

## Is Eastern Europe experiencing a second demographic transition?

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**Abstract:** Demographic indicators measuring intensity related to the family have declined dramatically two years after political changes in Eastern Europe. However, nuptiality-fertility models display lower ages for the first marriage and for childbearing; unlike the West where marriage and childbirth is often late. The total fertility rate is actually lower in Eastern Europe than in the West. The fall in fertility leads to natural decrease values in the East. The transformation of demographic patterns currently being observed is more rapid than it was in the West twenty years ago. In particular, the external conditions are quite different. The symptoms are closer to crisis behavior than to intentional choice. Czech reproductive patterns show that couples behavior has been very pragmatic and sensitive to external conditions. The recent surveys on attitudes regarding family manifest that Czech population focuses on traditional family with children (mostly two) based on legal marriage.

**Key words:** Second demographic transition, fertility, Czech population.

*Dramatic, drastic, unexpected, unprecedented, most remarkable and revolutionary, such are the adjectives frequently used to describe the sudden changes in Europe's population trends and demographic future observed since the mid-1960's.*

Dirk J. van de Kaa: The Second Demographic Transition Revisited:  
Theories and Expectations.

### Introduction

In demography, two theories related to significant reproductive behavior change have been formulated. The first one was called a theory of demographic transition which was, later renamed the first demographic transition, and deals with deep and irreversible decline of fertility and mortality rates through which every population passes. In the majority of European countries, the first demographic transition started in the second half of the previous century and was over before World War II. The process consisted of passing from the pre-transition stage characterized by long-standing equilibrium of high mortality and fertility through the transition stage of destabilization typified by declining mortality and fertility rates. The process ended in the post-transition stage of modern equilibrium that is characterized by low mortality and fertility (Chesnais 1992). In the pre-transition stage, replacement was only achieved in the following generations if women had a half dozen children. The reason was that the old demographic regime of high infant and child mortality was inefficient. The probability that a child would die before its parents was considerable and thus the natural chronological hierarchy was

disordered by inversion. Therefore, it can be said that the first demographic transition is a complex process of passage from disorder to order and from waste to economy (Livi-Bacci 1992).

The first demographic transition was a partial revolution of a general process of structural transformation when every population passes in the movement toward modernity (Chesnais 1992). Industrialization, urbanization and secularization were the indirect determinants of the first transition. Three basic components of modernization were distinguished: technological change (improved transportation, communication, medical technology, health care), structural change (increasing standard of living, better social security, longer and higher education, increasing female employment), and cultural change (increased democracy and equality, more personal freedom). The first demographic transition experienced by individual countries varied according to time, when the transition started, and its duration.

When the first demographic transition was over, fertility and mortality were supposed to oscillate around the low constant levels. In the period of interbellum, however, some countries (France, Czech lands, etc.) displayed depopulation trends with a net reproduction rate equal or below a replacement level (Czech lands  $R_0=0.656$  in 1936). Those unfavorable population patterns were unexpectedly changed after World War II when relatively long period of increased fertility, called a baby-boom, was observed. From World War II to the mid sixties, despite the political division, the whole of Europe exhibited very similar trends in family behavior. The demographic indicators concerning the family tended to be viewed as "favorable". A high nuptiality level was accompanied by a relatively low divorce rate. Couples married in order to have children, and families limited the number of their children to two or three. Infertility (childlessness) was very low. This rather unexpected baby-boom enabled forgetting the low fertility figures that had occurred before World War II in the thirties. However, former socialist countries experienced a shorter period of post-war fertility increase. Total fertility rate (average number of children per woman) had already started decreasing from a high level in the fifties (figure 1). Moreover, abortion was legalized in the 1950's in Bulgaria, Czechoslovakia, Hungary, Poland and Romania – before the introduction of modern contraceptives. Thus an induced abortion became an integral part of "family planning" in those countries, and to some extent, accelerated the decrease of fertility rates. Contributing to the limitation of the final number of children – despite the fact of full employment – were the high economic activity of women (necessary for the family budget), the insufficient number of child care facilities, and a chronic shortage of flats.

Profound demographic changes have occurred in Western European societies since the mid sixties. D. van de Kaa (1998, 1997, 1994, 1987) elaborated and summarized the ongoing demographic changes that are today called the second demographic transition. According to him, the ten years from 1965 to 1975 showed very rapid declines in fertility. The fertility decrease was universal in population groups independent of their religion, social status and education. The reduction of the average number of children per woman was observed in the whole of Western and Northern Europe independently of their rate of economic growth, proportion of women in the labor force, and unemployment rate. The ongoing changes altered Europe's demographic perspectives fundamentally because

fertility seemed to stabilize well below replacement level. The changes are otherwise indicated as “dramatic, drastic, unexpected, most remarkable, and revolutionary.”

Van de Kaa's (1987) concept of the second demographic transition was based on four related shifts:

- Shift from the golden age of marriage to the dawn of cohabitation
- Shift from the era of the king-child with parents to that of the king pair with a child
- Shift from preventive contraception to self-fulfilling conception
- Shift from uniform to pluralistic families and households

The shifts are related to:

- the contraceptive behavior practiced
- the level and pattern of fertility
- the timing, frequency, stability and type of union.

The first transition to low fertility was dominated by concerns for family and offspring, but the second emphasizes the rights and self-fulfilment of individuals. The norms and attitudes behind the first and second demographic transitions highlight the contrasts between altruistic and individualistic. The indirect determinants of the second transition are strongly related to the functioning of individuals in fast-changing, postindustrial societies. Van de Kaa also stressed the role of modern contraceptives (pill and intrauterine device) for reducing fertility levels from the mid sixties.

According to the theory of the second demographic transition, countries have unequally advanced on a unitary transitional path, and existing demographic diversity reflects only different stages and modalities.

Several questions related to the principle of the second demographic transition can be raised:

- 1) Is the principle universal? Can we expect in the future that all countries will have gone through this transition and will have experienced similar sequences of demographic events? Will those countries achieve the same final values of demographic indicators?
- 2) Is it possible to consider low values of demographic indicators such as total fertility rates and total first marriage rate as evidence of the second demographic transition achieved, despite very different social and economic settings?
- 3) Do the share of illegitimate births or the frequency of pre-marital conceptions have the same social meaning in different societies?
- 4) Where is the border line between transition and crisis?

Those questions are particularly challenging today when observing recent profound changes in family formation and reproduction in Eastern European countries (For purposes of this paper, Eastern European countries also include the Central European countries of Poland, Hungary, Czech Republic and Slovakia). Do those countries undergo double transitions (economic and demographic), or multiple transitions because of the above-mentioned factor plus changing social structures? Are those transitions mutually dependent?

## Trends and structures in family behavior of Europe

From the perspective of reproduction, Europe is currently divided according to timing (mean age at first childbirth), irrespective of the number of children (figure 2). Eastern Europe, experiencing the low age at first childbearing, emerges as a homogenous region and contrasts with the remaining European countries. In Eastern Europe, the average number of children also varies less compared with the figures of the remaining part of Europe. Taking into account a larger number of demographic indicators dealing with family behavior: mean age at first childbirth, mean age at first marriage, abortion ratio, illegitimacy ratio, total divorce rate, total fertility rate, and total first marriage rate (table 1), and reducing those variables to three factors (using the factor analysis with the method of principal components), the pattern of East-West division according to timing appears again (table 1, figure 3).<sup>1</sup> The first estimated factor explaining 37 % of data variability is called factor of timing because it is closely related to variables of mean age at first childbirth and mean age at first marriage. In addition, young ages are here related to poor family planning expressed by a high abortion ratio. Figure 3 displays factor scores (values of each factor for each country). The scores for the first factor (axis x) manifest clear Eastern European separation from the West based on timing (first factor). In other words, Eastern Europe still displays early marriage and childbearing accompanied by frequent induced abortion used as "contraception ex post". Unlike the western second demographic transition that was significantly influenced by the second contraceptive revolution (introducing pills and IUD at the end of the sixties), the mass use of modern contraceptives is not still perceptible in current Eastern European reproductive patterns. Poor family planning and reliance on legal abortion have become an integral part of sexual behavior from the fifties, and have been maintained up to the present.

The second factor (explaining 27 % of variability) is labeled break-up of traditional family (low scores for traditional uniform family forms, high scores for pluralistic family issues). The highest factor loadings expressed a high correlation with variables of illegitimacy ratio and total divorce rate that opposed a total first marriage rate (table 1). Countries on the upper part of the factor score plot (figure 3) experience widespread cohabitation accompanied by high illegitimacy ratio and frequent divorce of legal marriages, particularly Estonia, Sweden, and Norway. The factor scores of the first and the second factors combined in figure 3 display that Europe is divided into East and Residual according to timing and family planning issues (first factor). The importance of diverse regional cultural settings for family formation behavior is more eminent, and seen according to the second factor which opposes primarily North and South (West and East being rather neutral). The first and second factors added together explain the 63.3 % of data variability. The intensity (quantum) of fertility and primo-nuptiality is reflected only with the third plan (the third factor) and explains the 18 % of variability. These results

<sup>1</sup> The matrix of factor loadings called the factor pattern matrix is reported in table 1, where only factors that account for variance greater than one (the eigenvalue is greater than 1) are included and factor loadings with values greater than 0.5 are displayed. The percentage of total variance explained by each factor is listed at the last row for each respective factor.

illustrate that structural components prevailing over level issues are not frequent in demographic history because any important demographic differentiation that occurred was based on changing levels, and not so much on changing structures.

To better understand this new phenomenon of inter-country differentiation based on timing/structure, we will now provide a short historical outlook based on three cross-sectional views corresponding to turning points of the second demographic transition. 1965 was the beginning of the transition in western countries and 1985 was the end of their transition also for Southern Europe. Eastern European countries started significantly changing demographic behavior in 1992, which resulted in the formation of their current grouping in 1995.

The subsequent country classification is based on the cluster analysis method in order to identify relatively homogeneous groups of countries according to family behavior. The variables used to identify distinct subgroups were: age-specific fertility rates (for ages -19, 20-24, 25-29, 30+), age-specific first marriage rates for females (for ages -19, 20-24, 25-29), illegitimacy ratio (proportion of illegitimate live births), total divorce rate (number of divorces per 100 initial marriages). All variables were transformed to Z scores (all variables have a mean of 0 and a standard deviation of 1). The squared Euclidean distance was used as a distance measure, and countries were combined into clusters through agglomerative hierarchical clustering based on the method of average linkage between groups. The results of grouping can be seen in the dendrogram in figures 4,5,6 for calendar years 1965, 1985 and 1995. In examining the dendrograms, it became obvious that the four-cluster solution might be the most appropriate. For groups thus determined, mean values of initial variables were computed and plotted as seen in the corresponding dendrogram below.

In the mid sixties, different levels and age-specific profiles in fertility and female primo-nuptiality primarily characterized individual types of European family behavior (figure 4). The outlier type was that of *very high old fertility* represented by only one country – the Netherlands with very high fertility rates and childbearing was significantly protracted beyond the age of 30+. The opposite profile was of *early primo-nuptiality with more frequent divorce and low-young fertility*. The two remaining clusters are *balanced nuptiality with high-balanced fertility* and *late nuptiality with rare divorce and high-old fertility*. These two clusters can be considered as intermediate patterns.

**In the mid sixties, Europe was primarily divided according to demographic profiles irrespective of geographic neighborhood** because countries from different macroregions appeared in each group. The cluster with the most countries (characterized by balanced nuptiality with high balanced fertility) comprised Western, Central and also Northern European countries. Only the three-country group of early nuptiality with low-young fertility (Hungary, Romania and Bulgaria) could be considered as a forerunner of the future Eastern European demographic family model.

In the mid eighties, the second demographic transition was considered to be finished in Northern, Western and also in Southern Europe. In considering the four-cluster solution, the former GDR appeared as a new outlier while the Netherlands shifted into the West-South model (figure 5). Unlike the 1965 grouping where groups did not follow geographic perspective, **the 1985 European demographic division was primarily spatial** (figure 5). Eastern Europe was clearly distinguished with the highest fertility and

primo-nuptiality figures beginning with particularly young ages. As forerunners of new attitudes and value-system reflected by pluralistic family forms (widespread cohabitation, high illegitimacy ratio and high divorce rate), Denmark and Sweden appeared as a special group. In the next stage of grouping, two clusters were formed: West-South combined with North, and East combined with GDR. This process validated the idea that political division into two blocs can have, as a consequence, different demographic patterns.

Dramatic, drastic, unexpected, and unprecedented are adjectives used for labeling the second demographic transition, and are also fully valid for describing the changes that have occurred in former socialist countries after the collapse of the communist regimes. Two years after the political changes, demographic indicators related to the family started shifting dramatically. The total fertility rate is actually lower than in the West (figure 1, 2). The fall in fertility has led to natural decrease values in these countries. Primo-nuptiality started decreasing very rapidly at the same time as fertility. However, the transformation of family models currently being observed has been more rapid than it was in the West thirty years ago. The external conditions (economic and social) are also very different. Furthermore, the classification of family behaviors from the mid nineties did not provide a clear trend toward a more pronounced European uniformity. **In 1995, European countries were grouped according to geographical and topical perspectives** (figure 6). Again, Eastern Europe (former socialist countries) forms a compact demo-geographical area in spite of very dramatic recent changes. The low values of total fertility rate are accompanied by lower age at first childbirth when compared with the West (figure 6). The former GDR re-emerges as a separate outlier, but joins the "West" at the later stage of clustering. The remainder of Europe (previously West-South and North) no longer displays any continuous spatial configuration. Lower illegitimacy and lower fertility is observed in Southern Europe (Italy, Spain, Greece) as well as in the Netherlands, Switzerland and FRG. Middle levels with more frequent pluralistic family forms (high illegitimacy and divorce rate) are observed in Northern Europe, as well as in France or Belgium.

When summarizing the ongoing changes, European countries passed from diversity based on historical-cultural conditions that were reflected in the demographic patterns still seen at the beginning of the sixties. During the eighties, types of family behavior began to correspond to European geographical division. Currently, we observe East-West division where the East displays a specific almost "crisis" behavior, and the "West" represents a European residual group with a mixture of different family models. An extraordinary trajectory has been observed for the Netherlands that has passed from an outlier position with the highest fertility rate in the mid sixties to the current very reduced childbearing similar to Southern European profiles.

#### **Comparative development of the Czech Republic and the Netherlands**

The study of changes in demographic patterns presented at three specific time points for Europe has been completed by examining yearly development of rates from 1950 to

1997 in the Czech Republic and the Netherlands. The Czech Republic thus represents an Eastern European population model and the Netherlands a Western demographic pattern.

Through the period from 1950 to 1997, both national populations differed in levels and timing of first marriage, divorce, first childbirth, illegitimacy, premarital conception, and induced abortion. The time development of intensity indicators (total fertility rate, total first marriage rate for females, and proportion of illegitimate births) showed two important crossovers. Until the 1970s, the highly traditional Dutch society – with low economic activity of women and extremely low illegitimacy – experienced a high number of children per woman (by 1965 more than 3), and total first marriage rate always exceeded 100 %. However, mean age at first childbirth and at first marriage remained significantly older than in the Czech Republic. By the mid sixties in the Netherlands, induced abortions were not legal, total divorce rate was low, and premarital conceptions less frequent. Family related behavior began to change from the mid sixties, and the onset and stages of the second demographic transition can be easily depicted with Dutch indicators. On the contrary, Czech figures did not follow a similar scenario.

Total fertility rate curves of both countries crossed in 1972 at 2.1 children per woman. Dutch fertility was declining from previous high numbers and Czech fertility rising due to natality stimulating measures (figure 7). The Czech Republic compared with the Netherlands experienced more favorable cross-sectional fertility rates only in the years from 1972 to 1992. Currently (1997), the difference between both countries in total fertility rates again reversed, and TFR is 1.54, in the Netherlands and 1.18 in the Czech Republic. The current difference is almost the same as in 1950 (NL: 3.10; CR 2.83). However, Dutch average number of children per woman has remained stable at 1.5 since the end of seventies, while in the Czech Republic a dramatic decline occurred within four years, with TFR decreasing from 1.7 in 1992 to 1.2 in 1996 and 1997. Regardless of the discrepancy in time development of TFR in both countries, later motherhood in the Netherlands has always been observed. The difference in mean age at first childbirth age was the highest in 1993, reaching 5.7 years (NL: 28.3; CR: 22.6). In the Czech Republic the 1997 age of first maternity increased to 24 years, but is still low in comparison with the Netherlands (figure 7).

Until the 1980s, a number of extra-marital live births per 100 live births was extremely low in the Netherlands and did not exceed 3 % (figure 8). Single motherhood was also not frequent in the Czech Republic (less than 5 %). The proportion has increased since the 1980s in the Netherlands and in the Czech Republic since the 1990s. In 1997, both countries displayed the same value of 18 %. Unlike the Netherlands, this number is due to a sharp reduction of legitimate births in recent years in the Czech Republic. As a result, the share of illegitimate births is rising despite the fact that the frequency to have an extra-marital birth has not varied. The Dutch pattern reflects more frequent cohabitation.

Children born within 8 months after marriage per 100 marriages have been more numerous, and the rate is increasing in the Czech Republic (figure 8). The level currently stands at about 40 premarital conceptions per 100 marriages. In the Netherlands after the so-called “second contraceptive revolution” at the end of the 1960s, there was an observable reduction of children conceived prior to marriage. The Netherlands currently exhibits exceptional behavior by Western standards because the number of premarital

conceptions is again increasing. However, this time the results are intended, and couples decide to marry after being certain of having children.

Success of family planning can be measured indirectly by the ratio of induced abortions per 100 live births. In the Czech Republic the era of modern contraceptives (pills, IUD) was preceded by the legalization of abortion in the Abortion Act of 1957 which resulted in the use of abortion as "contraception *ex post*" instead of as a mean for solving an accidental situation (as it is in the West). For this reason the Czech abortion ratio has been relatively high in the European context (figure 9). After amending the Act on January 1, 1987 by eliminating the commissions which regulated abortion, the number of interventions increased rapidly, with the maximum of 86 induced abortions to 100 live births reached in 1989. The abortion ratio started decreasing later, and dropped to 50 in 1997. In the Netherlands the Abortion Act was introduced after the second contraceptive revolution, and the Dutch induced abortion ratio remains extremely low, which is an indication of a high level of sexual education and family planning.

By the beginning of the 1970s in both national populations, total first marriage rate for females showed a strong propensity to marry (figure 10). A purposeful state intervention in the Czech Republic (advantageous loans for young married couples, priority for obtaining a state apartment, etc.) increased, and kept high first marriage figures even after the 1970s. The period from 1975 to 1990 was that of the biggest contrast between the Czech Republic and the Netherlands in level of primo-nuptiality. In the last few years the first marriage rate has fallen in the Czech Republic, and is currently below Dutch figures. Mean age at first marriage has displayed the same trends as the mean age at first childbirth; i.e., Czech women have always married at younger ages (figure 10). The current (1997) gap is 4.5 years (NL: 27.9; CR: 23.4). Marriage dissolution by divorce has been more or less parallel, but with lower figures in the Netherlands (figure 9). In 1997, the total divorce rate was 33 divorces per 100 initial marriages in the Netherlands and 42 in the Czech Republic.

Dutch and Czech populations have followed differing scenarios of family development that conform to West/East models. Similar values of demographic indicators in some years reflected only accidental coincidence, and were often followed by a reversal of trends. The influence of cultural conditions was not too different immediately following World War II, but was gradually erased and replaced by the impact of the different political system installed.

#### **Four-year Czech transition/crisis?**

The family and its forms was in the process of change in the West mainly from the 1965s to the 1975s as documented by previous figures. The Czech Republic, as well as other former socialist countries, followed the same model of demographic behavior until the beginning of the nineties. Despite the fact that changes in the economy of the Czech Republic have been less dramatic compared to those in other former socialist countries, fertility, nuptiality, and structural characteristics have started similarly changing in all former socialist countries since 1992. The initiators of new family behavior are the generations born during the "second baby boom" that took place in the Czech Republic



in the first half of the seventies. Total fertility rate decreased within only four years, from 1.7 in 1992 to 1.2 in 1996 (figure 11). At the same time, we observe a drop in the total induced abortion rate from 1.3 LIA (legally induced abortion) per woman to 0.7 in 1996. The trends in fertility and abortion have differed according to age (figure 12). The fertility decrease was extraordinary in the younger ages, including the ones of traditionally highest fertility. Between the ages of 18 and 23, the decline was over 50 per cent for each single year age group (figure 11). The fertility decline has been accompanied by an even faster decrease in abortion rates to which all age groups contributed. Because the age at first childbirth increased only to 24 years (from 22.5), the ongoing changes might have been the result of a segmentation effect in the sense that at least two types of behavior occurred. Those who bore children had them at about the same lower age as the previous generations. Another group of couples was emerging that was sensitive to changing external conditions. This new group postponed childbearing or limited the number of births. In that sense, we can think about demographic diversification of the previously very homogeneous and uniform Czech society.

Total fertility rate by birth order dropped significantly for birth order one and two (figure 13). Based on profound changes of birth rates by birth order, we can also estimate the proportion of women according to number of children (figure 13). From the cross-sectional perspective, the proportion of childless women dramatically increased to almost 50 per cent in 1996–1997, thus reflecting changes in birth order fertility. Subsequently, the proportion of women with one and two children decreased.

The proportion of children born out of wedlock increased to 18 per cent in 1997. However, rates of marital fertility have been declining, and those of extra-marital fertility have not significantly varied (figure 14). The result of such an evolution is the apparent increase in the proportion of extra-marital births without observing the real increase of intensity of illegitimate fertility.

The second demographic transition started in the West under relative economic prosperity. In the Czech Republic at the beginning of the nineties, women's education and economic activity were already high. The economic situation of most young people and more particularly the chronic shortage of accessible apartments (especially in big cities) has not created circumstances similar to those observed in the West thirty years earlier. Regardless of the current living difficulties, new opportunities especially for young people have been seen recently in the former socialist countries: the opening of borders, increased opportunities for foreign travel, wider education, and job opportunities. These new possibilities for personal fulfillment and, conversely, the loss of security provided by the former system; e.g., the new phenomenon of unemployment, could play a similar role in modifying procreative behavior to that played by the relative economic prosperity in Western Europe. Of particular interest is the rapidity of the change which has taken place in a very short period of time. In the Czech Republic, total fertility rate significantly declined within four years, and is among the lowest in the world compared with the ten year transition of Western countries. The sequences or stages are different, as well as the initial external conditions. All changes occurred suddenly and rapidly in all indicators, thus touching almost everybody. A retrospective outlook on the Czech cross-sectional reproductive patterns shows that couples behavior was very pragmatic and sensitive to external conditions (figure 7). However, a completed fertility rate from the cohort

perspective was extremely stable for birth cohorts 1930–1965, showing 1.9–2.1 children per woman. Currently observed changes are nevertheless fundamental due to extremely low intensity values. Unfortunately, the five year period on which we can judge is too short. Considering all factors together, it seems that the current changes echo more of a crisis response than an intentional choice. Recent surveys in the Czech Republic on opinions and attitudes regarding family and marriage showed that people here display more conservative opinions compared with results of the same surveys conducted in Western Europe (Kuchařová V., Tuček M., 1999). The Czech population focuses on a traditional family with children (mostly two) based on legal marriage. Unlike surveys conducted in the past, the only shift in Czech opinion referred to timing with postponement of marriage and childbearing to older ages being the most frequently stated.

### **Conclusion**

Since 1989 Eastern Europe has disappeared as a political region, although demographic patterns formed there during the last few decades are still evident. Two years after political changes, demographic indicators measuring intensity related to the family have declined dramatically. However, nuptiality-fertility models display lower ages for the first marriage and for childbearing, in contrast to the West where marriage and childbirth is often late. Total fertility rate is actually lower in Eastern Europe than in the West. The fall in fertility leads to natural decrease values in these countries. The transformation of demographic patterns currently being observed is more rapid than it was in the West twenty years ago. In particular, the external conditions are very different. The symptoms are closer to crisis behavior than to intentional choice. Consumer prices, low real wage growth, high unemployment, and a rather "medium" level of social protection have contributed to family income deterioration. The intensification of pathological occurrences, rising criminality, corruption, etc., lead to an increased general feeling of insecurity and distress. The process of economic transformation into a market economy is not proceeding as quickly as was initially expected. In particular, the increasing shortage of housing has led to a deterioration of living conditions. Social costs are much higher than was expected.

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## References

- CHESNAIS, J. C. (1992): *The Demographic Transition. Stages, Patterns, and Economic Implications. A longitudinal study of Sixty Seven Countries Covering the Period 1720–1984*, Clarendon Press.
- KAA van de, D. J. (1998): *Postmodern Fertility Preferences: from Changing Value Orientation to New Behavior*. The Australian National University, Working Papers in Demography No. 74.
- KAA van de, D. J. (1997): *Options and Sequences Europes Demographic Patterns*. Nethur-Demography Paper No. 39.
- KAA van de, D. J. (1994): *The Second Demographic Transition Revisited: Theories and Expectations*. in *Population and family in the low countries 1993* NIDI CBGS Publications.
- KAA van de, D. J. (1987): *Europe's Second Demographic Transition*, *Population Bulletin*, Vol.42, No 1.
- KUCHAŘOVÁ V., TUČEK M., (1999): *Sociálně ekonomické souvislosti demografického vývoje v České republice*. Výzkumná zpráva za podpory Hlávkovy nadace.
- LIVI-BACCI M. (1992): *A Concise History of World Population*, Blackwell.

## VÝCHODNÍ EVROPA A DRUHÝ DEMOGRAFICKÝ PŘECHOD

### Résumé

V posledních deseti letech se zřetelně změnilo reprodukční chování obyvatel bývalých socialistických zemí. Ze všech demografických ukazatelů se nejvýrazněji snížila úroveň plodnosti a to bez ohledu na hloubku ekonomických krizí jednotlivých zemí. Retrospektivní pohledy založené na třech průřezových analýzách v letech 1965, 1985 a 1995 ukázaly, že demografické chování evropského obyvatelstva se v čase měnilo a dnešní geografická polarizace reprodukčních vzorců byla nastolena teprve nedávno. Metoda seskupovací analýzy aplikovaná na ukazatele plodnosti, sňatečnosti a rozvodovosti ukázala, že evropská diferenciací kolem roku 1965 (před počátkem druhého demografického přechodu) byla založena spíše na kulturních vzorcích a odvozené typy nevykazovaly výraznější geografickou konfiguraci. Naopak kolem roku 1985 (kdy druhý demografický přechod byl ukončen nejen v zemích severní a západní, ale také jižní Evropy) pozorujeme, že typy reprodukčního chování jsou v souladu s geografickým členěním Evropy. V současné době (typologie kolem roku 1995) se vyděluje reprodukční režim bývalé Východní Evropy (dnešní Střední a Východní) oproti ostatním evropským zemím. Detailnější porovnání vývojových trendů ukazatelů plodnosti, potratovosti, sňatečnosti a rozvodovosti v České republice a Nizozemsku umožnilo vymezit přelomové roky v obou zemích. V České republice se zejména jedná o situaci po roce 1992, kdy byly nastoleny historicky nové modely reprodukčního chování, které se vyznačují výrazně nižší úrovní plodnosti, ale také poklesem potratovosti. Do budoucnosti bude narůstat počet bezdětných žen.

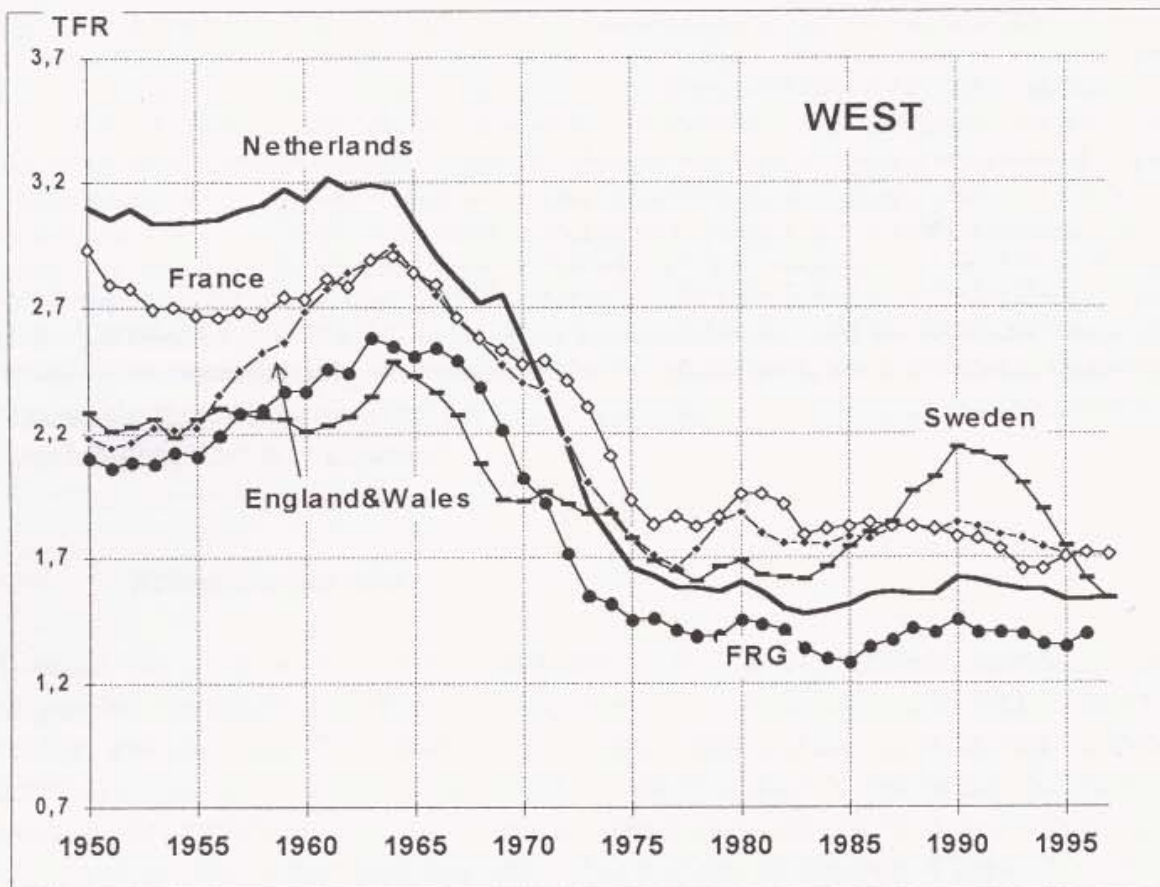
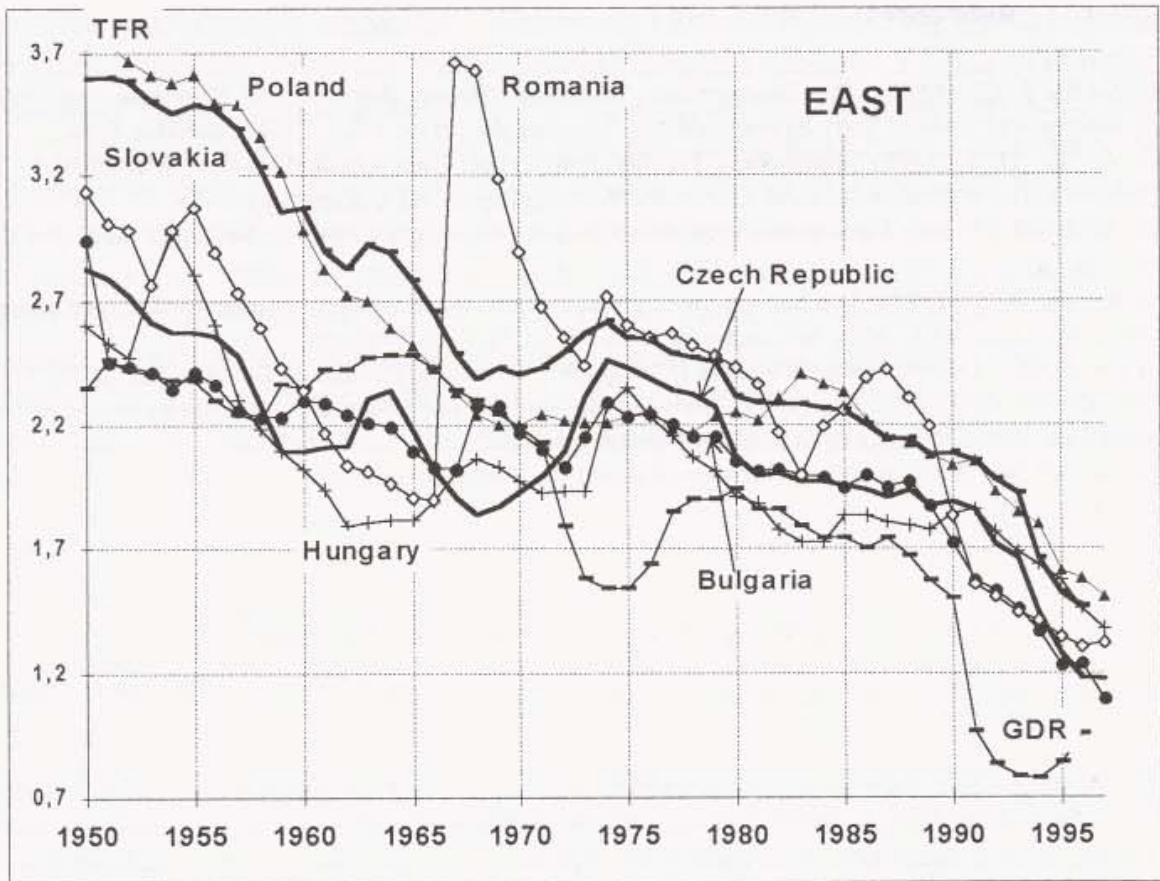


Figure 1 Total fertility rate development 1950 – 1997

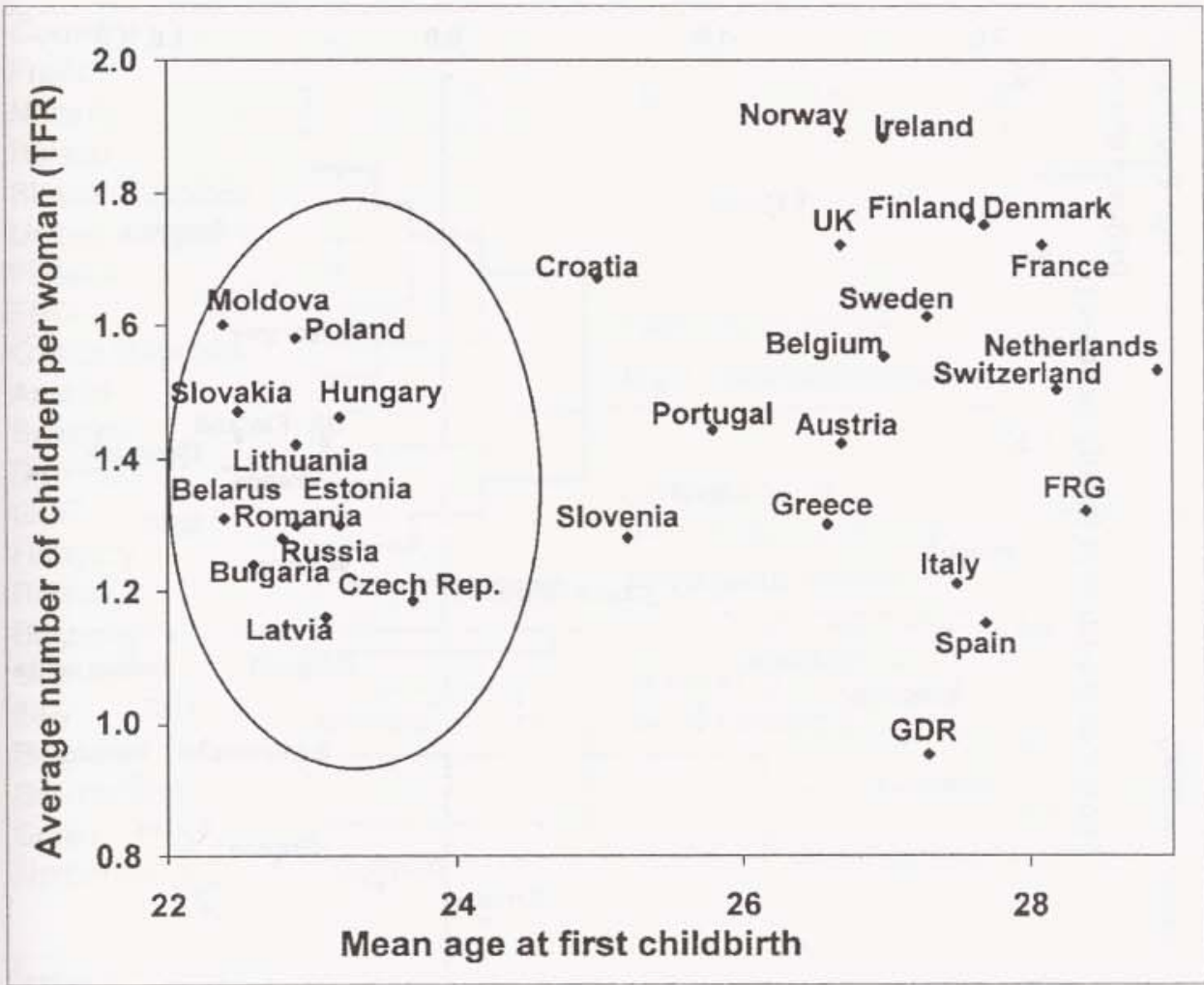


Figure 2 European fertility pattern in 1996

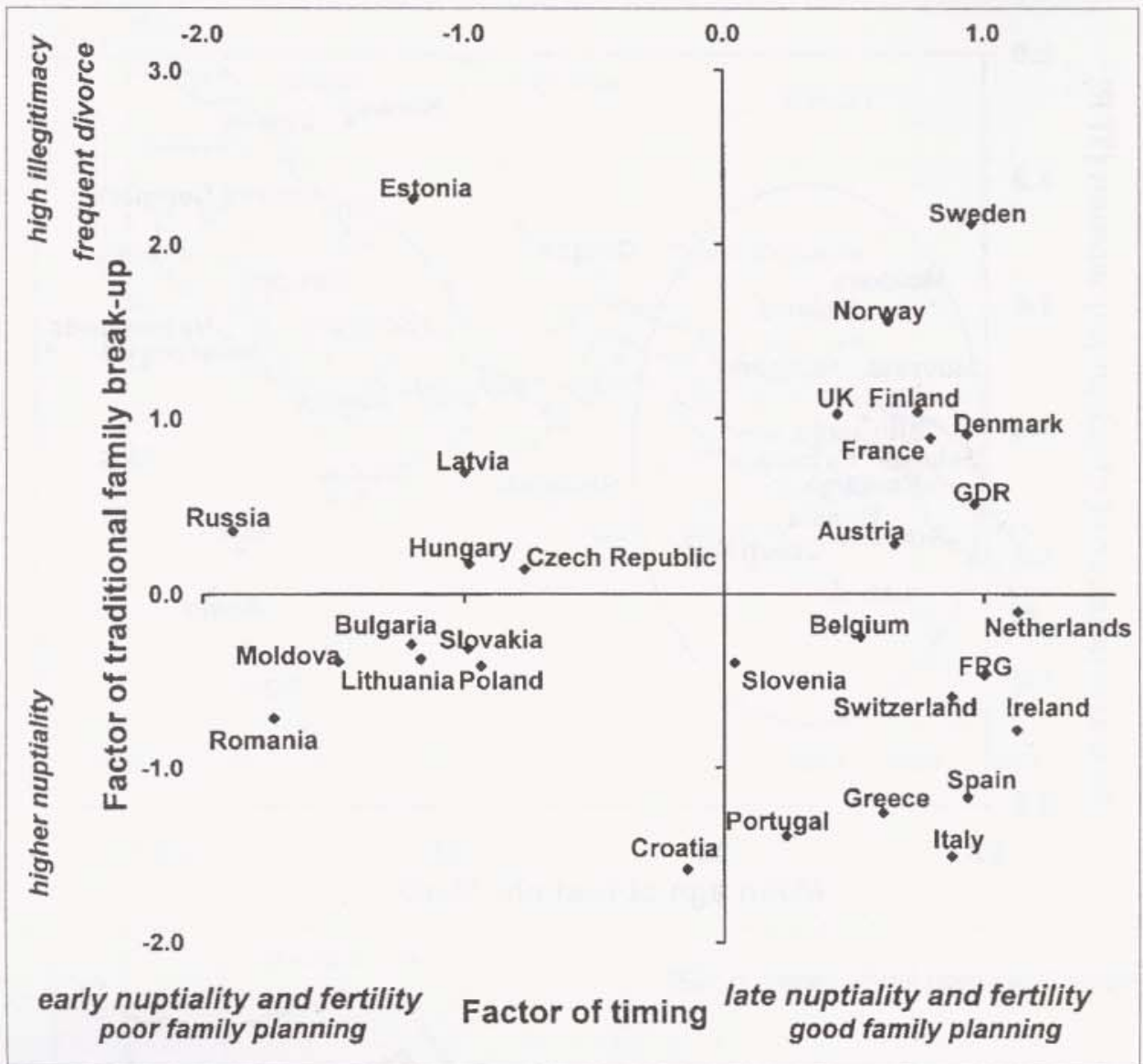


Figure 3 Factor scores for European family behavior in 1996

**Country**

- France
- Norway
- Poland
- Slovak Republic
- United Kingdom
- Finland
- FRG
- Czech Republik
- Austria
- Sweden
- Denmark
- GDR
- Hungary
- Romania
- Bulgaria
- Greece
- Italy
- Belgium
- Switzerland
- Spain
- Netherlands

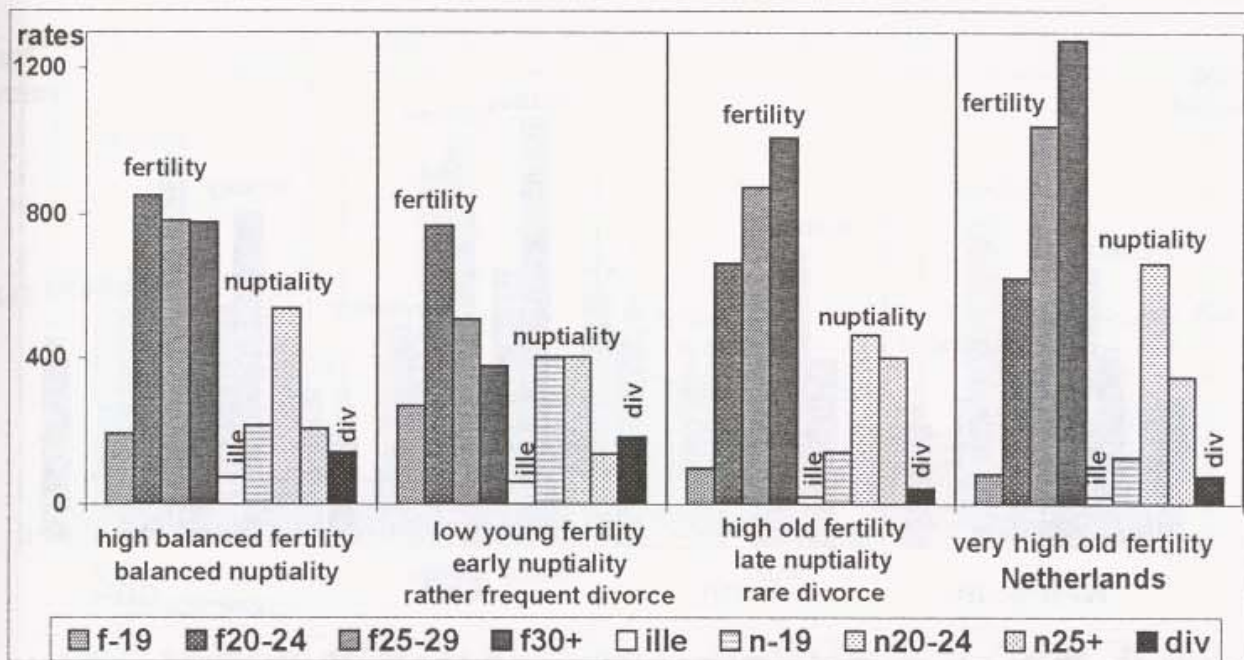
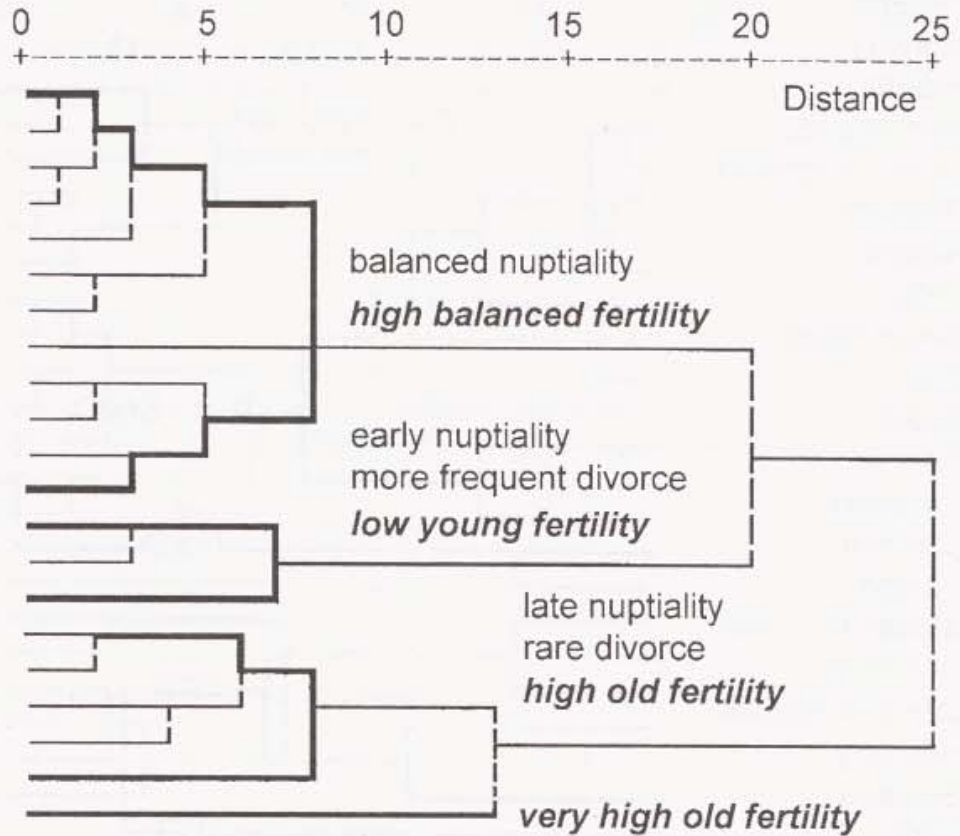


Figure 4 Country classification according to fertility and nuptiality profiles 1965

**Country**

Finland  
 Norway  
 France  
 Netherlands  
 United Kingdom  
 Belgium  
 Austria  
 FRG  
 Switzerland  
 Italy  
 Spain  
 Greece  
 Denmark  
 Sweden  
 Poland  
 Slovak Republic  
 Romania  
 Czech Republik  
 Hungary  
 Bulgaria  
 GDR

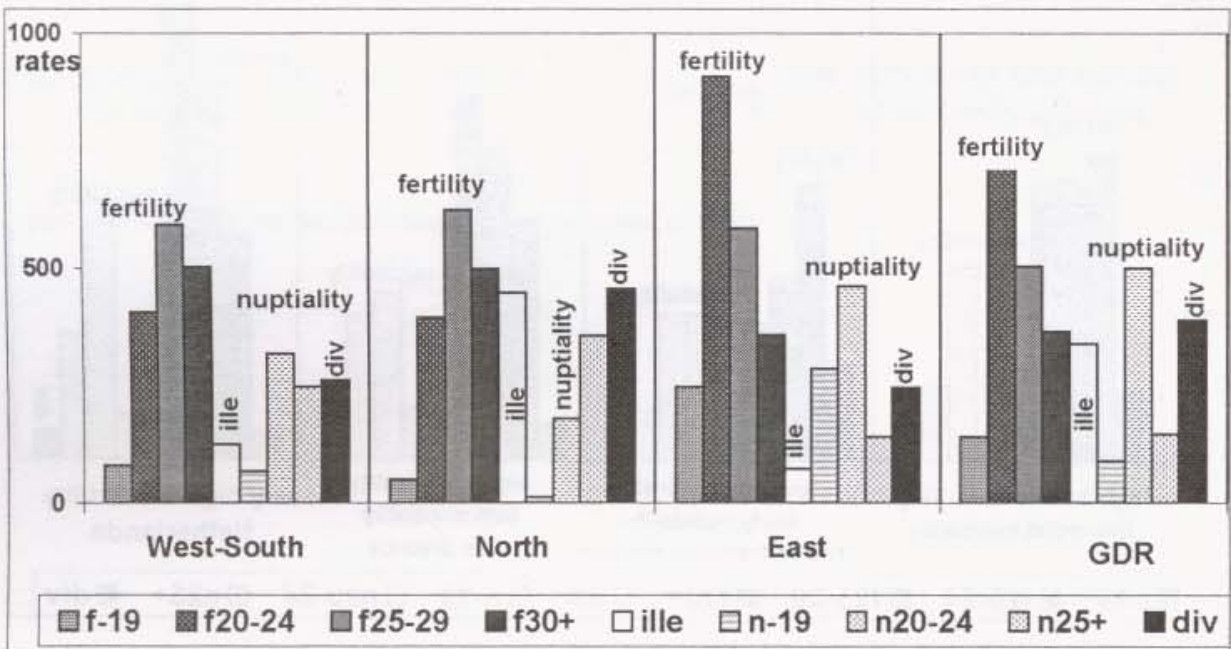
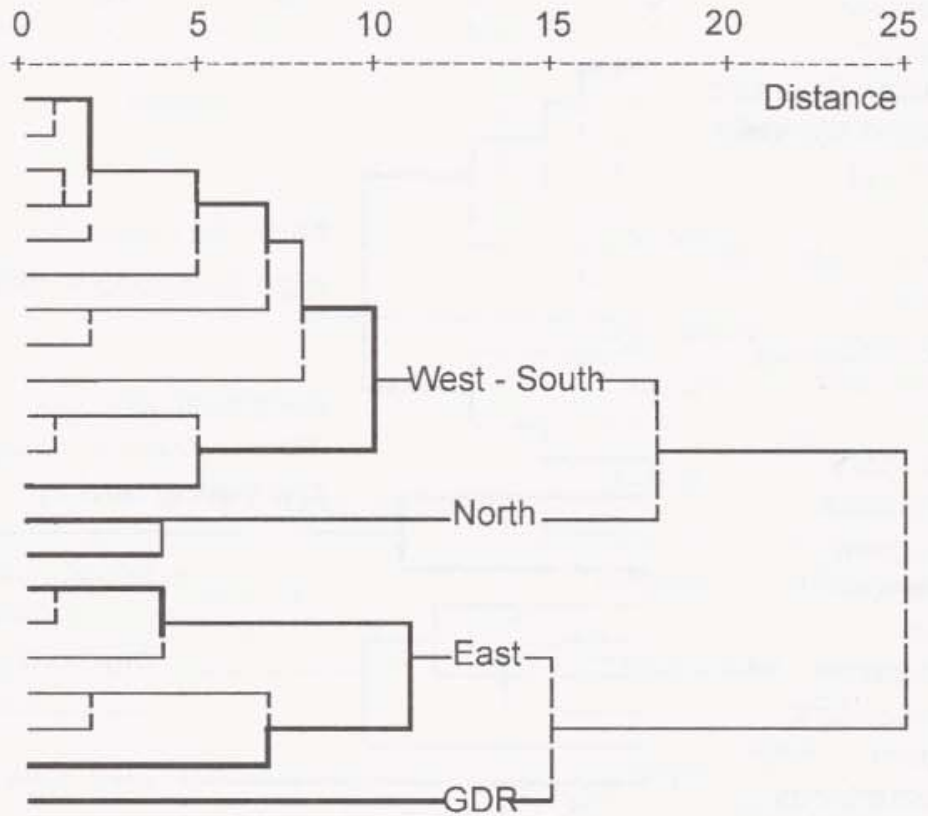


Figure 5 Country classification according to fertility and nuptiality profiles 1985



**Country**

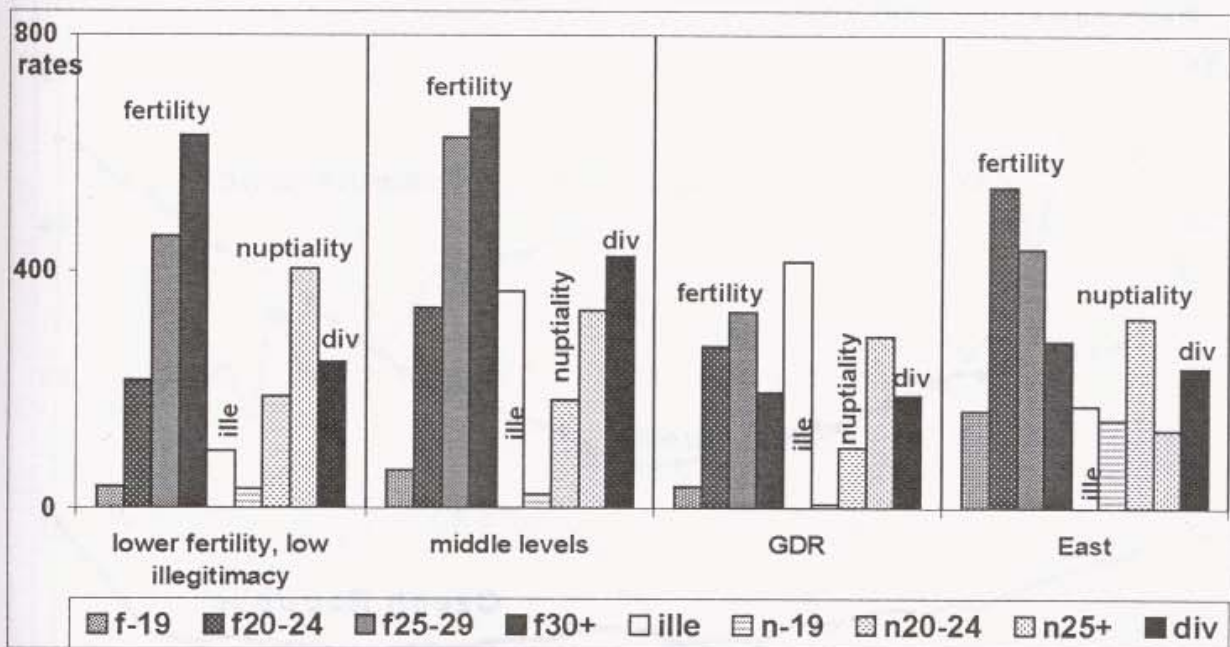
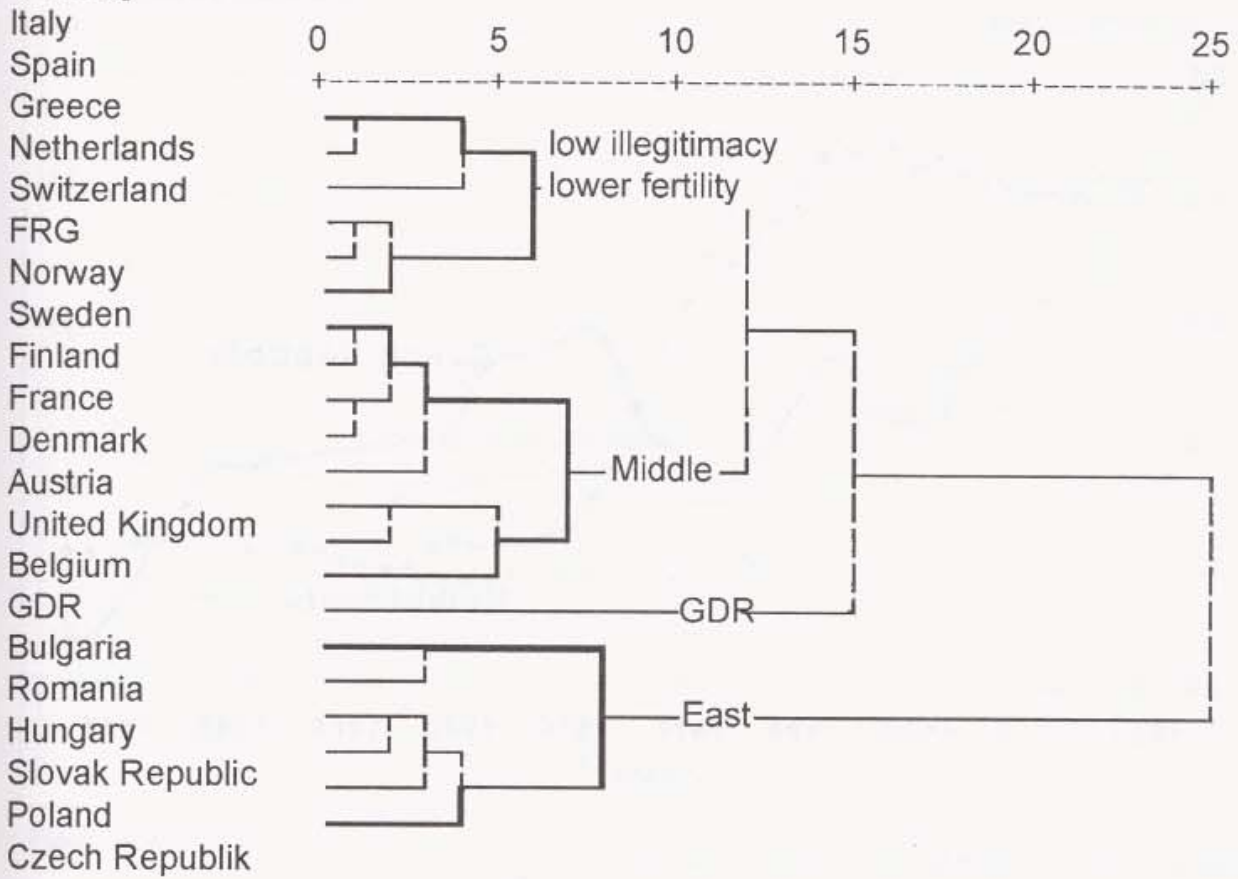


Figure 6 Country classification according to fertility and nuptiality profiles 1995

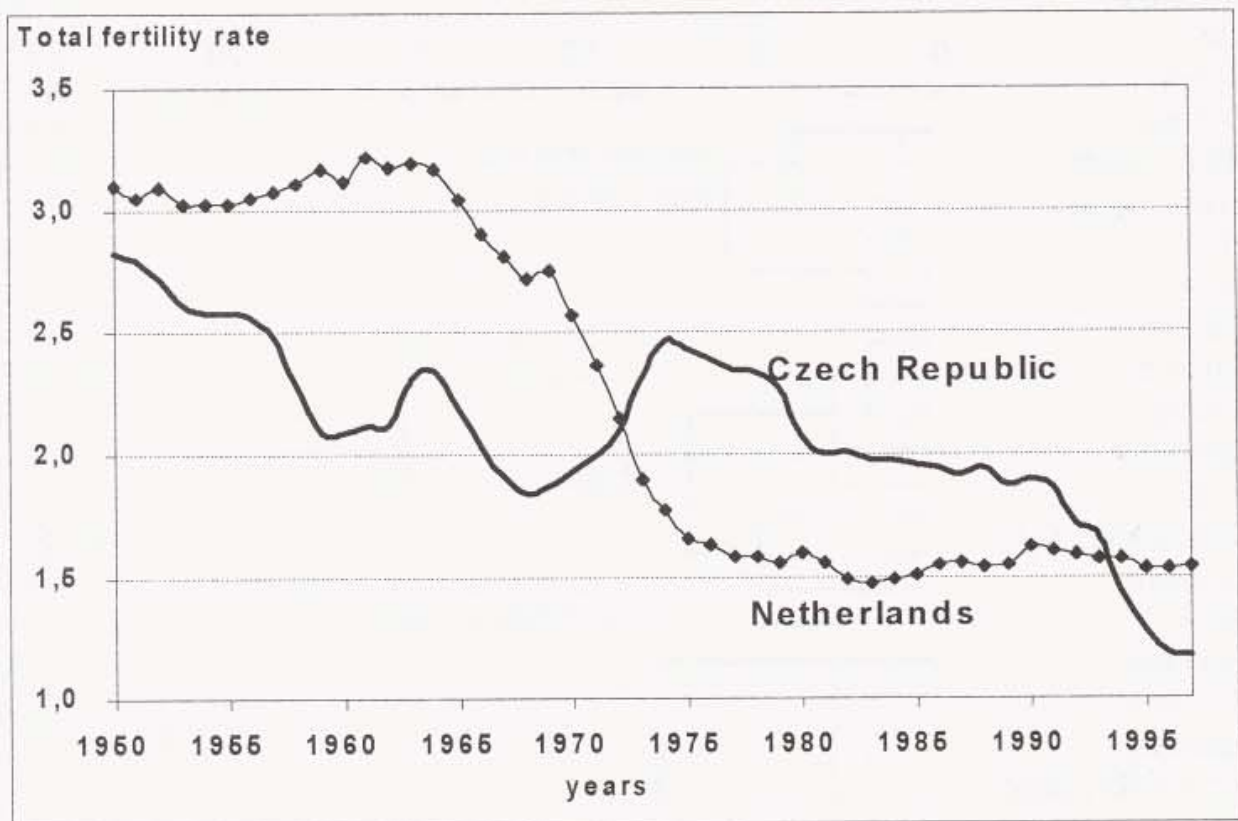


Figure 7a Average number of children per woman

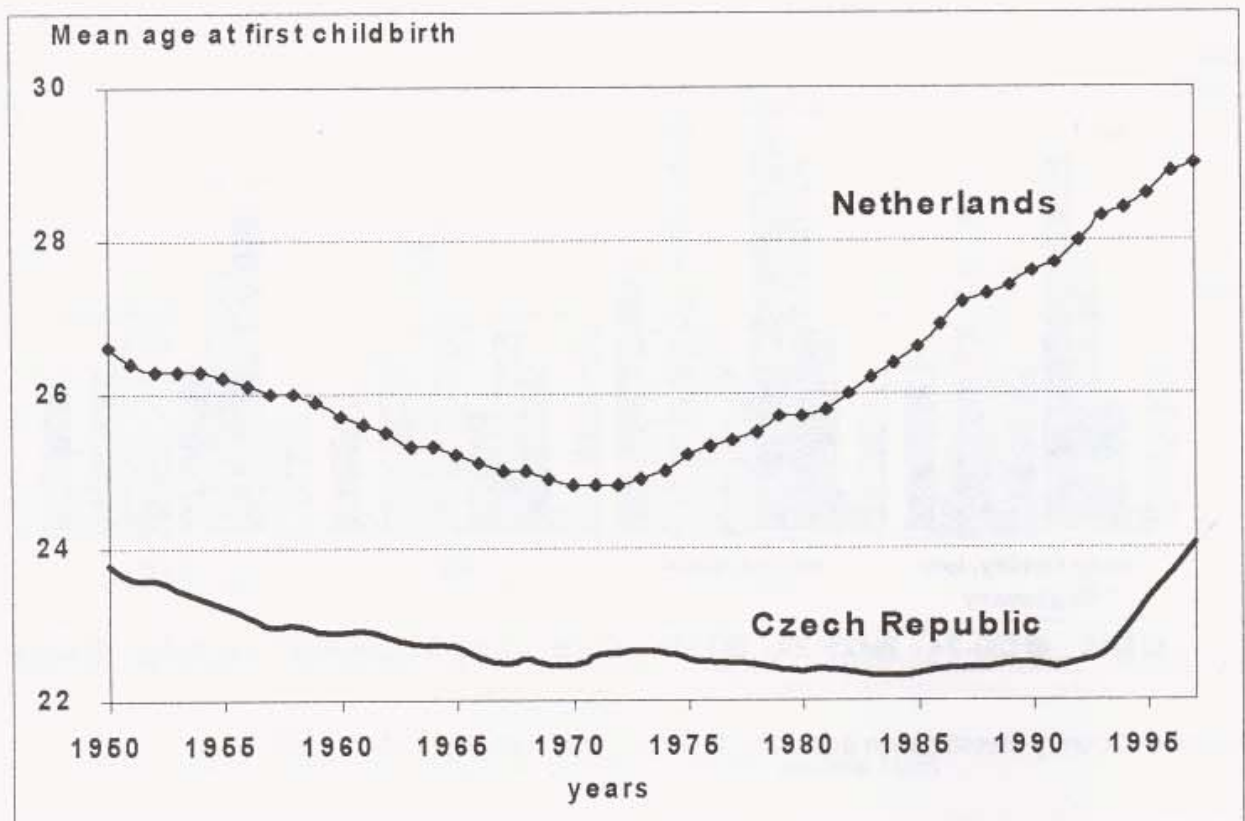


Figure 7b Mean age of women at birth of first child

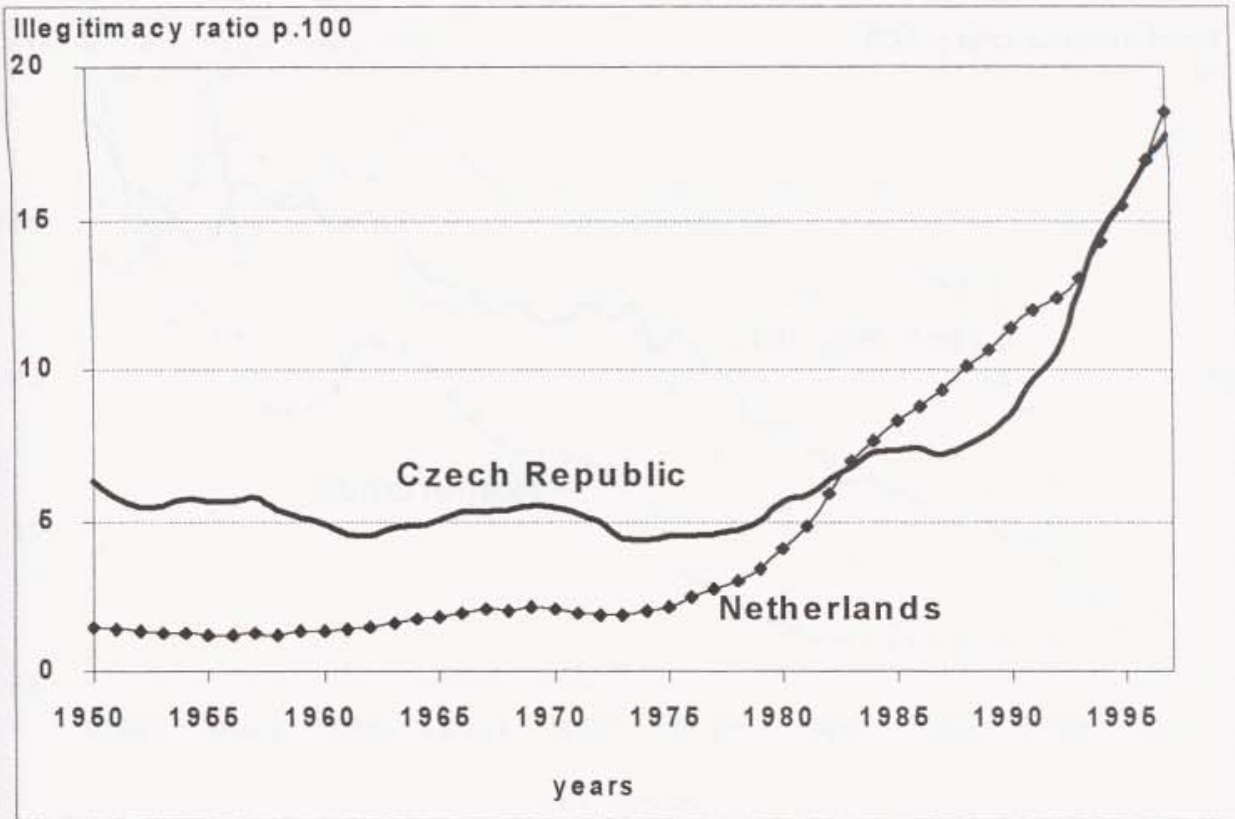


Figure 8a Number of extra-marital live births per 100 live births

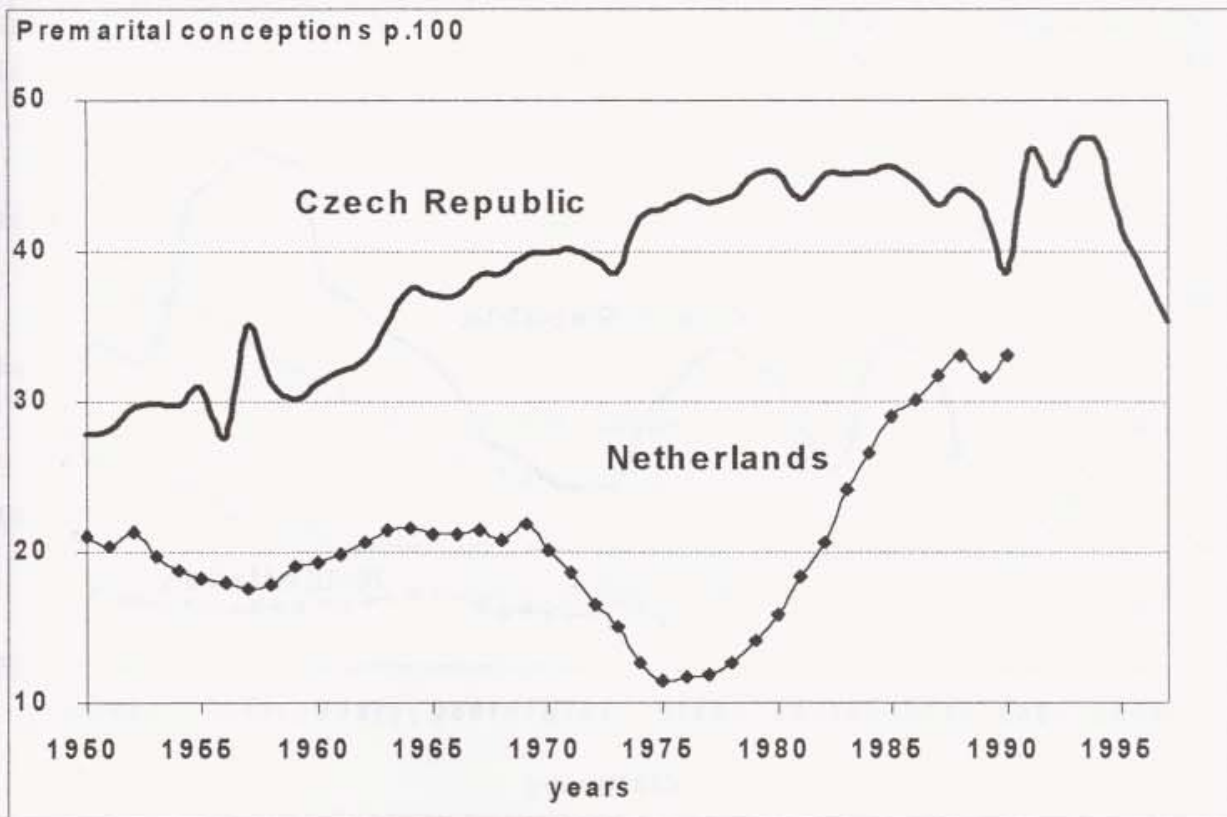


Figure 8b Children born within 8 months after marriage per 100 marriages

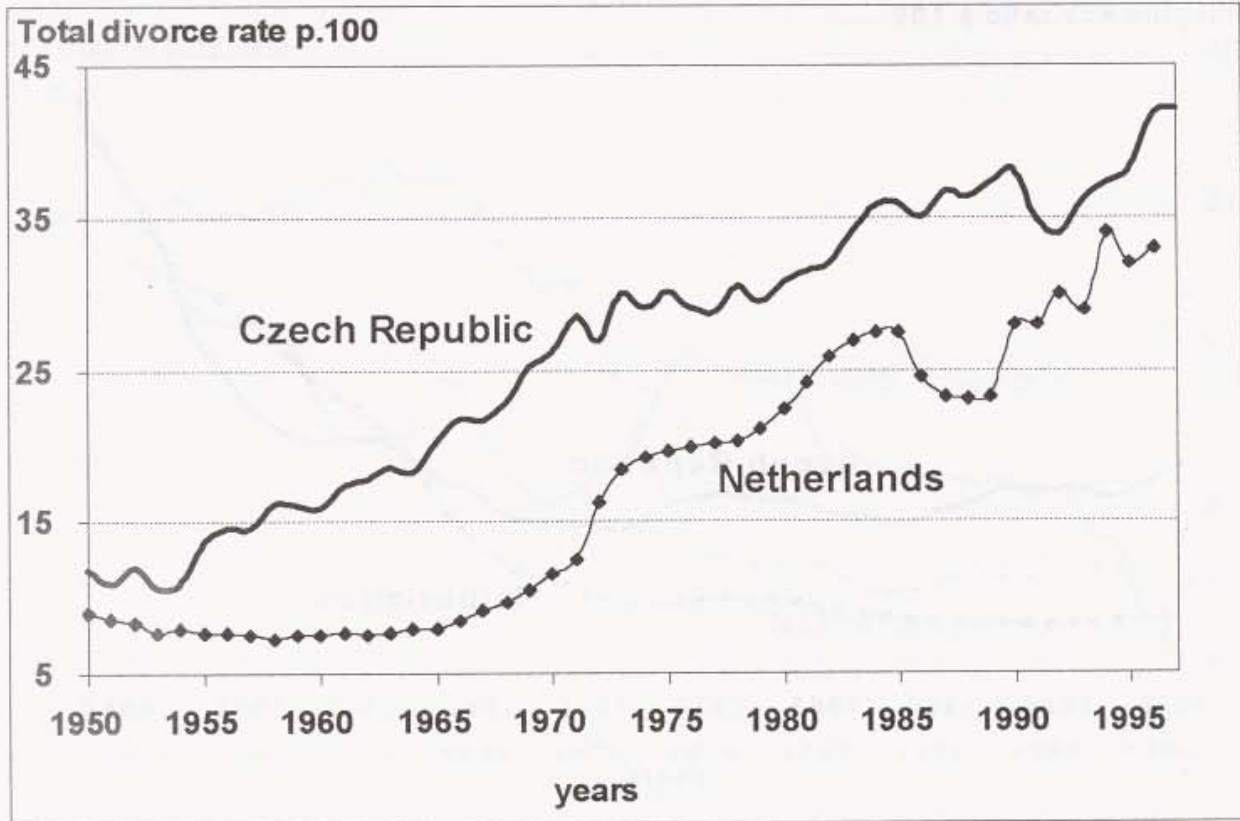


Figure 9a Total of duration-specific divorce rates per 100 initial marriages

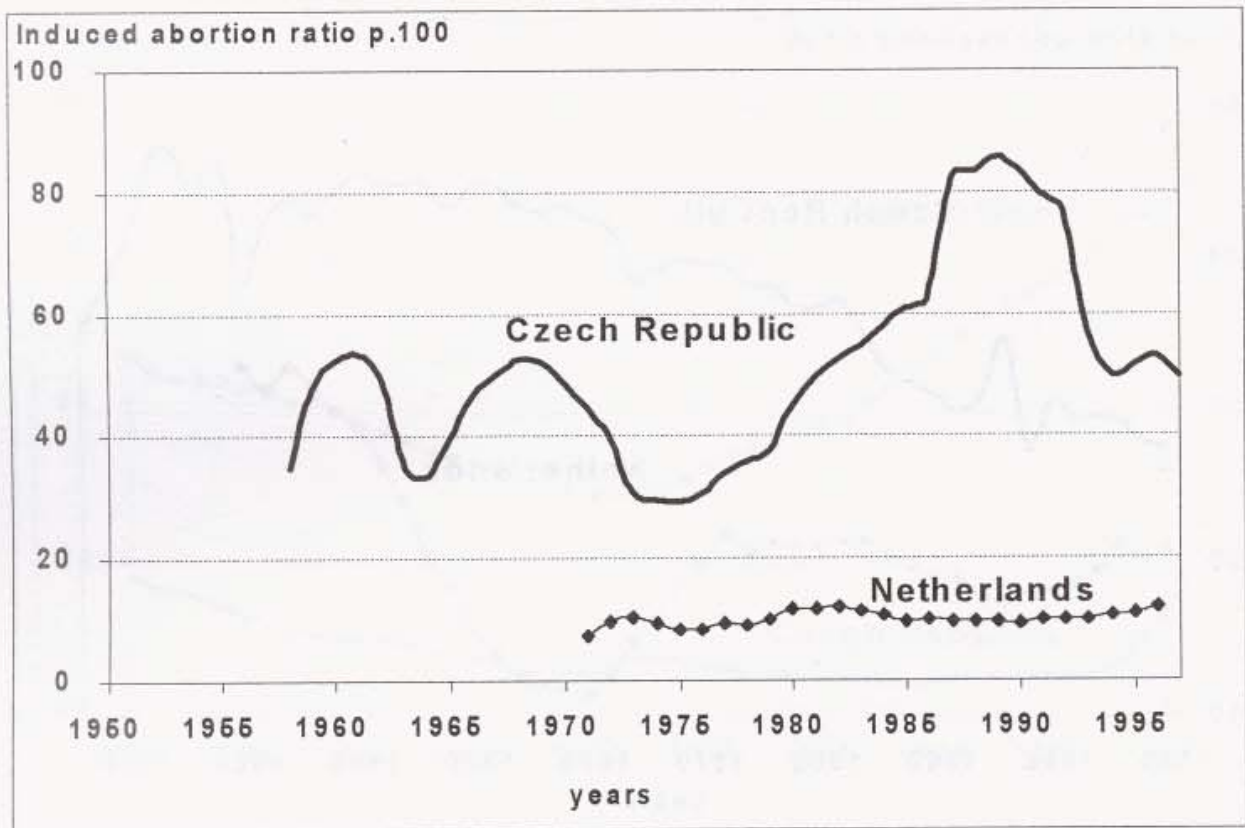


Figure 9b Number of induced abortions per 100 live births



Figure 10a Total first marriage rate for females below the age of 50

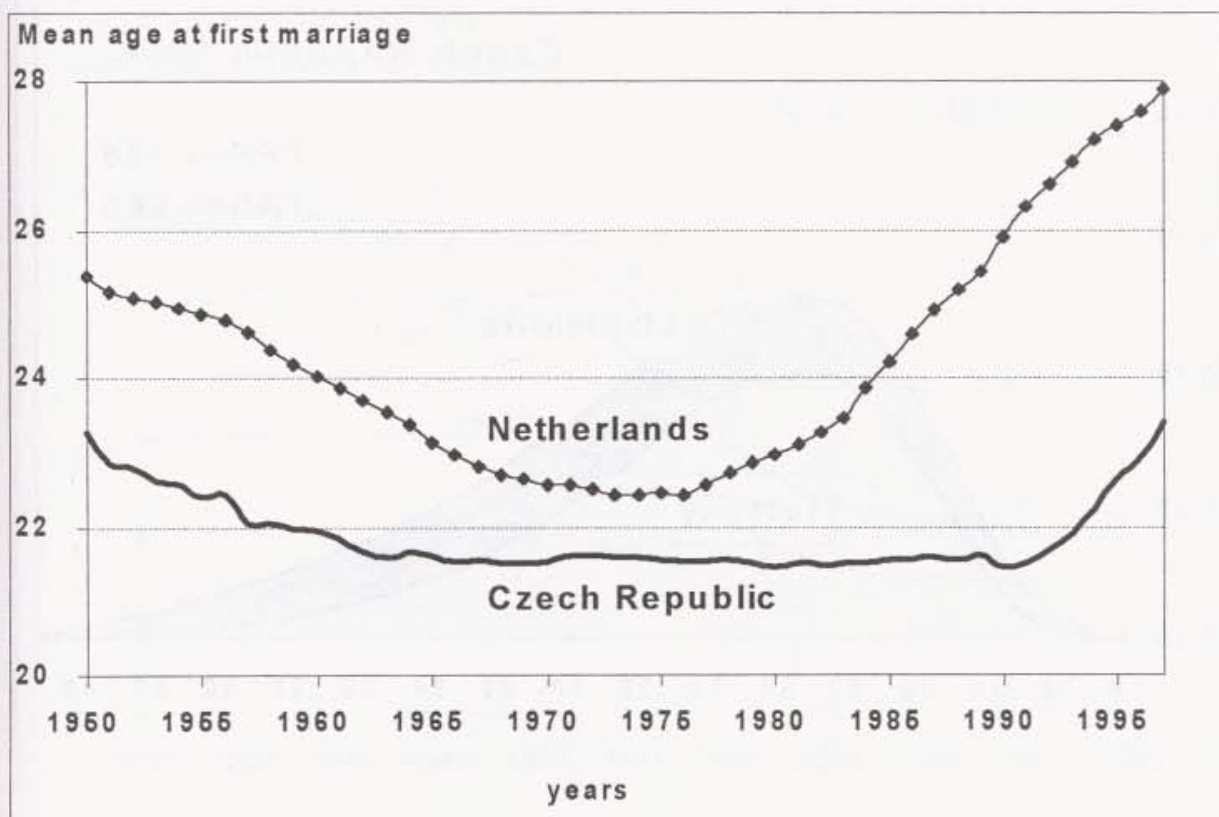


Figure 10b Mean age of women at first marriage

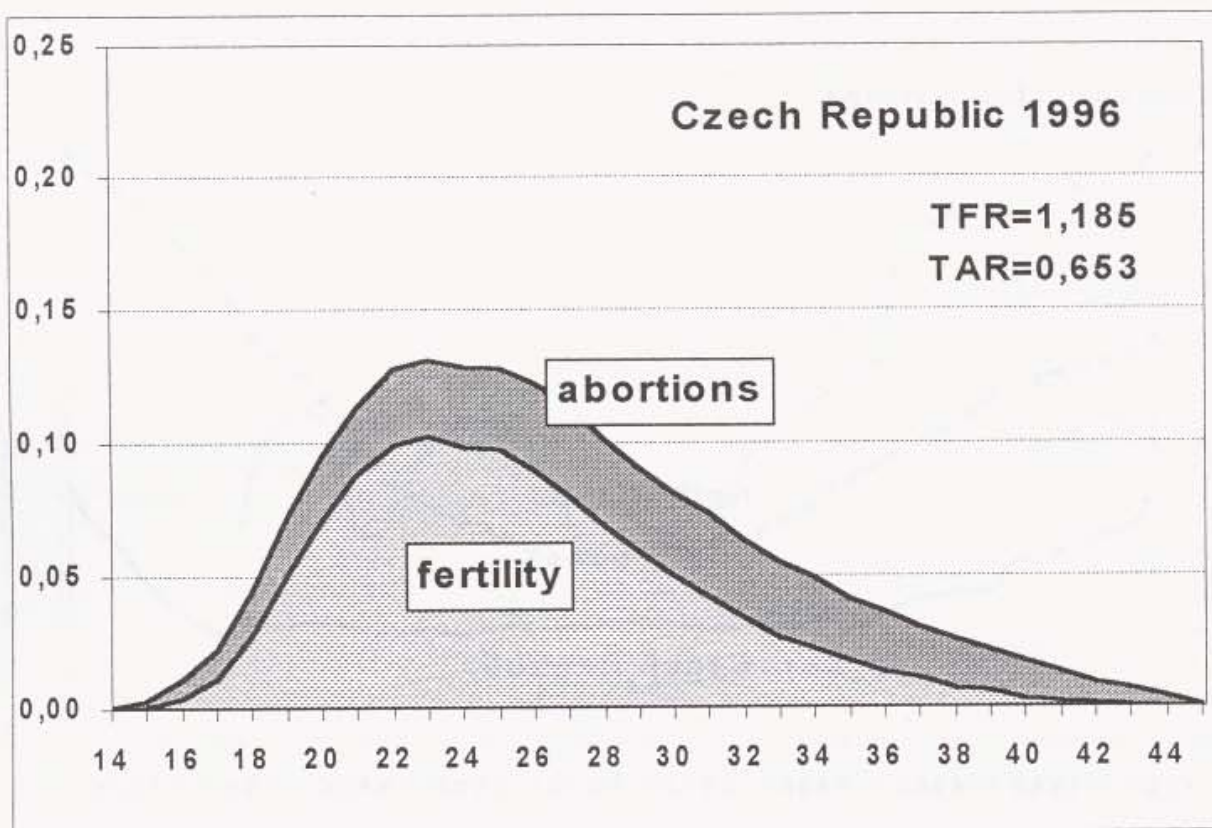
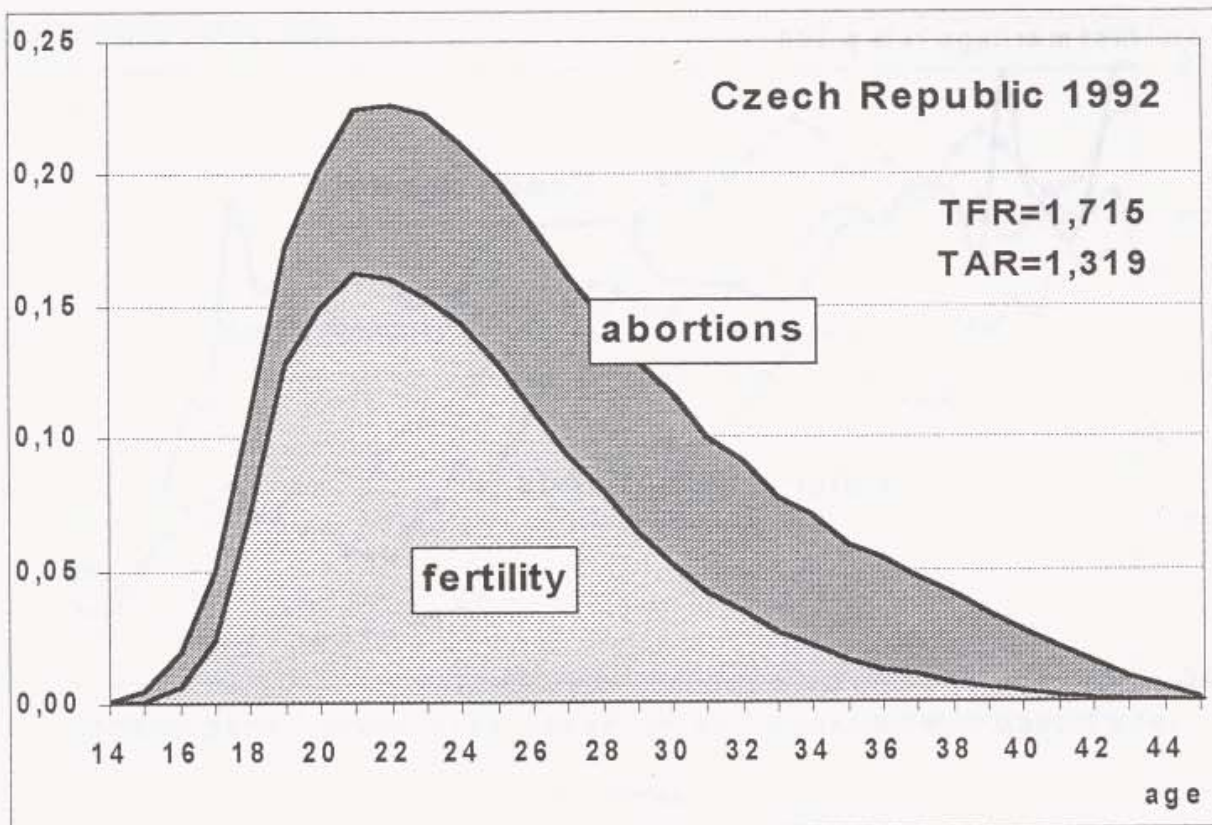


Figure 11 Cumulative age-specific fertility and abortion rates

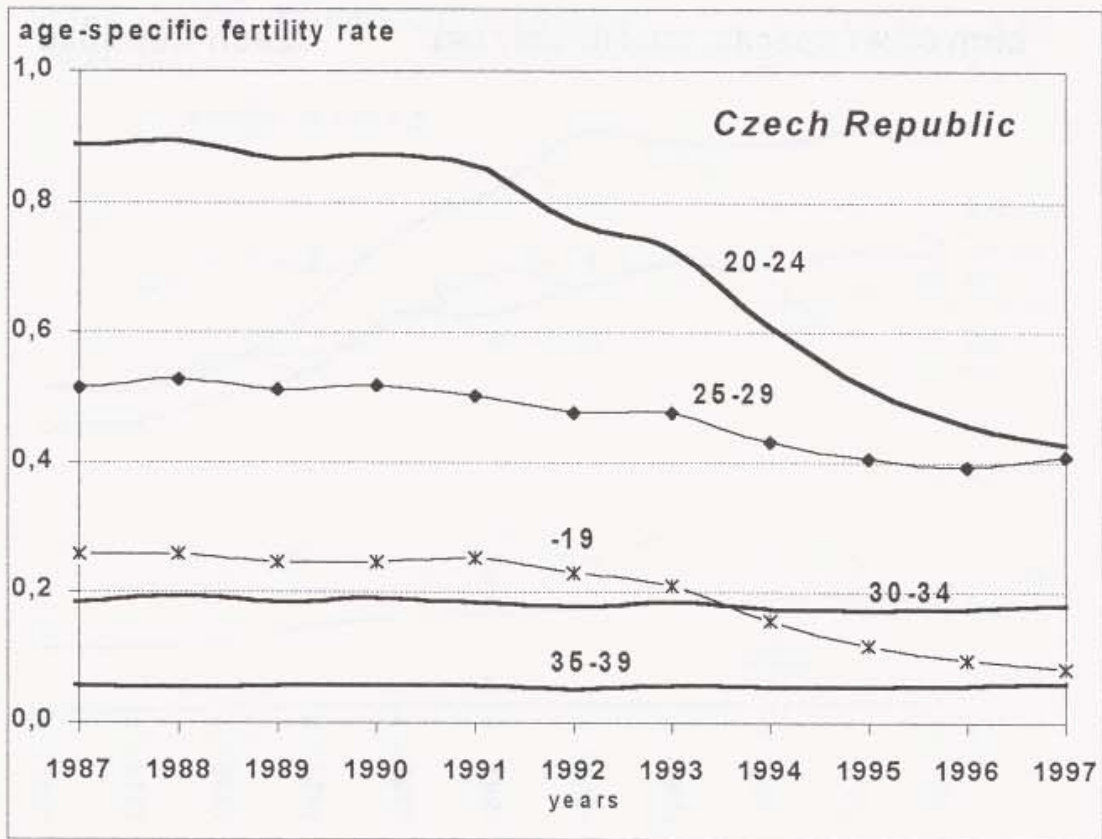


Figure 12a Age specific fertility rate development

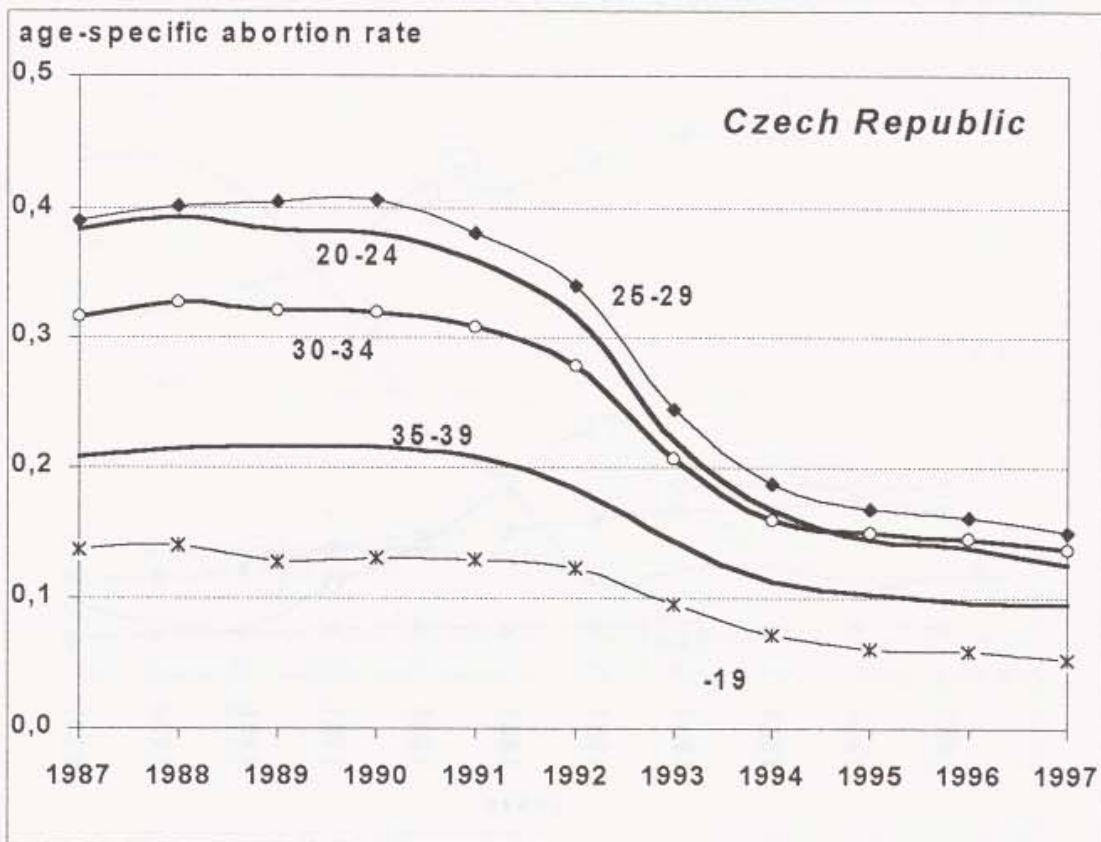


Figure 12b Age specific abortion rate development

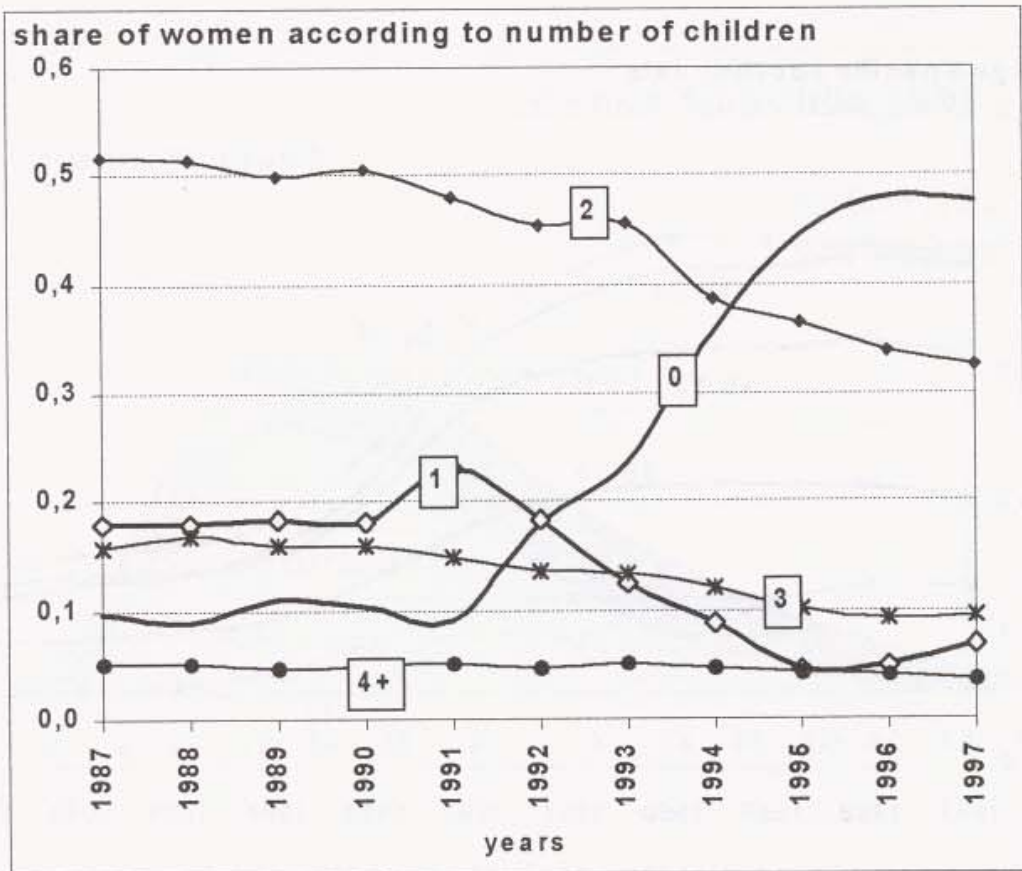
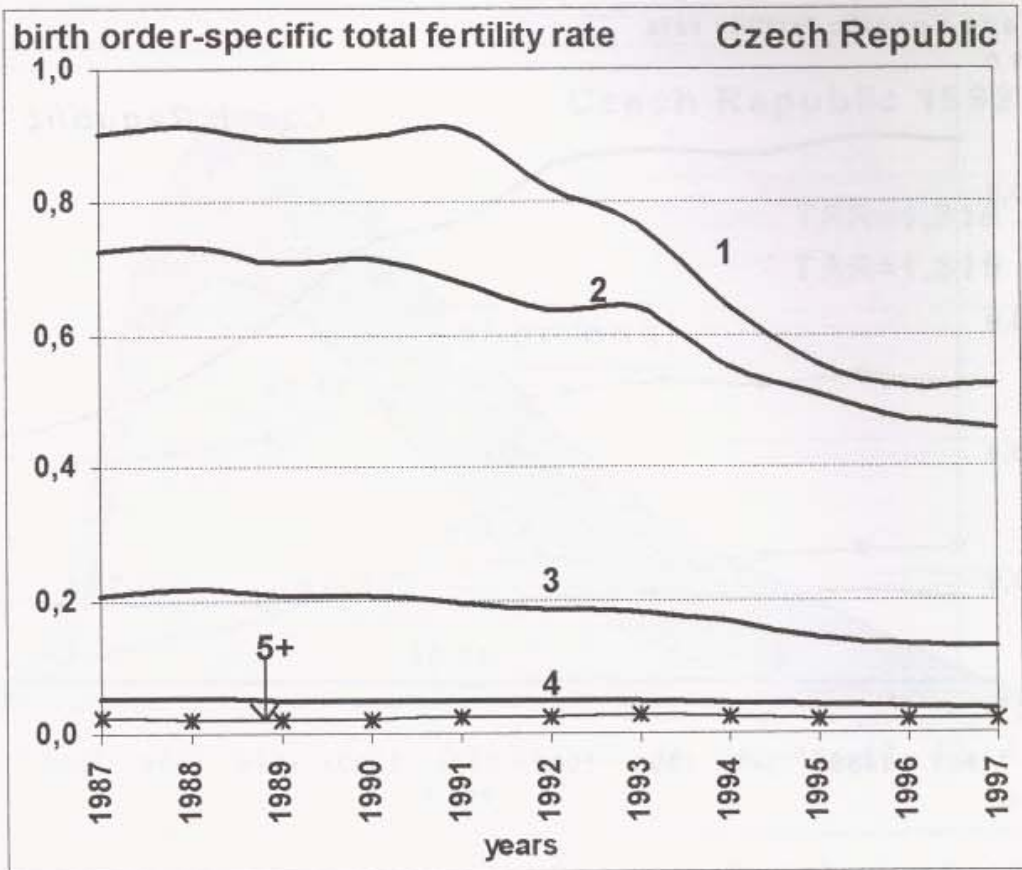


Figure 13 Birth order specific patterns



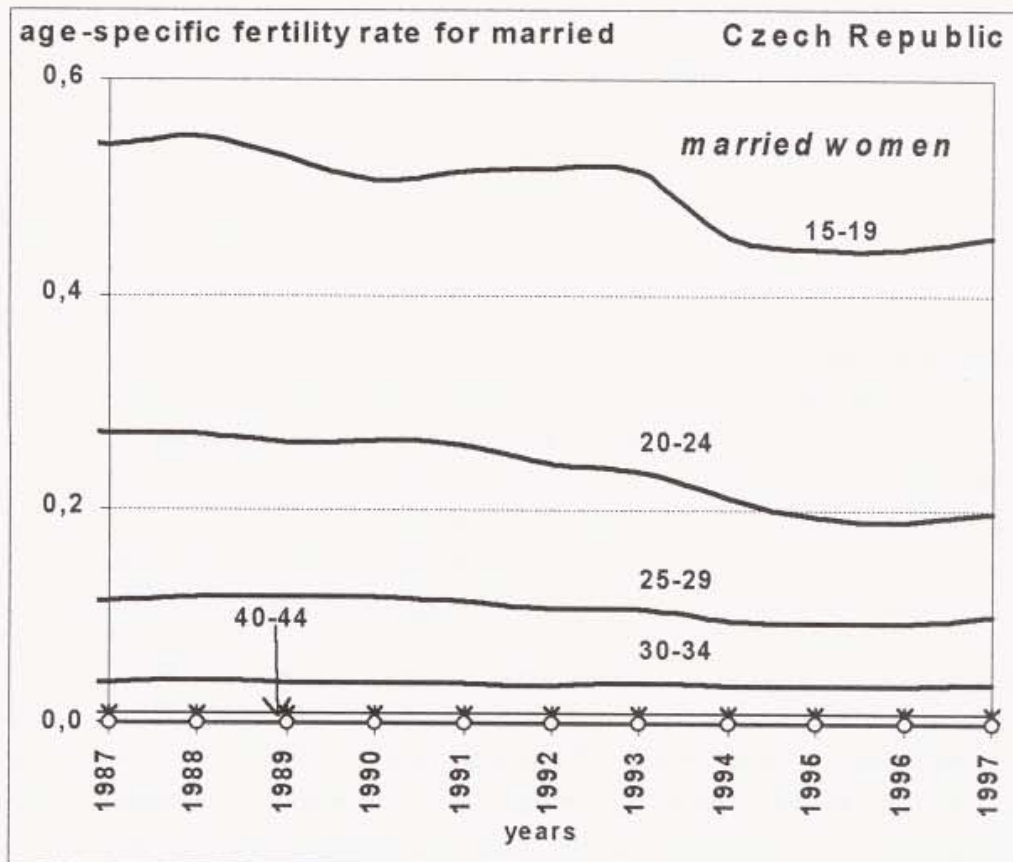
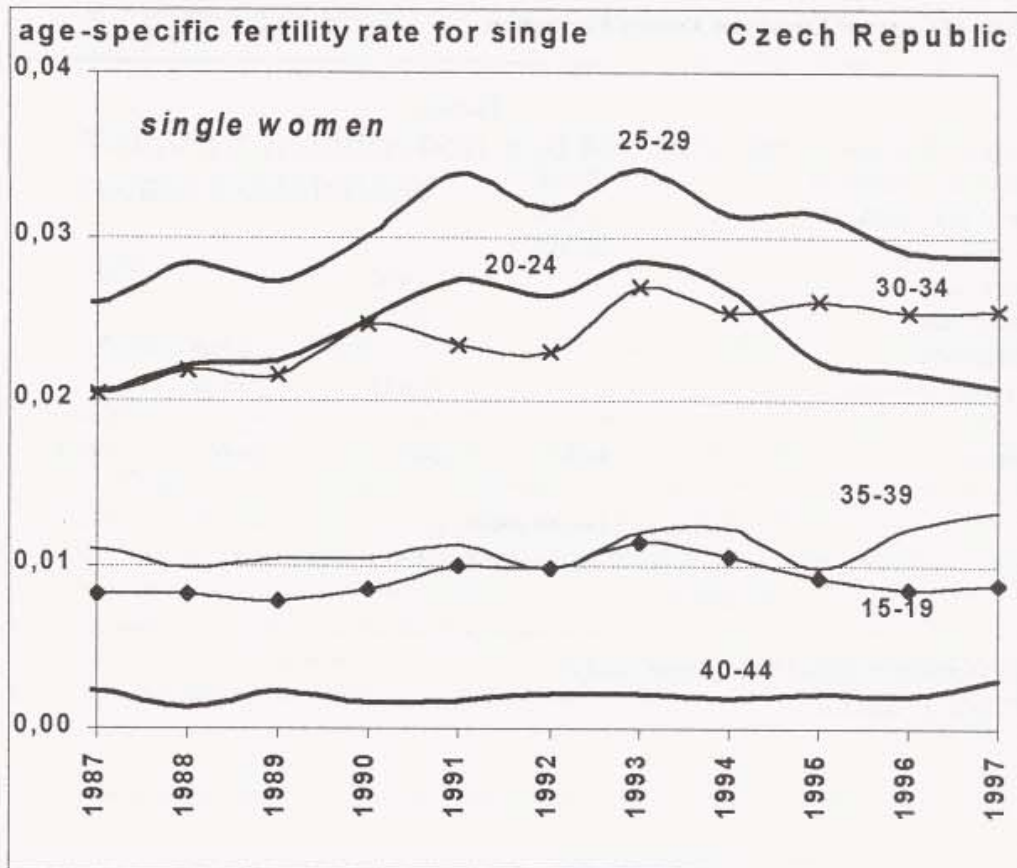


Figure 14 Age marital status specific fertility rates

**Table 1 Factors of Current European Family Formation**

	Factors			
	1	2	3	
Mean age at first childbirth	0.968			
Mean age at first marriage	0.931			
Abortion ratio	-0.807			
Illegitimacy ratio		0.876		
Total divorce rate		0.754		
Total fertility rate			0.840	
Total first marriage rate		-0.623	0.629	
% of variance	36.6	26.7	18.0	<i>Total</i> 81.3
Factor 1	timing and family planning			
Factor 2	break-up of traditional family			
Factor 3	levels			

Extraction Method: Principal Component Analysis.

Rotation Method: Varimax