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# The Part-Time Revolution: Changes in the Parenthood Effect on Women's Employment in Austria across the Birth Cohorts from 1940 to 1979

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## Abstract

Comparing employment rates of mothers and childless women over the life course across the birth cohorts from 1940 to 1979 in Austria, we address the question of whether the parenthood effect on employment has declined. By following synthetic cohorts of mothers and childless women up to retirement age, we can study both the short-term and long-term consequences of having a child. We consider employment participation as well as working time and also perform analyses by educational level. Our study is based on the Austrian microcensus, conducted between 1986 and 2016, and uses descriptive methods, logistic regression models, and decomposition analysis. The results show that the increase in the proportion of part-time work has led to a declining work volume of mothers with young children, despite employment rates of mothers having increased across cohorts. Return to the workplace is progressively concentrated when the child is 3–5 years old, but the parenthood effect has become weaker only from the time children enter school. Part-time employment is primarily adopted (at least with younger children) by highly educated mothers and often remains a long-term arrangement.

## Introduction

Having children has a significant impact on women's employment, which leads both to gender inequality and disparities with childless women. In addition to cross-country differences in the parenthood effect on women's employment, variation over time has been observed due to changing family policies, cultural attitudes, and women's labour market opportunities (Goldin, 2006; Vlasblom and Schippers, 2006; Nieuwenhuis, Need and

Van Der Kolk, 2012; Connolly *et al.*, 2016). In this article, we compare the employment of mothers and childless women across birth cohorts from 1940 to 1979 in Austria. Previous research mainly examined the short-term consequences of childbirth on mothers' employment over the first years of their children's life, often in conjunction with parental leave policies (Aisenbrey, Evertsson and Grunow, 2009; Kanji, 2011; Schober, 2013; Berghammer, 2014). Instead, we study both

short-term and long-term consequences. To achieve this, we follow mothers and childless women over their life courses up to their retirement age in synthetic cohorts, i.e. we treat the age distribution of successive waves of cross-sectional data as if birth cohorts were passing through time. We consider their employment participation and their working time arrangements and also perform analyses by educational level.

Austria is commonly considered a prime example of a conservative–corporatist welfare state (Esping-Andersen, 2009), characterized by care duties being mainly allocated to families and less to state institutions. With the rise of women’s employment in Austria, this familistic orientation elicited the growth of part-time work, which enables mothers to continue taking over care responsibilities, while fathers’ (full-time) employment remains largely unaffected (Berghammer and Verwiebe, 2015).<sup>1</sup> In fact, by 2014, the female part-time employment rate in Austria reached the third highest in Europe after the Netherlands and Switzerland (Eurostat database, 2018b). Furthermore, unlike other countries with predominantly part-time female labour force participation, this rate continues to rise in Austria. By studying women’s employment in Austria, we can document in detail how part-time work increased over recent decades, especially in relation to having children. Comparing the labour market behaviour of mothers and childless women is particularly relevant in Austria, as a relatively large share of women has no children. The childlessness rate was 19 per cent in the cohorts that have more recently completed childbearing years (women born in 1972) and as high as 30 per cent among university-educated women (born between 1956 and 1960) (Sobotka *et al.*, 2015; Beaujouan, Brzozowska and Zeman, 2016). The challenges in reconciling (full-time) employment and raising children, which results in a large parenthood effect on maternal employment, have been proposed as the main explanations for the high levels of childlessness observed (e.g. Sobotka, 2011). This contribution provides evidence towards how the parenthood effect has evolved across cohorts.

By addressing the issue of part-time employment, this study contributes to a wider discourse on women’s employment in Europe and the United States. There has been a debate over whether the opportunity for part-time work allows women who would otherwise be inactive to remain in the labour market, or whether part-time employment creates a marginalized work force (Gallie *et al.*, 2016). A related debate revolves around the issues of working time preferences (Hakim, 2002). It addresses the question of whether working part-time is voluntary or involuntary and how working time

preferences interact with both cultural and economic structures. Scholars identified several reasons for why part-time work is widespread and continues to increase in some countries. First, policies that encourage part-time work play a decisive role. Examples include the right to work part-time and childcare infrastructure, in particular the lack of full-time childcare spaces (Kreyenfeld and Hank, 2000; Del Boca, Pasqua and Pronzato, 2009). Second, cultural attitudes that support traditional gender roles make two full-time earners difficult to realize. A masculine workplace culture means that high time availability and flexibility are expected from men. Likewise, occupational segregation and the associated wage gap tend to sort women into jobs that are easier to accommodate childrearing but often entail lower wages (Blau and Kahn, 2003; Mandel and Semyonov, 2005). Third, mothers are expected to devote a lot of time to their children in cultures of time-intensive and child-centred mothering (Hays, 1996; Bianchi, 2000). In addition, the following three factors related to educational differences play a role in women’s participation in the workforce. Highly educated women have a higher earnings potential, which makes full-time work more attractive. However, they also tend to be partnered with equally highly educated men, often in high-level positions that entail high work commitment and long working hours. These circumstances may lead them to curtail their working hours, especially when they have children. In addition, there is evidence that the culture of intensive mothering is particularly strong among highly educated women (Sayer, Gauthier and Furstenberg, 2004).

Our analyses are based on seven waves of the Austrian microcensus surveys, conducted between 1986 and 2016, which contain information on the number and birth year of children ever born. We constructed synthetic cohorts of 10 years (1940–1949, 1950–1959, 1960–1969, 1970–1979), which we followed from women’s young adulthood over their prime employment years up to age 60. Unlike several previous studies on parents’ employment behaviour that had to cap at ages 40 or 45 because they only had information on children in the household available (Percheski, 2008; Konietzka and Kreyenfeld, 2010; Büning and Pollmann-Schult, 2016), we are able to follow cohorts of women to the end of their labour market careers. Taking into account the employment trajectory until higher ages is desirable since there are not only immediate consequences of employment; rather, lifetime employment largely determines welfare in old age. In conservative welfare states such as Austria, old age poverty among women tends to be a particular concern because they are often less

well-secured by their own employment (Angel and Kolland, 2011).

Therefore, using a cohort comparison of four successive 10-year cohorts of women, this study addresses the question of whether the parenthood effect has declined over cohorts. Given improved opportunities for combining work and family, and more egalitarian gender attitudes, we expect—in line with previous evidence—that employment participation of mothers has converged towards the rate of childless women. However, the rise in part-time employment may have attenuated this decline in the parenthood effect. Our study details to what extent this is the case, paying specific attention to children's age. In terms of education, we expect the parenthood effect to be generally stronger among lower-educated mothers and we comprehensively analyze changes over cohorts and by age of the youngest child.

In the remainder of this article, we first provide an overview on the theoretical background and previous research regarding women's labour force participation, part-time employment, and the education effect on employment. Subsequently, we discuss the profiles of the four cohorts under study. Next, we address data and methods. Finally, we present the findings on employment, full-time/part-time employment, and educational differences as outlined earlier.

## Theoretical Background and Previous Research

Previous theoretical contributions have addressed the reasons for the increase in female labour force participation. At the macro-level, policies, in particular the arrangement of work–family policies, have played a key role (Nieuwenhuis, Need and Van Der Kolk, 2012; Steiber and Haas, 2012). Other factors include the expansion of the service sector (Thévenon, 2013), families' economic need for more than one income due to rising costs of living, and the cultural change towards more egalitarian gender role attitudes (Pfau-Effinger, 2004). At the micro-level, the main determinants of women's labour market participation are the number and age of children, education and income, gender role attitudes, and partnership characteristics (Pettit and Hook, 2005; Nieuwenhuis, Need and Van Der Kolk, 2012). The higher labour force participation of highly educated mothers has been largely explained by their higher earnings, better opportunities in the labour market, and more attractive job characteristics as well as by their more gender egalitarian attitudes (Steiber and Haas, 2012). The effect of micro-level determinants varies by country and life stage. For instance, in countries such as

France or Norway, the education effect on mothers' employment is larger when children are younger (because highly educated mothers return back to the workplace faster than their lower-educated peers), while it levels off with the increasing age of the children. Conversely, in other countries (e.g. Austria), educational differences by phase in the family life course are similar (Steiber, Berghammer and Haas, 2016).

Part-time employment can be theoretically conceptualized either in terms of integration or in terms of segmentation (Gallie *et al.*, 2016). The integration perspective assumes that the option for part-time work serves as a bridge into the labour market for persons who would otherwise be inactive (such as mothers with young children). The segmentation perspective views part-time employees as a marginalized workforce that is easier to substitute, experiences less on-the-job training and reduced career opportunities, and suffers from low task discretion and highly repetitive tasks. Empirical evidence points towards a lower intrinsic quality of part-time jobs in some countries but still finds a high degree of job satisfaction (Gallie *et al.*, 2016). The integration–segmentation conceptualization is closely related to the debate around working time preferences. Some scholars, most prominently Catherine Hakim, have argued that women's employment choices are predominantly explained by their preferences (Hakim, 1995). In her preference theory, Hakim distinguishes between women with a strong work orientation and commitment (work centred), women with a strong preference for family (home centred), and adaptive women without any clear preference, who seek to combine work and family (Hakim, 2002). Highly educated women are assumed to be more often work-centred than their lower-educated peers. According to Hakim's theory, adaptive women predominantly choose to work part-time. They are particularly responsive to policies (e.g. availability of childcare services) and also favour occupations (such as teaching) that may more readily be combined with family life. Indications for part-time work being a lifestyle choice rather than a constraint are a high job satisfaction and a reluctance to raise working hours even if circumstances permit. Other scholars have contested Hakim's preference theory mostly on the grounds that it does not sufficiently consider constraints (McRae, 2003). Constraints to full-time work may be both structural (e.g. opening hours of childcare, partners' working hours) and cultural (e.g. norms of intensive mothering). Critics have also argued that working time preferences are not static but are shaped by both constraints and actual working hours (Crompton and Harris, 1998; Steiber and Haas, 2012). These preferences hence interact with cultural and economic

structures. Moreover, there is frequently a mismatch between attitudes and behaviour, which challenges the notion that women are largely able to live according to their preferences (Steiber and Haas, 2012). Highly educated women are usually better able to pursue their preferences for full-time work (while paying for childcare and outsourcing housework), part-time work or staying at home because of the couple's higher resources and their better negotiating position towards their partners (Bernardi, 1999; Verbakel and de Graaf, 2009). Cross-national evidence has shown that part-time work is more prevalent among less-educated women than among their highly educated peers (Del Boca, Pasqua and Pronzato, 2009). This is also the case for Austria (Baierl and Kapella, 2014), although more detailed results find that this relationship only applies to mothers with school-aged children, while part-time work is more frequent among highly educated mothers with infants or pre-school children (Berghammer, 2014; Steiber, Berghammer and Haas, 2016).

In Austria, both structural and cultural constraints play a role in the rise of part-time employment. Its childcare and school infrastructure are commonly not geared towards two full earners and show a high degree of regional variability (Dörfler, Blum and Kaindl, 2014). Other policy measures also facilitate the part-time option, most importantly the right to work part-time (since 2004) and lower taxes. Part-time work is also enabled by moderate costs of living, which allow many families to sustain on one-and-a-half incomes.<sup>2</sup> Norms of intensive mothering are influential (Diabaté, 2015), and large amounts of the Austrian population hold negative attitudes towards full-time working mothers with a child below age 3 (Steiber and Haas, 2010). Coupled with this, there is a strong male breadwinner culture; overtime is common in Austria with the average number of usual weekly hours of work among full-time employees being among the highest in the European Union (43 hours per week in 2017) (Eurostat database, 2018a). These cultural attitudes are sustained by a gender wage gap, which persists from the time of labour market entry (Bock-Schappelwein *et al.*, 2018) and hinders men taking up parental leave or reducing their working hours. Within the context of these constraints, surveys find a high degree of voluntary part-time employment in Austria: less than 10 per cent of part-time employed women aged 25–49 report that their work arrangement is involuntary. This pattern is similar to other countries with high part-time work rates (e.g. the Netherlands, United Kingdom) and in contrast to Southern Europe and some Central and Eastern European (CEE) countries (Baierl and Kapella, 2014).

## Cohort Profiles

This section briefly presents the profiles of the four Austrian cohorts under study with respect to education, employment, and family life (for an overview, see Table 1; Supplementary Figure A.1 shows a Lexis diagram to facilitate connecting policy events with women's ages in different cohorts).

### World War II and post-World War II (1940–1949)

The cohorts born during World War II or in the immediate post-war period generally experienced their early socialization under tight economic circumstances. Family relations were often strained due to many fathers' long absences during and after the war (Sieder, 1987: pp. 236–242). Most women in these birth cohorts completed only primary education. They continuously lived in a family context, moving from their parental home to living in a household with their husband (Prskawetz *et al.*, 2008). Close to 90 per cent of women married and had children—two on average. In 1957, women in Austria obtained the right to take unpaid parental leave for 6 months with a guaranteed return back to their workplace; this was extended to 1 year in 1961 and endowed with an income-dependent leave benefit. In the early 1960s, when many of the women born in these cohorts had entered (or were close to entering) the labour market, female employment rates were higher in Austria than in the other western European countries (Butschek, 1965). Most women worked in the service sector, closely followed by the agricultural sector and industry (mostly textile) (Butschek, 1965; Butschek, 1974). Shortly after the post-war period, in the 1950s and 1960s, the economy began an unprecedented boom and families could increasingly afford a modest standard of living.

### Early baby boom (1950–1959)

Given a favourable economic situation, women's employment rate started a steadily continuous increase around 1970, after a drop had taken place between 1960 and 1970 (Butschek, 1974; Lutz, 2000). The service sector expanded while the number of employees in the agricultural sector decreased. During the 1980s, the economy weakened and unemployment began to rise. In 1974, the parental leave payment of 1 year, previously income dependent, was changed into a flat rate. In 1975, a far-reaching family reform was enacted, which provided women with the right for employment independent of their husband's consent. Since the 1970s, the development of childcare infrastructure for the morning care of children aged 3 and older (mainly for educational

Table 1. Overview on cohort characteristics

	World War II and post-World War II (1940–1949)	Early baby boom (1950–1959)	Late baby boom (1960–1969)	Generation X (1970–1979)
Female employment rate (per cent) <sup>a</sup>	55	62	67	74
Low-educated women (per cent) <sup>a</sup>	47	37	23	13
Highly educated women (per cent) <sup>a</sup>	3	8	10	20
Cohort total fertility rate <sup>b</sup>	1.98	1.78	1.63	1.59
Mean age at birth <sup>c</sup>	25.4	25.9	27.2	28.2
Cohort childlessness (per cent) <sup>d</sup>	12	15	17	19
Cohort childlessness among highly educated (per cent) <sup>e</sup>	24	23	26	—
Ever married (per cent) <sup>f</sup>	88	83	77	—
First union was cohabitation (per cent) <sup>g</sup>	14	41	72	88
Economic situation when cohort members were (mainly) aged 25–35				
Period	1965–1984	1975–1994	1985–2004	1995–2014
Real GDP growth (yearly) <sup>h</sup>	Approx. 3–7 per cent until 1974; slightly negative growth in 1975, 1978 and 1981	Fluctuation; high growth only in single years (e.g. 1990: 4 per cent)	Always positive; between 0.5 and 4 per cent	High in 2007 (almost 4 per cent); crisis effect in 2009 (–4 per cent)
Average yearly growth rates of real GDP (per cent) <sup>h</sup>	3.3	2.4	2.4	1.7
Real wages <sup>i</sup>	Growing with approx. same or higher rate than productivity	Transition from higher to lower rates	Wages growing at lower rate than productivity	
Unemployment rates <sup>j</sup>	Until 1982 stable below 3 per cent	Rising from about 2 to almost 7 per cent	Rising from less than 5 to more than 7 per cent	6–7 per cent until 2012, then rise up to 9 per cent
Childcare rates 0–2 years <sup>k</sup>	2	3	7	17
Childcare rates 3–5 years <sup>k</sup>	46	60	77	88
Normative support for maternal employment (share of women aged 35–44 who agree in per cent) <sup>l</sup>				
A working mother can establish just as warm and secure a relationship with her children as a mother who does not work	71	71	80	82
A preschool child is likely to suffer if his or her mother works	80	73	57	50

Notes: <sup>a</sup>Own computations; data refer to age 36/37.

<sup>b</sup>Data from the Human Fertility Database; mean across cohorts; from 1965 to 1974: mean cohort size by age 40; last cohort pertains to 1970–1974 only.

<sup>c</sup>Data from the Human Fertility Database; mean across cohorts; from 1965 to 1974: mean age at birth by age 40; last cohort pertains to 1970–1974 only.

<sup>d</sup>Sobotka (2017); data for 1970–1979 obtained upon request from Sobotka.

<sup>e</sup>Zeman et al. (2017); 1960–1969 refers to 1960–1961.

<sup>f</sup>Council of Europe (2006).

<sup>g</sup>Berghammer, Schmidt and Filgenschnee (2015).

<sup>h</sup>Austrian Economic Chamber (2017).

<sup>i</sup>Fannira-Mühlberger and Leoni (2013) and Mayrhuber et al. (2015).

<sup>j</sup>Austrian Economic Chamber (2017).

<sup>k</sup>Own computations based on Statistics Austria (2019).

<sup>l</sup>Own computations based on ISSP 1988, 1994, 2002, and 2012, EVS 1990, 1999, and 2008. Original scales range from 1 to 4 (EVS 1990 and 2008) or 1 to 5 (all ISSP waves and EVS 1999) with values 1 and 2 indicating (strong) agreement (for further information see EVS (2018) and ISSP (2018), respectively).

GDP: Gross domestic product; ISSP: International Social Survey Programme; EVS: European Values Study.

reasons) enabled part-time work among women. By 1980s, the childcare coverage rate was around 50 per cent. In the early baby boom cohorts, several demographic changes were initiated, such as the spread of nonmarital cohabitation or the increase in childlessness—but they were still only represented as a minority. The divorce rate was still low—at a level of 18 per cent in 1970—but started a steady rise thereafter.

### Late baby boom (1960–1969)

Although the growth rate in women's employment was less steep during the 1980s than the decade before (Lutz, 2000), women's position in the labour market began to strengthen in which they increasingly held leading positions and academic jobs (Dörfler and Wernhart, 2016). After becoming mothers, a growing share returned (faster) to their workplaces, but since the mid-1980s, increasingly on a part-time basis. With a weakening economy since the 1980s, labour market uncertainties rose, real wages grew less rapidly than before, and many families felt that they could no longer live on a single income. The main changes in family policies were the extension of the parental leave duration from 1 to 2 years in 1990 and, 1 year later, the introduction of parental leave for fathers. Moreover, the childcare infrastructure for the morning care of children above age 3 improved continuously. Some of the demographic developments that had started in the previous cohorts accelerated, e.g. increase in premarital cohabitation, postponement of childbearing (Prskawetz *et al.*, 2008). Meanwhile, the mean number of children per woman continued to drop and the use of the birth-control pill, legal since 1962, became increasingly widespread (Sieder, 1987: p. 257).

### Generation X (1970–1979)

Generation X experienced a more flexible and globalized labour market than previous generations (partly related to Austria's accession to the European Union in 1995), although the labour market continued to be highly regulated (e.g. trade unions are strong and a high percentage of employees are covered by collective bargaining agreements). Generation X has shown to hold a stronger work-life orientation on account of the centrality of work status (Beutell and Wittig-Berman, 2008), but evidence is inconclusive (Schröder, 2018). Norms of intensive mothering have become stronger over time and are more prevalent in this generation than in previous ones (Berghammer, 2013). Equality between men and women further increased in terms of education, employment, and work status. However, while men became increasingly involved in childcare and housework (Berghammer, 2013), they

remained reluctant to take a substantial share of parental leave or to reduce their working hours as mothers increasingly did. In 2004, the right to part-time work until the child's seventh birthday was introduced (restricted to employees that were employed in a company with more than 20 employees for at least 3 years). Regarding parental leave, in 2002, the system became more familistic (payments up to 3 years) and comprehensive (no longer tied to previous employment). In 2010, additional leave options were introduced to provide parents with greater flexibility (including one income-dependent option restricted to around 1 year). The childcare infrastructure for children below 3 years and full-time childcare developed slowly and predominantly in urban areas. With respect to demographic developments, the age at motherhood continued to increase while the cohort family size remained stable compared with the previous cohort.

On the basis of empirical evidence and the changing context of cohorts, we formulate the following hypotheses. First, we expect that mothers' employment rates will converge towards their childless counterparts' (hypothesis 1). This reasoning is based on better opportunities for combining work and family, more gender egalitarian attitudes, and economic necessity in view of low wage growth. In addition, compositional changes (particularly an increase in highly educated women) as well as demographic changes (particularly a decreasing number of children) could play a role. We, however, do not assume a significant increase in mothers' employment with children below age 3 due to extensions of the parental leave period (1990 and 2002) and a scarcity of institutional childcare. Second, we expect that an increasing share of mothers would return to their workplaces on a part-time basis, especially those from the late baby boom cohort, among which the right to work part-time started to take effect (hypothesis 2). Third, with regard to education, we expect a convergence of education groups in the employment rate (Berghammer, 2014) as the lower-educated women especially profit from better opportunities to combine work and family (hypothesis 3). Part-time employment could also be more frequent among highly educated mothers with young children, because intensive mothering prevails more strongly among them and—if they prefer part-time work—they will be better able to realize it. Another argument pertains to the declining selectivity of highly educated women as their share expands: while highly educated women in older cohorts may have been more selective, for instance, in terms of skills, motivation, and work orientation (Gesthuizen, Solga and Künster, 2011), this might be less the case for the highly educated in younger cohorts.

**Table 2.** Number and age of women under study

Cohort	World War II and post-WW II (1940–1949)	Early baby boom (1950–1959)	Late baby boom (1960–1969)	Generation X (1970–1979)
Respondents with information on parenthood	16,777	18,998	19,911	11,104
Mean age at time of interview (SD)	51.3 (0.07)	42.7 (0.07)	34.8 (0.07)	28.3 (0.08)
Mean age in				
1986	41.0 (3.1)	31.1 (2.9)	23.2 (1.6)	
2016		58.4 (1.2)	51.4 (2.9)	41.8 (2.8)

Source: Austrian microcensus 1986–2016 (own computations).

Note: SD: standard deviation.

## Data and Methods

The analyses are based on Austrian microcensus data (labour force survey), a representative survey conducted since 1974 using a one per cent sample of Austrian households. This large-scale survey contains detailed information on household composition, employment, and education. In addition, approximately every 5 years (1986, 1991, 1996, 2001, 2006, 2012, and 2016), questions on the number and birth year of biological children were added in a special module directed at women aged 15 and over (in some waves, a different age definition was applied; for more details, see Supplementary Table A.1). While participation in the core microcensus is compulsory, participation in this module was voluntary, but response rates were above those reported for other Austrian social surveys. In the initial waves, data were collected in face-to-face interviews, whereas the special modules from 2006 were conducted by computer-aided telephone interviews. Between 1986 and 2001, questions about children were asked to another household member if the randomly selected respondent was not available. To assess the quality of these proxy interviews, we conducted sensitivity analyses that excluded them and, reassuringly, the results were very similar. Thus, the proxy interviews were included in the analyses. Case numbers and mean age at the time of interview are depicted in Table 2 (for a detailed sample description, see Supplementary Table A.2).

The availability of information on biological children is a clear advantage of this survey over other surveys that are most frequently used for analyzing labour force participation. The EU Labour Force Surveys, the EU Statistics on Income and Living Conditions, and—for some countries, including Austria—its predecessor, the European Community Household Panel, only inquire about children living in the household. Hence, they do not allow for making a distinction between childless persons and parents who do not live with their children.

This is less of an issue in younger age groups but becomes a growing concern around age 40 (for women) when children start to leave the parental home (Greulich and Dasré, 2017).

Our variables are defined as follows. We distinguish between four 10-year cohorts: 1940–1949, 1950–1959, 1960–1969 and 1970–1979. Regarding the employment classification, we consider women who are active in the labour market as employed. That is, unlike the common International Labour Organization (ILO) definition, we do not denote women on parental leave as employed. We use the number of working hours during a regular work week and differentiate among short part-time work (1–20 usual weekly working hours), long part-time work (21–35 hours), and full-time work (36 hours and more). The distinction between main and secondary job is not available in the older surveys, hence our analyses refer to the main job. The categories for *age of the youngest child* are as follows: 0–2 years, 3–5 years, 6–9 years (primary school age), 10–15 years (lower secondary school), and 16–19 years (upper secondary school).<sup>3</sup> We group *education* into the following four categories: low education denotes incomplete or complete primary education; medium education means having completed a secondary vocational track, usually apprenticeship training; medium–high education refers to having completed the higher vocational or general school, which ends with an examination permitting university attendance (in Austria, the ‘Matura’); and high education denotes having completed the tertiary education. In analyses on earlier birth cohorts, medium–high education and high education had to be collapsed due to low case numbers of women with tertiary education.

In our analytic strategy, we mainly pursue a descriptive approach in which we combine many characteristics: cohort, motherhood status, age, age of the youngest child, working time, and education (for a similar approach, see Trappe, Pollmann-Schult and Schmitt, 2015). We first



depict differences in employment rates between childless women and mothers for all four cohorts under study and show maternal employment rates by age of the youngest child. In a second step, we differentiate by working time arrangements (full-time, short part-time and long part-time, unemployment, parental leave, and inactivity), focusing on childless women and mothers at ages 36–45 (in this age group, we dispose with data for all four cohorts). Next, we analyze mothers' working time arrangements by age of the youngest child (until age 19) in more detail. Finally, we include education in our analyses of female employment (differences between childless women and mothers) and working time arrangements (differences by age of the youngest child).

We also estimated logistic regression models and, based on these results, conducted a Blinder–Oaxaca decomposition analysis (Sinning, Hahn and Bauer, 2008) to assess whether the changing composition of mothers (i.e. increasing education, fewer children) or other developments (e.g. labour market policies) are responsible for changes in maternal employment across cohorts. The different cohorts overlap only partly in terms of women's age, and we thus had to restrict the age range to 36–45, which is a limitation of the multivariate models. Logistic regression models are estimated separately for the four cohorts. We estimated models both for *non-employed vs. employed* and for *part-time employed vs. full-time employed*.<sup>4</sup> We depict the average marginal effects (AMEs), as these are most comparable across models for different groups (Best and Wolf, 2012). AMEs represent the average effect of a specific characteristic (e.g. being highly educated) on the probability of being (full-time) employed. Positive coefficients indicate that a certain group is more often in (full-time) employment, while negative coefficients indicate that a certain group is less often in (full-time) employment than in the reference group.

## Empirical Results

### Descriptive Results

#### Employment rates

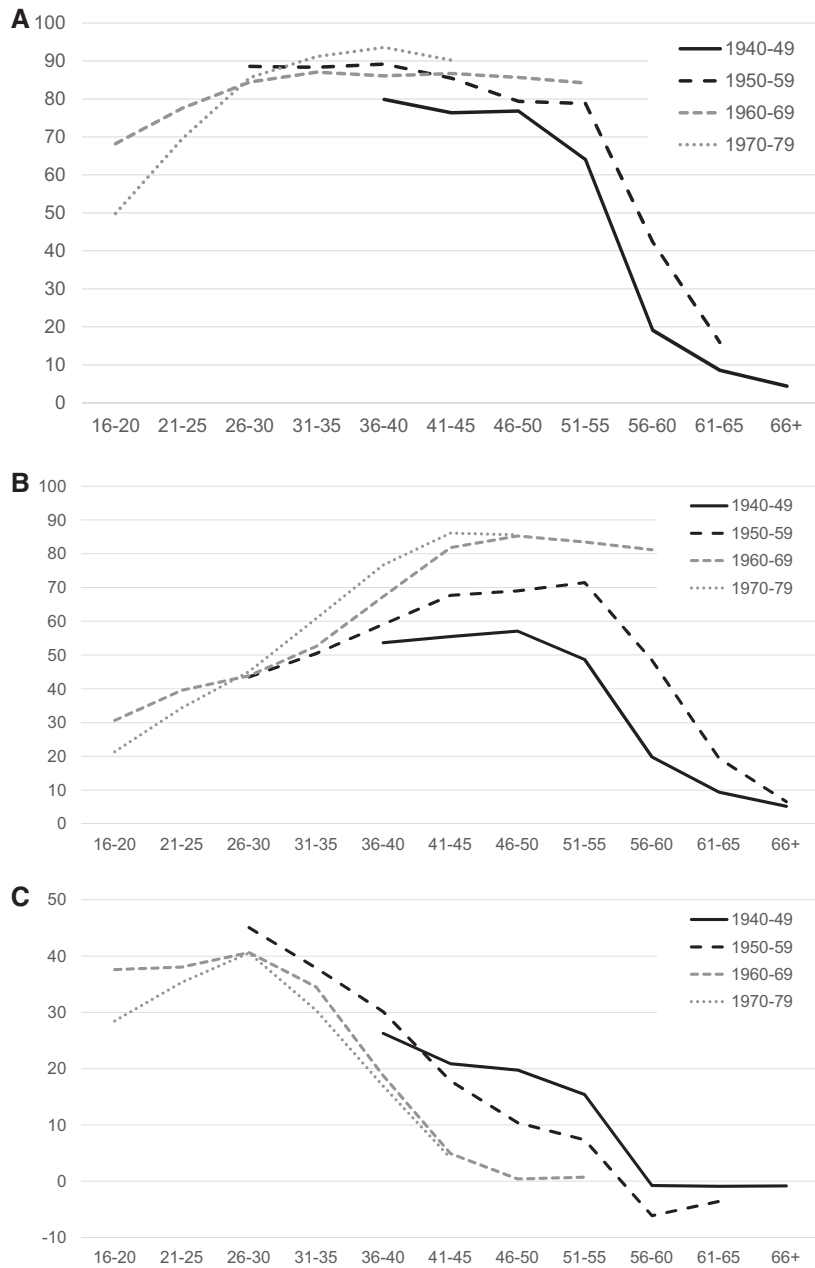
Figure 1 shows employment rates of childless women and mothers across cohorts. The results reveal only a moderate change in the employment rates of childless women over time. They mostly range between 80 and 90 per cent in the prime employment years (26–50), while being slightly lower in the oldest cohort (Figure 1A). Conversely, among mothers, the employment rate rises with each younger cohort, thus providing

evidence for a declining parenthood effect over time (in line with hypothesis 1). For example, in the 36–40 and 41–45 age groups, the differences between the youngest and oldest cohorts are as large as 23 and 31 percentage points, respectively (Figure 1B). The results also demonstrate that the male breadwinner model is still quite widespread in the oldest cohort, with many women remaining housewives after they had children. For example, at ages 36–45, 45 per cent of women in the oldest cohort are not employed. Figure 1C displays the absolute difference in the employment rates between childless women and mothers. It shows that employment behaviour of mothers and childless women converges with age as the children grow up. In the two younger cohorts, differences in employment participation have almost levelled when women reach their early 40s, while in the two older cohorts, the gap continues to persist.

Due to the postponement of childbearing in recent decades, it might be misleading to compare maternal employment rates by age (as in Figure 1), since women at a given age will have younger children in the younger cohorts than in the older ones. We hence depict maternal employment rates across cohorts by age of the youngest child (Figure 2). The almost identical employment rates of around 30 per cent in all cohorts when the youngest child is below age 3 are striking. The faster re-entry to the workplace of each younger cohort becomes apparent only when the youngest child is aged 3–5. At this family life course stage, less than 40 per cent of women in the oldest cohort were employed compared with almost 70 per cent of women in the youngest cohort, with a steady rise observed among the cohorts in between. Aside from this conspicuous pattern, cohort differences in re-entry into the workforce with older children are moderate. For example, the rise in the employment rate from when the child is aged 3–5 to when it is 10–15 ranges from 69 per cent to 88 per cent (+19 points) in the youngest cohort and from 37 per cent to 51 per cent (+14 points) in the oldest cohort. Hence, the absolute increases are not all that dissimilar. The results also reinforce the finding (displayed in Figure 1) that being a housewife used to be common in the oldest cohort—with half of the mothers staying at home even when the youngest child is aged 10–15—but this model was eventually replaced by working mothers.

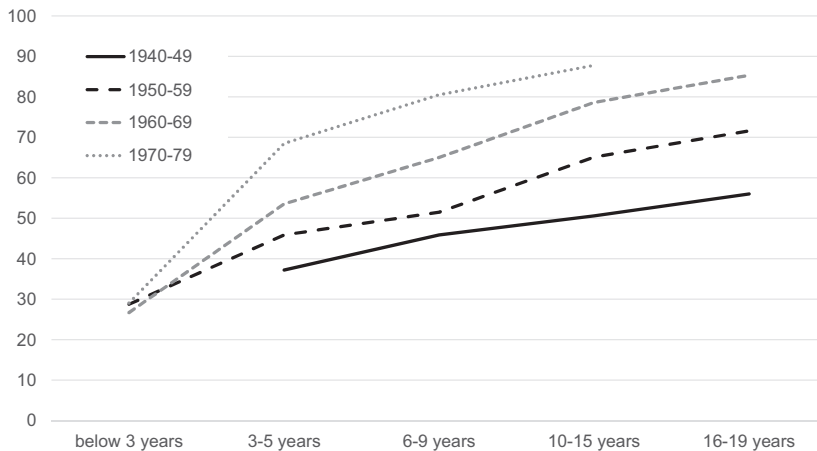
#### Full-time/part-time employment

In a next step, we introduce the full-time/part-time distinction. The results reveal that the full-time rate among childless women in all cohorts is around 70 per cent (Figure 3A). This means that their labour market behaviour in terms of working hours has remained rather



**Figure 1.** Women's employment by motherhood status and age: cohorts born 1940–1949 to 1970–1979 (per cent). (A) Childless women. (B) Mothers. (C) Difference in employment rate in percentage points between childless women and mothers

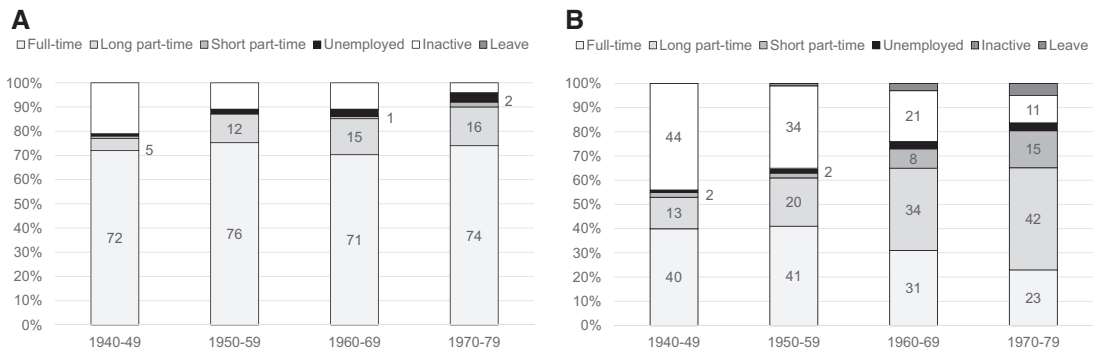
Source: Austrian microcensus 1986–2016 (own computations).



**Figure 2.** Mothers’ employment by age of the youngest child: cohorts born 1940–1949 to 1970–1979 (per cent)

*Note:* When their youngest child is below age 3, the women are on average 32 years (cohort 1950–1959), 29 years (1960–1969), and 30 years (1970–1979) old. We do not show data for the birth cohort 1940–1949 with a child below age 3 as they are on average 39 years old, which is atypical for their cohort. For the same reason, we do not show data for the cohort 1970–1979 with a child age 16–19 as they are on average 44 years old.

*Source:* Austrian microcensus 1986–2016 (own computations).

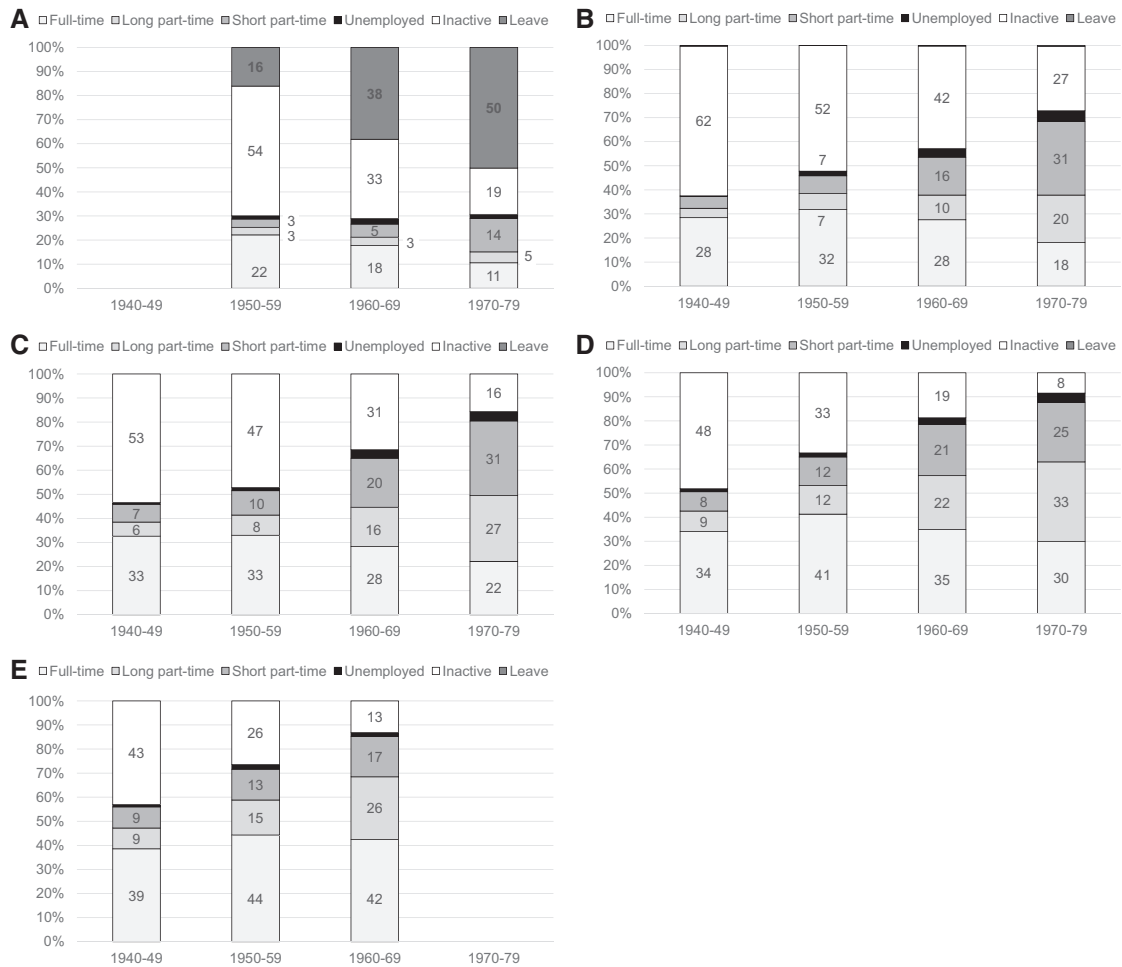


**Figure 3.** Women’s employment status in detail by motherhood status at ages 36–45: cohorts born 1940–1949 to 1970–1979 (per cent). (A) Childless women. (B) Mothers.

*Source:* Austrian microcensus 1986–2016 (own computations).

stable and that they were almost unaffected by the increasing diversity of working hours among mothers.<sup>5</sup> A quite different trend in working hours emerges for mothers (Figure 3B): In parallel with a rising maternal employment rate, the share of full-time employed mothers has nearly halved from about 40 per cent in the two oldest cohorts to 23 per cent in the youngest one (corresponding to hypothesis 2). In fact, part-time work (53 per cent, mostly long part-time) has become the most prevalent arrangement in this youngest cohort.

Again, we introduce the age of the youngest child as an alternative time metric (Figure 4). Whereas we had previously observed that the maternal employment rate with a child below age 3 is around 30 per cent in all cohorts, the actual labour market volume has dropped considerably along with the decrease in the share of full-time employed, which halved from 22 to 11 per cent (Figure 4A). This change implies that the mean working hours of employed women with the youngest child below 3 years have declined from 14 to 9 hours per



**Figure 4.** Mothers' employment by the age of the youngest child: cohorts born 1940–1949 to 1970–1979 (per cent). (A) Below 3 years. (B) Between 3 and 5 years. (C) Between 6 and 9 years. (D) Between 10 and 15 years. (E) Between 16 and 19 years.

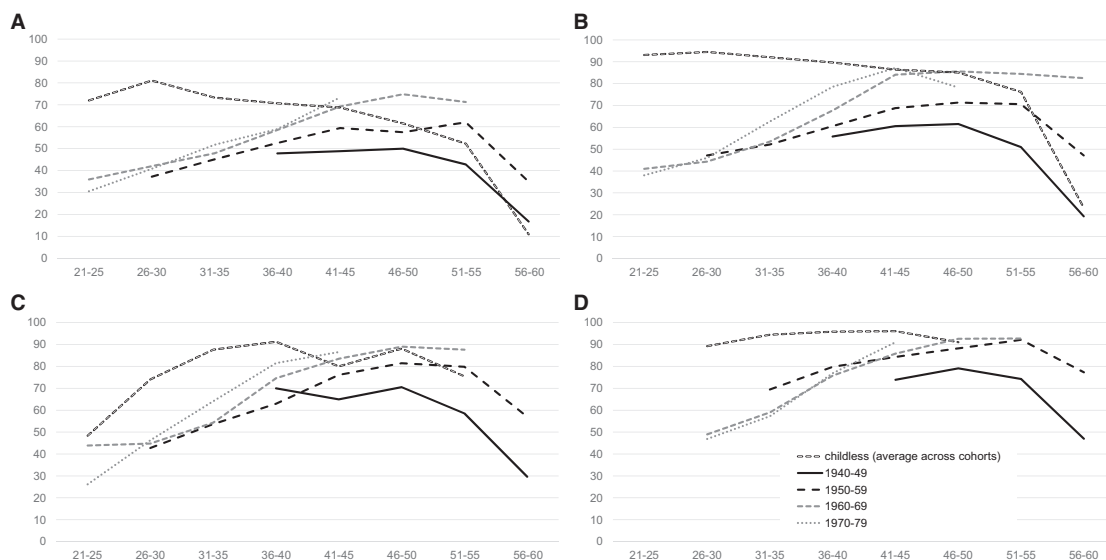
Source: Austrian microcensus 1986–2016 (own computations).

week across cohorts (not shown in figure). With the youngest child between 10 and 19 years, the share of full-time working mothers across cohorts has come closer (Figure 4D and E), suggesting that many mothers who had returned to the labour market on a part-time basis raise their working hours when their children get older. Even so, with the youngest child aged 10–15 years, still only 30 per cent of mothers work full-time compared with 58 per cent in short part-time or long part-time in the youngest cohort (Figure 4D).<sup>6</sup>

### Educational differences

In Figure 5, we look at educational differences in the age-specific employment rate for mothers and childless

women. We distinguish between cohorts for mothers but not for childless women as their employment rate varies little over cohorts. The employment rate for childless women differs between women who have at least medium education (around 90 per cent) and women with low education (around 70 per cent; refers to approximately aged 31–45). Among mothers, the employment rate is also higher for those with higher educational levels. The results reveal, in addition, that the increase in the employment rate concerned low- and medium-educated mothers more than mothers in the two higher education categories (in line with hypothesis 3). This conclusion is based on a comparison of the oldest cohort (1940–1949) with the second youngest cohort



**Figure 5.** Women's employment by education, motherhood status, and age: cohorts born 1940–1949 to 1970–1979 (per cent). (A) Low education. (B) Medium education. (C) Medium–high education. (D) High education.

*Note:* Shown are age–education groups with at least 50 observations. Values given for childless women present the average across cohorts.

*Source:* Austrian microcensus 1986–2016 (own computations).

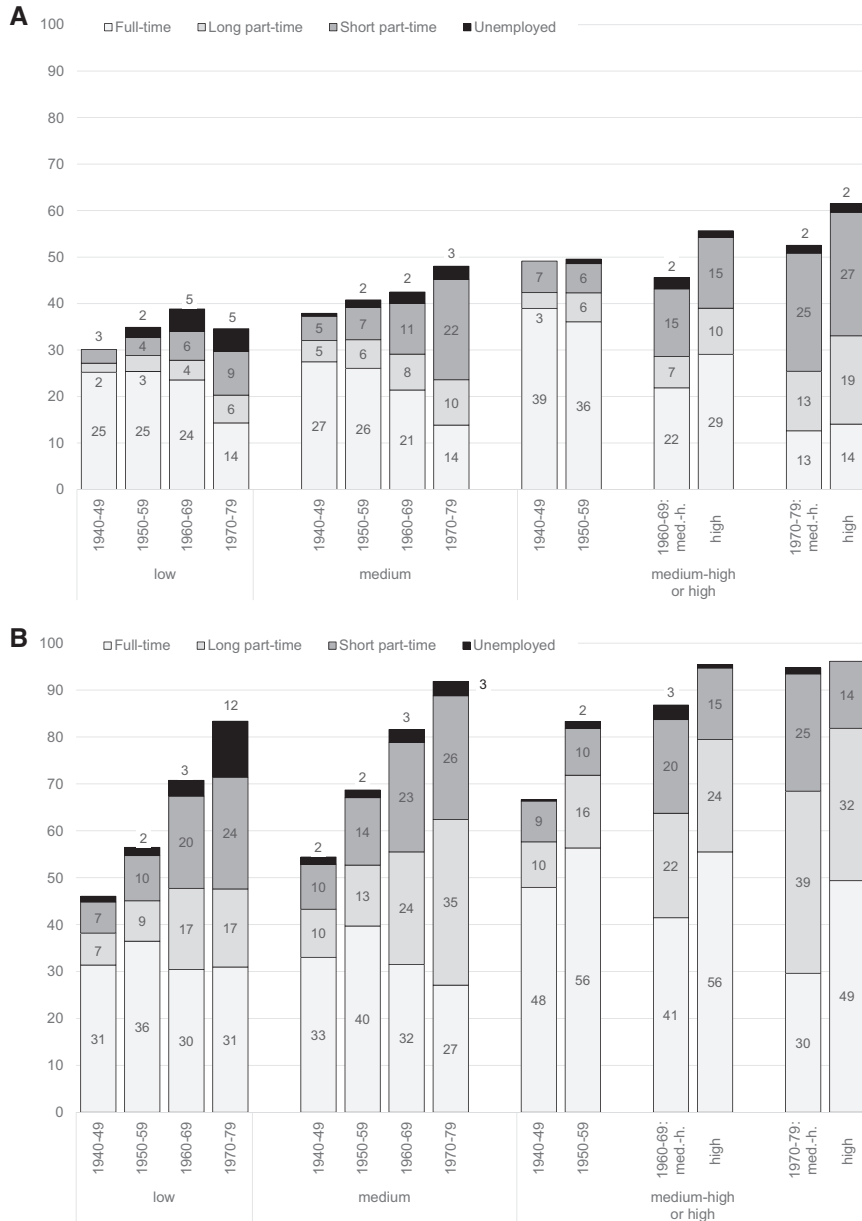
(1960–1969) with regard to the mean employment rate during the age range of 36–50 (we did not consider the youngest cohort because of small case numbers). The average increase in the employment rate was 19 percentage points for low-educated mothers and 20 percentage points for medium-educated mothers but only 14 and 8 percentage points for the two higher education categories (see Supplementary Figure A.2 for a presentation by cohort). This result indicates a converging trend among mothers with different educational backgrounds.

Next, we concentrate on mothers' employment with a youngest child below age 6 (Figure 6A). While the numbers are similar for the two oldest cohorts, mothers from the 1960–1969 cohort onwards increasingly return to the workplace on a part-time basis. Across all cohorts, low-educated mothers are least likely to work part-time and the non-employment rate (i.e. inactivity and unemployment) is by far highest among them. This pattern may be, with some caution, interpreted as a polarization among low-educated mothers between full-time and non-employment. Part-time work is initially adopted by medium-educated mothers, and by the youngest cohort, it is clearly most common among medium–high-educated mothers and highly educated mothers. Whereas in the three older cohorts, full-time employment was highest among highly educated mothers, the rates had converged to be almost identical in the youngest cohort.

Figure 6B shows how working time arrangements have evolved by the time the children are aged 10–19. The results provide evidence that, in line with their greater labour market potential, in the youngest cohort, highly educated women are most likely to increase their working hours to full-time. Whereas half of the highly educated mothers with a child in this age group work full-time, the three lower educational categories display full-time rates around 30 per cent. Notwithstanding, the stronger downwards trend in full-time work among highly educated women and medium–highly educated women—from 67 to 49 per cent and from 48 to 30 per cent, respectively (cohorts 1950–1959 to 1970–1979; see note to figure)—indicates that the decline in the parenthood effect was relatively less pronounced among these groups of women.<sup>7,8</sup>

### Multivariate Results

The results from the multivariate models support the main descriptive findings (Table 3, panel A). The decline in the parenthood effect in employment is reflected in the declining relevance of age of the youngest child (with the exception of children below age 3). In younger cohorts, more mothers are employed independently of the child's age. While the employment rate of highly educated women is distinctively higher in the older cohorts, the education effect converges across cohorts. Regarding full-time/part-time employment (Table 3,



**Figure 6.** Mothers' employment by the age of youngest child and education: cohorts born 1940–1949 to 1970–1979 (per cent). (A) Below 6 years. (B) Between 10 and 19 years.

*Note:* (A) In the 1950–1959 cohort, the 36 per cent full-time value in the medium–high and high categories split into 27 per cent among medium–high and 49 per cent among high. (B) In the 1950–1959 cohort, the 56 per cent full-time value in the medium–high and high categories split into 48 per cent among medium–high and 67 per cent among high.

*Source:* Austrian microcensus 1986–2016 (own computations).

panel B), the results show an increase in part-time work in the two younger cohorts, especially with younger children. Conversely, the employment rate in the two older cohorts had been lower, with a higher share of mothers working full-time. Accounting for the age of the youngest child, highly educated mothers are more likely to work full-time. In the youngest cohort, the full-time employment rate of medium–high-educated women is lower compared with the three older cohorts.

Findings from the decomposition analyses comparing the 1940–1949 cohort with the 1960–1969 cohort and the 1970–1979 cohort indicate that increasing maternal employment cannot be explained by changing cohort characteristics (e.g. female education) but seem to be (almost solely) driven by structural changes, i.e. the rise in part-time work (Table 4).<sup>9</sup>

### Concluding Discussion

This study has drawn a detailed comparison of employment behaviours between childless women and mothers who were followed up on in synthetic cohorts over their life courses from their late teens to age 60. Its aim was to analyze whether the parenthood effect has declined over cohorts of women. When using the employment rate as an indicator, we may indeed conclude that engaging in paid work has become significantly easier for

mothers; returning to the workplace is increasingly concentrated when the child is aged 3–5.

On the other hand, the strong rise in part-time employment makes it difficult to assess how much the parenthood effect has really declined. In fact, with the youngest child below age 3, mean working hours went down over cohorts (despite a stable employment rate) and, with a child aged 3–5, they have remained stable (despite an increase in the employment rate). This pattern suggests that the parenthood effect has become weaker from the time children enter school but less so before. There are several interconnected reasons for the spread of part-time work. While some pertain to structural constraints (such as opening hours of childcare) or cultural constraints [such as full-time external childcare being normatively rejected, especially for young children (Steiber and Haas, 2010)], personal preferences matter too. A high share of mothers states that they voluntarily work part-time; spending more time with their children or having more leisure time shapes their preference. Even with a teenage child, only a fraction (20–25 per cent) of part-time working mothers wants to increase their working hours (see endnote 6); the majority seems to be content with their work arrangement. Nevertheless, the question of whether part-time work for mothers is a preference remains the subject of debate. With the data at hand, we cannot determine to what extent preferences are formed by constraints and

**Table 3.** Logistic regression analyses by cohort (mothers, aged 36–45)

Cohort	(A) Non-employment vs. employment (0/1)				(B) Part-time vs. full-time employment (0/1)			
	AME				AME			
	1940–1949	1950–1959	1960–1969	1970–1979	1940–1949	1950–1959	1960–1969	1970–1979
Age of youngest child								
Below 3 years	–0.29***	–0.36***	–0.42***	–0.30***	—	–0.05	–0.15**	–0.29***
3–5	–0.18***	–0.24***	–0.19***	–0.07*	0.04	–0.02	–0.18***	–0.33***
6–9	–0.11***	–0.18***	–0.13***	–0.02	–0.04	–0.09***	–0.21***	–0.24***
10–15	–0.07***	–0.07***	–0.02	0.02	–0.05*	–0.04*	–0.09***	–0.11***
16–19	Ref.	Ref.	Ref.	Ref.	Ref.	Ref.	Ref.	Ref.
Highest education								
Low	–0.09***	–0.08***	–0.11***	–0.13***	0.02	0.05**	0.03	0.06
Medium	Ref.	Ref.	Ref.	Ref.	Ref.	Ref.	Ref.	Ref.
Medium–high	0.11***	0.07***	0.06**	0.03	0.11***	0.07*	0.07**	0.01
High	0.19***	0.25***	0.13***	0.08***	0.07	0.22***	0.15***	0.15***
Cragg and Uhler's R <sup>2</sup>	0.09	0.13	0.16	0.20	0.02	0.04	0.07	0.10
N	4,679	5,915	4,156	2,118	2,542	3,722	3,036	1,714

Note: Non-employment includes inactive mothers, unemployed mothers, and mothers on leave. Employment comprises part-time employment and full-time employment. Part-time employment contains short part-time and long part-time. Full-time employment means 36 or more hours per week. A dash (—) indicates that  $n < 40$ . Controlled for number of children in the household.

Source: Austrian microcensus 1986–2016 (own computations).

\*\*\* $P < 0.001$ ; \*\* $P < 0.01$ ; \* $P < 0.05$ .

**Table 4.** Decomposition analyses (mothers, aged 36–45)

Decomposition analyses	Change	Sample characteristics	Coefficients
(A) Non-employment vs. employment (all mothers, aged 36–45)			
Cohort 1960–1969 compared with cohort 1940–49			
(1) Omega 1	0.19***	0.01	0.18***
(2) Omega 0	0.19***	0.01	0.18***
Cohort 1970–1979 compared with cohort 1940–1949			
(3) Omega 1	0.27***	0.03*	0.24***
(4) Omega 0	0.27***	0.02	0.25***
(B) Part-time vs. full-time (only employed mothers, aged 36–45)			
Cohort 1960–1969 compared with cohort 1940–1949			
(1) Omega 1	-0.29***	-0.05***	-0.24***
(2) Omega 0	-0.29***	-0.01	-0.29***
Cohort 1970–1979 compared with cohort 1940–1949			
(3) Omega 1	-0.44***	-0.11***	-0.33***
(4) Omega 0	-0.44***	0.01	-0.44***

*Note:* These results were obtained after 100 replications, each with the method proposed by [Sinning, Hahn and Bauer \(2008\)](#). All decomposition analyses include the same list of independent variables, as the model shown in [Table 3](#).

*Source:* Austrian microcensus 1986–2016 (own computations).

\*\*\* $P < 0.001$ ; \* $P < 0.05$ .

actual working hours. The increasing diversity of working hours among mothers is not mirrored among childless women. Instead, if working time is reduced, it is almost always—at least initially—for reasons of care. This finding challenges the notion that Generation X seeks a better reconciliation between working time and leisure.

Another important finding is that part-time work often remains a long-term arrangement rather than being a stepping stone into full-time employment (although we would need individual-level panel data to observe changes in employment hours). Many mothers do not expand their working hours to full-time, even as their children grow up (for international evidence, see [Månsson and Ottosson, 2011](#); [Kelle, Simonson and Gordo, 2017](#)).<sup>10</sup> They avoid this, even though disadvantages in terms of career prospects, pension benefits, and poverty among single mothers rise with the duration of part-time work ([Thévenon, 2013](#)). In the youngest cohort, only 30 per cent of mothers work full-time when their children attend lower secondary school (aged 10–15). Current labour laws provide the right to part-time work until the child's seventh birthday and, by this time, this arrangement is often consolidated in the company and also in the family (i.e. regarding the division of unpaid work and with respect to the extent of leisure

time). We interpret the rise of part-time work as a new divide *within* the workforce between mothers and childless women. Mothers in part-time employment, especially if it is short part-time, are now in rather marginalized labour market positions. Before the spread of part-time employment, both mothers and childless women worked full-time. Hence, the divide was less within the workforce but between housewives and those women who were active in the labour market (with small differences by motherhood status).

The education-specific results reveal that employment rates increased most strongly among low- and medium-educated mothers, while the increase was more moderate among their highly educated peers whose employment levels were already higher in older cohorts. This result, thus, suggests a converging trend between education groups (in line with [Berghammer, 2014](#)). Medium-high-educated women and highly educated women resume employment faster than their less-educated counterparts after childbirth and more often on a part-time basis. This implies that the parenthood effect has declined relatively less in these groups of women than among their less-educated peers. In line with this finding, the results from the decomposition analysis reveal that changing cohort characteristics (e.g. more highly educated women) cannot explain the increase in maternal employment. Notwithstanding, as their children grow older, highly educated women are more likely than the other three educational groups to expand their working hours to full-time. On the other hand, we find that low-educated mothers experience more polarization between full-time work and non-employment (often unemployment) with children below age 6 than in the other education groups—and if they work part-time, they more often do so because they cannot find a full-time job. This supports the view that highly educated mothers are better able to pursue their working time preferences.

How do the Austrian results compare internationally? First, this case study provides evidence that despite the general trend towards an increase in women's labour force participation, the parenthood effect on maternal employment does not disappear steadily. Instead, we find stable maternal employment rates with a child below age 3 across cohorts covering 30 years and a decreasing work volume with children below age 6 due to the stark rise of part-time work (for Germany, see [Kelle, Simonson and Gordo, 2017](#)). These results challenge the idea of a general movement towards increased gender equality ([Esping-Andersen et al., 2013](#); [Goldscheider, Bernhardt and Lappégård, 2015](#)) and run counter to an increased prevalence of dual breadwinner



parents observed in most other European countries (Berghammer and Verwiebe, 2015; Connolly *et al.*, 2016). Second, while previous research found that highly educated women engage less in part-time work (Del Boca, Pasqua and Pronzato, 2009), the Austrian results show that this association only holds among mothers with older children. In the youngest cohort, three of the four highly educated employed mothers with children below age 6 work part-time. This challenges the widely held preconception that highly educated women are career-focused and oriented on gender equality.

### Notes

- 1 In terms of working time regime, since 1975, a standard full-time work week in Austria is 40 hours (8 hours per day), but many collective bargaining agreements provide reduced hours (e.g. 38.5).
- 2 For instance, higher disposable income net of housing costs in Norway and Sweden compared with Finland is a main reason for the four to five times higher part-time employment rates in these countries during the 1970s–1990s (Rønsen and Sundström, 2002).
- 3 In Berghammer and Riederer (2018), we also show results that pertain to the empty nest stage.
- 4 We also applied ordered logistic regression models (non-employment, short part-time, long part-time, full-time). Their interpretation is, however, not as straightforward because increasing employment rates of mothers (positive effect) are partly offset by increasing part-time employment rates (negative effect).
- 5 The 2006, 2012, and 2016 microcensus surveys additionally contain information on the reasons for part-time employment, allowing analyses for cohorts 1960–1969 and 1970–1979 (see Supplementary Table A.3). Among childless women who work part-time, around 40 per cent do not want a full-time position and almost 20 per cent cannot find one (the rest works part-time for, e.g. other personal and family reasons, illness).
- 6 Analyses on the reasons for part-time employment show that around 80–90 per cent of mothers with children below age 10 work part-time for reasons of care (see Supplementary Table A.3). With the youngest child aged 10–15, still one half attribute their part-time arrangement to care reasons and 20–25 per cent want to increase their working hours.
- 7 Additional analyses on the reasons for part-time work (cohorts 1960–1969 and 1970–1979; see Supplementary Table A.3) indicate that the part-time working arrangement is more often involuntary among low-educated women than their higher-educated peers. Among part-time working mothers with a youngest child aged between 10 and 15 years, 20 per cent (high education) and 29 per cent (low education) want to increase their working hours (not necessarily to full-time); between 5 per cent (high education) and 12 per cent (low education) indicate that the reason for their part-time work is that they cannot find a full-time position. On average, only 56 per cent of women born 1960–1979, who work part-time in 2016 and want to work more hours, would like to work full-time, 33 per cent of women would like to work long part-time, and 11 per cent of women would like to work short part-time (e.g. an increase from 12 to 20 hours per week).
- 8 Statistical tests corresponding to Figures 1–6 generally support our observations (see Supplementary Tables A.4–A.6). For instance, these tests confirm that (i) the “motherhood effect” in employment is smaller in the two younger cohorts than in the two older cohorts; (ii) mothers are more likely to work part-time, more likely to be on leave, more likely to be unemployed, and less likely to be inactive in younger cohorts; (iii) mothers of young children work particularly less often full-time in younger cohorts; (iv) mothers of children below age 6 are more likely to work part-time if they have medium or high education; (v) mothers of children aged 10–19 are less likely to work short part-time if they are highly educated; and (vi) there has been convergence between mothers and childless women in all educational groups at ages 41–45.
- 9 Example of interpretation: the difference of 0.19 (Table 4, panel A, decomposition 1) means that the share of employed mothers is 19 percentage points higher in the 1960–1969 cohort than in the 1940–1949 cohort. The decomposition result suggests that only 1 percentage point is explained by different compositions (characteristics) of mothers in the two cohorts, while 18 percentage points are due to other developments (resulting in differences in regression coefficients, i.e. effects of characteristics).
- 10 Legally, parents have supervisory duty for their children up to age 18.

### Supplementary Data

Supplementary data are available at *ESR* online.

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