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Research Article

**Austria:
Persistent low fertility since the mid-1980s**

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Austria: Persistent low fertility since the mid-1980s

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Richard Gisser⁵

Abstract

This chapter offers an in-depth analysis of fertility in Austria, a country which has experienced a low and relatively stable fertility level and a gradual postponement of childbearing since the mid-1980s. We begin by summarising Austrian population trends in the post-World War II period and highlighting recent relatively high migration levels. We outline the long history of sub-replacement fertility and high childlessness in Austria and look in detail at recent parity-specific developments, trends in family size, delayed childbearing and persistent fertility differences by education level, country of origin and religious affiliation. The chapter then summarises main trends in family-related behaviour, including the changing patterns of leaving parental home, the rise in cohabitation, the decline in marriage and the rise of divorce and the diversity in non-marital childbearing, which has a long tradition in many parts of the country. We discuss the development of family policies in Austria and their relationship to fertility during the past decades. Social policies in Austria provide only a limited support for a reconciliation of childrearing and employment among mothers with children below the age of three. A combination of one of the highest family spending rates among the OECD countries and the low fertility rates indicate that structural constraints (such as the availability of childcare) constitute part of the explanation of low fertility.

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1. Introduction

Austria, a central European country with a population of 8.3 million in 2007, has a long history of sub-replacement fertility. Completed fertility had dipped below two children per woman already during the (first) demographic transition and rose temporarily above this level among the 1917-1946 cohorts. Following the peak of the baby boom in the early 1960s a substantial fall in fertility lasted until the mid-1980s. Since then Austria has recorded low and relatively stable period fertility, with the period total fertility rate hovering around the level of 1.4. A long-standing trend towards delayed childbearing has been in part responsible for the persistence of such low fertility levels. Also the desired family size has reached relatively low levels: already the late 1950s cohorts have expressed sub-replacement fertility preferences at a young age. Minor swings in period fertility were associated with changes in family policies, in particular parental leave arrangements.

As in other European countries, family and living arrangements have been changing rapidly in Austria since the early 1970s. Cohabitation has increasingly become an alternative to marriage, divorce rates have reached very high levels and extramarital childbearing, which was historically common in many regions, has risen substantially. Migration has become an important component of population change, contributing markedly to the continued increase in population size.

Structural trends outside the family system such as women's higher educational attainment and their rising labour force participation combined with increased earnings engendered more egalitarian and individualistic attitudes and values which, in turn, are thought to have affected family stability. At the same time, social policies in Austria provide only a limited support for a combination of childrearing and employment among mothers with children below the age of three. With one of the highest family spending rates among the OECD countries, the low fertility rates and the modest gap between fertility preferences and realized family size indicate that structural constraints—such as the availability of childcare—constitute part of the explanation of low fertility.

This chapter offers an in-depth analysis of fertility trends in Austria. It begins by briefly summarising population trends in Austria in the post World War II period. The subsequent review of fertility trends looks at both period and cohort measures and emphasises parity-specific developments, trends in family size and childlessness. The chapter then analyses changes in living arrangements and the family, especially in the patterns of leaving parental home, marriage, divorce, cohabitation, out-of-wedlock births and abortion. It also discusses the changing role of women's labour force

participation for fertility trends. Subsequently, it outlines the development of family policies in Austria and analyses their relationship to fertility during the past decades. The last section contains a synthesis and discussion of major findings.

2. Main population trends in Austria

This section outlines main components and characteristics of population change in Austria after 1945. It focuses on the trends in migration, mortality, total population size and population ageing. Developments in fertility, marriage and living arrangements are analysed in the subsequent parts of this chapter.

After World War II, the population of Austria stagnated at slightly below seven million until the end of the 1950s. Since then, Austria has become a country of net immigration. The most notable immigration waves included the influx of immigrant workers between 1961 and 1973, the migration movements from 1989 to 1993 linked partly to the breakdown of the state-socialist systems in central and eastern Europe, the dissolution of Yugoslavia and the subsequent civil war on that territory. Most recently high net migration was recorded between 2000 and 2005, partly related to past immigration and including many family reunions of the recently naturalised Austrians. Leaving aside the periods of stagnation in population size, the importance of migration for total population growth increased. A comparison of the growth periods (1961-73 and 1989-2004) yields few differences in the annual population growth rate (0.57% for the first and 0.49% for the second period) but fundamental differences in its components. The natural increase was 0.39% per annum in the period 1961-73 and 0.07% in the period 1989-2004; net in-migration was 0.18% per year in the first, and 0.41% in the second period (including statistical adjustments of 0.02%). The total population size reached 8.3 million in January 2007; 95% of the relatively rapid population increase recorded from 2001 to 2004 (0.57% annually) was the result of a positive migration balance.

Relatively high migration rates contributed to the rising proportion of foreigners (residents not holding Austrian citizenship) among the total population, from 1.4% in 1961 to 4.6% in 1989 and 8.4% in 1994. Later, the high rate of naturalisations reduced this growth considerably. At the end of 2004, the number of foreigners was 788,600 or 9.6% of the total population. Austrians citizens born abroad have become a fast growing segment and their number reached 575,000 at the end of 2004, or 7.0% of the total population – up from 5.0% in 2001. Together with the foreign citizens (the non-naturalised, first-generation immigrants and their descendants), the Austrians born

abroad form the population with migration background. This category already comprised one sixth of the total population (16.6%) by the end of 2004.

The number of deaths fell to an all-time low of 73,600 in 2006. Despite fluctuations in numbers of deaths, mortality rates have generally decreased in the last decades. Since 1970, when the period of stagnation in mortality rates ended, life expectancy at birth has risen annually by an average rate of 0.29 years for men and by 0.26 years for women, reaching 76.65 years and 82.24 years, respectively, in 2005. The gender gap in life expectancy at birth has narrowed from 7.2 years around 1980 to 5.6 years at present. The number of years a person may still expect to live at retirement age (i.e. age 65) increased also and reached 16.99 years for men and 20.33 years for women in 2005.

The most recent official projections for the years 2005-50 by Statistics Austria (Hanika 2005, updated in Statistics Austria 2006b) are based on the following hypotheses for the main variant: an increase in the total fertility rate (TFR) between 2010 and 2030 from 1.4 to 1.5 with the mean age at childbearing rising to 31.0 years; an increase in life expectancy up to 2050 to 84.3 years for men and 89.0 years for women; a decrease in net-migration from 49,000 in 2005 to 20,000 per year in the period 2019-50. Thus the population will grow, although at a progressively slower pace, to 9 million in 2050, i.e., by about 9% compared to the initial population of 2006. As the number of persons older than 60 will increase by two thirds in the same period, demographic ageing is inevitable. The proportion of elderly people will rise from the present 22% to 33.5% in 2050. The working age population (15-59 years) will increase slightly until 2020, and then decline by 8%, while the population below the age of 15 will decline by the same percentage during the whole projection horizon.

3. Period and cohort fertility trends

3.1 Long-term trends in period and cohort fertility

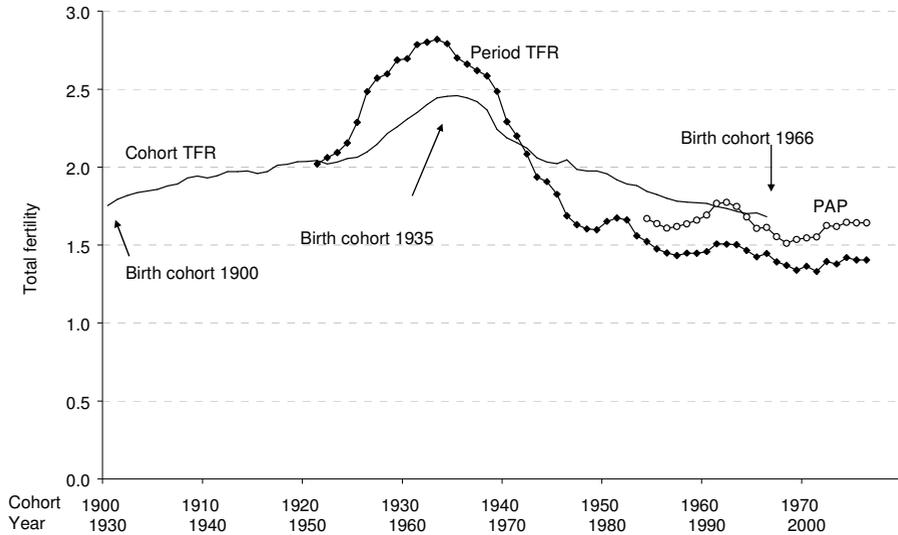
The long-term trends in Austrian fertility have evolved in parallel with the trends in western and northern European countries. Three major shifts affected fertility developments during the 20th century. First, a steep fall in fertility rates took place after World War I, leading to sub-replacement fertility levels during the economic crisis of the 1930s (Frejka and Sardon 2004). As a result, women born during the first quarter of the 20th century achieved below replacement fertility as well. Second, a marked rise in fertility was recorded during the period of economic and social recovery after World

War II, and culminated in the early 1960s, when the period TFR reached the level of 2.8. Subsequently, a substantial fall in fertility took place between the mid-1960s and the mid-1980s. Figure 1 shows the completed cohort fertility among women born between 1900 and 1966 and period fertility rates in 1951-2006. For the more recent period, starting in 1984, the graph also displays a period fertility indicator based on parity progression ratios, termed the period average parity (PAP). This fertility index is based on a set of age-specific childbearing probabilities for first births and duration-specific childbearing probabilities for second and higher-order births. This approach reflects properly the sequential nature of childbearing.⁶ Whereas the TFR has oscillated around the level of 1.4 in the last two decades, the PAP, which is less affected by tempo effects, has typically reached the levels of 1.6-1.7. Completed fertility has gradually declined among women born after 1935, dropping below 1.7 among women born after 1965.

This section outlines major changes in period and cohort fertility rates. It looks at parity-specific trends in completed fertility among women born in the period 1900-66 and selected socio-economic differentials in cohort fertility and parity distribution as reported by the population census of 2001 (Statistics Austria 2005c). The second part contains an analysis of trends in period fertility tempo and quantum, concentrating on the postponement of parenthood to higher reproductive ages. The focus of this analysis is the period 1984-2006, for which the birth statistics were collected by birth order, thus permitting a detailed study of the parity-specific components of fertility changes.

⁶ The PAP is based on the assumption that following the birth of the first child, the childbearing intensity is primarily a function of the time that has elapsed since the previous birth rather than age. As long as birth intervals remain relatively stable, this index is not affected by the ongoing trend towards later childbearing for birth orders two and higher. Although in reality both age and duration strongly affect childbearing intensities, we have found that duration-specific fertility rates for all ages combined have been considerably more stable in Austria than the schedule of age-specific childbearing intensities (see also Ní Bhrolcháin 1992: 616 for further arguments supporting the use of duration-specific fertility rates). The construction and the use of the PAP index is further described in Sobotka et al. 2005 (see pages 119-120 and 132-133, and Appendix 3, which is available as a supplementary online material).

Figure 1: Period (1951-2006) and cohort (1900-1966) fertility indicators, Austria



Source: Census 2001 (Statistics Austria 2005c) for birth cohorts 1941-1966 and census 1991 (Statistics Austria 1996) for birth cohorts 1900-1940. Period data and cohort fertility realised in 2001-06 are based on authors' computations based on the database of births in 1984-2006 provided by Statistics Austria.

3.2 Completed fertility and parity distribution among women born since 1900

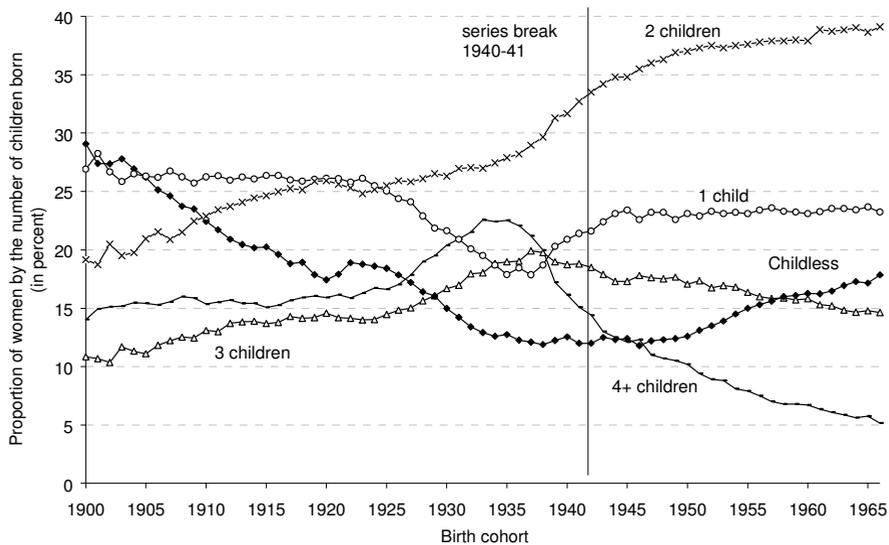
Austrian population censuses carried out in 1981, 1991 and 2001 (Statistics Austria 1989, 1996 and 2005c) provide retrospective information on cohort fertility.⁷ Our description focuses on the birth cohorts 1900-66. For the cohorts born after 1955, that had not completed their fertility at the time of the most recent census, we combine the data from the 2001 population census with the vital statistics records for 2001-05 and with estimates of a small portion of their future fertility at late childbearing ages. Our computations differ somewhat from those presented in the most extensive analysis of Austrian cohort fertility to date (Frejka and Sardon, 2004), which relied on cohort fertility estimates based on long-time series of period fertility data.

Figure 2 depicts changes in cohort parity composition. Women born in 1900, affected in part by the economic crisis of the 1930s, achieved low completed fertility of 1.75 through a combination of high childlessness and small average family size. According to the 1991 census, childlessness among Austrian women born in the early 20th century reached particularly high levels, surpassing 20% for women born up to 1915 and even reaching 29% among women born in 1900.⁸ This is well above the levels of childlessness recorded in early 20th-century cohorts in neighbouring Germany, the Czech Republic and Slovakia. The post-war baby boom led to a remarkable rise in completed fertility, surging to 2.46 among women born in 1935. This rise resulted in a marked shift in the final parity distribution. Childlessness decreased to 12% among women born between 1936 and 1949, and families with only one child became relatively uncommon. In parallel, larger families became dominant, with more than 40% of all women born in 1932-38 having three or more children.

⁷ To reduce potential selectivity linked to differential mortality by parity status, the population census conducted in 1991 is used to analyse the fertility of women born in the period 1900-40 and the most recent population census (2001) is used to analyse fertility of cohorts born in 1941 and later. For women born in the early 20th century we also considered using the 1981 census data (no earlier data are available). However, these data differed from the data of both 1991 and 2001 census rounds as they indicate considerably higher childlessness for all women past reproductive age in 1981 (the difference was 2-6%; see also footnote 3). Because census data for 1991 and 2001 showed consistent and almost identical results with respect to completed fertility and parity distribution of women born in 1905 and later, we decided not to use the 1981 data. The parity distribution for old-aged women at the time of the 1991 census may potentially suffer a bias owing to differential mortality by parity. The available research indeed shows that childless women have slightly higher mortality rates than women with one or two children at the age of 65 and over (Doblhammer 1997: Table 8-4), but this difference is small and cannot account for large changes in childlessness suggested by the results of the 1981 and 1991 censuses.

⁸ The population census carried out in 1981 (Statistics Austria 1989) indicated even higher levels of childlessness among Austrian women born in the early 20th century, exceeding 25% among women born until 1912 and reaching 30-33% in the birth cohorts 1900-1906 (see also footnote 2).

Figure 2: Cohort parity distribution, Austrian women born 1900-1966

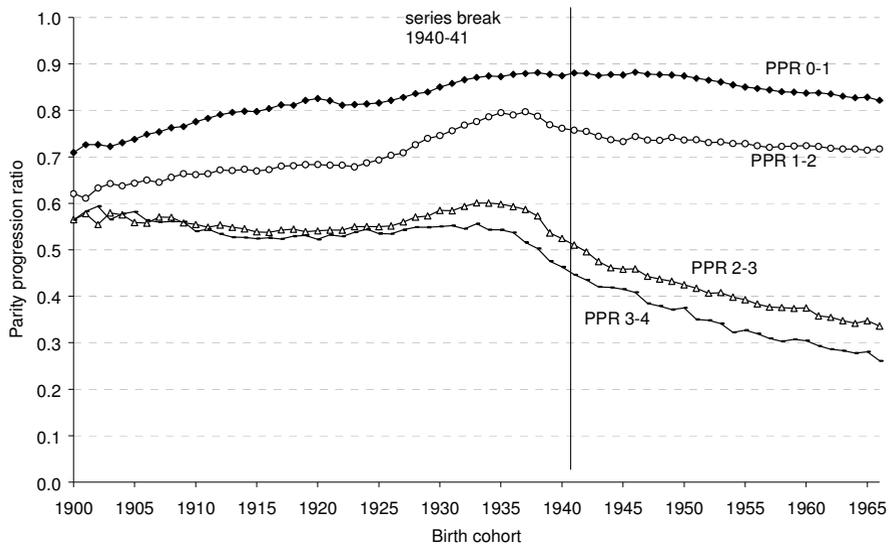


Source: Census 2001 (Statistics Austria 2005c) for birth cohorts 1941-1966 and census 1991 (Statistics Austria 1996) for birth cohorts 1900-1940. Cohort fertility taking place in 2001-2006 was computed from the database of births in 1984-2006 provided by Statistics Austria.

The gradual spread of two-child families constitutes the only trend that started already among the early 20th century cohorts, continued among the cohorts that brought about the baby boom and persisted thereafter. Slightly more than one fifth of all women born in 1910 had two children, whereas this proportion reached almost 40% for the mid-1960s cohorts. The end of the baby boom caused a relatively rapid decline in the proportion of larger families. This trend was particularly pronounced for families with four or more children, whose share fell from 23% in the 1935 cohort to 5% in the 1966 cohort. In parallel, childlessness gradually increased to 18% among this cohort and the trend projection suggests that it is likely to reach 21% for women born in the mid-1970s. Although this is substantially below the childlessness levels recorded among the early 20th century cohorts, these estimates put Austria alongside countries with the highest childlessness in Europe, such as Germany, the Netherlands, and the United Kingdom (Sobotka 2005b). The declining share of large families and the general

orientation towards a two-child family norm is also reflected in the parity progression ratios shown in Figure 3. Whereas the progression rate to a second birth remained stable and relatively high (above 0.7) among women born during the 1950s and 1960s, progression rates to third and fourth births declined steadily. For the youngest cohort analysed here (1966), only one third of all women having two children eventually had a third child and one quarter of women with three children further increased their family size. In contrast, in the baby boom cohort of 1933, 60% of women with two children had a third child and 55% of women with three children eventually had a fourth child.

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



Source: Census 2001 (Statistics Austria 2005c) for birth cohorts 1941-1966 and census 1991 (Statistics Austria 1996) for birth cohorts 1900-1940. Cohort fertility taking place in 2001-2006 was computed from the database of births in 1984-2006 provided by Statistics Austria.

3.3 Childbearing trajectories of younger cohorts

More subtle changes in first, second, and third birth trajectories among women born in 1950-1980 are depicted in Figure 4.⁹ These women have progressively postponed childbearing and each younger cohort experienced a further decline in cumulated fertility at younger ages. When the 1960 cohort is taken as a benchmark, the cumulated fertility decline among the younger cohorts was largest at ages 24-27 for first births and at ages 26-30 for second births (see the last graph of Figure 4 for first births). Subsequently, most of this 'deficit' has been markedly reduced thanks to increasing first and second birth rates among women in their late twenties and older. For instance, almost two thirds of the 'deficit' in cumulated first birth rates at the age of 25 for the 1970 cohort (-0.16) has been 'recovered' by the age of 36 ('deficit' less then -0.06). However, this 'catching up' has not been sufficient to counterbalance fully for the fertility decline experienced earlier in life (see also Frejka and Sardon 2004). In addition, the decline in third and higher-order birth rates at younger ages for women born before 1970 has not been compensated later in life, reflecting an increasing orientation towards a small family model.

3.4 Socioeconomic differences in completed fertility and parity distribution

The overall picture of cohort parity distribution hides a number of pronounced socio-economic differentials. Table 1 summarises major differences in completed fertility and parity distribution by place of residence, region of birth, religious affiliation, and level of education among women born between 1955 and 1960. These women had virtually completed their fertility 'career' at the time of the 2001 population census and we expect that the very small portion of fertility realised after 2001 will not affect the presented differentials.

⁹In this analysis, only fertility histories up to 2006 are included, based on the parity distribution recorded in the 1991 census and vital statistics for 1984-2006. There is no information on fertility trajectories realised before 1984, when data on order-specific fertility rates were not collected. Note that there are minor differences in completed fertility and parity distribution when compared with the analysis in the previous section (3.2), which uses the 2001 census results for reconstructing cohort fertility trajectories of women born after 1940. These latter data, which take into account pre-migration fertility histories of women who immigrated to Austria between 1991 and 2001 and were residents at the time of the 2001 census, show lower childlessness and overall higher levels of completed fertility.

Figure 4: Cumulative proportion of women having first, second and third birth by age, cohorts 1950-1980

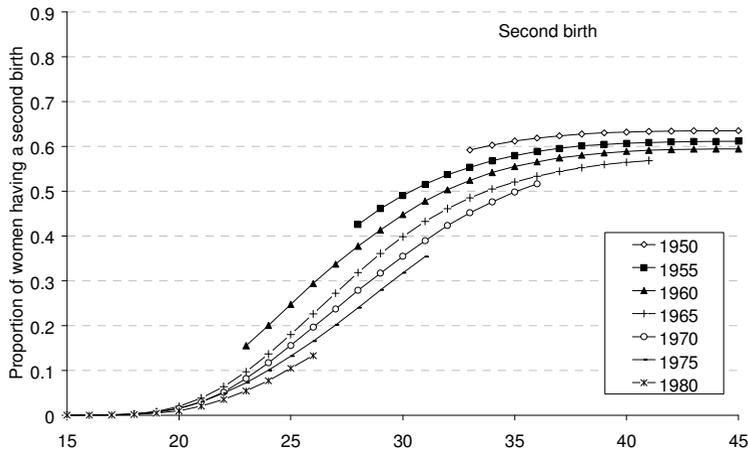
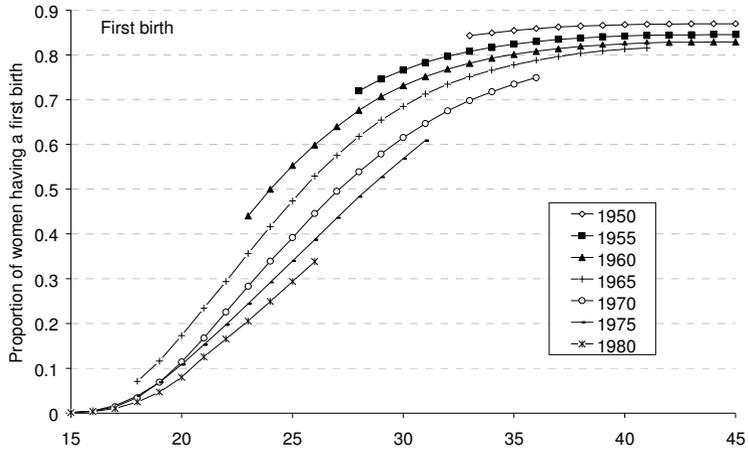
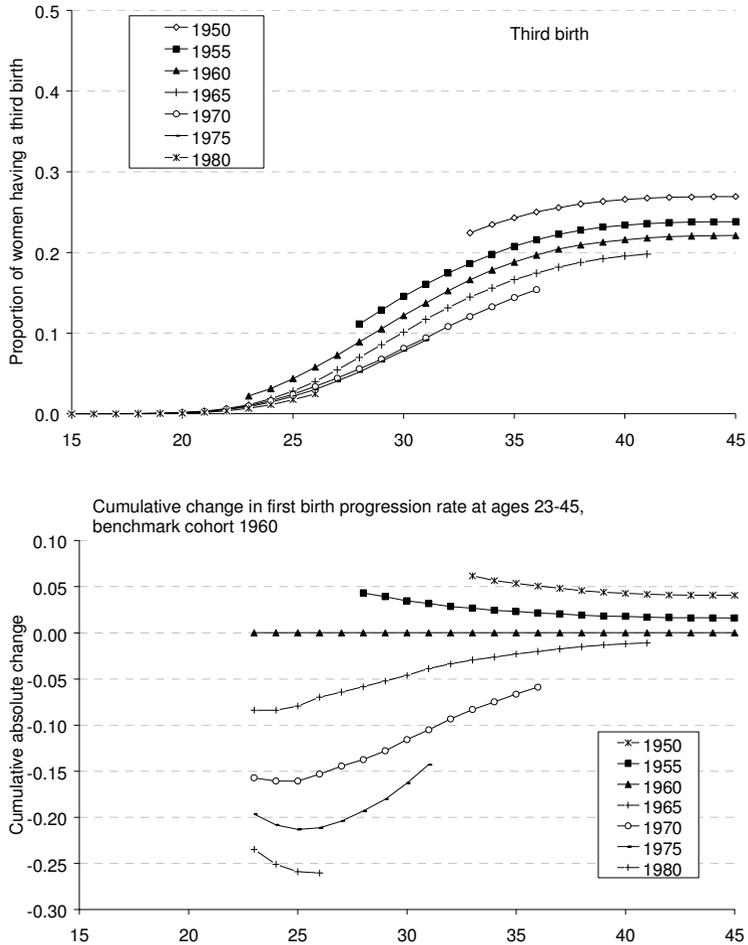


Figure 4: (Continued)



Source: Authors' computations based on the database of births in 1984-2006 and Statistics Austria (1996).

Notes: Data in the first three panels have been constructed from the period fertility data in 1984-2006 combined with the 1991 census data on parity distribution by age. These data differ slightly from the data in Figures 1-3, which are primarily based on the 2001 census results. Owing to a lack of time series of order-specific data for the period prior to 1984, it is not possible to reconstruct complete fertility histories of women born before 1970. Consequently, fertility curves for these cohorts start at the age they reached in 1984

Within Austria, Vienna traditionally stands out as having low fertility and high childlessness levels. One quarter of all women born between 1955 and 1960 residing in Vienna in 2001 were childless, as compared to 16% in the whole of Austria. Furthermore, their completed fertility reached a very low level of 1.43. This is not a new situation; in fact, the contrast between Vienna and the rest of Austria was more marked among the older birth cohorts and Viennese period TFR reached extremely low levels during the 1930s, falling to 0.6 in 1933-34 (Kirk 1946, quoted by Frejka and Sardon 2004). The baby boom was not very pronounced in Vienna and even the 'fertile' cohorts of 1931-35 achieved a completed fertility of 1.68, well below the replacement level and substantially below the average for the whole of Austria (2.45). Furthermore, Viennese women born before 1925 had only 1.34 children on average, although their replacement-level fertility was well above the current threshold of 2.1 owing to much higher infant and child mortality in the past (see Figure 5).

Among the foreign-born women, the growing Turkish minority stands out for its high fertility level (3.07 children per woman in the 1955-60 cohorts), very low level of childlessness and high prevalence of larger families. Two thirds of Turkish-born women have three or more children and the progression rate to a third child (0.74) is more than twice as high as that of Austrian-born women, which indicates a very limited popularity of the two-child family model among the Turkish population. Women born in former Yugoslavia have also relatively low childlessness levels, but unlike the Turkish-born women, they display a pronounced orientation towards a two-child family, with 46% having two children.

With respect to religious affiliation, two sub-populations represent the opposite extremes of fertility differentials in Austria. On the one hand, women without religious affiliation typically have the highest childlessness (31%), the lowest prevalence of larger families (with only one in ten having three or more children) and overall very low fertility: their mean number of children per woman (1.19) as well as their mean number of children per mother (1.73) are the lowest among all the socio-economic groups considered here. On the other hand, Muslim women, representing 3% of the total female population born in the period 1955-60, have high fertility levels and characteristics similar to the Turkish-born women, who constitute about one half of the Muslim minority. They have, however, experienced a pronounced decline in completed fertility, from 4.2 children per woman in the 1926-30 cohorts to 2.7 children per woman in the 1955-60 cohorts, with a gradual shift towards a family norm of two to three children (see Figure 5). In between these two extremes, Catholics, who represent almost three quarters of the total population, have slightly lower childlessness and higher

completed fertility than Protestants. The differences between these two groups have diminished over time.

Table 1: Selected characteristics of completed fertility and parity distribution among women born 1955-1960 by place of residence, country of birth, religious affiliation and highest educational attainment

	Childless (%)	1 child (%)	2 children (%)	3+ children (%)	PPR 2-3	Mean number of children per woman per mother		Share in the total population (%)
Place of residence								
All resident women	16.1	23.4	37.9	22.6	0.373	1.77	2.11	100
Vienna	25.3	28.3	31.4	15.0	0.323	1.43	1.92	19.4
Country of birth								
Austria	16.4	23.8	38.0	21.8	0.364	1.74	2.08	86.3
EU-15	21.9	22.8	34.3	21.0	0.380	1.64	2.09	2.4
Former Yugoslavia	9.0	18.2	45.6	27.2	0.373	2.05	2.25	4.9
Turkey	4.8	6.9	22.7	65.6	0.743	3.07	3.22	1.6
Religious affiliation								
Catholic	13.8	22.3	40.0	23.9	0.374	1.83	2.13	73.7
Protestant	16.0	24.7	39.5	19.8	0.334	1.71	2.03	4.8
Muslim	6.1	10.2	31.9	51.8	0.619	2.71	2.89	3.2
No affiliation	31.0	32.0	27.2	9.8	0.264	1.19	1.73	12.5
Level of education								
Tertiary: University	29.8	24.0	32.1	14.1	0.305	1.35	1.93	7.0
Tertiary: Academy (teachers & social workers)	18.1	21.2	40.1	20.6	0.339	1.69	2.07	5.2
Higher secondary: comprehensive grammar school + practical training	22.3	25.3	35.3	17.1	0.327	1.54	1.98	9.4
Lower secondary: apprenticeship & practical training	14.3	25.0	40.0	20.7	0.341	1.74	2.03	48.7
Basic education	13.5	20.2	36.5	29.8	0.449	1.99	2.30	29.7

Source: Population census 2001 (Statistics Austria 2005c).

A look at fertility differences by the highest completed level of education confirms the usual gradient, i.e. lowest childlessness, highest progression rates to a third child and completed fertility close to replacement level among women with basic education, and high childlessness coupled with a low level of completed fertility among women with a university education. In addition, Spielauer (2005) also found large fertility differentials by profession. Women graduating from academies (e.g., teachers training colleges and social worker training) are the main exception from the usual educational pattern. Whereas the older cohorts of academy-educated women had levels of childlessness and completed fertility similar to those of university-educated women, partly due to the importance of religious schools in the education system in the past (Spielauer 2005), younger cohorts born after 1950 have lower childlessness and higher fertility (Figure 5). Their fertility patterns resemble those of women with lower secondary education. Rising educational attainment coupled with the persisting fertility differentials explain part of the observed decline in completed fertility, which has been progressing more rapidly in the whole population than within any of the educational categories except that of women with basic education.

Figure 5: Completed fertility by place of residence, country of origin, religion and education level for women born before 1961

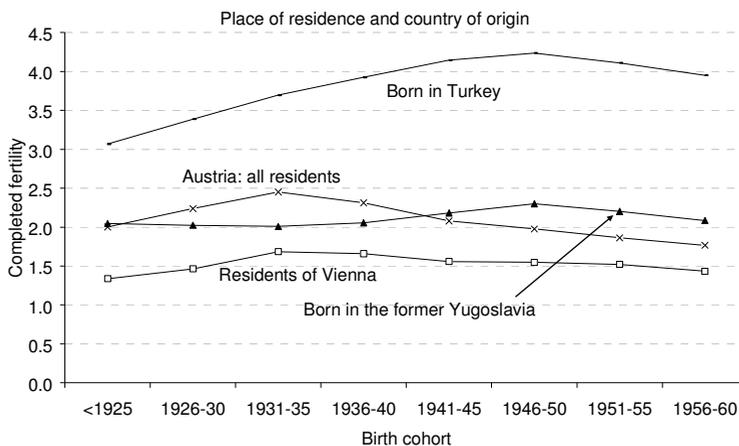
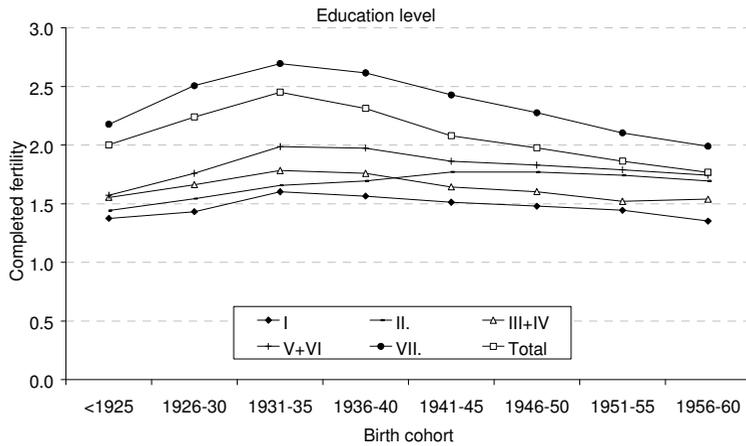
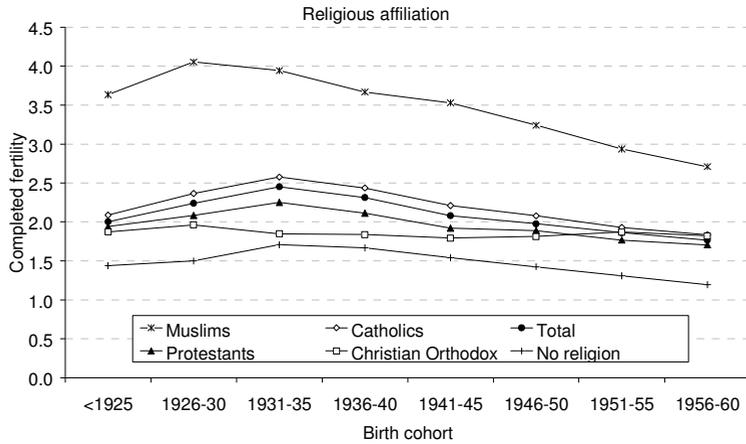


Figure 5: (Continued)



Source: Population census 2001 (Statistics Austria 2005c).

Note: Educational categories: I. University; II. Academy (teachers & social workers); III. Higher secondary (professional training); IV. Comprehensive grammar school (Gymnasium); V. Lower secondary with professional training; VI. Lower secondary (apprenticeship); VII. Primary school.

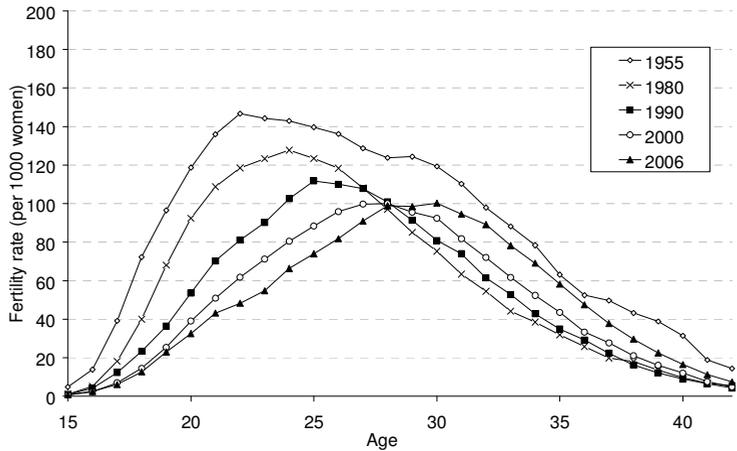
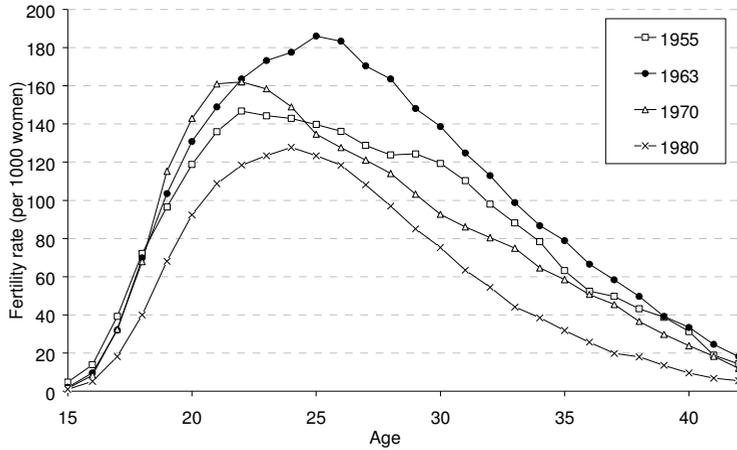
3.5 Period fertility tempo and quantum

The post-war baby boom reached its peak in 1963 and was followed by a pronounced decline in fertility that lasted until the mid-1980s. This decline was primarily driven by the gradual spread of a two-child family model combined with a decline in fertility at third and higher birth orders. The period fertility level has remained relatively stable since the mid-1980s and the shift towards later parenthood has become the most prominent feature of recent period fertility trends.

Figure 6 shows the transformations of age patterns of fertility since 1955. The baby boom had markedly raised fertility rates, especially in the prime childbearing ages. In the following period, fertility rates were declining among older women and childbearing was increasingly concentrated at younger ages. This trend was most clearly visible around 1970, when fertility rates reached the highest levels at ages 21-22. Since the early 1980s fertility rates have declined at younger ages, especially among women below the age of 25, and have gradually increased at older ages. As a result, the peak in fertility rates has shifted to ages 28-30 and has become less pronounced. Overall, fertility rates after 1963 fell most markedly at both ends of a woman's fertile period, dropping by more than three quarters among teenage women and, until 1990, by a similar order among women aged 40 and older (see Table 2). Consequently, only 4% of all fertility rates were realised by teenage women in 2006, down from 13% in 1970. The mean age of mothers at childbearing exceeded 29 in 2005, the highest level recorded since the early 1950s, despite the strong reduction in higher-order childbearing that usually occurs at late childbearing ages.

Figure 7 shows selected indicators of fertility timing. Especially first births have been postponed to later ages and the mean age of mothers at first childbirth increased by more than three years between 1984 and 2006, reaching 27.5 years. The median age at first birth has risen even more rapidly, reflecting in part the decline in the concentration of childbearing into earlier reproductive ages. In Austria, as in other developed countries, a substantial portion of postponed family formation can be explained by prolonged education and the later graduation age of students. The widely observed fact that being enrolled in education strongly inhibits fertility (e.g. Vikat 1994, Liefbroer and Corijn 1999, Hoem 2000) also holds true for Austria. A distinction between full-time and part-time education shows that full-time education reduces entry into motherhood to a greater extent (Buber 2001).

Figure 6: Age-specific fertility rates for women aged 15-42; selected years 1955-2006



Source: Eurostat (2006) and authors' computations based on the database of births in 1984-2005 provided by Statistics Austria.

Table 2: Fertility rates by selected age groups and main indicators of period fertility tempo and quantum, 1951-2006

	Sum of fertility rates in age groups (per 1000 women)					
	Below 20	20-24	25-29	30-34	35-39	40+
1951	216.8	591.7	562.0	356.8	229.7	73.0
1963	279.3	826.9	829.2	531.6	269.6	85.4
1970	293.2	774.5	580.6	380.2	203.2	61.3
1980	173.9	590.0	510.6	253.7	97.8	26.3
1990	101.7	431.9	512.8	288.6	101.9	20.1
2000	67.7	327.7	483.5	336.5	125.7	23.5
2005	64.0	274.4	467.6	399.5	166.9	32.0
2006	60.0	265.4	456.8	412.8	173.7	35.1
Change 1963–2000	–75.8%	–60.4%	–41.7%	–36.7%	–53.4%	–72.4%
Change 2000–2006	–11.3%	–19.0%	–5.5%	22.7%	38.2%	49.2%

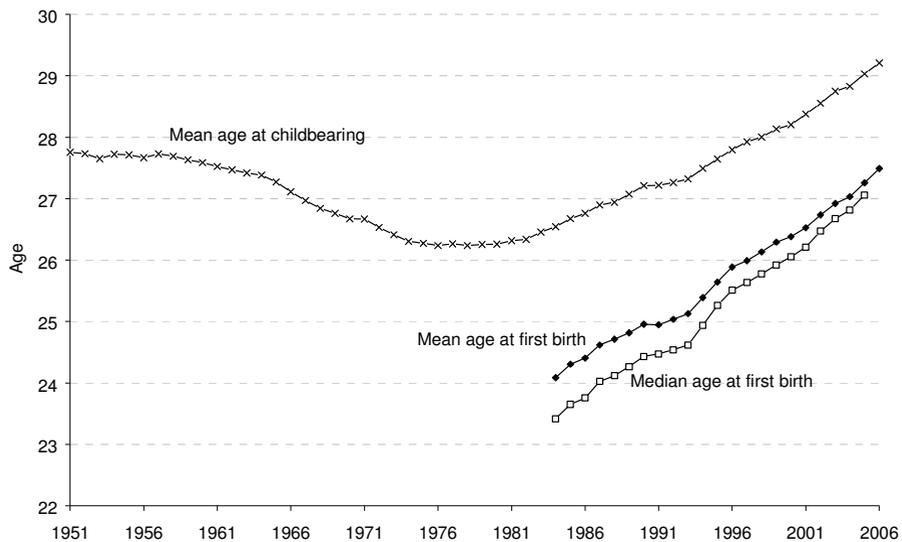
	Share <20 (%)	Share 30+ (%)	Mean age at childbearing	Mean age at first birth	TFR	PAP
1951	10.7	32.5	27.55		2.03	
1963	9.9	31.4	27.42		2.82	
1970	12.8	28.1	26.67		2.29	
1980	10.5	22.9	26.26	23.7 (est.)	1.65	
1990	7.0	28.2	27.20	24.95	1.46	1.69
2000	5.0	35.6	28.22	26.38	1.36	1.55
2005	4.6	42.6	29.03	27.26	1.40	1.64
2006	4.3	44.3	29.21	27.49	1.40	1.64

Source: Eurostat (2006), Council of Europe (2005) and authors' computations based on the database of births in 1984-2006 provided by Statistics Austria.

The increase in age at first birth can be observed in all education groups and is not only the result of staying in the education system for a longer time (Städtner and Spielauer 2002). Nevertheless, many women with only compulsory education still become mothers at an early age, whereas women with higher education frequently postpone family formation into their thirties. In their analysis of the 1996 Microcensus data, Städtner and Spielauer (2002:Table 4.1) estimated that women with compulsory

education became mothers at the age of 21.9 on average, whereas women with a university education became mothers at the age of 28.1. Buber (2002) found that highly educated women tend to inhibit childbearing immediately after completing their education as their opportunity costs of childbearing may be particularly high in the early stage of their career. However, their first birth intensity increases markedly soon thereafter, exhibiting a strong tendency of ‘catching up’. Women with tertiary education ‘speed up’ childbearing even more than women with higher secondary education. Sizeable educational differentials in first birth timing also explain the overall increase in the variance in age at entering motherhood among Austrian women (Sobotka 2005a: Table 4). Almost one tenth of first birth rates in 2004 were still realised by teenage women, while the last tenth of first birth rates occurred after age 34, representing a steady increase over the previous two decades.

Figure 7: Selected indicators of the timing of childbearing (1951-2006) and first birth (1984-2006)



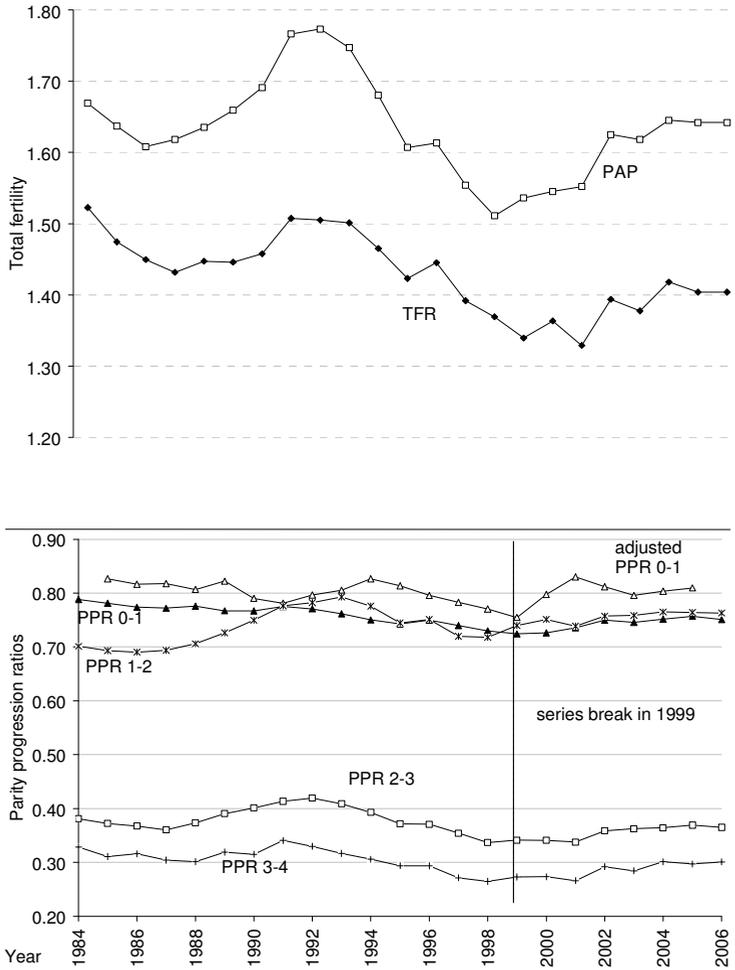
Source: Eurostat (2006) and authors' computations based on the database of births in 1984-2006 provided by Statistics Austria.

3.6 Parity-specific fertility trends since 1984

The lack of data on fertility by birth order for the period prior to 1984 limits our analysis of parity-specific trends to the past two decades, which were characterised by relatively stable fertility rates. Two minor waves in fertility were observed during this period: a modest increase in 1991-92 and again in 2002-04 (see Figure 8). The first peak was more pronounced, with the indicator of total fertility based on parity progression ratios (period average parity, PAP) reaching 1.77, and the progression rates to second, third and fourth births each rising by 7% between 1989 and 1991-92. This rise was, however, short-lived and was followed by a gradual decline in fertility rates during the next decade, when the PAP fell to 1.51 in 1998. The two peaks in fertility coincide with changes in family-related policies and are discussed in more detail in Section 6.2.

Apart from these fluctuations, parity progression ratios have been remarkably stable since the mid-1980s. The decline in first and second birth rates among younger women has been almost fully compensated by a subsequent increase in childbearing intensity at higher ages. However, the ongoing fertility postponement has negatively affected the overall first birth progression rates, for which Figure 8 shows both the unadjusted version (based on age-specific first birth probabilities) and the adjusted version. The latter indicator, which takes into account the influence of tempo effects, implies that about one fifth of all Austrian women would eventually remain childless if the parity-specific fertility rates of the early 2000s were to prevail in the future. Since birth intervals between the first, second and subsequent children have been stable, progression rates to second and later children have not been affected by tempo effects. Hence they reflect well the period fertility quantum. The recent patterns suggest that around 75% of all women with one child will eventually have a second child, 35% of all women with two children will have a third one and less than 30% of all women with three children will progress to parity four. When combined, these progression rates give an estimate of the PAP of 1.64 in 2006 as compared with a TFR of 1.40.

Figure 8: Total fertility and parity progression ratios, 1984-2006



Source: Authors' computations based on the database of births in 1984-2006 provided by Statistics Austria.
 Note: Break in the time series of parity progression ratios in 1999.

Our findings on period parity-specific fertility in Austria lead to three main conclusions. First, the shift to later parenthood has not yet been associated with a declining propensity of women to give birth to a first and second child. Second, recent period parity progression rates are very similar to the cohort progression rates observed among women born in the mid-1960s (see Section 3.2 above). This signals that a stabilisation of completed fertility and cohort parity distribution can be expected for women born in the late 1960s and in the 1970s. Finally, our analysis suggests that the long-standing decline in the propensity to bear a third child, which was the driving force of the fertility decline until the mid-1980s, has probably ended. It is worth noting that during a recent upward swing in fertility, third birth rates increased more rapidly, specifically by 10% between 2001 and 2005, than the progression rates to other parities (see also Sobotka et al. 2005).

3.7 Fertility among non-Austrian citizens

Growing populations of foreign residents as well as naturalised foreigners also increasingly influence fertility trends. Almost 12% of children born in 2005 were born to foreign mothers; this proportion would be much higher, probably close to one fifth, if births to naturalised immigrant women were included as well. As Section 3.4 documents, some of the immigrant communities can be classified as ‘high fertility groups’, at least in the Austrian context. The recent increase in third birth progression rates thus may be partly attributed to the compositional effect of the more fertile foreign populations becoming more numerous. Kytir’s (2005) overview of population trends in Austria shows that the gap between the period TFR of Austrian residents and foreigners has remained stable during the past 20 years (Table 3). Whereas the native Austrian women reached the ‘lowest-low’ total fertility level of 1.29 after 2000, women with non-Austrian citizenship have retained a total fertility exceeding two children per women, and the TFR among Turkish women even approached three children. In effect, the net impact of foreign residents on the Austrian TFR was positive and approaching 0.1. However, these data are partly affected by the selectivity of foreign-born women without Austrian citizenship (typically those arriving to Austria more recently) and by a close link between immigration and fertility (see also Overview Chapter 7). Consequently, the data on the TFR of foreign residents fluctuate to some extent with immigration waves.

Table 3: Period TFR of women resident in Austria by citizenship status, 1984-2004

Period	Total fertility rate (TFR)			Total	Difference (absolute)	Net impact of 'foreigners' on TFR
	Austrian citizens	Foreign nationals	Turkish nationals			
1984–89	1.43	2.22	3.70	1.46	0.80	0.03
1990–94	1.41	2.21	3.09	1.49	0.80	0.08
1995–99	1.31	2.06	2.63	1.39	0.75	0.09
2000–04	1.29	2.04	2.92	1.38	0.75	0.09

Source: Based on data published in Kytir (2005: 782, Table 8).

3.8 Fertility intentions

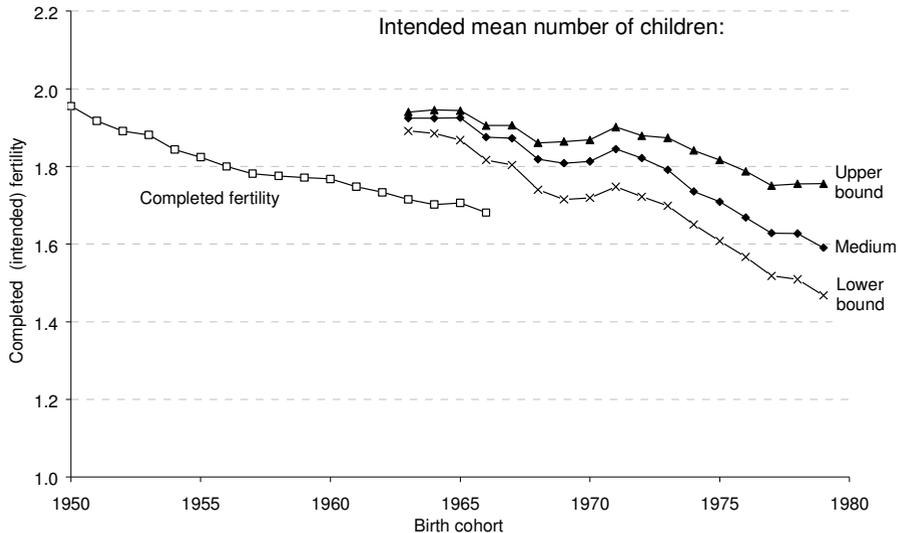
Bongaarts' (2001 and 2002) conceptual framework views fertility as resulting from the intended family size of the population. It is mitigated by a set of factors that reflect unanticipated effects, including competing preferences for a career, marital disruption, 'celibacy' and infecundity, unwanted fertility, gender preferences for children, and postponement effects. In conjunction with declining family size preferences, the factors listed above will influence fertility (Goldstein, Lutz and Testa 2003).

Figure 9 shows the completed fertility for Austrian women born between 1950 and 1966 (see also Figure 1) with the mean intended number of children for the cohorts of 1956 to 1979 based on the 2001 Microcensus survey. Besides the possibility that the Microcensus population sample over-represents women with higher fertility and higher intended fertility, the figure suggests a considerable level of unsubstantiated optimism regarding the intended family size among women in their late reproductive years (cohorts born in the mid-1960s), who desired by 0.2 children more on average than they were likely to achieve. The higher level of intended fertility among the younger cohorts born in the early 1970s is less surprising. Such a gap between intended and eventually realised fertility is commonly found in many advanced societies (Bongaarts 2001).

The figure shows a declining desired family size for the cohorts born after 1970, with a medium estimate at 1.63 for the women born in 1978. The upper-bound (1.76) and the lower-bound (1.51) estimates differ considerably due to a high proportion of younger respondents uncertain about their fertility desires and different assumptions employed for this group of women. Although the declining intended mean number of

children among women born in the second half of the 1970s may serve as an indicator of a possible further decline in completed fertility, a portion of this trend may be explained by a specific age effect. The analysis of time series of fertility intentions, collected by the Microcensus surveys of 1986, 1991, 1996 and 2001 shows that Austrian women typically have low fertility intentions at young adulthood (below age 25) and later show a slight increase in their fertility desires as they approach the age of 30. Interestingly, women born in the late 1950s already expressed sub-replacement fertility intentions (below two children per woman) when asked in the 1986 survey (Sobotka 2008). This evidence is consistent with the low family-size ideals reported for Austria and Germany by Goldstein, Lutz and Testa (2003).

Figure 9: Completed fertility among women born 1950-1966 and intended mean number of children among women born 1963-1979



Source: Microcensus 2001 for intended family size; cohort fertility data from Figure 1 for completed fertility.

Notes: The data on fertility intentions are weighted to be representative of the whole population of Austria and smoothed (5-years (cohorts) moving averages are used) to reduce random fluctuations attributable to a small number of respondents in each birth cohort. The higher (upper bound) estimate excludes the answers of undecided women; medium estimate assumes that women who are uncertain about their childbearing intentions and could not provide any range of their childbearing desires when asked do not intend to have an additional child, and the lower bound estimate assumes that all the undecided respondents do not wish to have an additional child.

4. Living arrangements and family formation

This section analyses the process of family formation in Austria, which is closely linked to fertility. We focus on leaving the parental household, entering a first union and marriage and discuss how these processes are related to the birth of a first child. We analyse changes in the timing of these events during the past decades as well as the rapid increase in cohabitation. We also outline trends in union dissolutions and divorce in particular and their relation to fertility and the number of children affected by divorce.

4.1 Leaving home and union formation

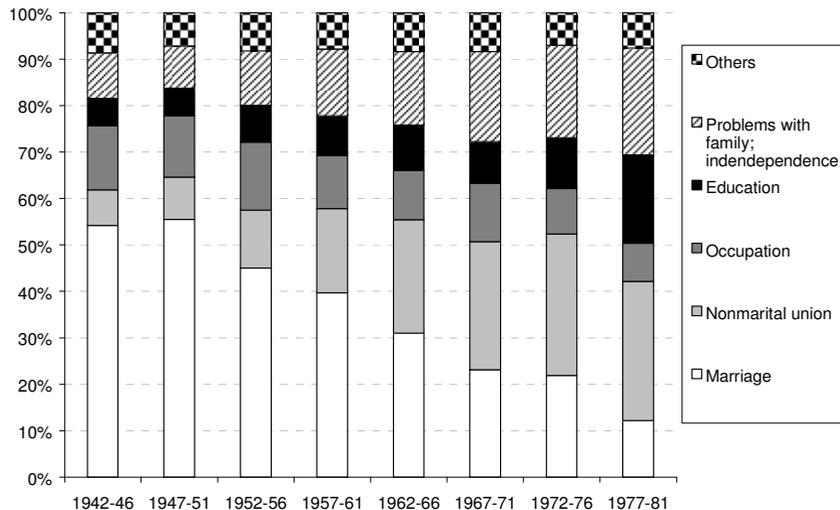
Leaving home is one of the “crucial nodes of the life course and a crucial event in the transition to adulthood” (Billari et al. 2001: 340), as it implies not only household independence but also greater social autonomy for young people. Like most other western European countries, Austria has early home-leavers, with a median age of 19.9 years for women born around 1960 (Billari et al. 2001). Nevertheless, data for the birth cohorts 1942 to 1986, based on the 2001 Microcensus survey reveal that leaving the parental home before the 20th birthday becomes less common for younger cohorts (Table 4). This trend is related to the increasing length of schooling and training (Landler 1997). The majority of women have left home by the age of 30 and only a few move out later. By the age of 35, one out of ten women still lives with at least one of her parents.

There are many different reasons for leaving home: attending school in another town, starting to work in a place far away from the parental home, moving in with a partner, marrying, problems with parents and the desire to be independent (Statistics Austria 2003). Union formation still constitutes the main reason for leaving the parental home although it declined from 62% among the birth cohort 1942-46 to 52% for the cohort 1972-76 (Figure 10). It is also interesting to note that Austria has particularly high figures for young people starting a cohabiting union within the parental home (Billari et al. 2001).

Table 4: Leaving parental home in Austria, women, cumulative percentages

Cohorts	Proportion of women who have left parental home by a given age					
	0-14	15-19	20-24	25-29	30-34	35+
1982-86	0.5					
1977-81	0.8	21.6				
1972-76	1.7	33.9	71.6			
1967-71	0.7	39.3	76.0	86.8		
1962-66	1.7	38.8	76.1	88.4	91.1	
1957-61	1.3	39.7	77.0	87.8	90.6	91.6
1952-56	1.4	41.5	79.5	89.0	91.4	92.3
1947-51	2.9	36.3	78.8	86.6	88.7	90.3
1942-46	4.3	31.5	74.3	86.5	89.1	90.5

Source: Microcensus 2001/3; special programme *Questions on families 2001*, cohorts 1942 to 1986.

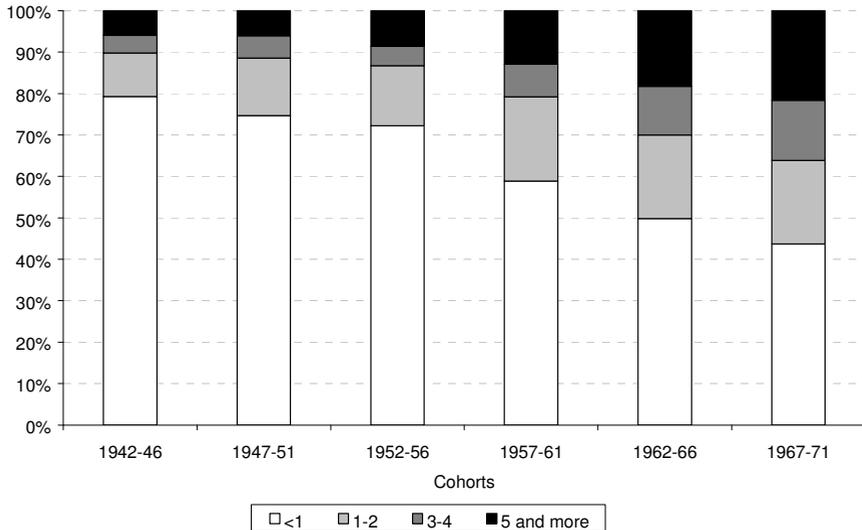
Figure 10: Reasons for having left the parental home in Austria

Source: Microcensus 2001/3; special programme *Questions on families 2001*, cohorts 1942 to 1981.

Remark: The category "Others" includes "Other reasons", "No special reason" or "Unknown".

Cohabitation is increasingly becoming an alternative to marriage: During the past decades, the importance of marriage as a reason for leaving the parental home has decreased (54% for cohorts 1942-46 and 22% for cohorts 1972-76) while the share of non-marital unions has increased. The disentanglement of union formation and marriage is also reflected by an increasing length of cohabitation (Figure 11, see also Overview Chapter 4). About three quarters of all women born in the 1940s and early 1950s started living with their partners at the time of marriage or married within the first year of cohabitation and nearly nine out of ten women were married two years after the formation of the first union. Women born in the 1960s cohabited for a longer time period. Every second woman married within the first year of cohabitation and, overall, two thirds were married two years after starting living together with their first partner. Living together without getting married was a relatively rare experience for women born in the 1940s, whereas the rule of ‘cohabitation first, marriage later or never’ has become a standard pathway of union formation for the cohorts born in the 1960s and later (Table 5).

Figure 11: Time (in years) between formation of first union and marriage, ever married Austrian women



Source: Microcensus 2001/3; special programme *Questions on families 2001*, cohorts 1942 to 1971.

Table 5: First union among women born 1941-67 who entered union before age 28 (%)

	Birth cohort					
	1941-45	1946-50	1951-55	1956-60	1961-65	1966-67
'Direct' marriage	74.3	66.2	55.0	39.1	32.7	25.1
Cohabitation as first partnership	8.3	14.8	24.9	38.8	49.8	55.0
Did not enter union by age 28	17.4	19.0	20.1	22.0	17.5	19.8
Did not marry by age 28	20.8	20.4	27.0	30.9	37.7	45.3

Source: Authors' computations based on the Family and Fertility Survey 1996 and Eurostat (2005).

Union formation and family formation are closely linked and the postponement of childbearing goes hand in hand with a postponement of union formation. What the 1942-61 cohorts have in common is an early and fast first union formation. A postponement of union formation first took place among the 1962-71 cohorts, followed by a further postponement for cohorts born in 1972 and later (Figure 12).

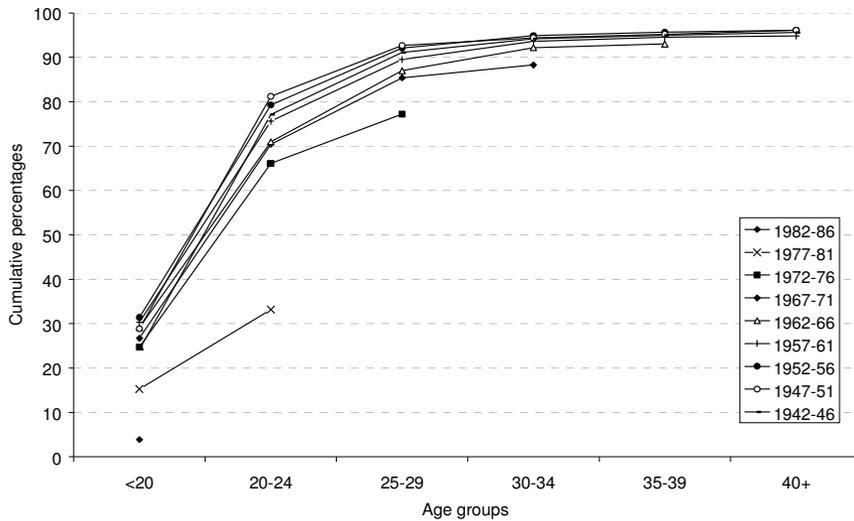
4.2 Patterns of marriage

Although young adults live as singles more frequently than in the past, the rapid spread of unmarried cohabitation has had the most prominent impact on the observed decline in marriage rates. As Winkler-Dworak and Engelhardt (2004: 33) point out, cohabitation has both a quantum effect (substitution of marriage) and a tempo effect (postponement of marriage) on marriage rates.

The gradual decrease in the importance of marriage is reflected by the long-standing drop in marriage rates that began in the early 1970s (Figure 13). This trend was interrupted by three pronounced peaks in first marriages (1972, 1983 and 1987), which have been linked to the introduction (1972), anticipated withdrawal (1983) and the actual withdrawal (as of 1 January 1988) of a marriage allowance granted to all persons marrying for the first time (Prioux 1993; Winkler-Dworak and Engelhardt 2004). Part of the long-term decline in first marriage rates is linked to the intensive postponement of first marriages and will not affect the cohort proportion of ever-married at age 50. However, life table estimates of total first marriage intensity, which are less sensitive to tempo distortions than the commonly used total first marriage

rates¹⁰, also dropped to a very low level of 0.60 in 2002-03. The analysis of Winkler-Dworak and Engelhardt (2004) shows that the tempo-adjusted indicators of period first marriage intensity in the late 1990s imply that close to 30% of all women will remain unmarried at age 50. The period mean age at first marriage among women has increased by more than five years since the mid-1970s and reached 28 years in 2004. Cohort indicators show a gradual retreat from marriage among women born after 1948; more than one fifth of all women born in the mid-1960s will remain unmarried when reaching age 50 as compared to 11-12% of those born in the mid-1940s.

Figure 12: Union formation among Austrian women

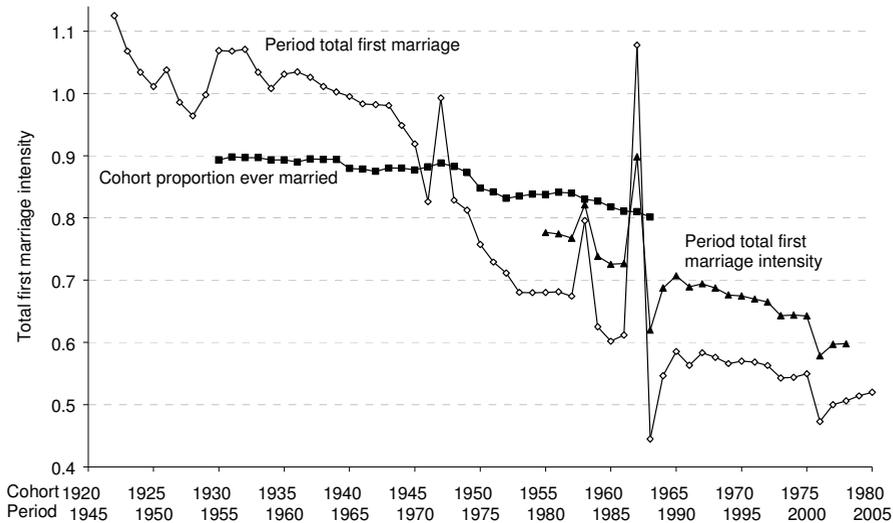


Source: Microcensus 2001/3; special programme *Questions on families 2001*, cohorts 1942 to 1986.

Remark: Dashed lines indicate right censoring.

¹⁰ Total first marriage intensity is a summary life table measure based on age-specific first marriage probabilities computed for women who have never married. The total first marriage rate is derived as a sum of age-specific first marriage rates (incidence rates), where the denominator includes all women of a given age, irrespective of their marital status.

Figure 13: Period (1950-2005) and cohort (1930-1963) indicators of first marriage intensity in Austria



Source: Authors' computations based on Eurostat (2005), Prioux (1993), and Statistics Austria (2006b).

4.3 Divorce¹¹

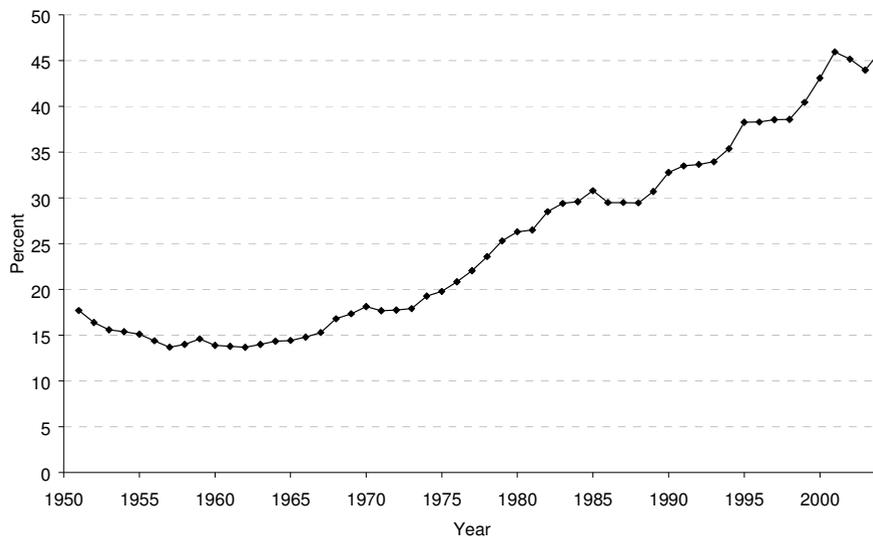
Austria has relatively high divorce rates and even before the introduction of legal divorce in 1938 it had one of the highest rates of marital breakdown in Europe (Zeman 2003). In 1961 the share of divorced women in Austria was 3.5%, one of the highest levels of all western European countries (Prinz 1995). The period total divorce rate¹² was 14% in 1960 and reached 46% in 2004 (Figure 14), indicating that close to one half of newly married couples would sooner or later divorce if the recent duration-specific

¹¹ Owing to lack of data only marital dissolutions are discussed in this article. The Family and Fertility Survey conducted in 1996 is the only data source in Austria that includes information on the dissolution of cohabiting unions.

¹² The total divorce rate is computed as a sum of divorce rates by duration of marriage in a given year.

divorce rates remained stable. Divorce rates are also gradually increasing over time from a cohort perspective. According to the 2001 census 14% of all Austrian women were divorced at age 40 (see Zeman 2003 for a detailed analysis of divorce and marital dissolution in Austria). Divorce rates show a pronounced peak in the third to the fifth year of marriage; the median duration of divorced marriages reached 9.8 years in 2004. This figure was 7.3 years in 1990, indicating that more and more couples who have been married for quite a long time eventually get divorced (Statistics Austria 2005a). Structural trends outside the family system such as women's higher educational attainments (Landler 1997), increased earnings, the increase in labour force participation (cf. Figure 18) or the growing urbanisation are thought to engender attitudes and values which, in turn, affect family stability.

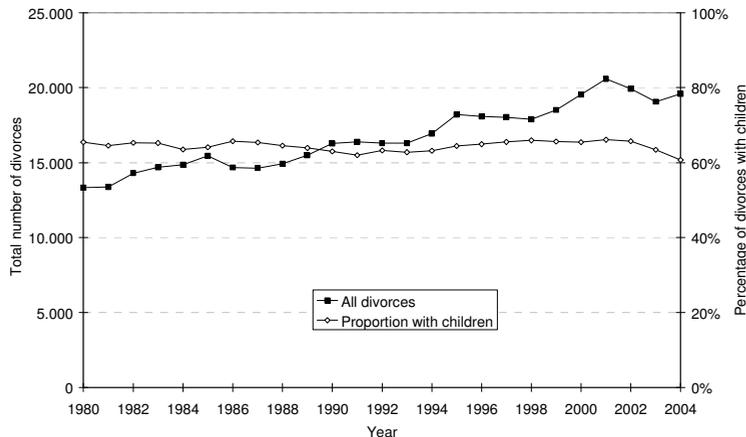
Figure 14: Total divorce rate for Austria, 1951-2004



Source: Statistics Austria 2005a, working tables of Statistics Austria.

Increasing divorce rates, but also the spread of cohabitation imply that a growing proportion of children experience a period of living with one parent. In 2000, 11.6% of children aged under 17 lived in one-parent households (OECD 2003: Table 4.2). During the past two decades, the share of divorces involving children irrespective of their age was rather stable at around 65%, and declined for the years 2003 and 2004, suggesting that childless couples increasingly experienced a marital breakdown (Figure 15). In 2004, a total number of 19,590 couples got divorced, of which 39% were childless, 26% had one child, 26% two and 9% three or more children (Statistics Austria 2005a). Among the 21,048 children affected by the divorce of their parents in 2004, 58% were below the age of 14. The study of Heuveline et al. (2003), based on the Family and Fertility Survey (FFS) data for to the early 1990s, estimates that 40% of all children go through a period of living with a lone parent before reaching the age of 15. Children born to cohabiting parents in Austria face a 2.2 times higher risk of parental separation than children born to married parents.

Figure 15: Total number of divorces and divorces with children in Austria, 1980-2004



Source: Statistics Austria 2001, Statistics Austria 2005a.

Note: The number refers to all children affected by the divorce of their parents, irrespective of their age.

4.4 Partnership context of childbearing

Changes in the patterns of union formation and living arrangements have strongly affected the partnership context of childbearing and childrearing, particularly in the case of first births. Table 6 provides an overview of partnership status around the time of the first birth for women born between 1941 and 1967 based on the FFS survey conducted in 1996.¹³ It is striking that a high and relatively stable proportion of women were unmarried and did not live with a partner at the time of first childbirth: around one fifth of first births occurred to non-cohabiting single mothers. The proportion of all children born to single mothers is also high. With 14 % of all children born to single mothers, Austria ranked third after the United States (16%) and Germany (15%) among the 17 countries analysed by Heuveline et al. (2003). Arguably, some single mothers had partners and intentionally kept a separate residence in order to qualify for the higher parental leave payments that were only granted to mothers who live alone. These higher payments were also granted to cohabiting and married mothers if their partner was unemployed, had no (or only a low) income or if the household income was low. This explains partly why in some poorer regions of Austria suffering from high unemployment rates (such as Styria) higher parental leave payments were more common.

The proportion of women having their first child in a cohabiting union has increased from 2% among the 1941-45 cohorts to 18% among the 1966-67 cohorts, exceeding thus the proportion of first births to single mothers. Furthermore, the initially high proportion of cohabiting parents who marry within two years has declined over time, indicating a rising permanency of cohabitation.¹⁴ In contrast, the share of single mothers who entered marriage after the birth of their first child shows an increasing tendency: one half of all single mothers born between 1961 and 1965 married within two years and another 13% started cohabiting. The indicator of premarital conceptions further shows the growing importance of cohabitation. Whereas the overall proportion of births conceived before marriage has gradually declined, progressively more children were conceived while the partners cohabited.

¹³ In order to make a comparison with the cohorts born in the 1960s, only women who became mothers before reaching the age of 28 are included in the analysis (the youngest cohort analysed, 1967, was aged 28 at the time of the FFS survey).

¹⁴ Heuveline and Timberlake (2004: 1226) note a high proportion of cohabiting couples in Austria, who have children outside wedlock and marry soon after the child is born. This differs from the patterns common in many other countries, where most cohabiting couples marry before having a child (e.g. Hungary or Switzerland) or, alternatively, where cohabitation remains a more permanent arrangement even after the arrival of a child (e.g. Finland; see also Overview Chapter 4).

Table 6: Partnership status at first childbirth (%); women born 1941-1967 who became mothers before age 28

	Birth cohort					
	1941	1946	1951	1956	1961	1966
	-45	-50	-55	-60	-65	-67
Marriage total	56.9	54.2	47.2	38.7	37.9	37.9
<i>Of which: total premarital conception (%)</i>	41	43	41	35	39	36
<i> conception when cohabitating (%)</i>	3	5	8	9	18	22
Cohabitation total	1.9	2.7	5.9	10.8	14.0	17.5
<i>Of which: married within 2 years (%)</i>	44	67	59	46	40	
Single total	18.9	20.8	21.1	20.2	19.6	15.1
<i>Of which: married within 2 years (%)</i>	34	43	43	46	51	
<i>Of which: cohabiting within 2 years (%)</i>	2	3	6	5	13	
No child by age 28	22.3	22.4	25.8	30.4	28.5	29.6
<i>Total conceptions extramarital (%)</i>	57	60	62	64	68	66

Source: Authors' computations based on the Family and Fertility Survey 1996.

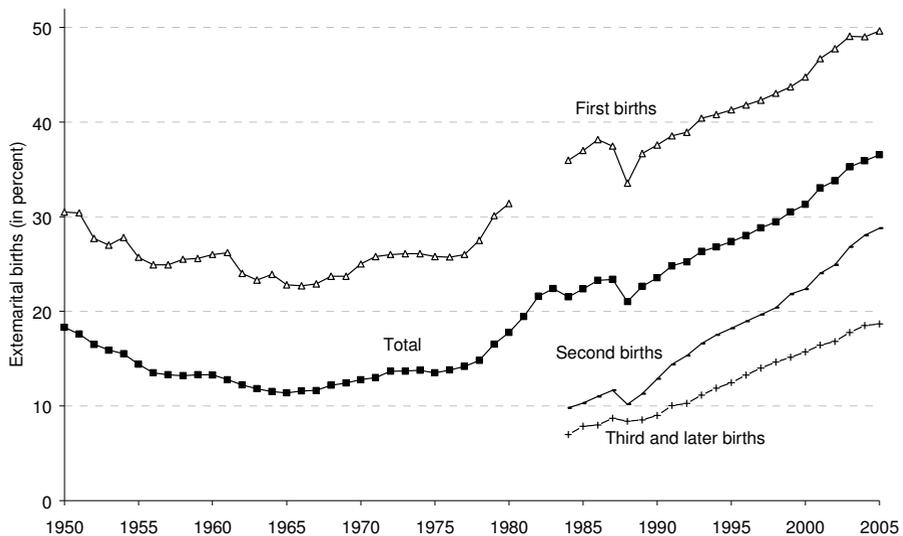
Many of the divorced and separated couples eventually form new unions. Childbearing in the second and higher-order unions has become an important component of Austrian fertility. Buber and Prskawetz (2000) found that one half of all couples, for whom the current union is the second one for at least one partner, had a shared child, most of them shortly after forming the new union. However, the net effect of union dissolution, re-partnering and stepfamily childbearing on Austrian fertility remains unclear. Focusing on whether and how fertility behaviour in second unions is influenced by the number of pre-union children, Buber and Prskawetz (2000) found that the arrival of a first shared child in a second union essentially depended on the number of pre-union children living in the household and on whose children one considers. More than one pre-union child living in the household at the time the second union was formed significantly decreased the intensity of conceiving a first shared child as compared to unions with no pre-union child in the common household. Most striking is the fact that, among all pre-union children, the presence of the man's children in the household has a positive effect on the conception of the first shared child. Couples where a childless woman lives in a second union and the man brings one pre-union child into the common household tend to quickly decide to have a shared child.

Compared to other European countries, the stepfamily formation in Austria is at a medium level (cf. Prskawetz et al. 2003, Vikat et al. 2004). According to a grouping of European countries by patterns of combined union and childbearing careers it has been found that stepfamily experience is most common in Sweden and the former socialist countries of central Europe, i.e. the Czech Republic, former GDR (East Germany) and Hungary. However, the underlying patterns of demographic behaviour were different. In the former socialist countries, stepfamilies were widespread since most of the women living in their second unions had children from their first unions. In Sweden dissolved first unions were among the least likely to have offspring, but their high number results, nevertheless, in a high rate of stepfamily formation.

4.5 Non-marital childbearing

Austria's tradition of extramarital childbearing dates back to the 17th and 18th centuries (Kytir and Münz 1986, Haslinger 1982, Mitterauer 1985). During most of the 20th century, Austria had the highest non-marital birth rate in Europe and has only been overtaken by the Nordic countries (especially Sweden, Denmark and Iceland) since the 1970s. As other developed countries, Austria has experienced a rapid increase in the proportion of children born outside marriage since the mid-1960s, when the percentage of extramarital births dropped to 11-12%, the lowest level since the beginning of modern statistical recording in the early 19th century (Haslinger 1982)¹⁵. Especially first births commonly occurred before marriage and even in the 'golden era' of marriage in the 1950s and 1960s, around one quarter of first births were extramarital (Figure 16; estimates by Kytir 1993). The rapid rise in extramarital childbearing started in the late 1970s and, with a brief interruption in the mid-1980s, continued until 2006, when 37% of all children and one half of all first children were born outside marriage. The recent spread of extramarital childbearing was not limited to first births; Figure 16 documents a threefold rise in the proportion of extramarital second births between 1984 and 2005.

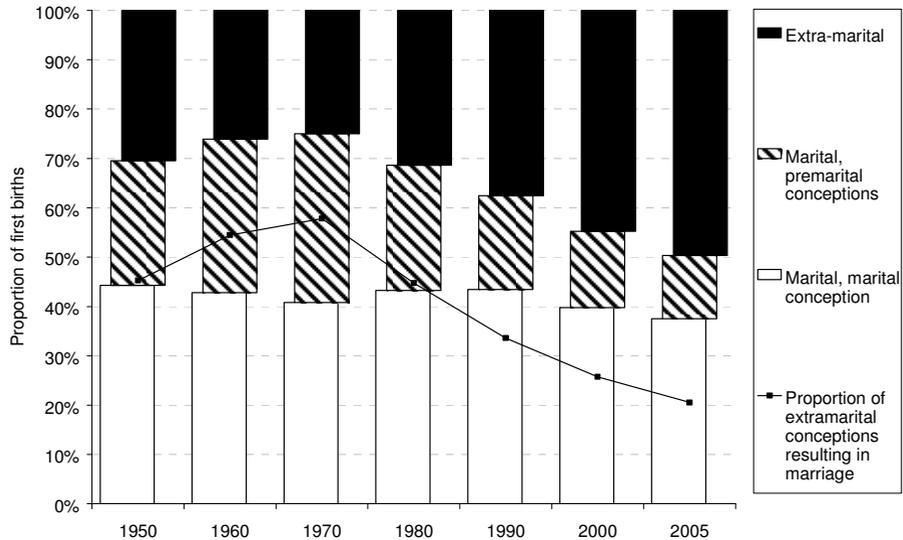
¹⁵ The proportion of extramarital births in the period 1819-1913 was computed by Gisser (1979) for the Alpine provinces of the Austro-Hungarian empire, which are not fully identical with the present day territory of Austria. This and Haslinger's (1982) study show that the proportion of extramarital births fluctuated considerably during the 19th and 20th centuries, especially in the largest cities, where it reached record high levels of 41% (Linz) and 71% (Klagenfurt) in 1868-69.

Figure 16: Proportion of children born outside marriage, 1950-2005 (%)

Source: Authors' computations based on the database of births in 1984-2005 provided by Statistics Austria, Statistics Austria 1988, and Kytir (1993) for first births in 1950-1980.

The era of shotgun marriages reached its peak around 1970, when six out of ten first births were conceived outside wedlock, but most of these conceptions were soon followed by marriage and resulted in a 'legitimate' birth. Hence, only one quarter of all first births was extramarital (see Figure 17). Overall, the proportion of first births conceived and realised within marriage has been relatively stable throughout the post-war period, hovering around 40%. What has changed radically is the proportion of extramarital conceptions leading to marriage, which has declined steadily since 1970. At present, young couples use efficient contraception and the social pressure to marry before giving birth is low. As a result, only one in five extramarital conceptions resulted in a 'pre-birth' marriage, whereas one half of all first children were born outside wedlock in 2005. These shifts manifest a deep transformation in the partnership context of childbearing.

Figure 17: Proportion of first births (born and conceived) by marital status, 1950-2005



Source: Authors' computations based on the database of births in 1984-2005 provided by Statistics Austria, Kytir (1993) for the period 1950-1980.

Note: Conception is considered premarital if the marriage took place within eight months preceding childbirth.

4.6 Abortion

Since 1 January 1975, abortion has been legally permitted during the first twelve weeks of pregnancy in Austria. Abortion during a later stage of pregnancy is exempt from punishment only if the life or mental health of the pregnant woman are in danger, as well as in case of an eugenic indication of severe intellectual or physical damage of the foetus. Abortion for medical-eugenic reasons is widely accepted in Austria (84%), but less as an instrument of birth control (Tazi-Preve and Kytir 1999). Parallel to legalising abortion, information centres for family planning were established by national, private and clerical institutions. Besides counselling women who intend to have an abortion, these centres also focus on family planning. Private institutions in favour of abortion are attacked by *Aktion Leben*, an anti-abortion lobby. In Austria, there is no obligation to

report abortions. Hence, no reliable numbers on abortions are available. Abortions at public hospitals or at publicly financed hospitals are reported in the hospital statistics and indicate the lower threshold for the number of abortions. Estimates range from 19,000 to 25,000 abortions per year (Tazi-Preve and Kytir 1999).

5. Trends in socio-economic determinants of fertility

5.1 Female labour force participation and fertility

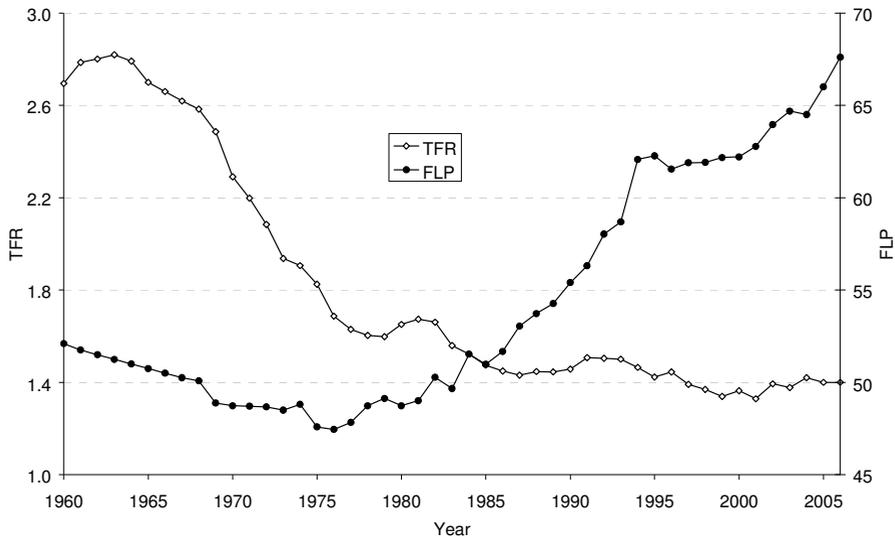
In this section we review relevant studies that have investigated the role of children and in particular childcare costs on the labour market participation of women in Austria. Engelhardt and Prskawetz (2004) give a thorough discussion of the theoretical approaches aimed at explaining the relationship between fertility and female employment.

Considering the change in the female labour force participation (FLP)¹⁶ and total period fertility rate over time (Figure 18) high levels of period TFR in the early 1950s typically went along with relatively lower levels of FLP (52% in 1960). The continuous decrease in TFR in the 1960s and 1970s to a level of 1.7 in 1976 was followed by a further decline in FLP to 47.5% in 1976. Thereafter, the FLP in Austria steadily increased, with 65% of all women participating in the labour force in 2003. However, the employment rates of women remain markedly differentiated by education. Whereas only 47% of women with lower than secondary education participated in the labour force, this proportion was 82% for women with tertiary education (OECD 2003: 38). The increase in FLP since the late 1970s has been favoured by a shift of production towards the tertiary sector where women have contributed 61% of the total increase in the labour force (Wernhart 2005: 5). Age-specific patterns of FLP (Figure 19) reveal that the increase has mainly occurred in the age groups 25 to 54, while labour force participation has decreased at older and younger ages during the past decades. Increasing eligibility for pension payments and longer education can explain these trends in the higher and lower age groups, while higher education increases the labour force participation in the age groups 25 to 54.

¹⁶ The female labour force participation rate is defined as the number of females working part or full time or actively seeking employment between the ages of 15 and 64 divided by the total female population aged 15-64.

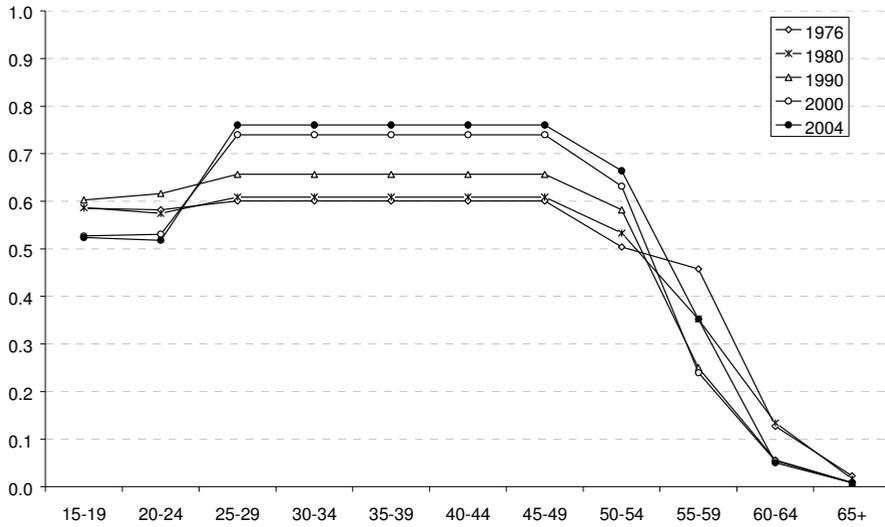
Among the European Union (EU) member states, Austria has one of the highest labour force participation rates for young women, while the old-age FLP is amongst the lowest. As a consequence, the overall FLP rates hover around the average levels for all EU members. As discussed in Biffi (2006), the higher FLP in Nordic countries, the United Kingdom and the Netherlands can be explained by the fact that unpaid work within the family is often ‘outsourced’, in particular child support and care.

Figure 18: Female labour force participation and period total fertility rate, 1960-2003



Source: FLP: OECD Labour force statistic, TFR: Council of Europe (2005).

Figure 19: Age-specific female labour force participation, 1976-2004, selected years



Source: WIFO (Austrian Economic Research Institute).

Note: Age specific labour force participations are only available for age groups 15-24 and 25-49. Therefore the same values for age groups 15-19 and 20-24 and respectively five times the same value for age groups 25-49 have been plotted.

Using the Austrian Microcensuses of 1987, 1989, 1991, 1993, 1997 and 1999, Wernhart (2005) studies the change in the determinants of FLP. Some of the key findings are summarised below. While overall female labour force participation increased by 3% between 1987 and 1999, the rise was more pronounced among married women and amounted to 9% during the same time period. However, the increase in female participation went along with a decrease in the average number of weekly hours worked, especially among married women. In 1987 the average number of weekly hours worked by women was about 40, subsequently dropping to 36.4 and 35.1 hours for all women and married women, respectively. While the share of women in the labour force is about 40%, women account for about 90% of part-time workers. Hence, part-time work, which has become considerably more common during the 1990s, is mainly prevalent among women with children (OECD 2003: Table 2.4).

A multivariate econometric analysis that regresses the labour force participation and the number of weekly hours worked on a set of socio-economic and socio-demographic variables for 1987 and 1997 yields several interesting findings. For instance, the number of children has the expected and strongly negative effect on the labour force participation of women, indicating that childrearing is still a predominantly female obligation in Austria. A child aged 0 to 3 reduced a woman's probability of participation in the labour market by 34% in 1997. This effect is closely linked to a relatively generous and long period of parental leave, encouraging parents to provide full time childcare when a child is very young (Section 6; OECD 2003). These negative effects weaken when the children are older. Having a child aged 16 to 18 only lowers a woman's probability to work by 6%. However, children have a positive effect on the labour force participation of men, though at a much lower absolute level when compared to the effects recorded for women. In summary, the findings of the study by Wernhart (2005) support the hypothesis that an increase in female labour force participation may be related to a declining share of females with children and that it may be characterised by an increasing share of part-time work among females.

The re-entry of mothers into the labour force has been analysed in several studies. Based on the Austrian FFS survey in 1996, Neuwirth (2002) and Nowak and Pfeiffer (1998) studied the entry of mothers into the labour force after the birth of their youngest child. The findings indicate that younger cohorts (those born since the 1950s up to 1969) re-enter the labour market at a higher rate as compared to mothers born before 1950. The re-entry rate declines with the number of children and increases with the age of the child. Owing to the long period of parental leave and lack of childcare facilities, the rate for re-entering the labour force is about twice as high for mothers with children aged two or above as compared to mothers with children below the age of two. According to the employment status before childbirth, blue-collar and white-collar workers re-enter the labour market at a significantly higher rate compared to self-employed women.¹⁷ Return rates are higher for white-collar workers than for blue-collar workers.

As in other developed countries, childcare costs and low availability of public childcare are negatively linked to the employment rates of women (OECD 2003). Mahringer's (2005) study, using data from the 1995 Austrian Microcensus suggests that the elasticity of labour force participation of women with children below the age of 15

¹⁷ The fact that self-employed women re-enter the labour market at a lower rate might be caused by a selection bias. If there are only a few self-employed women who leave the labour market after childbirth, a rather selective group of self-employed women who do not aim to re-enter the labour market might be captured.

is high with respect to both wages and childcare costs.¹⁸ Consistent with the theoretical considerations, Mahringer finds a significantly negative employment elasticity of childcare costs and a positive elasticity of female wages. The size of the average impact of an increase in net wages is about the same as that of a reduction of childcare costs by the same amount. Since the findings also indicate that an increase in family income reduces the probability of mothers' employment, it may be concluded "... that policies to support the availability of affordable childcare are more effective than direct transfers to families with regard to the goal of increasing female labour-market participation" (Mahringer 2005: 28). However, government spending in Austria is primarily focused on direct transfers; consequently, Austria "spends considerably more on maternity and parental leave payments (...) than on childcare services" (OECD 2003: 131).

Lutz (2003a) analyses the consequences of the introduction of childcare benefits (paid as an allowance to families instead of parental leave benefit granted under the previous scheme in the form of an insurance benefit) for children born since 1 January 2002. As summarised in Lutz (2003a: 227), the group of eligible persons is larger under the new scheme, the maximum period of entitlement has been prolonged by one year and the beneficiaries are allowed to earn additional income. Contrary to the intended effect, the new scheme has not succeeded in making work and family more compatible, although it has improved the financial situation of young parents. Lutz (2003a) states that "the percentage of women returning to the labour market before their children reach the age of 2¼ has dropped from 54 percent to 35 percent." At the same time, the estimated average duration of parental leave actually taken has increased from 65 to 110 weeks, potentially making the return of mothers to the labour market more difficult (OECD 2003).

Hoem et al. (2001b) studied the reverse correlation (i.e., whether women's labour force participation has inhibited childbearing) for third birth intensities, and Prskawetz and Zagaglia (2005) did so for second birth intensities using Family and Fertility Survey data for 1996. Both studies found that respondents with a stronger attachment to the labour force have significantly lower second and third birth intensities as compared to women with lower labour force attachment. The difficulty of combining motherhood and labour force participation in Austria may explain these results.

¹⁸ In economics, the elasticity of labour force participation measures the responsiveness of the labour force participation to the change in its determinants, e.g. wages and childcare costs in our example. It is measured as the percentage change in the labour force participation that occurs in response to a percentage change in wages or childcare costs.

5.2 Direct and indirect costs of children

Childrearing imposes costs to society and families. Recently, several studies were carried out in Austria to estimate the share of childrearing costs for families, and in particular mothers. These costs accrue both as direct costs in terms of direct expenditures spent on children by their parents as well as indirect costs through time invested in childrearing. The Austrian Economic Research Institute (WIFO) recently presented estimates on the direct costs based on the consumption expenditure survey of 1999/2000 conducted by Statistics Austria. Indirect costs were estimated based on the European Community Household Panel Survey (ECHP) and social insurance data.

Although Austria ranks among the top countries in terms of cash transfers to families (2.3% of GDP in 2000, cf. Guger 1998 for the distributional impacts of these transfers), direct child costs nevertheless exceed this amount. According to the estimates by Guger (2003: 689), direct consumption costs average €500 a month per child and rise with the age of the child. However, the indirect costs of children are considerably higher. Women with children who stay in employment earn, on average, €540 to €690 less per month than childless women. For women who stop working, the monthly loss is about €1,250.¹⁹ The findings also indicate that less qualified women are more likely to give up their employment after the birth of a child. Public transfer payments constitute about 10% of the net household income for an average household with children (for more details, see Wüger and Buchegger (2003)).

Based on social insurance data from 1972 to 2000, Lutz (2003b) studied the lost earnings of women with children. By the time the youngest child has grown up (19 to 24 years of age) this amounts to €103,000 (one child) or €136,000 (three or more children) if the woman continued to work. However, if she stopped working after the birth of her first child, the loss may be as high as €200,000.

5.3 Childcare services

As public and private childcare facilities are not available in sufficient numbers, especially for youngest children, reconciling work and family is difficult for Austrian women. In 2005, only 4.6% of all children below the age of three and 60.5% of all

¹⁹ These estimates are based on a 'nearest neighbour' matching method. A comparison group of childless women is generated that is similar in age, education and labour market experiences to the group of women with children. To each woman with a child a corresponding childless woman is assigned that comes closest in its characteristics selected.

children between age three and compulsory school age benefited from a publicly funded formal childcare arrangement. If private childcare facilities and childminders are also included, this number increases to 12.3% for children below the age of three, and to 84.2% for children aged three to five (Statistics Austria 2006a)²⁰. Moreover, inconvenient opening hours and long closing times during vacations of many day-care institutions constitute additional obstacles for combining childrearing and paid work. In 2005, 56.7% of public and private childcare institutions were only open until noon and offered no childcare in the afternoon, while lunch was offered in only 36.2% of all kindergartens (Statistics Austria 2006a). Surveys indicate that in most regions there is considerable 'unmet demand' for public day care for children below the age of three and after-school care (OECD 2003: 141-2). Consequently, almost 60% of working women with a child aged 0-2 rely on informal childcare (OECD 2003: 137).

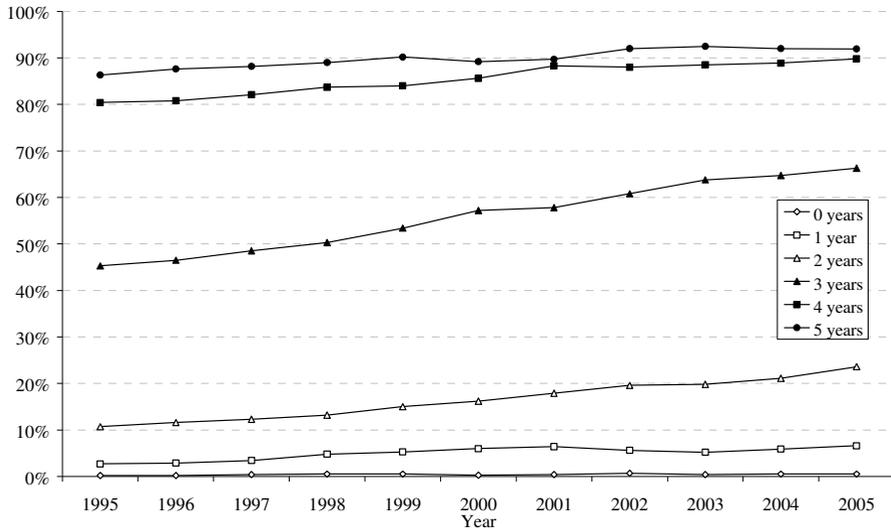
Since public provision of childcare is administered by the municipalities and regulated by provinces, there are great regional differences regarding its availability, organisation and cost (Neyer 2003, Statistics Austria 2006a). There is a clear tendency to increase the availability of childcare. The proportion of children in childcare arrangements rose significantly during the past decade, especially for children aged three (Figure 20). The fact that childcare services are currently being decentralised, provided on a commercial basis or moved over to private initiatives could, however, increase social and economic inequality regarding their accessibility and affordability as pointed out in Neyer (2003).

5.4 Attitudes towards family and fertility

Data from the 2001 Population Policy Acceptance Survey (Table 7) indicate that the importance of marriage has declined for succeeding female birth cohorts (and analyses of men reveal similar patterns). While only about 8% of the oldest female cohort (born 1936-40) consider marriage an outdated institution, more than one fourth of the youngest female cohort (born 1971-81) do so. The answering pattern of different birth cohorts for selected questions concerning marriage and family indicate a trend

²⁰ An exact international comparison is not possible, since Statistics Austria chose 15 October as the reference date whereas the reference date for Eurostat is the end of the year (Statistics Austria 2006a). According to Eurostat computations, only 45.9% of all children aged three benefited from childcare arrangements in 2003; according to the national reference date, the figure is 63.8%, which is comparable to the EU-25 mean of 68.6% (Statistics Austria 2006a).

Figure 20: Childcare in Austria by age of children, 1995-2005



Source: Statistics Austria 2006a, Working tables Statistics Austria
 Note: Children in publicly funded and private childcare arrangements but no childminders are included in this figure. The reference date is 15 October, with age in completed years on 1 September.

towards an increasing acceptance of diversity in household types. Part of this change in family-related attitudes could also be due to an age effect. However, research in other countries indicates that a cohort effect in the change of family values is very likely. Thus, in a cohort perspective, single mothers have become more accepted, and the traditional two-parent family model has increasingly been considered less important for raising a child.

Table 8 reveals that younger cohorts still highly value having children. However, Austrian women also see alternatives to childbearing, which has ceased to be a precondition for a happy life; having children is no longer the main goal in a woman's life (van de Kaa 2004). Most remarkably, only one quarter of younger women feel they owe it to society to have children, while this proportion is more than two times higher in the oldest birth cohort. Thus, the process of individualisation also seems to be an important factor shaping family attitudes in Austria.

Table 7: Proportion of women of different birth cohorts who agree with the selected statements concerning marriage and the family

	1936-40	1941-50	1951-60	1961-70	1971-81
Marriage is an outdated institution	8.2	14.3	22.1	23.6	25.8
A woman who wants to have a child as a single parent, and should be able to have the child even if she doesn't want to have a stable relationship with a man	76.8	86.0	88.2	88.7	91.9
It would be a good thing if in the future more emphasis were placed on family life	93.2	93.3	89.6	91.8	90.0
A child needs a home with both a father and a mother to grow up happily	86.5	80.9	74.4	76.4	64.1
Married people are generally happier than unmarried people	56.3	39.2	38.4	32.5	17.6
People who want children ought to get married	72.8	57.2	46.7	40.6	29.9
One parent can bring up a child as well as two parents together	51.4	59.8	58.7	54.4	60.2
It's all right for a couple to live together without intending to get married	67.1	72.3	85.1	89.2	92.6
Marriage is the only acceptable way of living together for a man and a woman	37.2	26.6	16.5	18.4	7.1

Source: Authors' computation based on the Austrian Population Policy Acceptance Survey 2001, weighted data.

Table 8: Proportion of women of different birth cohorts who agree with the selected statements concerning children

	1936-40	1941-50	1951-60	1961-70	1971-81
I believe that in our modern world the only place where you can feel completely happy and at ease is at home with your children	72.6	65.4	62.2	65.4	48.4
I always enjoy having children around me	84.3	83.7	80.8	80.5	72.3
I like having children because they really need you	84.9	75.8	77.4	73.4	61.5
I believe it's your duty towards society to have children	63.1	50.1	38.2	39.4	25.2
I believe that the closest relationship you can have with anyone is with your own child	90.9	89.9	82.4	87.2	89.5
I do believe you can be happy without having children	46.7	53.8	55.6	53.3	66.8

Source: Authors' computation based on the Austrian Population Policy Acceptance Survey 2001, weighted data.

6. Family policies and fertility

6.1 Family policies in Austria

Based on a comparative analysis of family policies in industrialised countries during the 20th century, Gauthier (2002) developed a typology of family-policy regimes:²¹ the social-democratic regime, the conservative regime, the southern European regime, and the liberal regime. Within this framework, Austria can be classified as having a 'conservative' regime, which is characterised by a varying system of state support for families, linked to the parents' employment status, and driven by a more traditional view of the gender division of labour. Compared to the other policy regimes, the level of cash support is medium to high. Working parents receive medium-level support. Moreover, parental and childcare leaves are relatively long, while childcare facilities are more limited (OECD 2003; see the Appendix for a summary of changes in the parental leave policy in Austria).

Components of the Austrian family (child) benefits include child allowance, tax allowance for children (Lehner 2002), childcare benefit, parental leave, the right to part-time employment and job security, additional cash transfers for families in need and an inclusion of the leave period for pension entitlement and the amount of pension received (Felderer and Gstrein 2005). Table 9 gives an overview of various family policies in Austria around the year 2000 (Kontula and Miettinen 2005, see also OECD 2003).

During the time period considered in this chapter, social and family policies in Austria were dominated by the traditional male breadwinner model. Hence, women tended to work full time until they had children and returned to work after a longer interruption. Combining work and family was difficult for women owing to the lack of public childcare, the non-existence of a private childcare market and the inconvenient school and opening hours of many day-care institutions (see also Section 4.3 and Figure 20 for time trends of these developments). Moreover, expenses for childcare and children's education are not tax deductible (O'Donoghue and Sutherland 1999).

Instead of facilitating women's employment opportunities by providing services, the government opted for an extended childcare leave, which has allowed mothers to

²¹ Gauthier's (2002) definition of family policy encompasses cash and in-kind benefits such as direct cash transfers to families, tax relief for families with children, maternity and parental leave, childcare facilities and subsidies as well as family law.

Table 9: Family policies in Austria (around 2000)

Parental allowance	Every mother and/or father of a child below the age of 2.5 (if one parent draws the benefit) or below age three (if both parents received it). €14.53 per day, income threshold: €14,500 per year
Maternity grant	Abolished in 1996
Child/family allowance	Paid for under 18 year-olds and up to age 26, if the children study at a university or are in vocational training below age 3: €105.4, below age 10: €112.7, below age 19: €130.9, from age 19 onwards : €152.7 for 3 or more children: +€25.5 per child and month
Income tax allowance	Since 2000 onwards, a tax credit of €50.90 for each child has been paid together with the child allowance amounting to €364 a year for a single earner household and for single parents. There are also tax credits for alimonies: €25.50 per month for the first child, €38.20 per month for the second child and €50.90 per month for the third and each further child.
Measures and reforms for reconciling work and family life	Financial support for unemployed persons for buying external childcare. 1998: a form of atypical work with up to 12 hours per week and gross salary under the marginal earnings threshold (i.e. €296.21 in 2001) was introduced. No taxes have to be paid; employers do not have to pay additional levies, only contributions to the social security system. Since 1998 (starting 1991 in Styria), competitions for women- and family-friendly enterprises have been carried out every year in all federal states of Austria. Since 1998, the Federal Ministry for Family Affairs, Senior Citizens, Women and Youth has offered the <i>work and family audit</i> to Austrian enterprises to improve the reconciliation of work and family life.

Source: Kontula and Miettinen (2005).

stay at home with their young children. Since December 2001, there has been a generous 36 month leave with cash benefits equalling €14.53 per day for all women (including students and housewives) who earn less than €14,600 per year. This income level is usually exceeded by mothers who are employed full time and thus forfeit the entitlement to this social benefit (OECD 2003).

Since July 2004, mothers employed full time are entitled to reduce their working hours after birth, provided the company has more than 20 employees and the mother had been employed for at least three years before pregnancy. In practice, only few

mothers meet these conditions. In 1999, the employment rate of mothers with children below the age of six in two parent families was about 66%, and 76% for single mothers (OECD 2001: 135). At the same time, only 29% of all mothers in two parent families with one partner employed full time worked full time themselves. The incidence of part time work for the corresponding group of women is 31% (OECD 2001: 135).

To sum up, social policy in Austria mainly provides financial incentives to increase fertility – which seem to be rather ineffective (OECD 2003) – whereas it offers only few structural incentives to reduce the incompatibility of childrearing and employment.

6.2 Changes in parental leave and swings in the second and third birth rates

Frequent changes in parental leave regulations created incentives for parents to space their second and subsequent children in such a way that they continuously receive the parental allowance while staying at home with their children. Such policy shifts can be viewed as ‘natural experiments’ whose effects are of great interest to demographers and economists (for recent examples, see Lalive and Zweimüller 2006 and Andersson et al. 2006). Until 2002, a prerequisite for receiving the parental allowance²² was a minimum period of employment prior to birth²³ and parental leave was treated in the same way as employment. Thus, parents were motivated to have their second or later child before or around the maximum duration of their previous parental leave. Such ‘targeted’ childbearing behaviour became a realistic option only from July 1990 onwards, when paid parental leave was extended from the first until the second birthday of a child and even until the child’s third birthday in the case of part-time parental leave (see Hoem et al. 2001a, OECD 2003, Gisser and Fliegenschnee 2004 and Lalive and Zweimüller 2006 for a more detailed description of parental leave changes). In July 1996, this period was reduced to a maximum of 18 months following childbirth if only one parent took leave, making ‘targeted’ birth spacing more difficult. January 2002 marked another policy turn. Since then one parent has been able to take parental leave for up to

²² In 1990, the parental allowance was a flat-rate payment of about €340 per month, which equaled about 40% of the median net income (Lalive and Zweimüller 2006). Moreover, since 1974, single mothers, and since 1990 economically deprived married mothers, have been entitled to a substantially higher flat rate (Appendix).

²³ 52 weeks in the preceding 24 months or 26 weeks in the preceding 12 months (Gisser and Fliegenschnee 2004); women below the age of 20 (since 1984 below the age of 25) had to have 20 weeks of gainful employment.

30 months and parental leave has no longer been linked to previous work experience.²⁴ Furthermore, more flexibility has been granted to combine parental leave with part-time work, allowing each beneficiary of the parental allowance to earn a gross income of up to €14,500 per year.

Changes in parental leave regulations may affect both fertility quantum and tempo. Studies on the effects of family policies on fertility suggest that policy effects are usually stronger with respect to fertility timing, often inducing short-term swings in period fertility and in the number of births, but the evidence is less clear-cut for long-lasting changes in fertility quantum.

In the case of Austria, several studies analysed the effects of policy changes enacted in 1990 and 2002 (Hoem et al. 2001a and 2001b, Prskawetz and Zagaglia 2005, Sobotka et al. 2005 and Lalive and Zweimüller 2006). The last study mentioned comes closest to addressing the issue of causality, analysing the effect of calendar month at first childbirth and the probability of having a second child in the next three years. This analysis explores the fact that the new parental leave regulations did not apply to women who had a baby in June 1990, whereas women who had given birth in July 1990 qualified for the extended leave. The study reported a 15% rise (4.9 percentage points) in the probability of having another child within 36 months following the first child, which can be attributed to the new leave regulations. Part of this increase was due to more rapid child spacing, but some positive effect (3.9 percentage points) remained ten years after the first childbirth. Focusing on third births, Hoem et al. (2001a, 2001b) found a bimodal pattern of third birth intensities in 1993-96, suggesting that many women spaced their third births shortly after the second one in order to qualify for an uninterrupted period of parental leave. Using the same dataset (Family and Fertility Survey conducted in 1996), Prskawetz and Zagaglia (2005) did not find a pronounced change in second birth risks by duration from first births in this period.

In order to provide further evidence on this issue, we have used the birth database provided by Statistics Austria to compute second and third birth risks by duration from the previous birth. Since we organised these data in an annual format, they lack the fine level of detail that is achieved by using monthly data. Nevertheless, we expect that major shifts in second and third birth spacing will be detected, which might correspond to the changing incentives provided by parental leave eligibility. The 1990 policy change has created an incentive which Hoem (1993) termed 'speed premium' in his

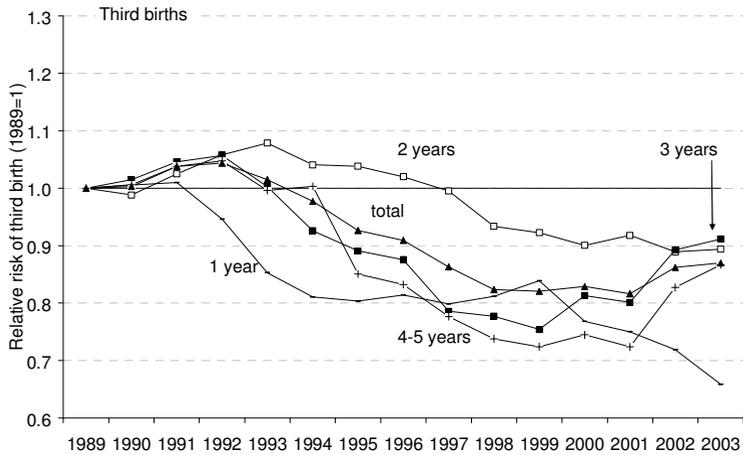
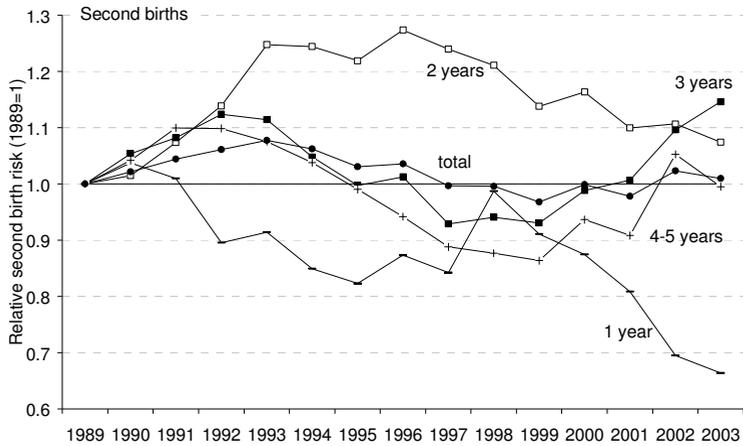
²⁴ If both parents participate in the parental leave scheme, they have been entitled to six additional months of paid leave from 1996 onwards, i.e. in total, three years since 2002. However, because parental leave continues to be taken almost exclusively by women (in 2004 men constituted only 2% of parental leave recipients; Gisser and Fliegenschnee 2004), only few couples take advantage of this possibility.

analysis of the pace of childbearing in Sweden: women who have another child in quick succession (approximately within 27 months²⁵) are rewarded by being eligible to another full parental leave period lasting until the younger child's second birthday.

Figure 21, plots second and third birth risks standardised to the 1989 level and shows a shift in the expected direction. The overall intensity of childbearing increased during the early 1990s; this increase was more pronounced for second births and reached almost 8% in 1993. However, from 1993 onwards, changes in birth intensity became differentiated by duration from the previous birth. First, there was a steep decline in the second and third birth intensity at the shortest birth interval of one year. This suggests that before 1990 some women had achieved a very close spacing of children in order to qualify for continuous parental leave, which was possible if they had a birth interval of no more than 15 months (12 months plus 14 weeks). A similar effect also explains a temporary rebound in second birth risks at duration one in 1998-99, which followed after the shortening of the parental leave period in 1996. From 1993 onwards, the increase in second birth risks continued only at the interval of two years, whereas the second birth risks declined for all other durations considered. Third birth risks fell for all durations from 1994 onwards, but this decline was markedly less pronounced for third births at a duration of two years. These differences were most clearly manifested in 1996. For instance, the second birth risk at a duration of two years reached the level of 1.27 compared to the 1989 level, whereas it dropped to 0.94 at a duration of three years, and the overall risk at durations one to five reached 1.01. The shorter eligibility to paid parental leave since 1996 reversed this trend and was linked to a gradual decline in birth intensities at a duration of two years. This reversal has been reinforced since 2002, when the new policies decoupled the link between parental leave eligibility and employment experience. Moreover, since 2002, women who want to have an uninterrupted period of paid parental leave can achieve this goal by having their next child within 33 months (30 months plus 14 weeks) or even 39 months if their partner actively participates in parental leave. As a result, second and third birth risks increased markedly in 2002 and 2003 in the third year following the previous birth. The overall second and third birth intensity also increased, suggesting that the new parental leave regulations have not only affected the spacing of births but also the quantum of period fertility (see also Sobotka et al. 2005).

²⁵ Parental leave could be taken until the child's second birthday. However, a gap of six weeks was subsequently allowed between the last parental leave and the beginning of a new maternity leave, which usually starts eight weeks before childbirth. Thus, to qualify for a new parental leave, the maximum time between two births was approximately 27 months (24 months parental leave plus six weeks after the parental leave plus eight weeks new maternity leave; see also Lalive and Zweimüller 2006).

Figure 21: Second and third birth risks by duration since the previous birth (standardised to the level in 1989)



Source: Authors' computations based on the database of births in 1984-2005 provided by Statistics Austria.
 Note: Duration refers to the difference between the analysed year and the year of the last previous birth

Although the changes in parental leave have been associated with changes in both period fertility tempo and quantum, there is no clear association with lasting changes in cohort fertility. Specifically, in contrast to Lalive and Zweimüller (2006), we have not found a lasting increase in the progression rate to the second and third child among women who had their first (or second) child after 1990. For instance, 73.3% of all women giving birth to their first child in 1989 had a second child in the next ten years, but only 70.6% of all women having their first child in 1991 had another child within ten years. Our analysis thus suggests that the increase in childbearing intensity in the early 1990s also affected women who did not qualify for the new parental leave regulations and, consequently, was not translated into cohort-specific progression rates defined for the parity cohorts (women having their first or second child in a particular year). Furthermore, our data also indicate that the bimodality in third birth risks by duration from the second birth, reported by Hoem et al. (2001a, 2001b) for 1993-96, can probably be explained by the small sample size in the FFS survey. Data based on vital registration show a shift towards a pronounced peak in second and third birth risks at the duration of two years, followed by a steady decline in childbearing intensity at longer birth intervals.

6.3 Effects of structural and financial incentives on fertility intentions and fertility preferences

For a fairly long time, the Austrian government has considered policy measures to increase fertility. In the literature, the effect of family policy on fertility—be it realised fertility or fertility intentions and desires—is questioned. While the conservative Austrian government has tried to increase fertility mainly by generous financial incentives, structural measures aimed at reducing the incompatibility between childrearing and employment have hardly been considered.

Using data from the second Austrian Population Policy Acceptance Survey in 2001 (PPA2), Engelhardt (2004) performed a multivariate analysis to estimate the impact of structural and financial incentives and constraints on desired family size and fertility aspirations of women in reproductive age (between 20 and 49). The results show a clear gap between the individually desired number of children and the realised number of children. In the literature, there is discussion whether this discrepancy could be lessened by reducing structural barriers and financial constraints.

Almost half of all women with one child and without children believe that it would be easier to have the desired number of children if certain policies were implemented.

Regarding the type of measures that would make the decision for a child easier, structural and financial incentives are in demand in almost equal shares. About 90% of all women at reproductive ages would like to have more flexible working times, more and improved opportunities to work part-time when having small children, as well as tax reductions for parents with children. Most interestingly, women at different parities do not differ substantially regarding the desired political measures. As a woman's age increases, the perceived effect of family policy on her desired number of children becomes reduced. More than half of all respondents, however, report that public subsidies would not have any influence on their desire for children.

Further insight in the wish to have children is gained by the reasons mentioned against having children. Among women without children, 31% do not want any children at all, while 64% of all women at parity one and 90% of all women at parity two and higher do not want any additional child. The reasons for not wanting (additional) children are parity dependent. Women without children report that they would have to give up leisure activities to keep their present standard of living and that they would not be able to enjoy life in the same way if they had children. One half of women at parity one already have the desired number of children and one third report that an additional child would be too expensive. For women at higher parities, high costs of children and difficulties in combining work and childrearing are the most important reasons against an additional child. For women without children, neither structural nor financial constraints, but primarily leisure and fun, are arguments against a first child.

Buber (2002) analyses to which extent the division of household chores and childrearing duties between partners and the perception of how fairly these tasks are divided influence plans of further childbearing among women with one child. The study shows that sharing childcare duties among couples is a driving force for plans of further childbearing, whereas the gender division of typically feminine household tasks²⁶ has no explanatory power. The results also illustrate that the satisfaction of a woman with her contribution to childrearing is a predictor of an increased desire for a second child.

²⁶ The study includes five household tasks, (1) cooking, (2) vacuum cleaning and tidying up, (3) grocery shopping, (4) washing dishes, and (5) doing the laundry and ironing.

6.4 Public discourse

The Austrian government, especially the ministry dealing with women's issues (currently "Federal Ministry for Women, Media and Civil Services"), but also women's organisations try to make Austrian society more gender equal. Equal opportunities and equal pay, equality in employment as well as in science and research, the protection of women against violence and poverty are among the concerns of the public discourse. The equal treatment of women and men in employment is mandatory in Austria under two equal treatment acts (Equal Treatment Act for the Private Sector 1979 and the Act on Equal Treatment in Federal Service 1993). At the Federal level, the gender mainstreaming strategy was implemented with the aim of integrating the equality perspective in all policy areas.

Government policy and public discourse can influence attitudes towards families and gender relations by promoting or slowing down changes in traditional gender roles (Oláh 2001). In the context of gender equality and family, the *halbe-halbe* campaign and the petition for equal rights of women, both held in 1997, should be mentioned. In 1997, the former Federal Ministry for Women's Affairs organised a campaign called *halbe-halbe* with the intention of starting a public debate on the distribution of gainful employment, income, household work and parenting between men and women. *Halbe-halbe* simply stands for "half and half", meaning that women and men should share work and household duties equally. Although the ensuing public debate on a more equal distribution of household and caring duties subsided after this campaign, the conflict between demands of work and family as well as the involvement of fathers in housework and caring duties since then tend to appear more regularly in the public discourse.

The Austrian *Frauen-Volksbegehren* (petition for a referendum on women's affairs) in 1997 generated further public debate. The main issue was to enact equal rights for women and men in the Austrian Federal Constitution and to gradually abolish the discrimination of women. The petition comprised a request for eleven legal provisions, including a minimum wage, social protection for those who work for a few hours per week only and specific provisions to improve the reconciliation of paid work and childrearing for both men and women (e.g. legal entitlement to part-time work for parents of pre-school children and the right to return to full-time work thereafter). In total, 11.2% of the Austrian population signed this petition, but unfortunately, none of the demands have been incorporated into law so far (Bericht des Gleichbehandlungsausschusses 1998). Discrimination of women is very often discrimination of mothers and an improvement of women's situation implies an

improvement of the living conditions of mothers and their families. The two examples given for Austria show that public discourse might only slowly influence attitudes towards families and gender relations and often is not followed by legal provisions.

7. Conclusions

Austria has a long history of sub-replacement fertility, spanning back to the late 19th century cohorts. From this perspective, contemporary low levels of period as well as cohort fertility are not surprising. It is rather the baby boom, affecting women born in the 1920s and 1930s and temporarily bringing completed fertility above two children per woman, which brought an unexpected interruption to long-term trends. In view of the rather stable fertility trends in the past two decades, marked by an absence of sudden shifts in fertility tempo and quantum, we expect period fertility level to remain stable in the near future unless substantial changes in family-related policies take place. We also expect that the gradual shift towards later childbearing may continue for another decade or two, as Austrian women have not yet reached high ages at first childbirth as their peers in many other European countries, e.g. Italy, France, the Netherlands, Sweden, and Switzerland. Higher education and labour force participation among women will further raise the age for starting a family and childbearing. Therefore, the tempo effect and the observed gap between different period fertility indicators are likely to prevail, with the period TFR being negatively distorted by 0.2-0.3. This implies that the observed number of births is around 15% lower than in the absence of birth postponement. If the period trends remain relatively stable, the cohort fertility level is unlikely to decline much further and may stabilise around 1.6 for women born in the mid-1970s.²⁷ This stabilisation of cohort fertility would imply that the ultimate parity composition would closely mirror the recent period parity progression ratios analysed in Section 3.6.²⁸ Four out of ten women would have two children, around one fifth of all women would remain childless, and less than one fifth

²⁷ If there was no change in the intensity of childbearing after 2005, women born in 1975 would reach completed fertility of 1.56 at age 50 (computation based on age and parity-specific birth probabilities). However, the more likely scenario of a further increase in the intensity of childbearing at higher ages implies that women born in 1975 are likely to have 1.60-1.65 children on average.

²⁸ Our analysis shows that the negative aggregate effect of delayed childbearing on completed fertility, documented for a number of countries (Kohler et al. 2002) may not always materialise, especially if the shift towards late parenthood is not particularly pronounced. Similar evidence on stable parity progression ratios was provided for France by Toulemon and Mazuy (2001).

would have three or more children. Third birth progression rates would stabilise or even increase thanks to the growth of some high-fertility minorities.

Different factors that are likely to affect future fertility trends may balance each other. On the ‘negative’ side, continuing secularisation among the mainstream population, sub-replacement fertility intentions among young adults as well as the ongoing trend towards higher education and delayed parenthood suggest a possible further decline in fertility. On the other hand, the increasing impact of immigrants with higher fertility rates on Austrian fertility trends, better accessibility to assisted reproduction for sub-fertile couples and policies aiming at reconciling work and childcare might have a positive impact on fertility.

Family policies in Austria have mainly been directed towards financial incentives with the intention of helping young mothers retreat from the labour market. They aimed much less at providing structural incentives that would permit people to better reconcile childrearing and employment. As a consequence, fertility is negatively associated with the labour-market behaviour of women. Strengthened by the EU’s goal of raising female employment rates, a tendency to increase the availability of childcare can be seen. Existing studies on the effects family policies have on fertility suggest that policy effects are usually stronger with respect to fertility timing, often inducing short-term swings in period fertility and in the number of births, but there is much less clear-cut evidence for lasting changes in fertility quantum. The case of Austria illustrates this point well: “with one of the highest levels of family spending in OECD it also has one of the lowest fertility rates, and increasing generosity of family benefits in the past has not apparently affected downward trend in fertility” (OECD 2003: 118). For family policies to have an influence on fertility it is indispensable to also integrate measures in labour-market policies, care policies and gender policies (Neyer 2003).

Below replacement levels of fertility, decreasing mortality and moderate migration will lead to rapid aging of the Austrian population through the next decades (see Section 2). Immigration will remain a very significant component of population change and the importance of migrants for childbearing may further increase. The ageing of the population will put a great deal of pressure on the sustainability of the social security system (including pensions, healthcare and care of the elderly) as a shrinking number of the working population is faced with an increasing number of dependents. Policies to secure the sustainability of the social security system include an increase in the retirement age and in labour force participation, especially among elderly workers and women. A rise in the participation of women in the labour force to the level recorded for men could prevent drastic shrinking of the labour force, projected after 2015 (OECD 2003, Figure 2.5). In addition to these policies targeted towards an increase of the

economically active population, family policies and education policies are important tools for the long term sustainability of Austrian social security systems. A well-tailored mix of policies supporting gender equality, family, improved access to full-time childcare, flexible working hours and increased labour participation of women may constitute a win-win strategy that enhances the economy and social security on the one hand and helps prevent further decline in completed as well as desired family size on the other hand. One step in a good direction is a prepared flexibilisation of parental leave that took place from January 2008, when parents have become able to choose between three variants of parental leave. These three variants have a maximum duration of 18, 24, and 36 months if the partner takes at least 3, 4 and 6 months, respectively, and imply three different levels of monthly parental leave allowance (€800, €624, and €436).

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APPENDIX

Major Changes in Austrian Parental Leave Policies, 1957 to 2008

1957

Paid mandatory maternity protection period of 6 weeks after birth (8 for nursing mothers) extended by 6 weeks before birth, i.e. a total of at least 12 weeks, nursing mothers up to 14 weeks, premature births up to 18 weeks; benefit (Wochengeld) equals average income over preceding 13 weeks.

Unpaid maternity leave up to 6 months with job security.

1961

Paid maternity leave up to child's first birthday with job security.

Maternity leave payment equal to unemployment benefit for single mothers, 50% of unemployment benefit for married women; reductions depending on household income, no benefit above a certain maximum household income; eligibility requirement: 52 weeks of (insured) employment during the two years immediately preceding a first birth, 20 weeks during the most recent year for second and higher order births.

1974

Paid mandatory maternity protection period extended to 16 weeks, 20 weeks for premature or multiple births.

Maternity leave payment independent of household income at flat rates with a 50% higher rate for single mothers and for married mothers if husband has little or no income.

Special maternity leave payment (Sondernotstandshilfe = SNH) for single mothers up to child's third birthday if mother cannot be gainfully employed owing to lack of childcare; SNH benefit related to unemployment benefit.

Eligibility requirements for mothers below 20 reduced from 52 to 20 weeks of employment preceding a first birth.

Mandatory maternity protection period counted as part of employment requirements for maternity leave payments if work contract exceeds mandatory maternity protection period.

1976

Entitlement extended to gainfully employed mothers with adopted children and to foster-mothers.

1978

Paid mandatory maternity protection period extended to 20 weeks in case of Caesarean delivery.

1982

Farmers and self-employed mothers entitled to 16 weeks of flat-rate transfer payments, 20 weeks in case of premature birth, multiple births or Caesarean delivery.

1984

Special maternity-leave payment (SNH) restricted to 'truly' single (non-cohabiting) mothers.

1989

Employment requirements for maternity leave payment for women below age 25 reduced to 20 weeks at first birth.

1990

Parental leave for fathers if mother is eligible for parental leave herself or if mother is employed; switch from one parent to the other permitted once, three-month minimum leave per parent.

SNH extended to married women and women in a consensual union (paid if husband/partner has little or no income).

1 July 1990

Parental leave period extended up to the child's second birthday.

Employer's consent required for part-time work.

Part-time leave permitted after the child's first birthday up to the second birthday (both parents at the same time) or up to the child's third birthday (one parent alone or both parents alternating).

Parental leave subsidy (of half the regular flat-rate parental leave payment) for farmers and self-employed mothers up to the child's second birthday.

Parental leave subsidy (also of half the regular flat-rate parental leave payment, until entitled to full parental leave payment) for mothers who are not self-employed and who do not meet the 52 (or 20) weeks employment requirement for parental leave payments.

1993

Part time leave possibility extended to the child's first year of life and up to the child's fourth birthday.

Unemployment benefit (up to 26 weeks) for mother/father if dismissed from job after parental leave; participation or willingness to participate in training course offered by the labour office required.

Paid maternity protection period extended up to 16 weeks after birth in case of premature birth and shorter maternity protection period before birth.

1995

SNH if local authorities certify that no childcare facilities are available; municipality must pay one third of SNH benefit.

1996

Employment requirements for parental leave payments are kept at twenty weeks, but reduced for mothers below the age of 25, who must have spent 16 out of the 20 required weeks in active employment.

Employment requirements for parental leave payments for second and subsequent births extended from 20 to 26 weeks.

Parental leave payments at one flat rate for all eligible mothers; single mothers and mothers whose husband/partner has little or no income may get additional loan benefits (about 45% of flat rate); loan benefits must be paid back by the child's father (vice versa if father takes parental leave).

1 July 1996

Parental leave payments reduced to a maximum of 18 months for one parent, 6 months for the other parent; part time parental leave payments adapted accordingly (maximum three years for one parent, one year for the other parent).

1 January 2002

Reform of parental leave policy. Up to three years can be taken. All residents included, also foreigners with legal rights to stay and having their principal domicile in Austria. Not dependent on previous employment, i.e. housewives and students are also eligible. More flexible, because parents can combine parental leave with part-time work more easily, each person who receives a parental allowance may earn a gross income of up to €14,600 per year.

1 July 2004

Legal right for mothers employed full time to reduce their working hours after having given birth, provided the company has more than 20 employees and the mother had been employed at least three years before she became pregnant.

1 January 2008

Three variants of parental leave introduced, with durations of 15+3, 20+4, and 30+6 months (the former number refers to a maximum duration of parental leave that can be taken by one parent only, the latter number refers to the additional duration of parental leave that can be consumed if the other parent also takes part in the leave). The parental leave allowance attached to these variants is €800, €624, and €436 per month, respectively. The annual income ceiling has been lifted to € 16,200.

Source: Hoem et al. 2001a, Gisser and Fliegenschnee 2004.