) compares the current levels of family dissolution in Estonia and Poland to that in other EU and EFTA countries, with Polish level as a reference. The data suggests that despite noticeable convergence since the beginning of 1990s, the difference between the countries appears relatively extensive in comparative perspective. Poland features the TDR next to the lowest levels in Europe. A still lower divorce rate is characteristic of only a few countries, including Greece, Italy, Romania and Spain. Estonia, on the other hand, can be found in the top group together with Belgium, the Czech Republic, Nordic and German-speaking countries. Within that group, Estonia ranked third in 2005, following Belgium and Sweden. Also, compared to the maps on marriage, the general pattern does not reveal the legacy of the cleavage along the frontlines of the cold war.

A final note that should be borne in mind with the comparisons of family dissolution across countries and over time, relates to the spread of new family forms. As regards consensual unions, the break-up of such unions is not reflected in the statistics reported in the present section, which depend on legal registration of marriage. It is obvious that the higher the prevalence of consensual unions, the larger proportion of *de facto* union dissolution is omitted from divorce statistics. Moreover, due to the greater risk of union dissolution

¹¹ Similar to other demographic and social indicators, in case of Estonia divorce rate for the total population is affected by the presence of large foreign-origin population. Like in many countries, immigrants feature a systematically higher rate of union dissolution, which pushes the corresponding national aggregates upwards (Katus et al., 2002).

characteristic of consensual unions, divorce statistics tend to underestimate rather than overstate the rate of actual union dissolution.

Map 7. Total divorce rate (EU 2004)



Source: Authors' calculations based on the Recent Demographic Developments in Europe 2005, Council of Europe Publishing, Strasbourg.

With respect to Poland and Estonia, the referred underestimation is probably much larger in the case of the latter. Taking this into account, it seems quite plausible that against the background of the relative stability of divorce rate in Estonia, the growth in non-married cohabitation has pushed the rate of union dissolution up during the past two decades but this trend is not captured by divorce statistics. From a life course perspective, however, this implies a greater diversity of living arrangements and household patterns in the country.

INSTEAD OF CONCLUSION

This article addressed the developments in fertility and nuptiality in two countries at the Baltic Sea – Poland from Central Europe and Estonia from Baltoscandia. The study highlighted the changes that have occurred in the patterns of childbearing, marriage and family dissolution over the past decade and a half, placing them in the context of longer trends.

As elsewhere in the region that was sealed off by the Cold War, the 1990s have typically been characterised by extensive transformation in demographic regime – downsurge of fertility from close-to-replacement to very low levels, extensive decline in marriage rates, rapid postponement of relatively early childbearing and family formation that was maintained since the disappearance of the European marriage pattern, increased pluralisation of living arrangements, etc. But at the same time, and this was the main focus of the study, the results also indicate noticeable differences in the recent and current demographic patterns between the countries.

The findings concerning the diversity of the transformation can be summarised in two major points. The first set of country-specific features relates to the tempo of changes that took start at the turn of the 1990s. In Estonia the changes followed a steeper trajectory with the drop of fertility and marriage rates to bottom levels, during 6-8 years after the onset of transformation. After reaching the lowest point, both fertility and marriage rates entered a new stage and started to recuperate; according to recent statistics they have increased by 15–20% since the second half of the 1990s. In Poland, on the other hand, the changes have featured a more gradual profile and the changes have spread over a longer period. Although the decrease has slowed down with respect to fertility as well as marriage rates, the data (until 2005) do not yet reveal any significant recuperation.

The second set of specificities concerns the link between fertility and nuptiality. Although gradually weakening, Poland still features a relatively strong connection between childbearing and registered marriage, which is reflected in a comparatively low share of children born outside wedlock and modest prevalence of non-married cohabitation among young people. In case of Estonia, the disconnection of reproduction from marriage and the spread of pre-marital cohabitation started more or less in the same timeframe as in Scandinavian countries and accelerated rapidly since the onset of societal transition.

The strengthening of these dissimilarities was also revealed by comparisons with other European nations. As regards fertility, among the new member states of the EU from Central and Eastern Europe Estonia ranks highest in terms of the extent of recuperation, while Poland features the second lowest position. Judging by the proportion of extra-marital births, Estonia belongs to countries where the dissociation between marriage and childbearing and the spread of new family forms appear among the most advanced in Europe while Poland can be found at the opposite end of the spectrum. The analysis based on Bongaarts-Feeney's model also provided an indication that the observed differences are likely to persist in the foreseeable future.

From the scholarly viewpoint, understandably, essential questions relate to the driving forces behind the observed patterns. The aim of the article, however, was to map the major similarities and dissimilarities between the countries rather than seek conclusive explanations. The latter could be pursued in the following stage of research, targeted on specific issues highlighted in the present study.

Beyond doubt, the results presented in the article support the assertion, that among the countries of Central and Eastern Europe, Estonia and Poland provide a valuable ground for in-depth comparative research on the recent transformation of demographic scene. Among others, such research could contribute to the evaluation of the role of long-standing differences, related to the existing cultural and religious traditions, experiences of socio-economic transition, and on another end, the path dependence of demographic development that can be traced back to the heyday of European marriage pattern and the timeframe of transition from traditional to modern generation replacement.

The availability of life history data from the new round of national surveys carried out in both countries after the turn of the millennium offers a favourable basis for research along the envisaged lines.

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FERTILITY AND FAMILY FORMATION AND DISSOLUTION: COMPARING POLAND AND ESTONIA, 1989–2005

The article presents a comparative analysis of changes in fertility and family formation and dissolution, in Poland and Estonia, in the years 1989–2005. Both countries were members of the socialist bloc and launched political, economic and social system reforms at the end of the 1980s. Estonia belongs to Northern Europe, geographically referred to as Baltoscandia, and Poland to the region of Central Europe. Using basic demographic indicators, and the position of Poland and Estonia in Europe, fertility and family related processes are analysed in the context of their transformation in European countries.

The article consists of two parts. The first one presents an assessment of changes in fertility. In addition to general indicators, the Bongaarts–Feeney formula is applied to measure the tempo and quantum effects during the period of rapid fertility transformation. The second part focuses on family formation and dissolution process. Both fertility and family changes, in Poland and Estonia, are considered in the broader European perspective.

The findings concerning the diversity of analysed demographic changes may be summarized as follows. Both countries differ in terms of the tempo of changes, that began at the turn of the 1990s. In Estonia, the changes followed a steeper trajectory, with the drop of fertility and marriage rates to bottom levels during 6–8 years after the onset of transformation. After reaching the lowest point, both fertility and marriage rates entered a new stage and started to recuperate. In Poland, the changes featured a more gradual profile and were spread over a longer period. Although the decrease has slowed down with respect to fertility as well as marriage rates, the data until 2005 do not yet reveal any significant recuperation. Another country-specific feature of fertility and family transformation concerns the interrelationship between fertility and nuptiality. Although gradually weakening, Poland still features a relatively strong connection between childbearing and registered marriage, which is reflected in a comparatively low share of children born outside wedlock and a modest prevalence of non-married cohabitation among young people. In Estonia, the disconnection of fertility from marriage and the spread of pre-marital cohabitation started nearly at the same time as in the Scandinavian countries and accelerated rapidly, since the onset of societal transition. The strengthening of these dissimilarities was also revealed by comparisons with other European nations. The results of the Bongaarts-Feeney's model also seem to indicate, that the observed differences are likely to persist in the foreseeable future.

In general, the results support the assertion, that among the countries of Central and Eastern Europe, Estonia and Poland provide valuable grounds for

in-depth comparative research, on the recent fertility and family changes. Life history data, available due to the new round of national surveys carried out in both countries after the turn of the millennium, offer a favourable basis for in-depth studies, along the envisaged lines.

Key words: fertility and family transformation, Central and Eastern Europe, Bongaarts-Feeney's model