



Demographic Research a free, expedited, online journal
of peer-reviewed research and commentary
in the population sciences published by the
Max Planck Institute for Demographic Research
Konrad-Zuse Str. 1, D-18057 Rostock · GERMANY
www.demographic-research.org

DEMOGRAPHIC RESEARCH

VOLUME 19, ARTICLE 14, PAGES 403-454
PUBLISHED 01 JULY 2008

<http://www.demographic-research.org/Volumes/Vol19/14/>

DOI: 10.4054/DemRes.2008.19.14

Research Article

Czech Republic:
**A rapid transformation of fertility and family
behaviour after the collapse of state socialism**

Tomáš Sobotka

Anna Šťastná

Kryštof Zeman

Dana Hamplová

Vladimíra Kantorová

This publication is part of Special Collection 7: Childbearing Trends and
Policies in Europe (<http://www.demographic-research.org/special/7/>)

© 2008 Sobotka *et al.*

This open-access work is published under the terms of the Creative Commons Attribution
NonCommercial License 2.0 Germany, which permits use, reproduction & distribution in any medium
for non-commercial purposes, provided the original author(s) and source are given credit.
See <http://creativecommons.org/licenses/by-nc/2.0/de/>

Table of Contents

1	Introduction	404
2	Period and cohort fertility: major patterns and trends	406
2.1	Completed fertility and parity distribution	406
2.2	Period fertility trends	410
2.3	Parity-specific analysis of fertility shifts after 1990	413
2.4	The transformation of childbearing patterns among women born after 1965	416
2.5	Selected trends and socio-economic differences in fertility	417
2.5.1	The sharp decline of teenage motherhood	417
2.5.2	The rise of extra-marital childbearing	420
2.5.3	Educational differences in the timing of first childbirth	422
2.5.4	Fertility among Roma	425
3	'Proximate' factors affecting fertility	427
3.1	Union formation and living arrangements: the rising importance of cohabitation	427
3.2	The link between union formation and entering parenthood	429
3.3	High intensity of divorce and union dissolution	430
3.4	Sexual behaviour, contraception, and induced abortions	431
4	Societal conditions affecting fertility and the family	434
4.1	Economic transformation, employment, and educational expansion	434
4.2	Family change, secularisation, and attitudes towards family and reproduction	436
4.3	Gender inequality, gender division of childcare and family roles	438
4.4	Ideal and intended family size	439
5	Family related policies	441
6	Discussion: major explanations of fertility shifts after 1990	444
6.1	New uncertainties and changed characteristics of the labour market	444
6.2	Educational expansion	445
6.3	'Disorder' in the life course and the new character of partnerships	445
7	Conclusions: future outlook	447
8	Acknowledgements	448
	References	449

Czech Republic: A rapid transformation of fertility and family behaviour after the collapse of state socialism

Tomáš Sobotka¹

Anna Štastná²

Kryštof Zeman³

Dana Hamplová⁴

Vladimíra Kantorová⁵

Abstract

Following the swift demise of the state-socialist regime in 1989, a profound transformation of family and fertility patterns has taken place in the Czech Republic. Family formation has been postponed and period fertility rates have fallen to very low levels, especially among young adults. Unmarried cohabitation has become relatively widespread and marriages have been progressively delayed or even foregone. These rapid shifts in family-related behaviour were primarily driven by a period change and resulted in a sharp discontinuity in cohort patterns of union formation and childbearing. We argue that the rapid change in family-related behaviour after 1990 was driven by a fundamental shift in the constraints and incentives for childbearing, which was conducive to later and more carefully planned family formation. The rapidity of observed changes can be explained as the outcome of a simultaneous occurrence of several factors, especially the expansion of higher education, the emergence of new opportunities competing with family life, increasing job competition, rising economic uncertainty in young adulthood, and changing partnership behaviour.

¹ Vienna Institute of Demography (VID). E-mail: tomas.sobotka@oeaw.ac.at

² Research Institute for Labour and Social Affairs, Prague. E-mail: anna.stastna@vupsv.cz

³ Czech Statistical Office, Prague. E-mail: krystoff@seznam.cz

⁴ Institute of Sociology, Academy of Sciences of the Czech Republic, Prague.

E-mail: dana.hamplova@soc.cas.cz

⁵ Population Division, Department of Economic and Social Affairs, United Nations, New York.

E-mail: kantorova@un.org. The views expressed in this paper are those of the author and do not imply the expression of any opinion on the part of the United Nations Secretariat.

1. Introduction

Following the swift demise of the state-socialist regime in the autumn of 1989, the Czech Republic experienced a profound transformation of the economy and society which led to the accession to the European Union on May 1, 2004. Many of the most crucial events took place shortly after 1989: the opening of the borders with Austria and (West) Germany, the establishment of democratic parliamentary political structures, the marketisation and privatisation of the once fully nationalised and rigid economy, and the dissolution of Czechoslovakia into two independent states as of January 1, 1993. Most institutions and businesses have been consistently re-oriented towards the 'Western' countries, and in particular the European Union.

While the pace of economic and political changes in the Czech Republic during the 1990s was impressive, these changes did not bring extreme shocks or turbulence as experienced in many other post-communist societies. Thanks to the existence of an extensive social security net, combined with a rapid expansion of small enterprises, the economic transformation did not entail severe consequences for the majority of the population (see Section 4.1 below). Following the accession to the European Union, the Czech Republic enjoys at present a period of accelerated economic growth combined with a rapid rise in wages and living standards. The GDP per capita, measured in terms of purchasing power parity, reached 79% of the EU level in 2006, surpassing Portugal and all countries of Central and Eastern Europe except Slovenia (Eurostat 2007).

Family life has undergone a considerable change as well. The most noticeable change is the intensive postponement of family formation. Fertility rates have fallen to very low levels, in particular among young women and between 1995 and 2005 the total fertility rates dropped below the 'lowest-low' threshold of 1.3. Less traditional union forms, especially unmarried cohabitation, have become widespread and marriages have been progressively delayed or even foregone by many younger men and women. Consequently, the proportion of extra-marital births has increased rapidly, surpassing 33% in 2006. Divorce rates, already high during the socialist era, have further increased. The rapid diffusion of modern contraception, particularly the Pill, has contributed to a more careful and cautious planning of family formation and to a steady fall in the number of induced abortions. Changes towards less traditional and less family-centred values and attitudes have been observed as well.

Although these rapid shifts in family-related behaviour were primarily driven by a period transformation, they are manifested by a sharp discontinuity in cohort patterns of union formation and childbearing. Whereas the cohorts born in the 1940s to 1960s are characterised by an early and almost universal marriage and family formation, the 'baby-boom' cohorts of the mid-1970s show more diverse patterns, characterised by a marked postponement of union formation and parenthood and also by higher rates of

childlessness and non-marriage. The growing diversity in the timing and sequencing of family-related transitions indicates increasing heterogeneity of behaviour within the population (Rindfuss 1991), which is partly linked to increasing differences between social groups.

The period after 1989 was also characterised by rapid changes in other demographic trends (Pavlik and Kučera 2002). Following a long stagnation in the 1960s to 1980s, when life expectancy at birth stalled among men and increased only by two years among women, mortality conditions started to improve immediately after 1990. This resulted in a marked increase in life expectancy, in particular among men (to 73.4 years, i.e., by 5.8 years between 1990 and 2006) and a reduction in the life expectancy gap between men and women to 6.3 years in 2006 (down from 7.8 years in 1990). Investment in healthcare, especially modern technologies and drugs that were unavailable during the socialist era, combined with the spread of a healthier lifestyle, as well as a convergence between men and women in some adverse behaviours (e.g. smoking, stress), were responsible for this trend.

Despite mortality improvements, deaths outnumbered live births from 1994 to 2005. This trend has been increasingly offset by migration, which has become an important component of population balance. Consequently, the Czech Republic has registered a renewed population increase since 2003. In 2006 a combination of rising period fertility rates, falling mortality and the relatively large size of cohorts in reproductive age led to a renewed natural increase of population, which is likely to have a temporary character. This minor natural increase of 1.4 thousand was complemented by net migration of 34.7 thousand, resulting in an overall population increase of 0.35%. Immigration is mostly work-related; two-thirds of the net migration balance is attributable to citizens of Ukraine, Slovakia and Vietnam, who also form the largest immigrant communities. Although underreported, emigration of Czech citizens (only 2.3 thousand recorded in 2005) has not become as widespread as in Poland and some other post-communist countries.

The total population size (10.33 million in mid-2007) declined by 0.3% between 1990 and 2007. Fluctuating fertility levels in the past caused substantial irregularities in the age structure of the population, posing considerable challenges for the educational system and labour market, as well as for the sustainability of the pension system. Until recently, population ageing in the Czech Republic was not as pronounced as in some other European countries. However, very low fertility levels resulted in a falling proportion of children below age 15 from 21% in 1990 to 15% in 2005. In addition, the number of people in retirement age will increase rapidly after 2009.

Our contribution aims to map the changes in fertility patterns and the main trends in living arrangements, as well as the character of family life, and to outline the main determinants of these changes. The focus is especially placed on the period of rapid

societal transformation after 1989, but we also inspect long-term developments and analyse changes in cohort behaviour. In addition, we look at the transformation in family-related policies and the general character of the welfare state and discuss their possible contribution to the observed changes in family life.

This chapter is structured as follows: The next section provides an analysis of long-term changes in fertility tempo and quantum, focusing in detail on fertility decline after 1989 and the role of tempo effects in this process, as well as changes in cohort fertility trajectories among women born after 1965. In addition, this part looks in more detail at selected fertility differentials, namely at the decline in teenage motherhood, the sharp increase in extra-marital childbearing, educational differentiation in family formation, and fertility among the Roma minority. The subsequent section (Section 3) reviews changes in the 'proximate' factors affecting fertility, namely partnership and union formation and the spread of unmarried cohabitation, the high intensity of union dissolution, and the trends in reproductive behaviour. Section 4 outlines major social and economic factors that have contributed to the rapidly changing fertility patterns in the last fifteen years. This section also describes the changing character of the Czech family and provides a sketch of family-related attitudes and fertility intentions among Czech women. Section 5 outlines changes in family-related policies after 1989. Section 6 discusses some of the major factors contributing to the observed shift to lower and later fertility after 1990. Section 7 concludes the chapter.

2. Period and cohort fertility: major patterns and trends

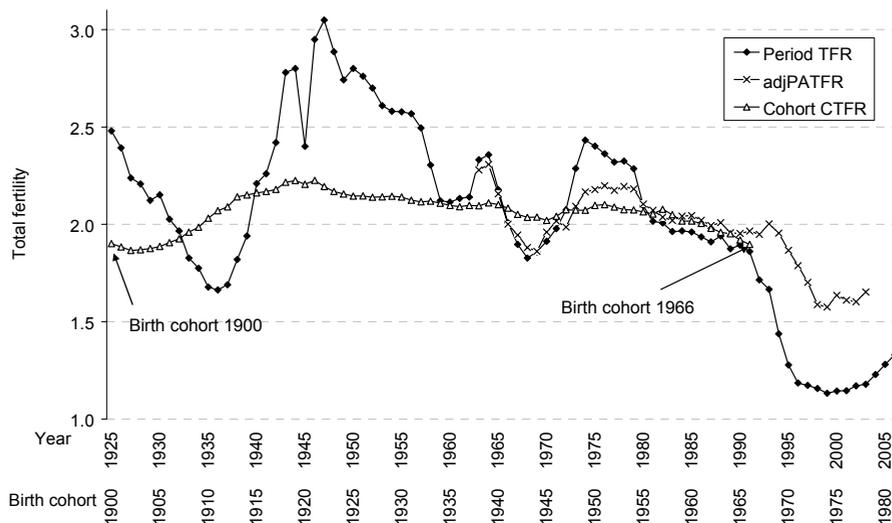
2.1 Completed fertility and parity distribution

The area of the present-day Czech Republic had experienced a significant decline in fertility, linked to a conscious limitation of births within marriage, from the 1870s (Fialová, Pavlík and Vereš 1990). Women born in the early 20th century reached a low fertility level of 1.87 in the 1902-03 cohorts. High levels of infant mortality at the time implied that fertility fell far below the replacement level threshold, which was close to three children per woman. Frequent swings in period fertility in the decades after the Second World War had surprisingly little impact on completed fertility among Czech women born after 1910. There were no signs of a distinct baby boom similar to that experienced in most Western societies by the 1930s cohorts during the 1950s and 1960s. Women born between the 1920s and 1950s achieved family sizes of about 2.1 children on average. Women born after 1960 experienced a gradual decline in completed fertility, which accelerated somewhat among the cohorts entering parenthood

after 1990. As a result, the mean number of children per woman in the early 1960s cohorts fell again below two (see Figure 1 and Section 2.4).

Whereas the completed fertility remained remarkably stable for most of the analysed cohorts, family size distribution underwent a substantial transformation. Increasing orientation towards a two-child family constituted the most characteristic trend that had begun among women born in the late 19th century and continued uninterrupted thereafter. This trend became most pronounced during the socialist era; around 55% of women born between 1950 and the late 1960s had two children (Figure 2). Although the two-child family ideal has spread to other European regions as well, such a pronounced pattern of family size distribution is fairly unusual. Among 18 societies analysed by Shkolnikov et al. (2004), only Bulgarian women born in the early 1960s have given birth to two children more frequently (57%) than the Czech women.

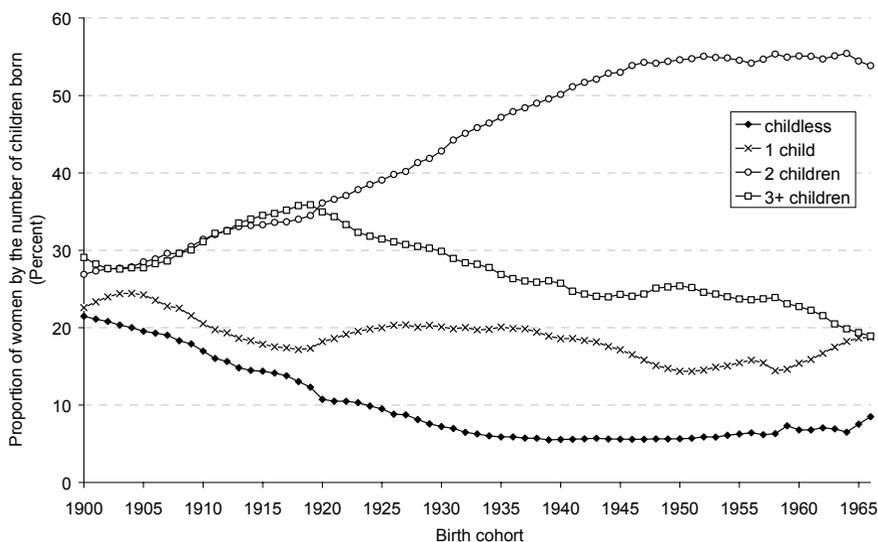
Figure 1: Period (1925-2006) and cohort (1900-1966) fertility indicators, Czech Republic



Sources: Completed cohort TFR: Authors' computations based on vital statistics data for 1961-2004, Census 1980 (FSU 1982) for birth cohorts 1921 through 1960; Census 1961 (Ústřední Komise 1965) for birth cohorts 1900-1920. Period fertility indicators: CZSO (2000 and 2007) and authors' computations based on vital statistics data for 1961-2005.

Note: Adjusted PATFR is an indicator of period fertility proposed by Kohler and Ortega (2002). It is based on multistate fertility table constructed from age and parity-specific birth probabilities, which are adjusted to remove distortions caused by the changes in the timing of childbearing.

Figure 2: Cohort parity distribution among Czech women born in 1900-1966



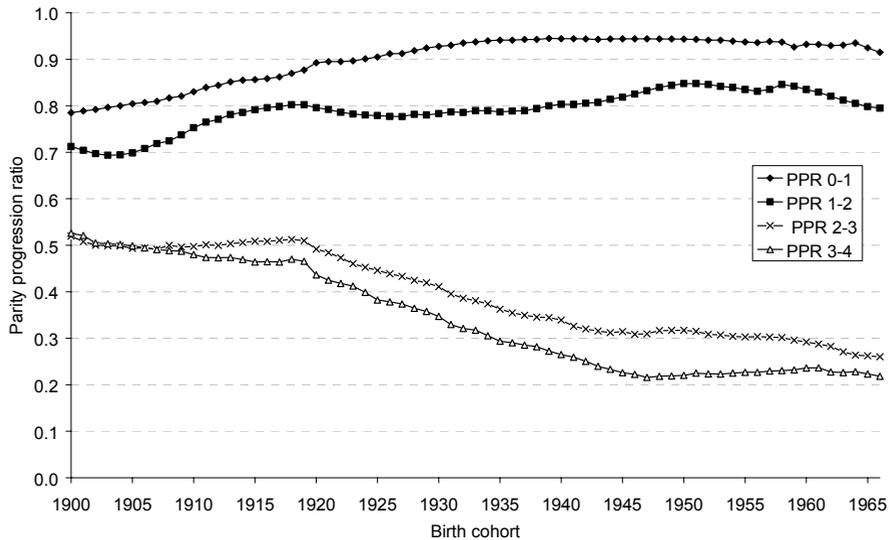
Sources: Authors' computations based on vital statistics data for 1961-2004, Census 1980 (FSU 1982) for birth cohorts 1921 through 1960; Census 1961 (Ústřední Komise 1965) for birth cohorts 1900-1920.

The shift towards a two-child family model was accompanied by a continuous decline in childlessness, which reached very low levels among women born since the early 1930s. A universality of marriage and childbearing was typical of reproductive patterns throughout the socialist period, supported directly and indirectly by various institutional arrangements and population policies. Only 5 to 7% of women born in 1930-1963 remained permanently childless; this level is only slightly above the level of biological infertility and was partly achieved thanks to the prevailing habit of early family formation.

Larger families were becoming increasingly unusual, which is illustrated by a long-lasting decline in childbearing intensity among women with two and three children and also a more recent drop in childbearing intensity among women with one child. Women born in the mid-1960s achieved a progression rate to second child of 0.80 (a slight decline from 0.85 reached by the 1958 cohort), whereas their third-child progression rate dropped to 0.26 (Figure 3), which is well below the level reached in the neighbouring countries (Sobotka 2005). The progression rate to fourth birth declined

below the third-birth progression rate and stabilised above 0.20. Overall, less than one-fifth of women born after 1963 will eventually have three or more children.

Figure 3: Parity progression ratios among Czech women born in 1900-1966



Sources: Authors' computations based on vital statistics data for 1961-2004, Census 1980 (FSU 1982, for birth cohorts 1921 through 1960); and Census 1961 for birth cohorts 1900-1920 (Ústřední Komise 1965).

The state-socialist era was characterised by the near-universality of the two-child family model and relatively low socio-economic differentiation in completed family size (Rychtaříková 2004). Although many fertility differentials found in other countries, especially with respect to education, were found in the Czech Republic as well, the differences between highly educated and low-educated women were less pronounced. For instance, the completed fertility for the cohort born in 1960 was 2.26 among women with a basic education and 1.73 among university-educated women. In particular, voluntary childlessness was unusual in all social strata and fewer than 12% of women in any educational category born in the 1940s and 1950s remained permanently childless (Rychtaříková 2004). Women with an elementary education reached the least uniform family distribution: they remained more often childless than women with the middle levels of education, but they also frequently formed large

families. In the cohorts born around 1960, close to 40% of women with a basic education had three or more children, compared to 11-12% among women with a university education. Part of this differentiation can be explained by a larger share of the higher-fertility Roma (Gypsy) ethnic minority in the group of low-educated women (see Section 2.5.4).

Religious affiliation, as declared in the population census, is associated with modest differences in family size. Catholics, who form the main religious group (26% of the population declared an affiliation to the Catholic Church in 2001), have a somewhat higher fertility at each age category than the majority of people with no religious affiliation. For instance, the 2001 Population Census recorded a mean number of 2.03 children per woman with no religious affiliation aged 40-49 and 2.18 children per woman of the same age with Roman Catholic affiliation (CZSO 2003).

2.2 Period fertility trends

Period fertility rates in the Czech Republic have been closely linked to external factors, such as wars, economic crises, population-related policies, and major societal upheavals. The economic crisis of the 1930s had already brought a marked decline in the total fertility rate (TFR) to a low level of 1.66 in 1936-37 (see Figure 1). In contrast, the early years of the Second World War, as well as the post-war period brought a pronounced rise in fertility rates.

Fertility trends during the socialist era can be seen as a sequence of “temporary booms and busts, explainable largely as compensatory responses of basically low-fertility cohorts to changing economic and political conditions” (Stloukal 1998: 110). Specifically, population-related policy measures such as the legalisation of abortion in 1957 or pronatalist policies implemented in the early 1970s, were associated with considerable fertility swings (Frejka 1980; Stloukal 1998). The brief baby boom of the mid-1970s followed a baby bust of the late 1960s, when the Czech Republic was one of the few European societies experiencing sub-replacement period fertility. These swings were typically short-lived and appeared to have only a limited effect on the long-term development in completed fertility and parity distribution (see Figure 1 and Section 2.1 above). Their main impact was thus on the tempo of fertility.

The most rapid drop in the TFR occurred after the collapse of the state socialist regime: between 1990 and 1996 it fell from 1.90 to 1.18 and remained at 1.1-1.2 until 2004. Most recent data indicate a partial recovery in total fertility to the level of 1.33 in 2006 and 1.44 in 2007. Unlike the previous cyclical changes, this shift bears all the signs of a fundamental and lasting change in reproductive regime, marked by declining fertility levels, later childbearing, and higher heterogeneity in family formation and

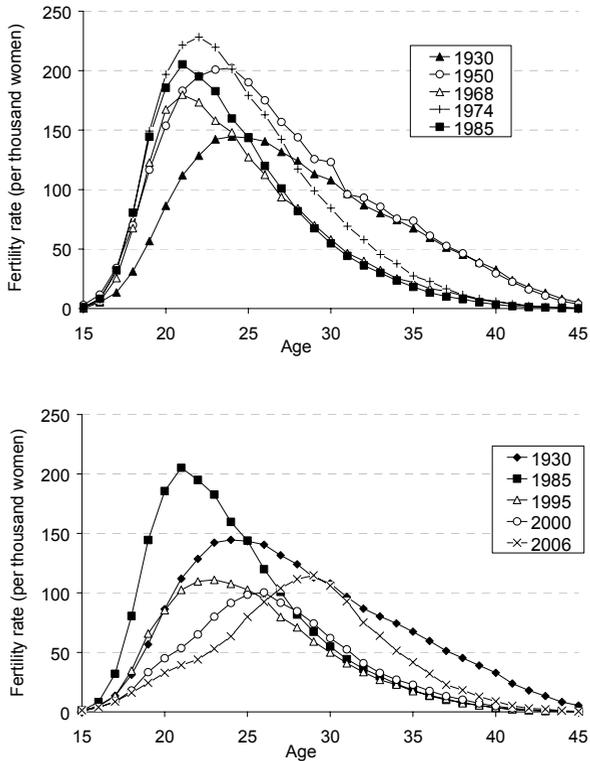
living arrangements. A considerable part of the observed reduction in the TFR was driven by a pronounced shift towards later timing of parenthood. Whereas during the socialist era most women had their first child at an early age, reaching their final family size relatively soon thereafter, the contemporary fertility pattern is characterised by a relatively late timing of parenthood, which is typical of the societies of Western, Southern and Northern Europe. This change is illustrated in the graph of age-specific fertility rates (Figure 4): the early-childbearing pattern, with a pronounced peak in fertility rates at ages 21-22 and very low fertility among women past age 30 has been rapidly replaced by a more heterogeneous age pattern of childbearing with a lower level of fertility and a less pronounced peak, which reached age 29 in 2006. Fertility rates after 1990 have plummeted in particular among young adults, declining by more than four-fifths at ages 18-20. On the other hand, a clear trend towards fertility 'recuperation' takes place at later ages. At ages 30-49, fertility rates more than doubled between 1995 and 2006 and their share on total fertility has consequently risen from 19 to 40% (Table 1; see Kantorová 2002, Zeman 2006, and CZSO 2007 for more details on changes in the age patterns of childbearing).

Table 1: Main indicators of period fertility tempo and quantum, Czech Republic 1930-2006

	Sum of fertility rates in age groups (per thousand)				Share 30+ (%)	Mean age at childbearing	Mean age at first birth	TFR
	Below 20	20-24	25-29	30+				
1930	105.1	603.7	639.7	791.8	37.0	28.6	24.9	2.14
1950	235.8	935.1	791.7	837.6	30.2	27.3	23.8	2.80
1968	227.6	821.9	489.3	288.8	15.8	25.1	22.5	1.83
1974	270.0	1067.3	701.8	393.4	16.2	25.2	22.6	2.43
1985	268.4	929.0	514.4	251.5	12.8	24.6	22.4	1.96
1990	247.1	876.1	516.9	257.3	13.6	24.8	22.5	1.90
1995	118.9	515.6	406.6	236.7	18.5	25.8	23.3	1.28
2000	64.1	333.4	447.4	297.1	26.0	27.2	24.9	1.14
2005	54.2	241.6	501.9	483.8	37.7	28.6	26.6	1.28
2006	54.4	232.7	502.5	538.3	40.5	28.9	26.9	1.33
Change								
1990-1995	-52%	-41%	-21%	-8%		+1.0 years	+0.8 years	-0.62
Change								
1995-2006	-54%	-55%	+24%	+127%		+3.1 years	+3.6 years	+0.05

Sources: Council of Europe (2005), CZSO (2004 and 2007), Zeman (2006), and authors' computations based on vital statistics data for 1930, 1950, 2005 and 2006.

Figure 4: Age-specific fertility rates among Czech women aged 15-45; 1930-2006

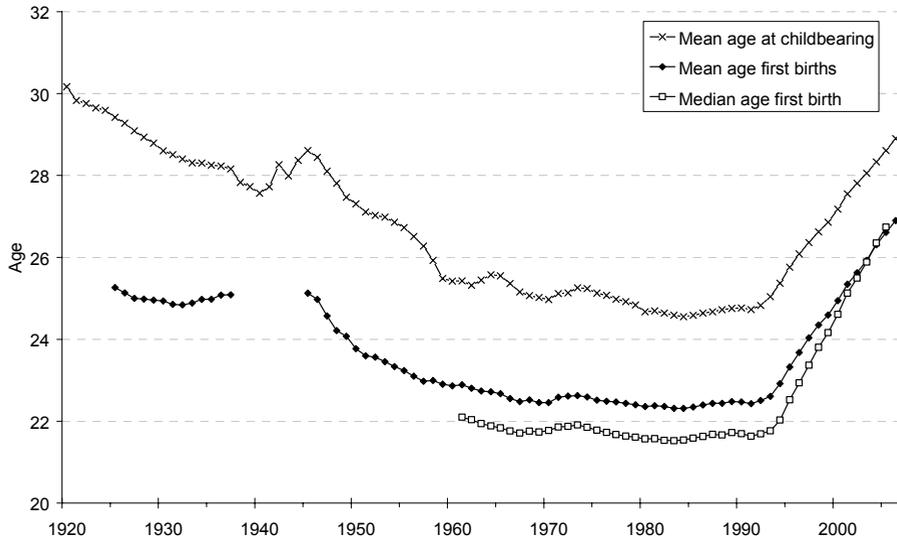


Sources: CZSO (2004, 2007), EUROSTAT (2006), and authors' computations based on vital statistics data for 1930, 2005 and 2006.

Indicators of fertility timing illustrate the intensity of the ongoing transition to a late-childbearing pattern. The mean age of mothers at first childbirth increased by more than four years, from 22.5 to 26.9 years, between 1992 and 2006. A similar rise has been recorded for the overall mean age at childbearing, which reached 28.9 years in 2006, the same value as in 1930, when the later childbearing pattern was to a larger extent driven by higher-order fertility (Figure 5). Table 2 summarises diverse indicators of the timing of entering motherhood. Whereas a significant proportion of women still form a family at a young age (in 2005, one-tenth of first birth rates occurred among women below age 20.6), many women have postponed motherhood into their early

thirties. As a result, different indicators of age heterogeneity, such as interdecile and interquartile age differences, have risen sharply. This trend is linked to the rising educational differences in family formation (see Section 2.5.3).

Figure 5: Selected indicators of the timing of childbearing, Czech Republic 1920-2006



Sources: CZSO (2000 and 2007), Zeman (2006) and computations based on EUROSTAT 2006 and vital statistics data for 1961-2006.

2.3 Parity-specific analysis of fertility shifts after 1990

Parity-specific fertility indicators as well as indicators that aim at removing the distortion caused by the shifts in the period timing of childbearing show a markedly less steep decline in fertility quantum than the period TFR (Sobotka 2003). In order to obtain a more accurate picture of the recent transformation in fertility patterns, we employ life-table analysis of first births based on age-specific first birth probabilities and duration-specific parity progression rates to the second and subsequent births ('birth interval' indicators). These indicators show a slight decline in the progression

Table 2: Selected indicators of the timing of first births among Czech women, 1985-2005

	1985	1990	1995	2000	2005	Abs. change 1990-2005
Women's age (years)						
10% of first birth rates occurring	18.7	18.9	19.1	19.9	20.6	+1.7
25% of first birth rates occurring	19.9	20.0	20.5	21.9	23.5	+3.5
Median age at first childbirth	21.6	21.7	22.5	24.6	26.7	+5.0
Mean age at first childbirth	22.4	22.5	23.3	24.9	26.6	+4.1
75% of first birth rates occurring	24.0	24.2	25.4	27.4	29.5	+5.3
90% of first birth rates occurring	26.9	27.1	28.6	30.3	32.1	+5.1
Half of women become mothers (fertility table)	22.0	22.2	25.4	28.0	29.8	+7.6
Age heterogeneity (years of age)						
Interquartile range (75%-25%)	4.1	4.2	5.0	5.5	6.1	+1.9
Interdecile range (90%-10%)	8.2	8.2	9.5	10.5	11.5	+3.3

Sources: Authors' computations based on EUROSTAT 2006, and vital statistics data.

Note: These indicators are based on age-specific first birth incidence rates (rates of the second kind) except of 'Half of women become mothers' indicator, which is based on age-specific first birth probabilities (rates of the first kind)

rates to the first, the second, and the third birth between 1990 and 2002-2003 (see Table 3). The summary indicator, termed 'period average parity' (for more details see Sobotka et al. 2005), which was adjusted for tempo effects in the case of first birth rates, declined by 7% during this period, reaching 1.74 in 2002-03. The birth interval analysis shows that not only have first births been postponed, but many women also delayed births of their second and third child: this trend is illustrated by a marked increase in mean birth intervals, especially between the first and second births (see Table 3 and Sobotka 2005).

If the recent parity progression rates prevailed over a long period of time, more women would remain childless (12%) or with only one child (23%), whereas the proportion of women with two or more children would decline. However, these changes would be relatively modest and the two-child family model would still remain dominant, with one half of women eventually having two children. This analysis gives further support to the hypothesis that the decline in total fertility rates in the 1990s was to a large extent driven by a substantial postponement of family formation.

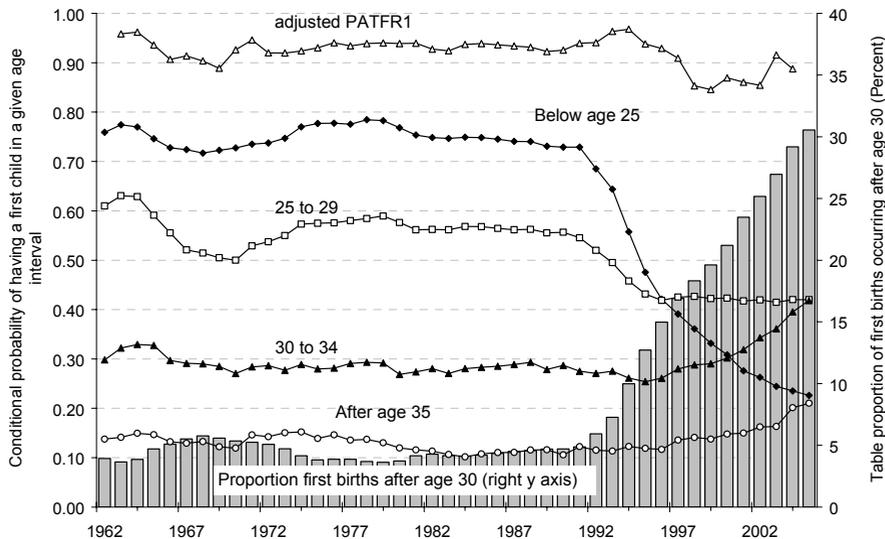
Figure 6 provides a more detailed look at the recent twists in first birth patterns. Fertility table indicators based on age-specific first birth probabilities show a sharp decline in the probability of having a first birth among women below age 25 and, since the mid-1990s a gradual trend of increasing first birth intensity after the age of 28 (ages 30+ shown in Figure 6). This trend is to a large extent cohort-driven. Women who experienced a sharp drop in first birth intensity at younger ages show a considerable

Table 3: Parity-specific changes in fertility in the Czech Republic between 1990 and 2002-03

Year	Parity progression ratios				Table mean age at 1 st birth and mean birth intervals			Indexes of total fertility	
	adjPPR ₀₁	PPR ₁₂	PPR ₂₃	PPR ₃₄	MAB ₁	BI ₁₂	BI ₂₃	adjPAP	TFR
1990	0.92	0.78	0.26	0.20	22.6	3.7	5.5	1.87	1.89
2002-03	0.88	0.74	0.24	0.23	27.1	5.0	6.4	1.74	1.16

Sources: CZSO 2000, and authors' computations based on EUROSTAT 2006 and vital statistics data for 1961-2005
 Notes: First-order parity-progression rate (*adjPPR₀₁*) is based on the period fertility table constructed from age-specific first birth probabilities, which were adjusted for tempo distortions using a method proposed by Kohler and Ortega (2002). Parity progression rates to the second and subsequent births are based on fertility rates by birth order and duration since the last previous birth. The mean age at first birth was computed from the distribution of births in the fertility table for first births and is not comparable with the commonly used mean age derived from the schedule of age-specific rates of the second kind (incidence rates), showed in Table 1, Table 2, and Figure 5. The set of parity progression ratios serves for a computation of an overall index of total fertility, the Period Average Parity (*PAP*, see Sobotka et al. 2005), adjusted for tempo effect.

Figure 6: Conditional period probability of having first child at selected age intervals among women who were childless at the beginning of these intervals (1962-2005)



Sources: Authors' computations based on EUROSTAT (2006), Census 1980 (FSU 1982) and vital statistics data for 1962-2004

tendency to ‘recuperate’ their postponed entry into motherhood later in life, generating an increase in first birth probabilities at ever-later reproductive ages. This increase is most intensive among women who were in their early 20s when the most pronounced fall of first birth intensities took place around the mid-1990s. The overall indicator of first birth intensity, adjusted for tempo effect (adjPATFR), displayed a relatively modest decline from 0.92-0.96 in the early 1990s to 0.86-0.88 in the early 2000s. However, the probability of having a first child before age 25 fell from 0.73 to 0.23 between 1990 and 2005. Thus, early childbearing, which would have been considered a ‘norm’ in the 1980s, had become relatively unusual by the early 2000s. Similarly, the probability of a woman having two children by age 25 fell dramatically: the set of age-parity birth probabilities in 2005 implies that only 6% of Czech women would reach the most common ideal family size of two children by age 25, down from almost 40% in the mid-1980s (see also Sobotka 2005).

2.4 The transformation of childbearing patterns among women born after 1965

Whereas women born up to the mid-1960s had experienced most of their childbearing before 1990 and their fertility histories are typical of the ‘state socialist’ era, women born in the 1970s have experienced a massive postponement of parenthood and more differentiated fertility patterns. This shift resulted in a bimodal distribution of first birth intensities by age, observed for women born between 1970 and 1974 (see Figure 7a). Such bimodality has been observed, as well, in the United States during the 1990s. As Sullivan (2005: 271) points out, this appears “to be a temporary phenomenon based on the uneven adoption of fertility delay across groups of women”. Whereas the U.S. pattern is linked to racial and ethnic differentiation in family formation, the explanation for the Czech Republic lies in the profound postponement of childbearing coupled with rising educational differences in first birth timing. Many Czech women born in the early 1970s had become mothers at a young age, following the fertility model of the socialist era. After 1989, many women who were still childless had interrupted the initial course of their generation’s fertility pattern and delayed childbearing until a later age. Such a temporary ‘freeze’ on childbearing was even more extreme in the former German Democratic Republic, where the breakdown of the communist regime and the unification with West Germany have brought more radical institutional and cultural discontinuity with the past (Conrad, Lechner, and Werner 1996 and Dorbritz in this monograph).

The trajectories of first and second births among women born between 1965 and 1980 show that the massive postponement of first births is unlikely to lead to a dramatic increase in lifetime childlessness (Figure 7b). Whereas each subsequent cohort

experiences further reduction in first birth rates until about age 25, the graph of cumulated change in first birth rates by age (Figure 7c) indicates a substantial 'catching up' at higher ages. Sobotka (2006) estimates that 13-15% of women born in 1975 may remain permanently childless. Although this represents a substantial increase when compared with the childlessness at 7.5% reached among women born in 1965, the permanent childlessness among Czech women is likely to remain below the levels recorded or projected in other countries of Central Europe.

So far, the 'catching up' effects have been less pronounced in the case of progression to second birth, especially when analysed for all women irrespective of their parity status (Figure 7b and 7c). This may be partly explained by the sequential nature of fertility: the 'recuperation' of delayed childbearing among cohorts that have experienced intensive fertility postponement is initially apparent in the case of first births and only later becomes manifested in the case of second births. It is very likely, however, that the proportion of women with only one child will increase more rapidly than the proportion of women who are childless. This trend is also suggested by a gradual decline in second birth progression rates among women born in the mid-1960s (Figure 3 above).

2.5 Selected trends and socio-economic differences in fertility

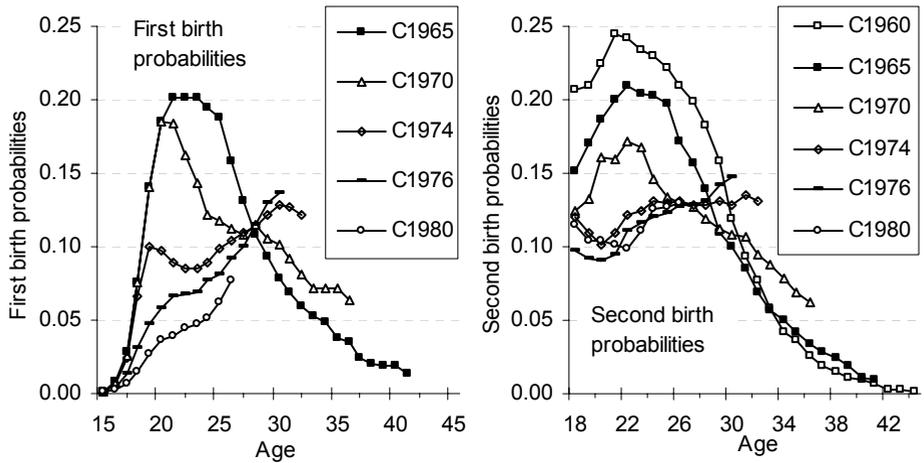
2.5.1 The sharp decline of teenage motherhood

Fertility decline during the 1990s was strongly concentrated at younger childbearing ages (Table 1 above). Consequently, the share of fertility among women below age 20 as a proportion of the total fertility rate fell from 13% at the beginning of the 1990s to 4% in 2005 (Table 4), making teenage motherhood increasingly marginal and confined to specific social groups. The reduction of early childbearing has been achieved through a widespread adoption of modern contraception. Remarkably, abortion rates among women below age 20 fell drastically as well and induced abortions remained less frequent than childbearing: 37% of pregnancies among teenage women were terminated by an abortion in 2005.

The fall in early fertility was less pronounced within the youngest age group of potential mothers (15-17) and was very sharp among older adolescents aged 18-19, whose fertility rates dropped by four-fifths between 1990 and 2005 (see Table 4). Whereas pregnancy and childbearing among young adolescents were already seen as accidental and generally unacceptable during the state-socialist period, childbearing among women aged 18-19 was quite common and publicly accepted. Societal changes

Figure 7: Transition to first and second birth by age among Czech women born in 1965-1980

a) Conditional age-specific probabilities of having first and second birth



b) Cumulative progression rate to first and second birth

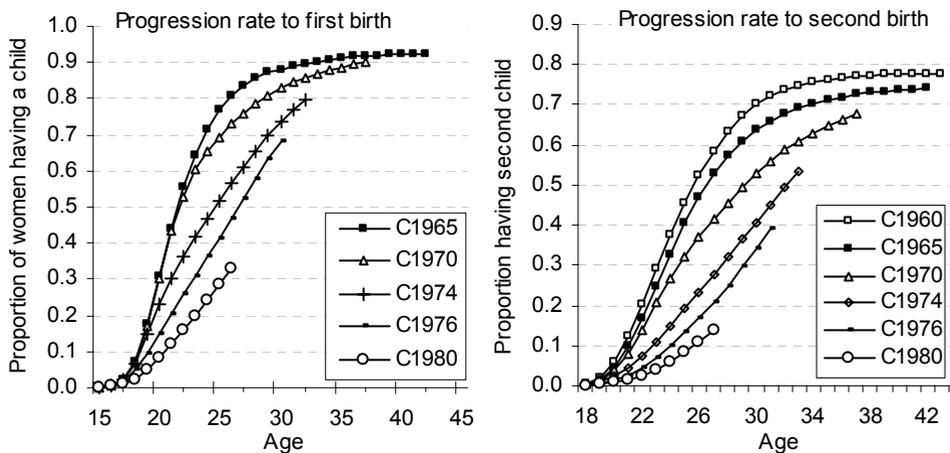
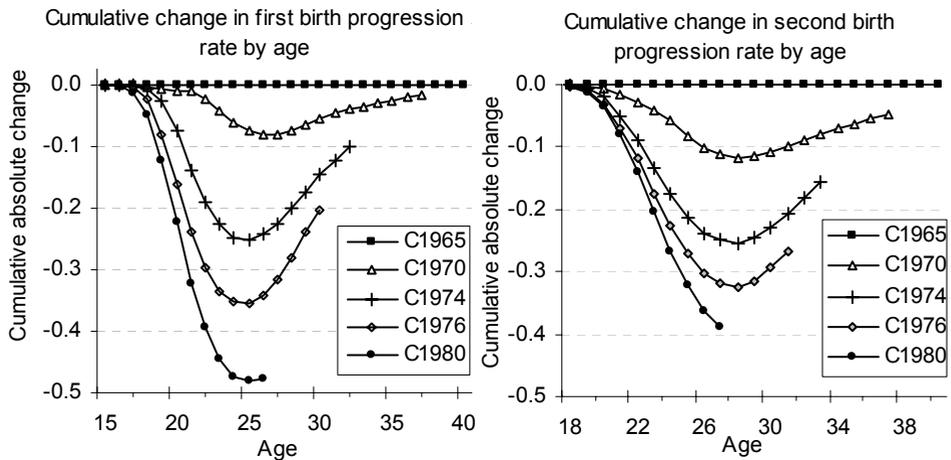


Figure 7: (Continued) Transition to first and second birth by age among Czech women born in 1965-1980

c) Cumulative change in first and second birth progression rate by age (benchmark cohort 1965)



Sources: Authors' computations based on EUROSTAT (2006) and vital statistics data for 1975-2006.

after 1989 have altered attitudes towards planned motherhood among young adults, who have themselves adopted more negative views on early childbearing. The impact of such changes on pregnancy rates among women below age 18 has been weaker. In this age group, pregnancy is almost always unplanned and unwanted, linked to insufficient information and use of less effective contraceptive methods.

Adolescent mothers exhibit the most noticeable increase in the proportion of extra-marital births. Only 13% of births among teenage mothers occurred within marriage in 2005, as compared to 82% in 1990. The social climate of the 1970s and 1980s made young women and their families go to great lengths to 'legitimise' the pregnancy and the child itself. Recently, more tolerant attitudes and the increased acceptance of premarital cohabitation have given pregnant teenage girls the option of not marrying if the only reason for marriage would be to avoid being stigmatised by the community. Recent qualitative research among teenage mothers (Vašková 2005 and 2006) shows that the majority of teenage mothers is not abandoned by the father of the child and that the couple does maintain a stable partnership. However, the socio-economic situation of

these women is not much better than that of women abandoned by their partners. Vašková found that the partners of teenage mothers tend to be unemployed, poorly educated, and are unable to contribute to a decent standard of living for their child and partner.

Table 4: Pregnancies and pregnancy outcomes among teenage women, Czech Republic 1990-2005

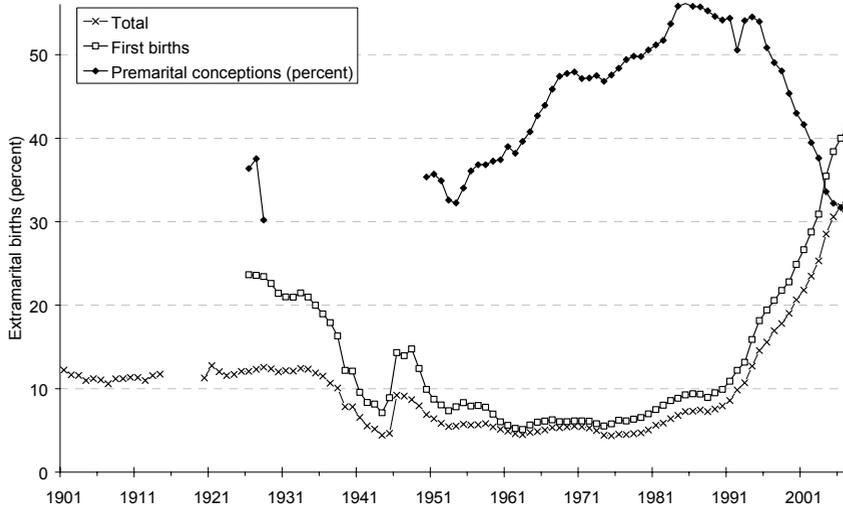
	1990	1995	2000	2005	Change 1990-2005
Fertility and abortion rates per thousand women					
Fertility rate (age 15-17)	10.5	6.4	4.3	4.6	-56%
Fertility rate (age 18-19)	107.1	50.1	25.5	20.0	-81%
Induced abortion rate (age 15-17)	13.7	7.1	5.5	5.2	-62%
Induced abortion rate (age 18-19)	44.8	19.4	13.7	10.9	-76%
Total rates below age 20					
Sum of fertility rates below age 20	0.25	0.12	0.06	0.05	-78%
Sum of induced abortion rates below age 20	0.13	0.06	0.04	0.04	-71%
Sum of pregnancy rates below age 20 (incl. miscarriages)	0.41	0.19	0.12	0.10	-75%
Other indicators					Abs. change
Proportion extra-marital births (%)	17.8	36.1	65.6	86.6	+68.8
Proportion of pregnancies terminated by induced abortion (%)	32.2	31.1	37.3	37.4	+5.2
Share of teenage fertility on the TFR (%)	13.0	9.3	5.6	4.2	-8.8

Sources: Authors' computations based on vital statistics data for 1990-2005.

2.5.2 The rise of extra-marital childbearing

A steep rise in the proportion of non-marital births indicates that the family context of childbearing has been undergoing a profound change since 1989. The overall proportion of children born outside marriage, displayed in Figure 8, quadrupled between 1989 (7.9%) and 2006 (33.3%). Childbearing outside marriage is especially common in the case of first births (41.6% took place outside marriage in 2005) and has become typical of young mothers and the lowest-educated women (Šalamounová 2002).

Figure 8: Extra-marital births and premarital conceptions in the Czech Republic, 1901-2006



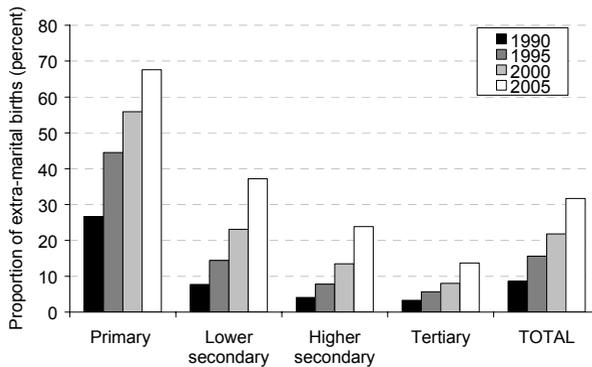
Sources: CZSO (2000, 2007), Zeman (2006) and authors' computations based on vital statistics data

Note: Proportion of pre-marital conceptions refers to the proportion of all marital first births in a given year that were realised within eight months following the marriage.

The sharp differentiation in the proportion of extra-marital births by mother's education is shown in Figure 9. Although women in all educational categories have experienced a significant rise in the frequency of non-marital childbearing, the divide between them has further widened. In 2005, no fewer than 68% of all births among the lowest-educated mothers occurred outside marriage, as compared with 14% of births among the mothers with university education. In the case of first births, these figures were 80 and 19%, respectively. Childbearing outside wedlock is also regionally differentiated. The proportion of non-marital births surpasses 45% in the districts of western and north-western Bohemia (western part of the Czech Republic) and it reaches 59% (2005) in the heavily industrialised district of Most. In contrast, less than one quarter of births occur outside marriage in most districts of the Czech-Moravian highlands and in southern Moravia alongside the Austrian border. These contrasts cannot be sufficiently explained by educational differences. A combination of historical, cultural, and economic factors plays a major role in this differentiation. Above all, the map of non-marital childbearing negatively correlates with the proportion of Roman Catholics, which is particularly high in predominantly rural and

more traditional districts of south-eastern Moravia. In contrast, the north-west Bohemian districts display an extreme level of secularisation combined with high employment in heavy industries, an ‘uprootedness’ of the local population frequently made up of post-war migrants, and also a history of elevated rates of extra-marital childbearing among the German population that resided here prior to 1945.

Figure 9: Proportion of extra-marital births by educational attainment of mother, 1990-2005



Sources: Authors' computations based on vital statistics data.

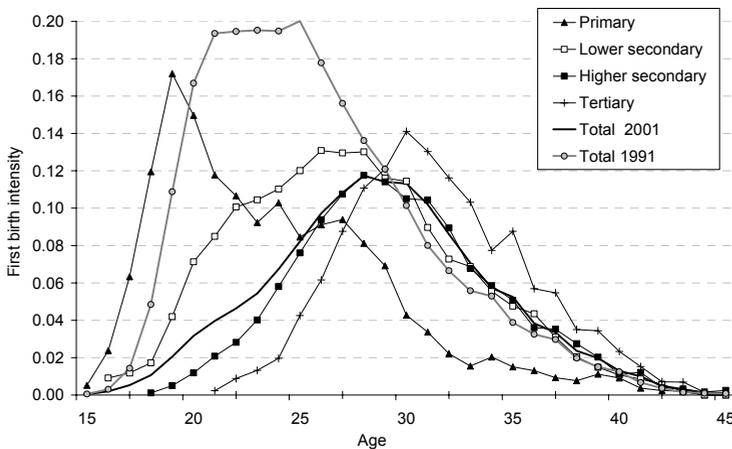
2.5.3 Educational differences in the timing of first childbirth

Kantorová (2004a) and Klasen and Launov (2006) show that fertility postponement in the Czech Republic during the 1990s was particularly pronounced among highly educated women. Women with different levels of education follow increasingly divergent pathways of family formation with respect to the partnership context (Section 2.5.2 above), timing, and coordination with other life-course events.

This differentiation is illustrated in the period indicators of entering motherhood derived from first birth fertility tables for 2001 and 1991 specified by mother's education. These tables were estimated by combining vital statistics on births by birth order and mother's educational attainment with the Census data on the distribution of women by age, number of children ever born and achieved level of education. In

addition, assumptions have been made on the completed level of education of women having children when studying⁶. While first birth intensities among women with a primary education in 2001 peaked around the age of 20, women with secondary schooling typically entered motherhood at ages 26-28, and those with a university degree became mothers around age 30 (Figure 10). The relative differences in mean age at entering motherhood are similar to those reported for many other European countries (e.g., Lappegård and Rønsen 2005 for Norway; Städtner and Spielauer 2002 for Austria).

Figure 10: First birth intensity among women by educational attainment, 2001



Sources: Authors' computations based on Census and vital statistics data for 1991 and 2001

⁶ The highest attained level of education is measured at the time of childbirth (vital statistics) and at the time of the population Census. Since educational enrollment and childcare are generally incompatible in the Czech Republic (Kantorová, 2004a), we assume that most women completed their education before giving birth to their first child. In 1991-2005, only 5-7% of women with a higher education and 17% of those with a primary education at the time of entering motherhood further progressed in education before having a second child (own computations). We used this evidence to estimate the proportion of women who are still in education at the time of their entry into motherhood and who will eventually progress in their educational level. Specifically, we attempted to overcome a potential overestimation of the number of women aged 15-20 who do not progress above the primary education level by: 1) adjusting exposure population for education reached during the year instead of at the beginning of the year and 2) adjusting the numbers of primary educated women aged 15-20 for those still enrolled in education who will eventually progress to the higher education category. Interested readers may contact Kryštof Zeman for further details on the results, as well as assumptions used.

Between 1991 and 2001, an intensive postponement of motherhood occurred among all women with higher than a primary education. A strong contrast exists in the early and late childbearing intensities: according to the 2001 tables, a majority of 64% of women with a primary education gives birth by age 25, whereas a comparable majority of women with a university education still remains childless by age 30 (Table 5). Women with a primary education who did not enter motherhood by the age of 30 have a low likelihood (19%) of ever having a child. By contrast, women with a university education show a strong propensity to achieve their delayed childbearing after that age: 61% of those still childless at age 30 would eventually enter motherhood later in their life. Thus, most of the educational differentiation in family formation is attributable to the timing of childbearing. The estimated overall first birth intensity is highest for women with lower secondary education (table childlessness of 16%) and lowest for women with university and upper secondary education (table childlessness of 24 and 26%, respectively).⁷

Table 5: Entry into parenthood among women by educational attainment; indicators based on period fertility tables for 1991 and 2001

	Achieved level of education				TOTAL
	Primary	Lower secondary	Higher secondary	Tertiary	
2001					
Mean age at first childbirth	21.6	24.9	28.0	29.8	26.8
Proportion having a child by age 25 (%)	63.8	43.9	15.5	4.3	24.8
Proportion having a child by age 30 (%)	76.7	71.3	50.6	38.7	56.6
Probability of ever having a child when childless at age 30 (%)	19.0	45.5	48.0	60.8	48.0
Table proportion childless (%)	18.9	15.7	25.7	24.0	22.6
Table proportion of first births after age 30 (%)	5.5	15.5	31.9	49.1	26.9
1991					
Mean age at first childbirth	20.8	21.4	23.6	25.9	22.6
Table proportion childless (%)	13.5	5.0	8.2	8.2	7.2
Table proportion of first births after age 30 (%)	3.9	2.8	8.3	12.4	5.5

Sources: Authors' computations based on Census and vital statistics data for 1991 and 2001

⁷ This period estimate is, however, affected by tempo distortion, and may not reflect educational differences in childlessness for particular birth cohorts.

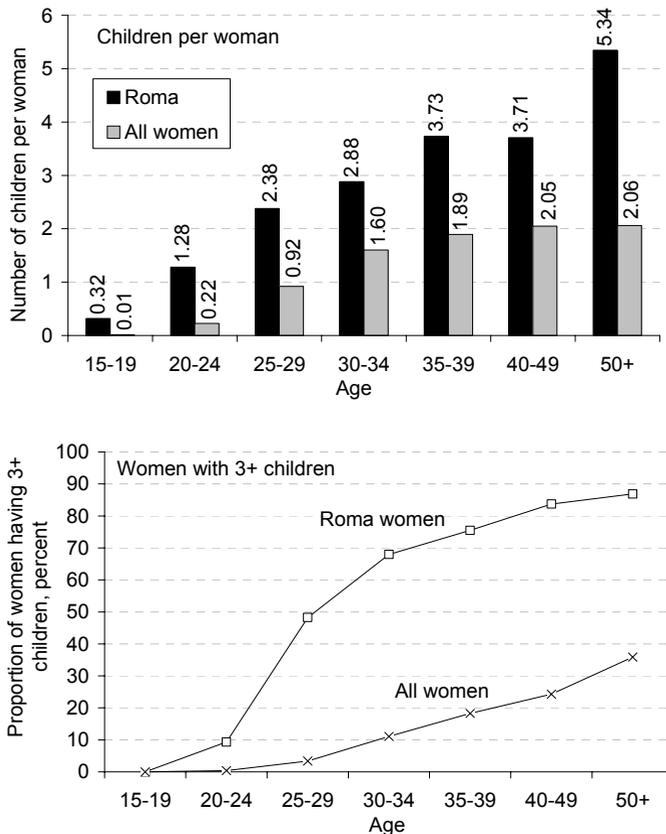
2.5.4 Fertility among Roma

The Roma (Gypsies) who first arrived to the Czech Lands around the fifteenth century constitute the only distinct minority whose fertility behaviour contrasts strongly with the majority population. Their fertility patterns are characterised by early and universal family formation, high fertility, and the absence of a two-child family norm. There are no precise statistics on the Roma population; most estimates put their number at 200-300 thousand, i.e., 2-3% of resident population in the Czech Republic (Langhamrová and Fiala 2003, UNDP 2003). Their traditional community ties were fragmented during the socialist era, when many Roma experienced forced settlement and employment in the manufacturing and construction sectors. They were hit particularly hard by the transformation of society after 1989 and are now facing widespread poverty, mass unemployment, marginalisation, and negative attitudes of the majority of the population (e.g., UNDP 2003, Cashman 2004).

Demographic characteristics of the Roma minority have been mostly studied with census data (e.g., Kalibová 1999). However, since only a tiny fraction of Roma declare their ethnicity in the population census (11.7 thousand in 2001), such data are problematic for making inferences about the whole Roma community. In this chapter, we utilise data of a United Nations Development Programme and International Labour Organisation (UNDP/ILO) survey of 2001 which specifically focused on the Roma population. Figure 11 presents selected results on fertility by age among women born before 1986, as compared with the data for all women in the Czech Republic. Childbearing is universal among Roma women; only 30% remained childless in the age group 20-24 and childlessness was marginal (around 3%) above age 30. In most age categories, the mean number of children among Roma women surpassed the number of children born to all women by a factor of 2 or higher. Four-fifths of Roma women born before 1952 had four or more children and on average they had 5.3 children, as compared to 2.1 among the total population. Younger cohorts of Roma women have reduced their family size, but have not yet adopted a two-child family model: progression rate to third birth remains high (0.62) even among women born between 1972 and 1976, who were in their late twenties at the time of the survey. Thus, in contrast with the total population, a large majority of Roma women has at least three children, commonly achieved before reaching the age of 30 (Figure 11). In addition, due to the persistence of an early family formation among Roma, the relative contrast between the Roma population and the majority remains strong for young adults. Roma women aged 20-24 had 1.3 children on average as opposed to 0.2 children among all women of that age. The continuation of early timing of motherhood among Roma since the collapse of the state-socialist regime is also manifested by an early age at first birth: one half of Roma women born between 1977 and 1981 became mothers before reaching

age 20 (for the total population, only 9% of women born in 1979 became mothers by that age).

Figure 11: Mean number of children and the proportion of women with three or more children by age, total population (January 2002) and Roma population (December 2001)



Source: Authors' computations based on UNDP/ILO Survey 2001 (Roma population), EUROSTAT 2006, Census 1980 (FSU 1982), and vital statistics data (total population).

3. 'Proximate' factors affecting fertility

3.1 Union formation and living arrangements: the rising importance of cohabitation

Marriage was almost universal during the state-socialist era and only a negligible proportion of men and women never married. Furthermore, most people were 'tying the knot' at an early age; in the 1970s and 1980s, the mean age at first marriage reached the lowest recorded levels: 21-22 for women and 24-25 for men. Cohabitation among young adults was not a completely marginal phenomenon prior to 1990, but it was more common only in larger cities and served as a brief prelude to marriage. In the mid-1980s, 44% of all newly-wed couples in the second largest Czech city, Brno, declared that they had already been living together for some time (Možný 1987). The Fertility and Family Survey (FFS) conducted in 1997 indicates that only 20-25% of first unions initiated between 1975 and 1989 started as cohabitations. Long-term cohabitation was more common only among lower-educated and divorced people (e.g., Rychtaříková 1994a).

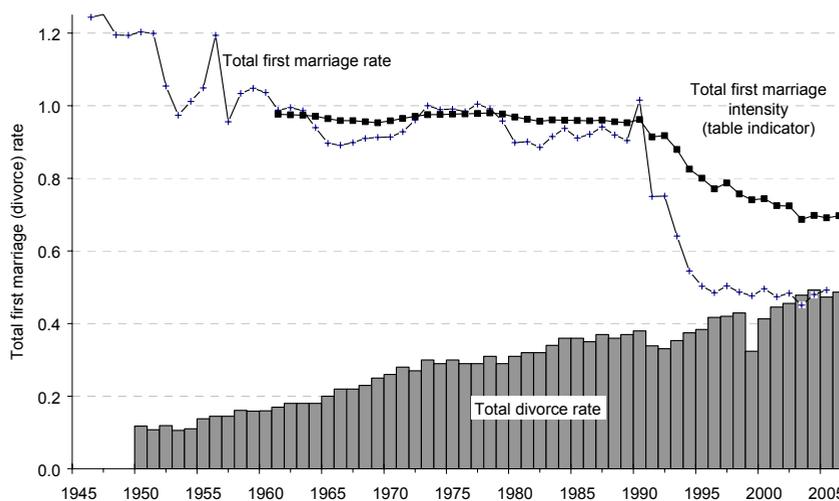
First marriage intensity declined sharply during the 1990s (Figure 12), especially among young adults. Marriages have been postponed even more intensively than first births and, consequently, the mean age at first marriage has surpassed the mean age at entering motherhood. In 2006, women entered first marriage at age 28.4 on average and men at age 31.1, which represents an increase of about seven years since 1989 (these indicators are based on the first marriage table). The proportion of married men and women dropped across all age groups, but especially at younger ages: for instance, only 12% of women aged 20-24 were married in 2005 as compared with 62% in 1991. This trend is connected with the growing popularity of non-marital cohabitation, as well as with a general postponement of early life-course transitions, namely leaving the parental home, finishing education, entering the first union and achieving stable employment.

Non-marital partnerships became a standard step in one's partnership 'career' in the 1990s and young people more often opted to cohabit with their first partner than to marry directly.⁸ Education and socio-economic position have lost their power in explaining whether people will marry directly or cohabit first (Hamplová 2004). This trend is in agreement with sociological surveys which find a generally positive evaluation of unmarried cohabitation, especially as a premarital stage (Section 4.2). In

⁸ There are no detailed data that would enable tracing the spread of cohabitation over time and its actual prevalence in diverse social and age groups; Zeman (2003: 20) shows that different surveys and census data yield contrasting estimates on the spread of cohabitation after 1990.

addition, cohabitation entered as a first union among young adults in the 1990s lasted longer before its dissolution or subsequent marriage than the cohabitations started in the previous two decades (Kantorová 2004b). Hamplová (2004) found that people in higher socio-economic positions are more likely to transform their cohabitation into marriage.

Figure 12: First marriage intensity and total divorce rate among Czech women, 1946-2006



Sources: Rychtařková (1994b), Council of Europe (2005), CZSO (2007), and authors' computations based on vital statistics data.

Notes: Total first marriage rate is computed as a sum of age-specific first marriage 'incidence' rates (rates of the second kind); total first marriage intensity is computed from the schedule of age-specific first marriage intensities (occurrence-exposure rates, rates of the first kind), which properly reflect the exposure population (single women).

Preliminary data from the Generation and Gender Survey (GGS) conducted in 2005 show that cohabitation became more prevalent than 'direct' marriage among women born in the second half of the 1970s (Table 6). These women have also delayed their union formation and one-third has never entered a union by age 25. The available data also show an increase in the number of younger individuals still living with parents and a gradual increase in the proportion living single (Table 6). Due to low accessibility of affordable housing, many young adults form their first union before leaving the parental home, i.e., they cohabit or live married for a limited time when residing with their parents (Škop 2005). The continuation of this pattern is partly a side-effect of

social policy, which allows free-market rent in the newly rented apartments, but regulates rents in many apartments retained by the same tenants as in the early 1990s. This ‘insider-outsider’ housing market inflates the market (unregulated) rents in larger cities, especially in Prague, where the housing demand is high.

Table 6: Proportion of women (in %) experiencing selected transitions below age 25 (cohorts 1966-1984)

	Birth cohort			
	1966-70	1971-75	1976-80	1981-84
Transitions before age 25				
Still in parental home at age 25	17.6	26.2	27.8	..
Ever in union	80.8	70.2	66.1	..
Ever married	75.2	61.5	46.4	..
N (weighted)	481	528	478	
Among those who entered first union before age 30 or at the time of the survey:				
First union started as cohabitation (%)	27.7	37.1	58.0	75.2
N (weighted)	423	427	362	113

Sources: Authors' computations based on Generation and Gender Survey 2005

Note: The 2005 data are preliminary results and may slightly change due to data cleaning procedures.

3.2 The link between union formation and entering parenthood

Before 1990 first union formation, mostly by marriage, and first childbirth were strongly interrelated and concentrated into a short period in young women's lives. This strong relationship was manifested in several ways. Less than 10% of first children were born to unmarried mothers (Figure 8 above). A woman's pregnancy (if not followed by induced abortion) constituted a common and relatively strong 'reason' to marry. In the 1980s and the early 1990s, more than one half of all brides were pregnant when marrying for the first time (Figure 8). Fiala (2001: Table 5) shows that until the early 1990s, around 84% of marital first births took place within the first two years of marriage. According to the census data, only a tiny minority of about 4% ever-married women remained childless, most of them presumably due to infertility. In contrast, a majority of never-married women, who formed a very select group, 'abstained' from reproduction: around two thirds of never-married women born around 1960 remained childless (Rychtaříková 2003).

The disconnection of this previously tight link between marriage and childbearing is apparent in several forms. The 'pressure' to marry among unmarried pregnant women has declined in significance during the last decade. Consequently, the share of marital first births conceived prior to the wedding has fallen from 54% in 1994 to 32% in 2005 (Figure 8). Furthermore, a growing number of married couples postpone childbearing for several years after their wedding. The postponement of first birth within marriage is most apparent for women with a higher education (Kantorová 2004b).

Another sign of the erosion of the link between marriage and first childbirth is the rising share of cohabiting couples who do not marry before the birth of the first child. Polášek's (2005) analysis of vital statistics shows that the declining propensity to marry is also detectable by a decline in marriage intensities of unmarried mothers, especially during the first two years following the childbirth. Among women having an extra-marital first child in 1991, 26% married within the next two years; this proportion fell to 12% for women having an extra-marital first birth in 2002.

3.3 High intensity of divorce and union dissolution

Czech society has a long history of fairly high rates of marital dissolution and divorce, and currently it has one of the highest incidences of divorce in Europe. Since the 1980s, roughly 30,000 divorces occur annually and this figure remains stable in spite of decreasing numbers of marriages and the changing population structure by marital status. Historically, the highest number of divorces was reached in 1996 in anticipation of the stricter family law. The new family law (No. 91/1998) that went into force in 1998 substantially modified the conditions upon which the marriage can be dissolved limiting the divorces of spouses with small children and restricting the divorces in the first year of marital duration. Most importantly, it established the possibility of divorce by mutual agreement. However, the trends in the total divorce rate (TDR), shown in Figure 12 above, indicate that the impact of the new law on the intensity of marital disruption was not longstanding. The TDR dropped to 0.32 with the implementation of the new legislation in 1999 but subsequently rose again to 0.41 in 2000 and 0.49 in 2004, the highest level on record.

Despite the new legislation aiming to reduce divorces of spouses with dependent children, their share remains high, amounting to 61% of all divorces in 2005. However, the share of one-child families among divorced parents has been increasing due to the fast decline of the fertility level since the 1990s. Parental divorce was a life event experienced by 28,732 children in 2005; every third to fourth child is eventually exposed to parental divorce (Zeman 2006). Divorce frequently paves the way to the formation of a new union and further childbearing. One-third of marriages were

concluded by at least one divorced partner in 2005 and in 14% of marriages, both spouses were divorced. Divorced people forming new union are also more prone to stay in an unwed partnership, especially when they 'inherited' children from their previous partnership (Zeman 2003).

The dissolution of cohabitations is not covered by the official statistics. Survey data indicate, however, that the intensity of dissolution is several times higher for cohabiting unions than for marriages (Zeman 2003). Considering that the intensity of nuptiality has decreased by a third since 1989, that half of the marriages are being eventually dissolved, and that cohabitations, which are substituting the 'missing' marriages, show an even higher risk of dissolution, we may conclude that marriage in its traditional form has eroded markedly. It is difficult to estimate the effects of these changes on fertility: although the observed union instability is likely to lead to lower fertility, this effect is partly offset by childbearing in second and third unions, where partners often attempt to have at least one shared child of their own.

3.4 Sexual behaviour, contraception, and induced abortions

Since the early 1990s there has been a marked shift in reproductive behaviour – from limited use of modern contraception and strong reliance on induced abortion to the widespread use of effective contraceptive methods, especially the Pill. Up until the early 1990s, first sexual intercourse was commonly 'unprotected' and first pregnancy often unplanned; many women employed contraceptive methods or opted for abortion only after reaching their intended family size.⁹

Although it was only after the political regime change in 1989 that the Czech Republic experienced a full-blown 'sexual revolution', bringing a boom of information and messages on sex, contraception, and pornography, the available data do not suggest a radical change in sexual behaviour (Weiss and Zvěřina 2001). Two surveys of sexuality and reproduction conducted in 1993 (Reproductive Health Survey – RHS) and 1998 showed a stable mean age at first intercourse, which was 18 years for both men and women (Weiss and Zvěřina 2001: 38). Furthermore, premarital sexual experience was already universal during the socialist era: the RHS survey of 1993 found that only 0.4% of sexually experienced women had had sex for the first time after marriage.

Delayed union formation and the spread of less stable forms of living arrangements suggest that younger generations have frequent sexual experience with

⁹ This pattern of family size limitation was also reflected in abortion-to-birth ratios. In 1990, there were 3.6 abortions per one birth among women with two children as compared to 0.5 abortions per birth among women with one child and fewer than 0.3 abortions per birth among childless women (Sobotka 2002).

more than one partner. The surveys do not fully support this hypothesis and, interestingly, indicate that more young adults are sexually inactive for longer periods of time (Weiss and Zvěřina 2001).

The most marked change can be observed in birth control. Currently, most men and women use effective contraceptive methods at the start of their sexual life and the first pregnancy therefore mostly involves a carefully planned discontinuation of contraceptive use. The proportion of women aged 15-49 who were prescribed oral contraception increased by a factor of twelve, from 4% in 1990 to 47% in 2006 (Figure 13). In addition, 7% of women used the intrauterine device (IUD), some 15% used condoms and around 7% relied predominantly on withdrawal and 'natural methods' of family planning (author's computations from the GGS 2005 data). This is a dramatic difference from the situation in 1993, when almost a quarter of women relied on withdrawal or 'natural' planning methods (Figure 14). At present, there are almost no differences in the choice of the various contraceptive methods among women of different educational categories. However, low-educated women with a partner are less likely to use any form of contraception: the non-use rate is 16% for women with a tertiary education and reaches 34% for women with a primary education (data not adjusted for differences in age structure). Women's sterilisation (tubal ligation) remains relatively infrequent – at about 4,000 surgeries annually (UZIS 2005) – due to a restrictive directive from 1972, which allows sterilisation only after the third childbirth (fourth childbirth for women under age 35). However, more women would probably use sterilisation if it were permitted following their second delivery (Zeman 2006).

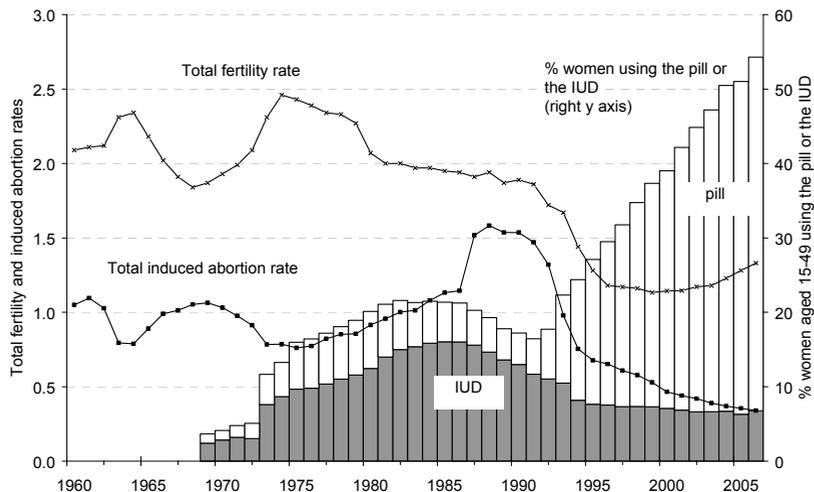
The use of modern contraception and a more responsible approach to reproductive health led to a drastic reduction in induced abortion, which had become relatively common by the late 1980s (Figure 13). The pronounced peak in abortion rates between 1987 and 1992 is linked to the easier access to abortion since 1987, following an abolishment of special commissions, which previously decided on each request for an abortion (Wynnyczuk and Uzel 1999). The number of induced abortions, which was comparable to the number of live births by the end of the 1980s (more than 110,000), fell to 25,352 in 2006 (UZIS 2007). The total induced abortion rate fell from 1.54 in 1990 to 0.34 in 2006. Also the structure of women who have abortions has changed. While before 1990, induced abortion was mostly requested by married women, abortion rates among married and unmarried women have recently converged. At present, induced abortion still remains most frequently used among women with two children. Two markedly different groups of women have the highest intensity of abortion rates: the first one is represented by young, childless and single women who have an abortion when contraception has failed. The second group, which is declining over time, is represented by 'older' married or divorced women, typically with two children, who

still use abortion as a kind of ‘contraception ex post’, as was common during the socialist era (Zeman 2006).

Abortion is accessible on request up to the twelfth week of pregnancy. Since 1992, a fee of around 3,000 CZK (around 110 EUR¹⁰) has been introduced for performing an abortion. The fee is not demanded for abortions performed for health reasons; these abortions caused an increase in the proportion of induced abortions conducted for health reasons from 11 to 24% between 1992 and 1994. This proportion subsequently declined gradually to 18% in 2005.

Delayed childbearing, combined with an expansion of infertility treatment services, have led to an increasing number of couples seeking assisted reproduction. More than 3% of children were born after in-vitro fertilisation (IVF) in the early 2000s (Kučera, Mardešić, and Žáčková 2005). Later childbearing and the frequent practice of transferring two or more embryos into the womb after an IVF treatment have resulted in a doubling in the proportion of multiple deliveries, to 2.05% in 2006, as compared to around 1% in the 1950s to the mid-1990s.

Figure 13: Total fertility rate, total induced abortion rate and the proportion of women aged 15-49 using the Pill or IUD, 1960-2006

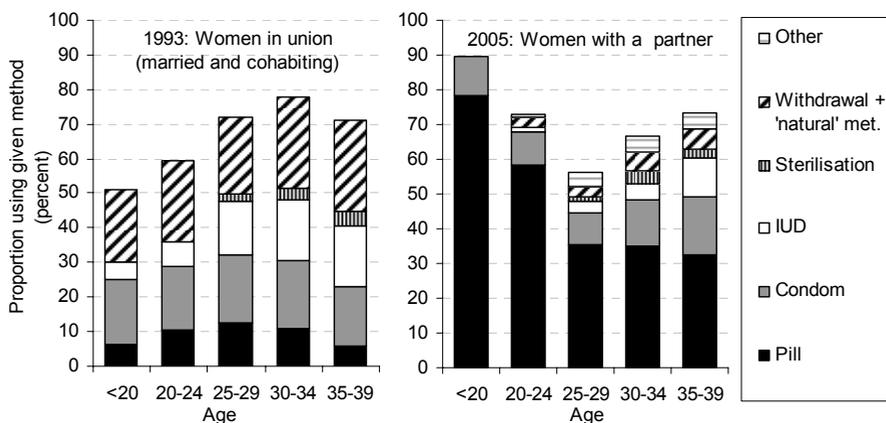


Sources: UZIS (2007) and authors' computations based on vital statistics data.

Note: IUD stands for intrauterine device.

¹⁰ In this chapter, values in Czech Crowns (CZK) are also expressed in Euro (EUR), using the exchange rate of 26.9 CZK per 1 EUR, valid in November 2007.

Figure 14: Current contraceptive use by age in 1993 and 2005, Czech women in union (1993) or living with a partner (2005)



Sources: Czech Republic Health Survey 1993 (RHS 1995: 78, Table IV.6), and authors' computations based on the Generation and Gender Survey 2005

Notes: The 2005 data are preliminary results which may slightly change due to data cleaning procedures. In case of multiple methods reported by the respondents, only the main or the most effective method is shown (e.g., the Pill when a combination of the Pill and the condom or the Pill and withdrawal was reported).
IUD stands for intrauterine device.

4. Societal conditions affecting fertility and the family

4.1 Economic transformation, employment, and educational expansion

The emergence of a new economic regime after 1989 implied a shift to a service economy, where knowledge and education play an important role. There were two distinct periods of economic downturn: the first, more pronounced, in 1990-1992, connected with the initial re-orientation from the socialist economy tightly linked with Eastern European markets to the more open market economy and the second, in 1997-1998, related to the restructuring and privatisation of large industries. Unemployment, which was an unknown phenomenon during the socialist period, increased throughout the 1990s, with the overall registered unemployment rate reaching 9% in 2000 and subsequently declining to 6% in 2007.

The Czech economy did not suffer massive external shocks as most other post-socialist countries did. Initially, a large number of newly established small businesses and enterprises partly offset negative effects of economic transformation. Later, large-

scale privatisation led to the restructuring and modernisation of many industries, including the banking and telecommunications sectors. Due to this process, as well as to the geographic proximity to western European markets, the Czech economy has attracted large flows of foreign direct investment, which reached the highest per capita level among all Central and Eastern European countries at the end of 2004 (CERGE 2005). Czech industries have become competitive and strongly export-oriented. Since the early 2000s, the economy has picked up, resulting in an accelerated growth of the GDP, which reached 6% in 2005-2007.

The estimated level of real wages, which had declined considerably after 1989, returned to the 1989 level in 1996 (RILSA 1999) and has continued to grow since the late 1990s. Despite officially proclaimed neo-liberal policies aimed at tightening eligibility conditions for various social benefits during the period of 1990-1998 (Potůček 2001), government measures remained oriented towards substantial income redistribution with the aim at reducing inequalities in incomes and living standards. The extensive social security net and strongly egalitarian policies, which have been retained by both left-wing and right-wing governments, have prevented a wider spread of poverty. In the late 1990s and the early 2000s, the Czech Republic had – along with Slovenia and Slovakia – the most equal distribution of income and the lowest poverty level among the former socialist countries (e.g., Garcés, Ródenas, and Carretero 2003; Heyns 2005). As a result, Czech families and individuals experienced lower levels of income-related uncertainty than did families in most other societies of Central and Eastern Europe.

Employment rates have declined especially among young adults, mostly as a result of their prolonged enrolment in education. Economic activity rates of women, which reached very high levels during the socialist era, have remained relatively high, peaking at 85-92% at ages 35-54 in 2006. Among women past the education stage, a gradual decline in economic activity has been recorded at ages 30-34, concomitant with the trend towards later motherhood (CZSO 2005). Prolongation of the period that women spend at home after childbirth (see Section 5 below) may create obstacles to their re-entry into the labour market. Throughout the history of regular labour force surveys starting in 1993, women have always had considerably higher unemployment rates than men: for instance, in 2006, 8.8% of economically active women and 5.8% of men were unemployed (CZSO 2007b)¹¹. The lack of opportunities for part-time employment constitutes a constraint for women who want to combine work and childcare. Part-time jobs are not widely available, partly due to the lack of incentives for employers to provide them. Moreover, part-time work is frequently underpaid and for some may

¹¹ This figure is based on an internationally standardised labour force survey and is not fully comparable with the officially published unemployment statistics.

yield a smaller income than the guaranteed minimum social security payment. As a result, only 8.7% of all employed women worked part-time in 2006.

Following the regime change in 1989, the value of higher education rose markedly and educational level has become a crucial factor for individual employment prospects, career opportunities and income level (Večerník 1999). A marked increase in the rates of higher education participation has taken place, especially since the mid-1990s. According to the OECD study (2005), the proportion of women aged 20-24 who are still in education increased from 13% in 1995 to 30% in 2003. As has been shown for a number of European countries, educational expansion constitutes the most important factor leading to the postponement of family formation (Beets et al. 2001). This effect is further strengthened by prolongation of the period between completing education and entering parenthood, which took place among medium and highly educated women after 1990 (Kantorová 2004a). Many of these women want to gain a stable position in the labour market and achieve relatively good standards of living before entering motherhood.

4.2 Family change, secularisation, and attitudes towards family and reproduction

Unlike neighbouring Austria, Poland or Slovakia, Czech society became strongly secularised in the course of the twentieth century, a process which accelerated during the post-war period, being supported by an official fierce anti-religious ideology. The communist regime in Czechoslovakia carefully isolated churches from society and religious symbols were gradually pushed out of people's everyday lives. By the end of the 1980s, only 11% of wedding ceremonies were co-administered by the Church (Hamplová 2001). Accordingly, church attendance has been declining steadily. While approximately two-thirds of the population were attending church services every week in the 1940s, only 6% did so in the late 1980s (*ibid.*). This trend towards a secularisation of society has not been reversed after the establishment of a democratic society and the lifting of various restrictions on religious freedom since 1990. The support for traditional religion is still low and the Czech Republic has one of the lowest rates of church attendance in Europe (Hamplová 2000, 2001). In the 2001 Population Census, only 31% of inhabitants declared any religious affiliation, mostly to the Roman-Catholic church (26%; CZSO 2002).

Highly secularised and increasingly consumerist, Czech society had become tolerant towards certain forms of non-traditional family behaviour already before 1990, generally accepting abortions, premarital sex, and divorce. Thus, in a 1994 survey (ISSP 1994) only 2% of respondents under age 35 strongly disagreed with premarital sex and only one-third of them found extra-marital affairs to be always wrong.

Similarly, the Czech population has adopted highly liberal views on abortion. According to the 1994 ISSP survey, 68% of respondents agreed that “a pregnant woman should be able to obtain a legal abortion for any reason whatsoever, if she chooses not to have the baby” while only 7% strongly disagreed. More recently, the 2005 Public Opinion Research Centre survey (CVVM 2005a) found that about 70% of respondents agreed that the decision for an abortion is entirely up to the woman, while only 2% were for strict prohibition. In comparison, in the early 1970s one-third of women found abortion laws to be too liberal and only 6% wanted further liberalisation (Public Opinion Research Institute survey; IVVM 1971).

Unmarried cohabitation has become broadly accepted as well. By 1994 around 70% of the ISSP respondents agreed that “it is a good idea for a couple who intend to get married to live together first” and the ISSP survey in 2002 replicated this finding without any significant shift (Chaloupková and Šalamounová 2004). Similarly, the Population Policy Acceptance Survey (PPA) of 2001 demonstrated the popularity of pre-marital cohabitation over direct marriage: 55% of respondents under age 30 preferred to live with a partner first and then to get married, while only 21% would choose ‘direct marriage’. The Czech population also quickly adopted tolerant attitudes towards long-term unmarried partnership, even though it does not seem to be a lifestyle of widespread preference. Thus, a majority of respondents in the ISSP 1994 and 2002 surveys agreed that “it is alright for a couple to live together without intending to get married,” but only one in ten respondents of the 2001 PPA survey preferred to cohabit but not to get married later. In addition, divorce is generally considered an acceptable means of ‘solving’ serious marital discords. According to the 2005 CVVM survey, divorce ranked as one of the most accepted among the broad range of socially or morally problematic behaviours (CVVM 2005b). Finally, Weiss and Zvěřina (2001) found that attitudes towards sex and sexuality, already liberal before 1990, have become yet more open during the 1990s, especially among women.

Several Czech demographers (e.g., Fialová and Kučera 1997 and Rychtaříková 2000) have stressed the pragmatic attitude of the Czech population, which enables a flexible adjustment to changing societal conditions. The opening and pluralisation of society since 1990 have brought a modest growth in post-materialism as conceptualised by Inglehart (Rabušic 2000: 15 and 2001) and a broader acceptance of some phenomena that had previously been perceived negatively, such as non-family living arrangements, voluntary childlessness or homosexuality. Due to these fairly liberal attitudes, Czech society has not undergone any vigorous debate on social issues that, in many other societies, are seen as controversial. For instance, access to abortion on request, which has been possible since 1957, is consistently supported by a majority of the population and there has been no systematic attempt by any political party to seek legislation that would prohibit or seriously restrict access to abortion.

However, marriage and family still continue to enjoy uncontested popularity among Czech men and women. Unlike in 'Western' societies, where the responsibilities and restrictions of family life were often seen as inhibiting individual fulfilment, family life in the state-socialist societies provided a space for authenticity and individual self-realisation (Sobotka 2004). Furthermore, family ties and mutual aid of family members were important for obtaining consumer products that were in short supply and for providing informal services, which were not available through the underdeveloped service economy (Možný and Katriňák 2005). Although this functional importance of the family for exchanging and getting access to goods and services has diminished since 1989, the idealised positive image of family life still prevails even among the younger generations and childless people. According to the 2001 PPA Survey, a majority of childless Czech women and men aged 18-39 agreed that they only feel completely happy and at ease at home with children (Sobotka and Testa 2008).

4.3 Gender inequality, gender division of childcare and family roles

Following the introduction of a competitive labour market model in the Czech Republic after 1989, a discussion commenced on the issues of work-life balance and gender relations in both the labour market and the family (Čermáková et al. 2002, Ettlrová and Šťastná 2006, Kuchařová et al. 2006). The continuing inequality in the gender division of housework has been documented in a number of research studies. The pressure to attain higher labour efficiency, together with increasingly time-consuming paid work and very limited opportunities for part-time employment, has led to a reduction in the amount of free time for the family (Křížková et al. 2005).

Persisting gender stereotypes based on the presumption of women's primary involvement in the family and men's primary involvement in their professional activities have resulted in a situation in which a harmonisation of family and working life is not perceived as compatible with men's social roles (Křížková et al., 2005). Consequently, the participation of men in childcare and household tasks remains low. According to the ISSP 2002 survey, Czech women contribute two thirds of the total time necessary for doing the housework (Chaloupková 2005). Moreover, women's housework participation varies very little according to whether she is employed full- or part-time.

Interestingly, even women who work full-time, as do their partners, opine that it is fair to work more in the home than their partners and perceive a fair proportion of their household duties to be around 60% (Chaloupková, 2005). Despite the demand for women's double role in fulfilling work and family obligations, satisfaction with the division of childcare and household tasks between women and their partners is

relatively high, even in families with at least one small or school-age child and in which both parents work. According to the GGS survey of 2005, the mean value of satisfaction was 8.7 for men and 8.1 for women on a 0-10 scale. Every third woman and 45% of men are completely satisfied; no significant educational differentials were detected (authors' computations).

4.4 Ideal and intended family size

A strong orientation towards a two-child family model constituted the most characteristic trend in reproductive patterns during the socialist era. The emergence of a two-child norm can be traced back to the 1950s, when the intended family size among young women reached 2.10 in 1956 (Kučera 1994: 128). However, family and parenthood surveys from the mid-1970s showed a relatively high disproportion between intended fertility and an ideal number of children: 55% of respondents in 1974 and 53% in 1977 thought that an ideal family should have more children than two (IVVM 1974 and 1977).

The 2005 Generation and Gender Survey shows that the two-child family norm remains strongly established. The two-child 'target' is most frequently mentioned by the youngest respondents, specifically, by two-thirds of women aged 18-19 (Table 7). Furthermore, only a few respondents intend to have a larger family. Among women below age 25, only 13% intend to have three children, with just 1% aiming for four or more. These findings suggest a remarkable continuity in fertility intentions among Czech women during the last decades, as well as a continuation of the trend towards the disappearance of large families. However, a comparison of selected results of the GGS (2005) survey with the 1997 FFS survey and the 1993 RHS survey indicates subtle changes in fertility intentions during the last 15 years. Whereas the proportion of women preferring three or more children has not changed, the preference for childlessness and for the one-child family model has slightly increased in comparison with the number of women preferring two children. This subtle shift is visible for women of all reproductive ages, as well as for young adult women (only FFS 1997 and GGS 2005 data were available for women below age 25).

Consequently, the mean intended family size has been slightly declining as well. For women of all reproductive ages, it dropped from 2.2 in 1993 to 2.1 in 1997 and 2.0 in 2005. Furthermore, women below age 25 express sub-replacement family size intentions, with the mean of 1.85 children per woman (2005). The emergence of smaller family size intentions among young adults suggests two different interpretations: First, for some women childlessness or having one child is an expression of their lifestyle preferences, which are centred on non-family interests. Second, other women may

realistically anticipate various constraints they would face if they had two or more children and already adjust their intentions downwards at the time of reaching adulthood.

Table 7: Intended final parity distribution and mean number of children among women of reproductive age in 2005

cohort	age	Intended parity distribution, % (only respondents specifying their intentions)					Does not know (%)	Mean number of children Intended	N
		0	1	2	3	4+			
1986–87	18–19	7.5	17.0	66.0	8.2	1.3	-	1.79	159
1981–85	20–24	6.2	17.3	60.1	15.5	0.9	-	1.88	323
1976–80	25–29	3.3	13.6	62.9	16.5	3.7	-	2.05	455
1971–75	30–34	3.8	13.7	55.6	22.8	4.2	-	2.11	505
1966–70	35–39	4.4	17.0	54.5	17.2	7.0	-	2.07	459
1961–65	40–44	9.2	16.5	55.3	14.2	4.8	-	1.90	436
Total	18–49	5.8	16.8	57.1	16.4	3.0	-	1.97	2793
Completed fertility and parity distribution:									
1960	45	7.5	18.7	54.4	15.0	4.3	-	2.02	

Comparison with the previous surveys

a) Women below age 25

Cohort	Survey	Intended parity distribution, % (only respondents specifying their intentions)					Does not know (%)	Mean number of children Intended	N
		0	1	2	3	4+			
1973–82	FFS 1997	4.8	15.4	69.7	10.2	1.6	10.9	1.92	522
1981–87	GGG 2005	6.6	17.2	62.0	13.1	1.0	-	1.85	482

b) All women aged 15 (18) – 44

Cohort	Survey	0	1	2	3	4+	Does not know (%)	Mean number of children Intended	N
1948–78	RHS 1993	1.4	9.1	68.6	21.0		8.9	2.16	4258
1953–82	FFS 1997	3.8	16.1	62.9	17.2	3.2	15.9	2.08	1721
1961–87	GGG 2005	5.4	15.6	58.1	16.9	4.1	-	2.00	2337

Sources: Authors' computations based on Generation and Gender Survey 2005 and computations based on published results of the RHS (1995: 54, Table III. 10) and FFS (1997: Table 24) surveys. Completed TFR of the 1960 cohort: Authors' computations based on vital statistics data for 1974–2004.

Note: The GGS data are preliminary results which may slightly change due to data cleaning procedures. 'Does not know / uncertain' answer was not possible in the GGS survey. The FFS data were weighted to be representative of the whole population.

5. Family related policies

The declining fertility over the 1950s and 1960s led the government to expand its family-related policies. Their objective was to provide financial benefits and welfare incentives to encourage childbearing while enabling mothers to remain in the labour force. The relevant measures, such as the prolongation of maternity leave, the introduction of further childcare leave with job guarantee, a maternity allowance, loans for newly-wed couples, and development of childcare facilities, were introduced in the late 1960s and especially in 1970-1972.

Many policies enacted during the socialist era had a pronatalist and interventionist character, being aimed at encouraging replacement-level fertility (Kocourková 2002: 303). In addition, some policies, such as the rules governing the distribution of public housing and the provision of special loans for married couples up to age 30, with repayments reduced at the birth of a child, supported early entry into marriage and parenthood (e.g., Rabušic 1990). After 1989, the pro-natalist function of a number of family policies was abandoned. Policies affecting families became mostly based on broader social welfare policies aimed at reducing income inequality, providing a minimum level of social security, and preventing poverty. More emphasis has been put on parental leave policies, and, in general, the government has shown no interest in formulating explicit population policies. Another reversal, albeit a more gradual one, occurred after the 1998 elections, which brought to power a coalition of the Czech Social Democratic Party and the Christian and Democratic Union, both of which had family support relatively high on their agenda. This policy turn was further fuelled by rising concerns about the very low birth rates recorded since the mid-1990s and the upcoming entry of the Czech Republic into the European Union, which involved efforts to harmonise various laws and policies.

One policy trend initiated during the socialist era and continued thereafter was the prolongation of post-natal leave. Paid maternity leave was introduced in 1957 for the duration of 18 weeks and later extended to 28 weeks. In 1966 an “additional maternity leave” (parental leave), lasting until the child reached the age of one year, was introduced and extended to two years in 1970, and three years in 1989. The pro-natalist orientation of family policies before 1990 was manifested by birth order-specific rules for the entitlement to various benefits. Paid parental leave was initially provided only to mothers with a second or higher-order child. In analogy, child benefits for families with up to four children increased progressively with the number of children. Since 1990, the child’s birth order ceased to be a criterion for child benefits entitlement¹² and all

¹² One peculiar aspect of the previous birth order-specific rules remained in place, however: the retirement age for women is still linked to the number of children they have raised (not necessarily their own children). As of

mothers became entitled for paid parental leave. Since 1990, the father of a child can also receive the parental allowance, although employed fathers have been entitled to take paid parental leave only since 2001. Only a tiny minority of men have chosen this option: in 2005, 1.4% of parental allowances were paid to men (Kuchařová et al. 2006).

Since 1995, paid parental leave was further extended until the child's fourth birthday, making the paid post-natal period in the Czech Republic one of the longest in Europe (Kocourková 2002). This may change, however, with the introduction of a more flexible 'multispeed' model of parental leave from January 2008.¹³ Following gradual extensions, the proportion of women staying on a parental leave for more than two years after childbirth has increased from the low value of 22% among women giving birth between 1970 and 79 to 78% among those who gave birth after 1990 (Hašková 2005). The large majority of women eventually return to work and the proportion of housewives remains low. However, the protection of the parent's workplace has remained fixed at three years¹⁴. This creates a discrepancy, as on the one hand many parents are encouraged to stay longer at home with their child, but on the other their return to work is rendered more difficult if they decide to take full advantage of the existing leave provisions. Moreover, a long continuous period spent by many mothers out of the labour market (a mother with two children can stay on parental leave for a period of up to eight years) causes a depreciation of their qualification and limits their employment prospects.

During maternity leave (28 weeks), women receive 69% of their previous salary (with the ceiling at 13,290 Crowns (CZK), i.e., 495 EUR per month in 2006); the parental leave grants a basic benefit of around 7,600 CZK (280 EUR per month)¹⁵, with a possibility of unlimited additional part-time income permitted since 2004. This amount equals 40% of the average public sector wage.

2006, 'childless' women retire at age 60, those who have raised one child at 59, two children at 58, 3-4 children at 57, and those who have raised 5 and more children retire at 56.

¹³ Since January 2008 a more flexible regulation allows parents to choose between 2, 3 or 4 years of parental leave (see also footnote 15).

¹⁴ Hence it is important to make a distinction between parental leave, which is provided to parents fulfilling specific conditions (full-time care of the child) until their child reaches the age of 4 (see Kocourková 2002) and its codification by the Labour Code, linked to the mandatory reservation of the work position of the parent on leave until the child's third birthday. Note that the official terminology on parental leave provisions in the Czech Republic differs from the terms used in this article. Only the work leave provided to the employees to care for a child who has not reached age three is officially termed "parental leave" (*rodičovská dovolená*), whereas the fixed financial support granted to any parent who provides all-day care to a child who has not reached the age of four is termed "parental allowance" (*rodičovský příspěvek*).

¹⁵ The basic parental leave benefit is granted to parents who opt for a 'basic' 3-year period of parental leave. Those who opt for a shorter period of two years are granted monthly benefit of 11,400 CZK (425 EUR), whereas those who opt for a long parental leave of four years are granted the basic benefit of 7,600 CZK for the first 21 months and a then a benefit of 3,800 CZK in months 23-48.

To support full employment of women and facilitate their earlier return to work after childbirth, an extensive network of subsidised childcare facilities was established between the 1950s and the 1980s (Kocourková 2002, Kantorová 2004b). Day-care enrolment rates of children aged 3-5 have remained high since 1990, reaching 88% in 2005 (UIV 2006). However, the public provision of nurseries has practically collapsed due to a combination of the extended parental leave, the withdrawal of state support leading to a substantial rise in fees and the transfer of responsibility for childcare to municipalities. Less than 1% of children below age 3 were enrolled in public nurseries in 2000, down from 14% in 1989 (Kantorová 2004b). At the same time, two-year old children are frequently admitted to day-care facilities: 26% of them were enrolled in 2004-2005. Still, the lack of early public childcare further limits mothers' options for an early return to the labour market.

The new political focus on the family since 1998 has led the Ministry of Labour and Social Affairs to draft a "National Family Report" (MLSA 2004), which covers in detail the whole range of family-related policies that are not discussed here, including tax breaks, housing support, and various social services. In October 2005, the Czech government approved the "National concept of family policy" (MLSA 2005), the first of its kind since the end of state socialism. This concept declares both general and specific aims of family policies, as well as general rules, within which these aims are to be achieved. The stated aims are not explicitly pro-natalist and are mostly drafted in rather general and declaratory terms so as not to annoy any particular interest group. They focus on the creation of a "family-friendly environment", which "will enable individuals to achieve their life strategies in fulfilling their partnership and family plans" and at the same time "to respect diverse interests and needs of various family types" (MLSA 2005: 9, authors' translation).

The government promotion of family-friendly policies has partly succeeded in transforming the general political attitude in favour of family policies, which now receive attention by all major political parties. A peculiar by-product of the new political race to demonstrate family-friendly policies before the parliamentary elections in June 2006 was an almost unanimous agreement of the parliament (Chamber of Deputies) in December 2005 to double the value of parental leave allowance, effective from 2007 (see above). This decision followed soon after the Chamber of Deputies agreed on an increase in the birth allowance from 8,750 to 17,500 CZK per child, i.e. from 325 to 650 EUR effective as of April 1, 2006.¹⁶ In addition, plans to double the value of child allowance, which ranks among the lowest in Europe, have been discussed (as of 2008 the monthly contribution is 500 to 700 CZK per child, i.e., 19 to 26 EUR).

¹⁶ In 2008, however, the value of birth allowance declined to 13,000 CZK per child (485 EUR).

This allowance is paid until the child reaches 15 years of age (26 years of age when studying) and depends on the child's age.¹⁷

6. Discussion: major explanations of fertility shifts after 1990

The observed rapid fall in period fertility rates after 1991 stimulated a discussion among Czech demographers on the main factors driving the changes in family-related behaviour (Sobotka, Zeman, and Kantorová 2003). Much of this debate centred on two broad explanatory frameworks, which were seen as mutually incompatible: the “economic crisis” hypothesis and the “second demographic transition” hypothesis. Inferences on the nature of demographic change were almost exclusively based on macro-level associations between reproductive behaviour and various economic and social trends (Kantorová 2004a). However, societal change following the collapse of the state-socialist system in November 1989 was so abrupt and multifaceted that it is impossible to separate the contribution of different factors to the changes in fertility tempo and quantum. Our central argument is that the sharp discontinuity in demographic behaviour in the last fifteen years was driven by a fundamental shift in the constraints and incentives for childbearing, both of which were conducive to late and carefully planned family formation. Progressively delayed entry into motherhood was facilitated by a rapid adoption of modern contraception, especially the contraceptive pill which is now used by a majority of young adult women. This section discusses some of the major factors driving the long-term transformation in childbearing behaviour in the Czech Republic.

6.1 New uncertainties and changed characteristics of the labour market

Before 1990, an egalitarian and rigid social system, non-existent unemployment, and limited opportunities for career implied a high degree of predictability of one's future earnings, housing conditions, and social and employment status. Thus, in combination with pronatalist policies encouraging early marriage and childbearing, the opportunity costs of childbearing were low and family formation decisions took place under largely foreseeable conditions. The diminishing family support, rising social stratification, and the emergence of a competitive labour market after 1990 brought about or sharpened

¹⁷ Only families falling below a certain income threshold (2.4 times of the defined subsistence minimum, see <http://www.mpsv.cz/en/4749>) qualify for receiving the child allowance.

different types of uncertainty faced by young adults (Mills and Blossfeld 2006). Under these circumstances, two different patterns of reproductive behaviour emerged. Lower-educated women with limited employment prospects often choose the predictable pathway to motherhood and still form a family at a young age. Highly educated women on the other hand, who face increased opportunity costs of childbearing, make use of the new career and employment opportunities and react by postponing motherhood, frequently into their early thirties (Section 2.5.3). This educational stratification of family formation and an intensive first birth postponement among highly educated women have been documented not only for the Czech Republic (Kantorová 2004a, Klasen and Launov 2006), but also for other post-communist societies (e.g., Huinink and Kreyenfeld 2004 for East Germany and Róbert and Bukodi 2006 for Hungary). However, our analysis suggests that the rising differentiation in first birth timing has so far not led to the increasing differences in overall first birth intensity by level of education.

6.2 Educational expansion

The rising participation in tertiary education, discussed in Section 4.1, has affected aggregate fertility trends in several ways. First, participation in education has been perceived as incompatible with motherhood (Kantorová 2004a) and the growing number of young adults enrolled in education has strongly contributed to the rapidly falling fertility rates among women below age 25. Second, as mentioned above, highly educated women have been displaying an intensive postponement of motherhood after finishing education, thus fuelling the observed aggregate shift towards a late childbearing pattern. Third, due to the broader range of opportunities and to less family-oriented values in society, the rising proportion of highly educated women is likely to contribute to the declining intended and actual family sizes, as well as gradually rising levels of childlessness. Mareš and Možný's (2005: 87) analysis of the 2002 survey of Czech women aged 30-35 found a strong association between women's education and the value they place on children: highly educated women had a positive attitude to childbearing but also viewed parenthood as a "potential source of complications in terms of their careers and relationships with their partners".

6.3 'Disorder' in the life course and the new character of partnerships

In line with the trend observed earlier in most Western societies (e.g., Rindfuss 1991), early life course transitions of Czech men and women have not only become delayed,

but also more varied and ‘disordered’ (Section 3.1 and 3.2). In particular, the declining importance of marriage and the rapid rise of less stable forms of partnerships have an independent effect on the postponement of parenthood (Sobotka 2004: 22-25). This process is again stratified by education. Lower-educated women frequently form family under unstable circumstances – in a cohabiting union or as single mothers (Section 2.5.2); in the latter case, they qualify for special welfare support. Individuals with a medium and high education often view cohabitation as a part of the family formation process, i.e., a ‘new’ stage which did not exist or was very short during the state-socialist era. However, many individuals also form partnerships which do not have parenthood as an explicit goal. These relationships serve as reflective, self-fulfilling projects, where partners engage in a constant monitoring of the quality of their relationship (Liefbroer 1999) and which may or may not eventually lead to parenthood.

Two broad conceptual frameworks fit the observed changes in family and fertility patterns very well: van de Kaa’s (1987) and Lesthaeghe’s (1995) concept of the second demographic transition and Kohler, Billari and Ortega’s (2002) concept of the ‘postponement transition’. Although Czech society retains very positive attitudes towards family life, it has also widely accepted non-traditional living arrangements, voluntary childlessness, abortion, and divorce (Section 4.2; Rabušic 2001). In addition, profound demographic shifts observed after 1990, including the decline and postponement of fertility and the rapid spread of cohabitation and extra-marital childbearing, are in line with the second demographic transition framework (Sobotka, Zeman, and Kantorová 2003). However, this transition took place under the conditions of the economy opening up to competition and global forces, which led to increased risks and uncertainties, especially for young adults. Childbearing decisions, which are irreversible and imply long-term commitments, have been intensively postponed by the cohorts born during the 1970s and this postponement further continues among the younger individuals. This development is in line with the hypothesis of the ‘postponement transition’ towards the late childbearing pattern, which constitutes a sharp and irreversible break with the previous reproductive regime. Both discussed frameworks suggest that many of the observed trends in childbearing behaviour are long-lasting and relatively ‘autonomous’. In other words, despite many changes in external social and economic conditions, “the transition appears to observers as if it were driven by its own momentum” (Kohler, Billari, and Ortega 2002: 664).

7. Conclusions: future outlook

Within a relatively short period after 1990, Czech society experienced a shift from early and almost universal childbearing to later, lower, and more varied childbearing patterns. Although the most widely discussed feature of this shift had been the drop of the total fertility rate to one of the lowest levels in the world by the late 1990s, our analysis has paid much attention to the massive postponement of family formation, which was the main driving force of the observed decline in the period TFR. The Czech Republic can be considered, alongside Slovenia, to be a 'model case' of the 'postponement transition' among post-communist societies of Europe. Cohorts reaching adulthood in the early 1990s experienced the most pronounced alteration in their life-course biographies: their transitions out of education, to employment as well as home leaving and union formation were generally postponed and became more diverse and less ordered than among their older counterparts. Our analysis also showed a strong tendency towards the 'recuperation' of postponed first and, to a smaller extent, also second births among these cohorts when they reach higher reproductive ages.

Much uncertainty remains regarding future trends in period and cohort fertility. Nevertheless, our analysis allows us to sketch a tentative outline of these trends. Continuation of the educational expansion and other factors contributing to delayed family formation implies that the postponement of childbearing is likely to continue further, albeit with a declining intensity. At present, Czech women still become mothers by about three years earlier than women in the latest-childbearing countries of Europe, such as Italy, the Netherlands, Spain, and Sweden. With the intensity of fertility postponement gradually diminishing, period total fertility rates are likely to show a continued modest recovery, which started after 2000. This will be fuelled by rapidly rising fertility rates among women in their thirties, who may contribute more than half of the overall total fertility by 2010. Parity-specific indicators of period fertility indicate that the limits of this recovery – in the absence of fertility postponement and without further decline in fertility rates – would be at a level of 1.6-1.7. We expect that this may also be the level of completed fertility among women born in the second half of the 1970s. This constitutes a considerable decline in comparison with the 1960 cohort, who had 2.02 children on average, but it also remains well above the period TFR levels recorded since the mid-1990s and also above the values of some projections based on the trends in period TFRs. A gradual downward drift in fertility intentions suggests that completed fertility is unlikely to bounce back close to the level of two children per woman among the younger cohorts, even if generous family-related policies were to take place. In addition, further erosion of the link between marriage and childbearing will probably continue and long-term cohabitation may increasingly become a widespread alternative to marriage.

The shifts in family-building patterns have been interpreted by some observers as the sign of a rapid 'return' of the Czech family to the 'Western family model' (Možný and Katrňák 2005) or, alternatively, as a sign of an accelerated second demographic transition (Rabušic 2001; Sobotka, Zeman, and Kantorová 2003). Nevertheless, the family model of western Europe is both diverse and in constant flux, and it is shaped in each society by specific institutional, historical and cultural factors. More than in most western European societies, Czech society still expresses overwhelmingly positive attitudes towards family life. This constitutes another reason why – despite a continuing postponement of family formation and the erosion of the traditional family – we do not foresee a decline of cohort fertility to very low levels among women who are currently entering their reproductive period.

8. Acknowledgements

We would like to thank two anonymous reviewers for their valuable comments and suggestions on the earlier drafts of this article. We are also grateful for language editing provided by Werner Richter and Elizabeth Zach. The Generations and Gender Survey in the Czech Republic was realised in the framework of the project "Family, Partnerships, and Population Ageing (Generations and Gender Survey: prospective longitudinal study)" funded by the research grant no. 1J 023/04-DP2.

References

- Beets, G., E. Dourleijn, A. Liefbroer, and K. Henkens. 2001. *De timing van het eerste kind in Nederland en Europa*. [The timing of first birth in the Netherlands and in Europe]. Rapport No. 59, Den Haag: NIDI.
- Cashman, L. 2004. Roma in the Czech Republic: an Excluded Minority. *eSharp* 3. Accessed at www.sharp.arts.gla.ac.uk/e-sharp/Laura_Cashman_romainczech.htm.
- Čermáková, M., H. Hašková, A. Křížková, M. Linková, and H. Maříková. 2002. *Podmínky harmonizace práce a rodiny v České republice*. [Work-Life Balance Conditions in the Czech Republic] Praha: Institute of Sociology, Academy of Sciences of the Czech Republic.
- Chaloupková, J. 2005. Rozdělení domácí práce a hodnocení jeho spravedlnosti ve vybraných evropských zemích. [Division of domestic work and an evaluation of its justice in selected European countries], *SDA Info* 7 (2): 9–14.
- Chaloupková, J., and Šalamounová, P. 2004. *Postoje k manželství, rodičovství a k rolím v rodině v České Republice a v Evropě* [Attitudes to marriage, parenthood, and family roles in the Czech Republic and in Europe]. Sociologické Studie / Sociological Studies 04/07, Praha: Institute of Sociology, Academy of Sciences of the Czech Republic.
- Conrad C., M. Lechner, and W. Werner. 1996. East German fertility after unification: crisis or adaptation?, *Population and Development Review* 22(2): 331–358.
- CERGE. 2005. *Czech Republic 2005. An economic survey*. Praha: CERGE-EI. Accessed at www.cerge.cuni.cz/publications/books.
- Council of Europe. 2005. *Recent demographic developments in Europe 2004*. Strasbourg: Council of Europe Publishing.
- CVVM. 2003. *Naše společnost*. [Our Society – public opinion surveys] Praha: Public Opinion Research Centre (CVVM), Institute of Sociology, Academy of Sciences of the Czech Republic.
- CVVM. 2005a. *Názory veřejnosti na interrupce a uzákonění registrovaného partnerství*. [Public opinion on abortion and on the codification of registered partnerships]. Praha: Public Opinion Research Centre (CVVM), Institute of Sociology, Academy of Sciences of the Czech Republic.
- CVVM. 2005b. *Morální přijatelnost různých druhů chování*. [Moral acceptability of various behaviours]. Praha: Public Opinion Research Centre (CVVM), Institute of Sociology, Academy of Sciences of the Czech Republic.
- CZSO. 2007b. *Employment and Unemployment in the CR as Measured by the Labour Force Sample Survey - Annual Averages 2006*. Praha: Czech Statistical Office. <http://www.czso.cz/csu/2007edicniplan.nsf/engpubl/3115-07-2006>.
- CZSO. 2007. *Vývoj obyvatelstva České republiky v roce 2006* [Population development in the Czech Republic in 2007]. Praha: Czech Statistical Office. <http://www.czso.cz/csu/2007edicniplan.nsf/p/4007-07>.
- CZSO. 2005. *Trh práce v ČR za roky 1993-2004* [Labour market in the Czech Republic in 1993-2004]. Praha: Czech Statistical Office. <http://www.czso.cz/csu/edicniplan.nsf/p/3103-05>.
- CZSO. 2004. *Demografická příručka*. [Demographic Handbook]. Praha: Czech Statistical Office. www.czso.cz/csu/edicniplan.nsf/p/4032-05.

- CZSO. 2003. *Sčítání lidu, domů a bytů 2001. Plodnost a sňatečnost žen*. [Population and housing census 2001. Fertility and nuptiality of women]. Praha: Czech Statistical Office. www.czso.cz/csu/edicniplan.nsf/p/4118-03.
- CZSO. 2002. *Sčítání lidu, domů a bytů 2001. Pramenné dílo*. [Population and housing census 2001. Main results]. Praha: Czech Statistical Office. <http://www.czso.cz/csu/edicniplan.nsf/p/4132-05>
- CZSO. 2000. *Časové řady základních dat demografické statistiky ČR v letech 1900 – 1999* [Time series of basic indicators of demographic statistics in the Czech Republic in 1900-1999]. Praha: Czech Statistical Office.
- Ettlerová, S., and A. Šťastná. 2006. Harmonizace rodinných a pracovních povinností rodičů se závislými dětmi. [Harmonisation of Family and Work Obligations of Partner Having Dependent Children], *Demografie* 48: 12–21.
- Eurostat. 2006. *Eurostat New Cronos database*. Theme 3: Population and social conditions.
- Eurostat 2007. *GDP per inhabitant in 2006*. Eurostat News Release 90-2007, 28 June 2007.
- Fiala, T. 2001. Vývoj manželské plodnosti prvního pořadí v České Republice během posledních padesáti let [Development of marital fertility of 1st order in the Czech Republic during the last fifty years], *Demografie* 43(2): 93–110.
- Fialová, L., M. Kučera. 1997. The main features of population development in the Czech Republic during the transformation of society, *Czech Sociological Review* 5(1): 93–111.
- Fialová, L., Z. Pavlík, and P. Vereš. 1990. Fertility decline in Czechoslovakia during the last two centuries, *Population Studies* 44(1): 89–106.
- FFS. 1997. *Fertility and Family Survey Czech Republic 1997*. Standard Country Tables. Geneva: Population Activities Unit, UNECE. http://www.unece.org/pau/ffs/f_h_151b.htm.
- Frejka, T. 1980. Fertility trends and policies: Czechoslovakia in the 1970s, *Population and Development Review* 6(1): 65–93.
- FSU. 1982. *Sčítání lidu, domů a bytů 1980. Plodnost žen* [Population, housing and households Census 1980. Fertility of women]. Praha: Federální statistický úřad.
- Garcés, J., F. Ródenas, and S. Carratero. 2003. Observations on the progress of welfare-state construction in Hungary, Poland, and the Czech Republic, *Post-Soviet Affairs* 19(4): 337–371.
- Hamplová, D. 2000. Šetření ISSP 1999 – Náboženství [ISSP 1999 survey – religion], *Sociologický časopis/Czech Sociological Review* 36: 431–440.
- Hamplová, D. 2001. Institucionalizované a neinstitutionalizované náboženství v českém poválečném vývoji, *Soudobé dějiny* 8: 294–311.
- Hamplová, D. 2004. Vzdělání, pracovní dráha a sňatkové chování v České republice. Disertační práce. FF UK: Praha.
- Hašková, H. 2005. Pracující matky a genderové role ve výsledcích mezinárodního longitudinálního průzkumu [Working mothers and gender roles in the results of an international longitudinal survey], *Gender, rovné příležitosti, výzkum* 6(1/2005): 22–27. Available at: <http://www.genderonline.cz/download.php>.
- Heyns, B. 2005. Emerging inequalities in Central and Eastern Europe, *Annual Review of Sociology* 31: 163–197.
- Huinink, J., and M. Kreyenfeld. 2004. *Family formation in times of social and economic change: an analysis of the 1971 East German cohort*. MPIDR Working Paper WP 2004-013, Rostock: Max Planck Institute for Demographic Research. <http://www.demogr.mpg.de/papers/working/wp-2004-013.pdf>.

- ISSP. 1994. Survey "Family and Changing Gender Roles II (ISSP 1994) - Czech Republic." International Social Survey Programme.
- IVVM. 1971. Unpublished Survey of Public Opinion Research Institute. Praha (internal doc.).
- IVVM 1974. Unpublished Survey of Public Opinion Research Institute. Praha (internal doc.).
- IVVM 1977. Unpublished Survey of Public Opinion Research Institute. Praha (internal doc.).
- Kalibová, K. 1999. Romové z pohledu statistiky a demografie [Roma from the perspective of statistics and demography], in *Romové v České Republice (1945-1998)*. Praha: Socioklub; pp. 91-114.
- Kantorová, V. 2002. Porodnost" [Fertility], in Z. Pavlík and M. Kučera (Eds.), *Populační vývoj České republiky 1990-2002*. Praha: Charles University, Department of Department of Demography and Geodemography, pp. 39-48. <http://popin.natur.cuni.cz/html2/index.php?item=8.4>
- Kantorová, V. 2004a. Education and entry into motherhood: the Czech Republic during the state socialism and the transition period (1970-1997), *Demographic Research*, Special Collection 3(10): 245–274. www.demographic-research.org.
- Kantorová, V. 2004b. Family life transitions of young women in a changing society: First union formation and birth of first child in the Czech Republic, 1970-1997. Doctoral thesis, Charles University in Prague and Université de Paris I – Pantheon – Sorbonne. http://www.demogr.mpg.de/publications/files/1785_1000000000_1_Full%20Text.pdf.
- Klasen, S., and A. Launov. 2006. Analysis of the determinants of fertility decline in the Czech Republic, *Journal of Population Economics* 19(1): 25–54.
- Kocourková, J. 2002. Leave arrangements and childcare services in Central Europe: policies and practices before and after transition, *Community, Work & Family* 5(3): 301–318.
- Kohler, H.-P., and J. A. Ortega. 2002. Tempo-adjusted period parity progression measures, fertility postponement and completed cohort fertility, *Demographic Research* 6(6): 92–144. www.demographic-research.org.
- Kohler, H.-P., F. C. Billari, and J. A. Ortega. 2002. The emergence of lowest-low fertility in Europe during the 1990s, *Population and Development Review* 28(4): 641–680.
- Křížková, A. (ed.), R. Dudová, H. Hašková, and H. Maříková. 2005. *Kombinace pracovního a rodinného života v ČR: politiky, čas, peníze a individuální, rodinné a firemní strategie*. [Work/Life Balance in the Czech Republic: Policy, Time, Money, and Individual, Family, and Company Practices.] Edice Sociologické studie / Sociological Studies 05:4, Sociologický ústav AV ČR.
- Kučera, M. 1994. *Populace České republiky 1918-1991*. Praha: Sociologický Ústav AV ČR.
- Kučera, T., T. Mardešić, T., and T. Žáčková. 2005. Úspěšnost mimotělního oplodnění a demografické aspekty neplodnosti v ČR [Successfulness of in vitro fertilisation and demographic aspects of infertility in CR], *Sanquis* 39/2005: 34.
- Kuchařová, V., S. Ettlerová, O. Nešporová, and K. Svobodová 2006: *Zaměstnání a péče o malé děti z perspektivy rodičů a zaměstnavatelů*. [Employment and Childcare from Parents' and Employers' Perspectives.] Praha: Research Institute for Labour and Social Affairs. http://www.vupsv.cz/Fulltext/vz_195.pdf.
- Langhamrová, J., and T. Fiala. 2003. Kolik je vlastně Romů v České Republice? [How many Romanies actually live in the Czech Republic?], *Demografie* 45(1): 23–32.
- Lappegård, T and M. Rønsen. 2005. The multifaceted impact of education on entry into motherhood, *European Journal of Population* 21(1): 31–49.

- Lesthaeghe, R. 1995. The second demographic transition in Western countries: an interpretation, in K. O. Mason and A.-M. Jensen (Eds.), *Gender and Family Change in Industrialized Countries*. Oxford, Clarendon Press, pp: 17–62.
- Mareš, P., and I. Možný. 2005. The Czech family, reproductive behaviour, and the value of children in the Czech Republic, in G. Trommsdorff and B. Nauck (Eds.), *The Value of Children in Cross-Cultural Perspective. Case Studies from Eight Societies*. Lengerich: Pabst Science Publishers, pp: 67–90.
- Mills, M., and H.-P. Blossfeld. 2005. Globalization, uncertainty and the early life course: a theoretical framework, in H.-P. Blossfeld et al. (Eds.), *Globalization, Uncertainty and Youth in Society*. London: Routledge, pp: 1–24.
- MLSA. 2004. *Národní zpráva o rodině* [National Family Report]. Praha: Ministry of Labour and Social Affairs of the Czech Republic. www.mpsv.cz/cs/898.
- MLSA. 2005. *Národní koncepce rodinné politiky* [National concept of family policy]. Praha: Ministry of Labour and Social Affairs of the Czech Republic. www.mpsv.cz/cs/4.
- Možný, I. 1987. K některým novým jevům v kulturně legitimních vzorcích rodinných startů, *Demografie* 29:114–123
- Možný, I., and T. Katriňák 2005. The Czech family, in B. N Adams and J. Trost (Eds.). *Handbook of World Families*. Thousand Oaks, California: Sage Publications Inc, pp: 235–261.
- OECD. 2005. *Education at a glance. OECD indicators 2004*. Paris: Organisation for Economic Co-operation and Development, Paris. <http://www.oecd.org/edu/eag2004>.
- Pavlík Z., and M. Kučera. (Eds.), 2002. *Populační vývoj České republiky 1990–2002*. [Population Development in the Czech Republic 1990-2002]. Praha: Katedra demografie a geodemografie přírodovědecké fakulty UK. <http://popin.natur.cuni.cz/html2/index.php?item=8.4>.
- Polášek, V. 2005. Svobodná matka – a co je potom? [Single mother – and what follows then?], *Demografie* 47(4): 287–292.
- Potůček, M. 2001. Czech social reform after 1989: concepts and reality, *International Social Security Review* 54(2–3): 81–105.
- Rabušic, L. 1990. Manifestní a latentní funkce Československé populační politiky [Manifest and latent function of Czechoslovak population policy], *Demografie* 32(3): 234–238.
- Rabušic, L. 2000. Je česká společnost “postmaterialistická”? [Is Czech society “postmaterialist”?], *Sociologický časopis* 36(1): 3–22.
- Rabušic, L. 2001. Value change and demographic behaviour in the Czech Republic, *Czech Sociological Review* 9(1): 99–122.
- RHS. 1995. *1993 Czech Republic Reproductive Health Survey. Final Report*. Czech Statistical Office, Factum, WHO, and Centers for Disease Control and Prevention.
- RILSA. 1999. *Zpráva o lidském rozvoji, Česká Republika 1999* [Human Development Report, Czech Republic 1999]. Praha: Research Institute for Labour and Social Affairs and UNDP.
- Rindfuss, R. R. 1991. The young adult years: diversity, structural change, and fertility, *Demography* 28(4): 493–512.
- Róbert, P., and E. Bukodi. 2005. The effects of the globalization process on the transition to adulthood in Hungary, in H.-P. Blossfeld et al. (eds.) *Globalization, Uncertainty and Youth in Society*. Routledge, London, pp: 177–213.
- Rychtaříková, J. 1994a. *Les unions informelles en République Tchèque*. Acta Universitatis Carolinae Geographica. Praha: Faculty of Science, Charles University in Prague.

- Rychtaříková, J. 1994b. Czech and Slovak families in the European context, *Journal of Family History* 19(2): 131–147.
- Rychtaříková, J. 2003. Diferenční plodnost v České republice podle rodinného stavu a vzdělání v kohortní perspektivě [Cohort fertility differentials in the Czech Republic by the family status and education], in D. Hamplová, J. Rychtaříková and S. Pikálková. *České ženy. Vzdělání, partnerství, reprodukce*. Praha: Institute of Sociology, Academy of Sciences of the Czech Republic, pp: 40–82.
- Rychtaříková, J. 2004. Změny generační plodnosti v České republice se zaměřením na vzdělání žen” [Changes in cohort fertility in the Czech Republic, with a focus on educational attainment of women], *Demografie* 46(2): 77–90. [http://www.czso.cz/csu/edicniplan.nsf/t/000029F152/\\$File/Rychta.pdf](http://www.czso.cz/csu/edicniplan.nsf/t/000029F152/$File/Rychta.pdf).
- Šalamounová, P. 2002. Změny plodnosti v České republice v 90. letech [Changes in fertility in the Czech Republic in the 1990s], *SDA Info* 4(1–2): 1–4.
- Shkolnikov, V. M., E. M. Andreev, R. Houle, and J. W. Vaupel. 2004. *The concentration of reproduction in cohorts of US and European women*. MPIDR Working Paper WP 2004-027, Rostock: Max Planck Institute for Demographic Research. <http://www.demogr.mpg.de/papers/working/wp-2004-027.pdf>.
- Škop, M. 2005. *Statistická analýza přežívání s aplikací na proces odchodu od rodičů v České republice* [Statistical analysis of survival with an application on leaving parental home in the Czech Republic]. Doctoral thesis, Charles University in Prague. www.skop.cz/Sci/Dis1.0sec.pdf.
- Sobotka T. 2002. Potratovost” [Abortion], in Z. Pavlík and M. Kučera (Eds.), *Populační vývoj České republiky 1990–2002*. Praha: Charles University, Department of Demography and Geodemography, pp: 49–56. <http://popin.natur.cuni.cz/html2/index.php?item=8.4>.
- Sobotka, T. 2003. Změny v časování mateřství a pokles plodnosti v České republice v 90. letech [Changes in the timing of motherhood and fertility decline in the Czech Republic in the 1990s], *Demografie* 45(2): 77–87.
- Sobotka, T. 2004. *Postponement of childbearing and low fertility in Europe*. Doctoral thesis, University of Groningen. Amsterdam: Dutch University Press. <http://dissertations.ub.rug.nl/faculties/rw/2004/t.sobotka/>.
- Sobotka, T. 2005. Changes in fertility quantum and tempo in Austria, the Czech Republic, and Slovakia. a parity-specific view, in F. Koschin (Ed.). *Fertility and family trends in Austria, the Czech Republic and Slovakia: Towards a convergence?* Praha: University of Economics, pp. 45–71.
- Sobotka, T. 2006. Bezdětnost v České Republice [Childlessness in the Czech Republic], in D. Hamplová, P. Šalamounová and G. Šamanová (Eds.), *Životní cyklus – sociologické a demografické perspektivy* [Life cycle in socio- demographic perspective], Praha: Institute of Sociology, Academy of Sciences of the Czech Republic, pp. 60–78.
- Sobotka, T., M. Winkler-Dworak, M. Rita Testa, W. Lutz, D. Philipov, H. Engelhardt, and R. Gisser. 2005. Monthly Estimates of the Quantum of Fertility: Towards a Fertility Monitoring System in Austria, *Vienna Yearbook of Population Research* 2005: 109–141.
- Sobotka, T., K. Zeman, and V. Kantorová 2003. Demographic shifts in the Czech Republic after 1989: a second demographic transition view. *European Journal of Population* 19(3): 249–277.
- Sobotka, T., and M. R. Testa. 2008. Childlessness attitudes and intentions in Europe, in: Ch. Höhn, D. Avramov and I. Kotowska. (Eds.), *People, Population Change and Policies:*

- Lessons from the Population Policy Acceptance Study* (Vol. 1). European Studies of Population 16/1, Berlin: Springer, pp. 177-211.
- Städtner, K., and M. Spielauer 2002. *The influence of education on quantum, timing, and spacing of births in Austria*. ÖIF Working Paper 29-2002, Austrian Institute for family Studies. www.oif.ac.at.
- Stloukal, L. 1998. An APC analysis of demographic responses to population policy measures: the case of the Czech and Slovak Republic, 1960-1990, *Genus* 54 (1-2): 87-121.
- Sullivan, R. 2005. The age pattern of first-birth rates among U.S. women, *Demography* 42(2): 259-273.
- UIV. 2006. *Databáze ÚIV - časové řady*. [UIV database – time series]. Praha: Ústav pro informace ve vzdělávání. <http://founder.uiv.cz/virtodd/rada.asp>.
- UNDP. 2003. *Avoiding the dependency trap. The Roma Human Development Report*. New York: United Nations. hdr.undp.org/reports/detail_reports.cfm?view=708.
- UNDP/ILO. 2001. Multi-country survey of Roma population in Central and Eastern Europe. <http://roma.undp.sk>.
- Ústřední komise. 1965. *Sčítání lidu, domů a bytů v Československé socialistické republice k 1. březnu 1961. Díl 1*. [Population and Housing Census, 1st March 1961. Vol. 1]. Praha: Ústřední komise lidové kontroly a statistiky.
- UZIS. 2007. *Potraty 2006* [Abortions 2006]. Praha: Institute of Health Information and Statistics of the Czech Republic.
- UZIS. 2005. *Sterilizace žen v České republice* [Women's sterilization in the Czech Republic]. Aktuální informace č. 2/2005, Praha: Institute of Health Information and Statistics of the Czech Republic.
- Van de Kaa, D. J. 1987. Europe's second demographic transition, *Population Bulletin* 42(1): pp. 1-59.
- Vašková, R. 2005. Bariéry a předpoklady vzniku nové rodiny jako samostatné jednotky u - náctiletých matek. [Barriers to and Prerequisites of Raising a New Family as an Independent Unit by Teenager Mothers], *Demografie* 45: 251-264.
- Vašková, R. 2006. Rozhodovací procesy -náctiletých těhotných dívek vedoucí k volbě časného rodičovství. [Teenage Pregnancy Decision Making Process leading to early Motherhood Choice] in D. Hamplová, P. Šalamounová and G. Šamanová (Eds.), *Životní cyklus – sociologické a demografické perspektivy*. Praha: Institute of Sociology, Academy of Sciences of the Czech Republic, pp: 79-117.
- Večerník, J. 1999. Inequalities in earnings, income and household wealth. Nerovnosti v ve výdělcích, v příjmech a majetku domácností, in J. Večerník and P. Matějů (Eds.), *Ten years of rebuilding capitalism. Czech society after 1989*, Praha: Academia. pp. 115-136.
- Weiss P., and J. Zvěřina. 2001. *Sexuální chování v ČR - situace a trendy* [Sexual behaviour in the Czech Republic – situation and trends]. Praha: Portál.
- Wynnyczuk, V., and R. Uzel. 1999. Czech and Slovak Republic in H. P. David (Ed.), *From abortion to contraception. A resource to public policies and reproductive behavior in Central and Eastern Europe from 1917 to the present*. Greenwood Press, Westport, Connecticut, pp: 91-119.
- Zeman, K. 2003. Divorce and marital dissolution in the Czech Republic and Austria. The role of premarital cohabitation. Doctoral thesis, Prague: Charles University.
- Zeman, K. 2006. *Vývoj obyvatelstva České republiky v roce 2005*. [Population development in the Czech Republic in 2005], *Demografie* 48(3): 153-165.