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When Gender Trumps Skills: Employment Trajectories of Austrian Parents After Their First Birth*

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Abstract: Increasing the labour market participation of mothers is often seen as a solution to address skill shortages in countries with long child-related career interruptions. However, little is known about the leave-taking behaviour of parents with higher and lower skill levels. This study addresses that gap by examining how employment trajectories after the transition to parenthood vary by gender and skill level in Austria, which has one of the longest parental leave entitlements globally. We focus on understanding whether skill differences shape leave-taking and labour market re-entry, and to what extent they explain the large and persistent gender gaps in parental employment.

We use a new dataset that, for the first time, links Austrian administrative data on births and daily labour market activities (2009-2022) with tested skill scores from the OECD's Programme for the International Assessment of Adult Competencies (PIAAC). Our main sample includes 5,130 Austrians born between 1942 and 1997. We focus on tested numeracy skills, which are strongly associated with employment and wages, offer a more precise measure of work-relevant skills than formal education, and account for important parts of the gender pay gap. Adopting a life-course perspective, we observe labour market patterns between the ages 20 and 70, and examine the three years before and after the birth of a first child to capture short- and medium-term dynamics.

We find clear differences by skill level. Higher-skilled women tend to return to employment more quickly and are more likely to use educational leave to extend their parental leave. Lower-skilled mothers, by contrast, experience longer periods out of the labour force. Among fathers, skill gradients are present as well: higher-skilled men are more likely to take parental leave than their lower-skilled counterparts, though leave uptake remains very low in absolute terms.

However, gender trumps skills. On average, mothers take 416 days of paid parental leave following the birth of their first child, while fathers take just nine days. Most mothers remain at home well beyond the period of paid leave, and part-time work is common upon return – regardless of skill level.

* This article has an Online Appendix with supplementary material: https://www.comparativepopulationstudies.de/index.php/CPoS/article/view/734/450

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Our findings suggest that policies aimed at increasing female labour market participation – particularly among the skilled – face structural constraints. In a context of demographic ageing and rising skill shortages, improving access to early childcare and encouraging more balanced leave-taking may be necessary to reduce gender gaps and make better use of existing skills across the workforce.

Keywords: Parenthood · Skills · Parental leave · Employment trajectories · Gender inequality · Life course

1 Introduction

The competing demands between childbearing and women's labour market outcomes remain a central topic in demographic, sociological, and economic research, and are often framed as a driver of low fertility (*Borck* 2014; *Engelhardt et al.* 2004; *Matysiak* 2009; *Raybould/Sear* 2021). The trade-off between parenthood and women's career progression manifests in the "motherhood penalty," the magnitude of which varies across European countries, depending on institutional frameworks, policies, and societal norms regarding motherhood (*Cukrowska-Torzewska/Matysiak* 2020; *Kleven et al.* 2019; *Matysiak/Węziak-Białowolska* 2016; *Redmond/Mcguinness* 2019). In German-speaking countries such as Austria – where the fertility rate stood at a historic low of 1.31 children per woman in 2024 (*Statistics Austria* 2025) – mothers face particularly large earnings losses, with a long-run child penalty of over 50 percent (*Kleven et al.* 2019) and a gender pay gap of 18 percent (*Eurostat* 2025). 97 percent of childcare allowance recipients are mothers (*Statistics Austria* 2023b) and among those who return to the labour market, 77 percent do so in part-time employment (*Statistics Austria* 2023a). These disparities are closely tied to persistent norms around traditional gender roles and childcare (*Kleven et al.* 2019).

These long career breaks contrast with ongoing policy efforts aimed at increasing female labour market participation in response to growing concerns about skill shortages. As is the case in many high-income countries, demographic change and shifting labour market demands have led to a shortage of skilled workers in Austria (*Dornmayr/Riepl* 2022), prompting calls to better integrate women – particularly mothers – into the workforce (*Austrian Court of Audit* 2024; *European Commission* 2024). Against this backdrop, it is essential to understand how employment patterns following the transition to parenthood differ across skill groups. While previous research has shown that skills affect fertility outcomes (*Bogusz et al.* 2025), little is known about how work-relevant skills shape parents' labour market behaviour post-childbirth. Existing studies on gender differences in career trajectories around childbirth have looked at how characteristics such as formal education, race, and migration status influence the ways in which parenthood affects career outcomes (*Adsera/Querin* 2023; *Glauber* 2018; *Ishizuka* 2021; *Lorenti et al.* 2024; *Lu et al.* 2017). However, a key gap remains in understanding how the employment trajectories of higher-skilled mothers and fathers compare to those of their lower-

skilled counterparts after becoming parents. This is particularly relevant given that extended career interruptions not only affect mothers' labour market outcomes, but also risk a broader societal loss of human capital – particularly, when high-skilled mothers remain absent from the labour market.

This paper addresses this research gap by comparing the employment trajectories of higher-skilled and lower-skilled mothers and fathers following the birth of their first child. This is made possible by a novel dataset that, for the first time, links Austrian administrative records – including the birth register – with standardised skill assessment data. Our focus is on work-relevant cognitive skills that are in high demand in the labour market (*Levy* 2010), have been shown to have a strong positive association with employment and wages (*Hanushek et al.* 2015; *Stijepic* 2020), and explain variations in individual earnings and economic growth more effectively than formal educational attainment does (*Hanushek/Woessmann* 2008). Our skill measures are drawn from the OECD's Programme for the International Assessment of Adult Competencies (PIAAC), which provides internationally standardised test scores in numeracy and literacy, offering precise and reliable indicators of work-relevant skills rather than indirect proxies or self-reports. We use a two-stage approach to capture both the long-term and short-term impact of parenthood on women and men with different skill levels. First, we provide a comprehensive life-course analysis – tracking daily employment from ages 20 to 70 – to compare higher- and lower-skilled individuals, thereby considering the important long-term consequences of parenthood (*Lorenti et al.* 2024; *Muller et al.* 2020). Then, we zoom in on the three years before and after first birth to investigate leave-taking and the speed of return to work for each skill group. We pay particular attention to differences in child-related employment trajectories by educational attainment, migration background, and rural versus urban regions, acknowledging that skills, employment, and motherhood penalties differ substantially across socio-demographic groups (*Glauber* 2018; *Ishizuka* 2021; *Lorenti et al.* 2024; *Lu et al.* 2017; *Massing/Schneider* 2017).

Our study makes several contributions. First, we compare skill-level differences in mothers' and fathers' employment trajectories following the transition to parenthood, thereby demonstrating, for the first time, how higher- versus lower-skilled parents differ in their leave duration and post-birth work intensity. Crucially, we measure skills directly by leveraging individual-level literacy and numeracy competences, rather than relying on proxies such as formal education, wages, occupation, or self-reports, as was done in previous studies (*Adda et al.* 2017; *Arntz et al.* 2017; *Bogusz* 2024; *Grip/Loo* 2002; *Mincer/Ofek* 1982; *Stewart* 2014). These standardised, test-based measures capture core cognitive skills needed to participate successfully in the labour market (*OECD* 2019), yield high returns – particularly numeracy (*Hanushek et al.* 2015) –, and gender differences within them have been shown to explain part of the gender wage gap (*Christl/Köppl-Turyna* 2020; *Rebollo-Sanz/Rica* 2022). There is also evidence that periods away from work are associated with declines in tested literacy skills (*Edin/Gustavsson* 2008), underscoring their relevance in the context of parental leave.

Second, we adopt a life-course perspective by tracking the labour market trajectories of individuals between age 20 and 70 to examine long-term employment

patterns. Whereas most studies focus solely on the immediate post-childbirth period (*Kunze* 2016), only a few extend into midlife and retirement (*Lorenti et al.* 2024; *Muller et al.* 2020).

Finally, we explore heterogeneity by educational attainment, migration background, and rural versus urban residence, revealing how gender differences vary across socio-demographic groups. Our analysis is enabled by a unique Austrian dataset that, for the first time, integrates register-based employment histories and birth records with tested skill scores. Austrian register data has thus far been severely underused and linkages with survey data such as PIAAC has only been possible since 2022. The data further allows us to differentiate between many different employment states and provides daily labour market spells, which is rare for European administrative data.

Together, these contributions reveal how work-relevant skills shape mothers' and fathers' employment trajectories after childbirth and provide evidence to inform policies that reduce the motherhood penalty and ease skills shortages. By comparing higher- and lower-skilled parents using our unique, linked dataset, we uncover patterns of extended career breaks that may deepen skill gaps – a pressing concern in Austria's low-fertility, ageing context with one of the world's longest parental leave schemes (*Dobrotić et al.* 2024; *Kleven et al.* 2024). While our strictly descriptive analysis does not establish causality, it traces employment trajectories in the short, medium, and long run, offering important insights into how policy reforms could help mitigate the trade-off between caregiving responsibilities and the underuse of female human capital – particularly in countries with generous parental leave systems and growing concerns over labour shortages.

2 Background

2.1 Work-relevant skills and post-birth employment

Employment trajectories differ markedly by human capital, which is typically proxied by educational attainment, wages, or occupational status. More highly educated individuals are more likely to experience continuous employment and higher earnings (*Heckman et al.* 2018; *Pessin et al.* 2023; *Stewart* 2014; *Tamborini et al.* 2015). These disparities become particularly pronounced after the transition to parenthood. Research shows that more highly educated mothers are more likely to return to work sooner and to work full-time post-birth than their lower-educated peers. In contrast, higher educated fathers are more likely to take parental leave and engage in caregiving (*Eriksson et al.* 2022; *Geisler/Kreyenfeld* 2019; *Lappegard* 2008; *Stahl/Schober* 2018). However, little is known about employment patterns by work-relevant skills levels, despite growing evidence that such skills are more predictive of wages than formal educational attainment is (*Hanushek/Woessmann* 2008), and are central to policy debates on labour market competitiveness and skill shortages.

Skill levels may shape employment patterns around childbirth, but the relationship can also run in the opposite direction. Human capital theory has long presumed that mothers face long-term earnings penalties because childbearing interrupts the accumulation and maintenance of work-relevant skills, aligning with a "use it or lose it" hypothesis (*Grip/Loo* 2002; *Mincer/Ofek* 1982; *Mincer/Polachek* 1974). Empirical studies confirm that mothers accumulate fewer years of schooling and employment than women without children (*Staff/Mortimer* 2012). However, whether time out of work due to child-related career interruptions leads to actual declines in job-relevant skills remains an open question.

While most existing studies have inferred skill depreciation indirectly from wage penalties (*Adda et al.* 2017; *Mincer/Ofek* 1982), more recent research uses standardised cognitive assessments to measure skills more directly. For example, *Edin* and *Gustavsson* (2008) show that time out of work is negatively associated with literacy scores in Sweden, and *Jessen et al.* (2025) estimate the child penalty in work-relevant cognitive skills. Test-based measures of cognitive skills – particularly numeracy – are also highly predictive of earnings, with a one-standard-deviation increase in numeracy associated with an 18 percent wage increase across OECD countries (*Hanushek et al.* 2015).

Our analysis focuses on skills that were measured prior to childbirth, thus mitigating issues related to reverse causality. However, the potential for skill depreciation remains relevant. Skill levels likely influence parents' labour force participation, while extended time out of work and work intensity may in turn inhibit the development or maintenance of work-relevant skills. This dynamic is essential to understanding the broader consequences of gendered employment interruptions across the life course.

2.2 The Austrian parental leave system

Since the 1960s, Austria has introduced a series of substantial parental leave reforms, gradually enhancing the generosity and scope of its policies. Today, the country has one of the most extensive parental leave systems in the world (*Dobrotić et al.* 2024; *Kleven et al.* 2024). At present, Austrian legislation mandates that mothers take eight weeks of maternity leave both preceding and following the birth of their child. During this period, the mother receives 100 percent of her pre-birth income. Fathers are entitled to take a "daddy month," during which they receive approximately €1,600 in compensation and can remain at home for one month following the child's birth.

In addition to the maternity leave and the daddy month, parents are entitled to up to 35 months of paid parental leave. They can select between two childcare allowance systems. The flat-rate system provides allowances of approximately €17-40 per day, contingent on the selected duration, and was chosen by 68 percent of parents in 2022. An alternative option is the income-dependent scheme, which provides 80 percent of the previous income, capped at a maximum of €2,300 per month. While the flat-rate system is available for up to 35 months if both parents share the leave (28 months if taken by only one parent), the income-dependent scheme can only be claimed until the child is 14 months old (12 months if taken by

only one parent). Policy evaluation studies show clear socio-economic gradients in scheme choice: higher-educated and higher-income parents are significantly more likely to use the income-dependent allowance, whereas lower-educated parents more often opt for the flat-rate scheme, typically selecting the maximum duration available (*Lorenz/Wernhart* 2022).

In the event that both parents share paid parental leave on an approximately equal basis (50:50 to 60:40), they are eligible for an additional €1,000 partnership bonus. Furthermore, the parental leave scheme includes a guarantee of job protection for up to 24 months (*Austrian Federal Chancellery* 2025).[1] Despite its generosity, uptake remains highly gendered: 97 percent of all childcare allowance recipients in 2022 were mothers (*Statistics Austria* 2023b).

3 Data and methods

To explore skill-specific employment patterns of mothers and fathers, we utilise an innovative dataset that matches administrative data with tested skill scores. Our empirical strategy follows a two-step process. First, we adopt a synthetic life course perspective, tracking the labour market trajectories of individuals aged 20-70 on a daily basis to examine long-term employment patterns of women and men with varying skill sets in visual sequence plots. Although each participant is only observed for a maximum of twelve years, the broad age range of our sample enables us to reconstruct and compare employment patterns and skill-specific gender disparities across the full adult life course. We then turn to the relationship between skills, parenthood, and employment patterns in the short and medium run. By studying labour market behaviours of parents during the three years before and after the birth of their first child, we analyse if and how employment trajectories of higher-skilled mothers and fathers differ from those of their lower-skilled counterparts. In supplementary analyses, we consider how employment patterns differ by birth order, educational attainment, migration status, and urban versus rural residents.

Our main sample includes 5,130 Austrians born between 1942 and 1997 who participated in PIAAC Cycle 1 (2011-2012), a survey that provides representative data on tested skills for the population aged 16 to 65. Unlike previous studies, which often relied on self-reported skills (*Deming* 2017) or tested skills from narrowly defined groups such as men in the military (*Edin et al.* 2022), PIAAC offers tested skill scores for a broad sample, enhancing the robustness of our analysis.

PIAAC is designed to assess adults' key information-processing competencies, namely numeracy, literacy, and problem-solving. These skill dimensions are increasingly prominent in the literature for exploring demographic aspects of

[1] Job protection in Austria ensures the right to return to a position corresponding to the employee's previous contractual duties. While this does not necessarily guarantee the exact same workplace, employees must be reinstated in an equivalent and contractually appropriate position with no loss in pay or status.

human capital (*Lutz et al.* 2021; *Reiter* 2022) and estimating its labour market returns (*Christl/Köppl-Turyna* 2020; *Rebollo-Sanz/Rica* 2022). For example, a study on OECD countries found that a one-standard-deviation increase in numeracy skills raises wages by an average of 18 percent (*Hanushek et al.* 2015). Given these considerable returns, numeracy is the primary skill domain considered in this study. Individuals are categorised into higher-skilled and lower-skilled groups based on PIAAC numeracy proficiency levels (*OECD* 2019). To validate the results, all analyses are also performed using literacy proficiency levels (see Fig. A1, Fig. A6, and Table A4 in the Online Appendix).

We supplement the skill scores from PIAAC with rich administrative data, including birth records (2015-2022), details on parental leave duration (2010-2021), daily labour market statuses (2010-2021), annual income data (2009-2020), and other socio-demographic variables (2011-2020). This wealth of information enables us to identify 234 mothers and 226 fathers who participated in PIAAC and experienced their first child (live birth) between 2015 and 2022. The shorter observation period for the subsample of births is due to the fact that birth registers cannot be linked with the other datasets before 2015. While this limitation naturally decreases our sample size, it ensures a more uniform sample, as no major parental leave reforms were initiated after 2015. More information on the register data, the sample, and the subsample of parents is provided in the Online Appendix (Section A1; Table A1).

4 Results

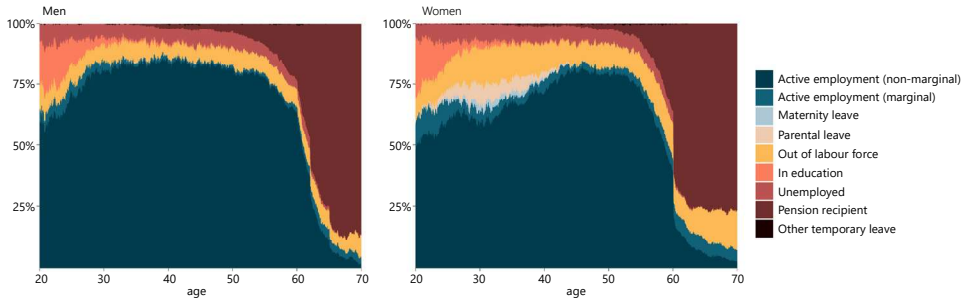
4.1 Long-term employment patterns over the life course by skill level

Before analysing skill-specific employment trajectories, we explore overall gender differences along the life course. Figure 1 shows the life course trajectories of all PIAAC participants aged 20 to 70 based on daily labour market spells.

The graph reveals substantial gender disparities. Labour market participation is consistently higher among men across nearly all age groups, with the most notable differences emerging during the childbearing ages of 25-40. Although most women eventually re-enter the labour market, the graph illustrates the persistent impact of childcare responsibilities. At age 30, nearly 10 percent of women are either on maternity protection or parental leave, while this proportion is less than 3 percent for men at any age. Women achieve their highest level of labour force participation at age 46 (82.6 percent in active non-marginal employment). In contrast, men maintain labour market participation rates of 80 percent or more from ages of 28-53.

The category "active non-marginal employment" includes both full-time and part-time work. Notably, in 2023, the part-time employment rate was 13.4 percent for men and 50.6 percent for women, indicating that a large share of women is, in fact, in active part-time employment (*Statistics Austria* 2024) – a strategy to reconcile

Fig. 1: Employment patterns over the life course by gender



Notes: This graph shows all PIAAC participants (men N = 2,527; women N = 2,601; born 1942-1997); PIAAC weights are applied.

Source: Statistics Austria register-based labour market careers (*Registerbasierte Erwerbsverläufe*), 2010-2021.

work and family duties (*Makay* 2023).[2] Relatedly, marginal employment[3] (teal blue segment) assumes a more prominent role for females than males. This pattern is partly driven by regulations that allow parents to engage in marginal employment while on parental leave: since our data records non-overlapping daily spells and prioritizes marginal employment over parental leave in the coding hierarchy, many of the women classified in marginal employment may in fact still be on parental leave.

Overall, the graph indicates significant gender disparities in employment patterns, largely driven by childbearing responsibilities, but with consequences that extend well into older age. While these patterns highlight substantial and persistent gender gaps in employment, it is important to note that part of these differences may also reflect long-term cohort trends in labour market participation and parental leave behaviour, since our life course profiles combine all cohorts born between 1942 and 1997.

Contrasting lower-skilled with higher-skilled individuals reveals important differences in their long-term labour market trajectories (Fig. 2). Higher-skilled adults

[2] While distinguishing between part-time and full-time work is highly relevant in the Austrian context, particularly given the large gender gap in part-time employment, this dimension cannot be incorporated into our sequence plots. The available part-time/full-time indicator in the register data is reported only at the calendar-year level, is often incomplete, and may suffer from measurement error (e.g., in cases of multiple jobs, only the main employer is recorded, changes within a year are not captured, and years dominated by parental leave are coded as missing). In contrast, our sequence data are based on daily labour market status that allow us to trace trajectories with much greater temporal precision. To nonetheless capture the relevance of working time, Online Appendix Table A3 provides supplementary evidence on the distribution of part-time and full-time employment around childbirth by gender and skill level, based on the yearly information.

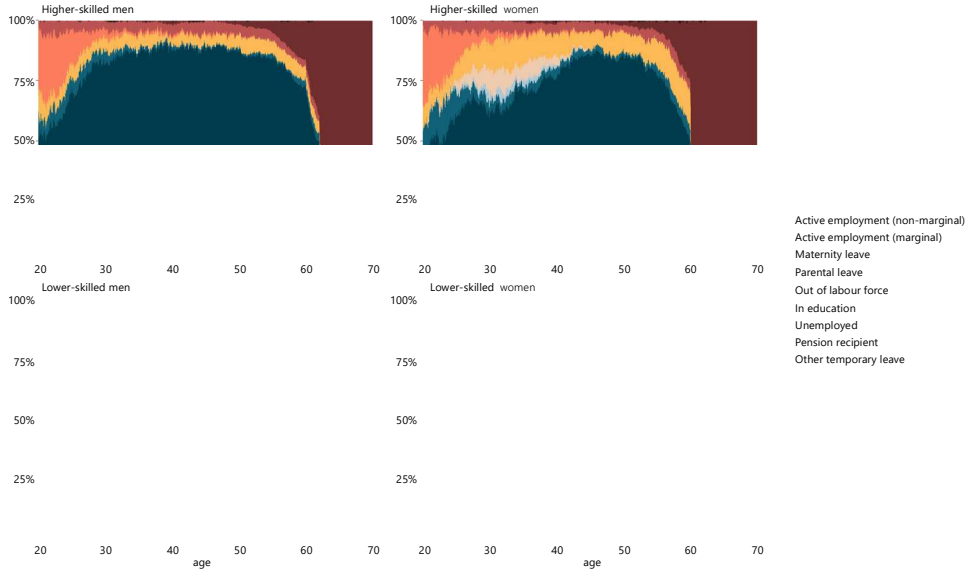
[3] A person is considered marginally employed if, in the case of regular employment, they do not earn more than a certain amount per month. In 2025, the threshold was €551.10 per month (*oesterreich.gv.at-Redaktion* 2025).

consistently demonstrate higher levels of labour market participation across all age groups. For example, between ages 30 and 70, only up to 8 percent of higher-skilled men are out of the labour force, while the proportion is approximately twice as high for lower-skilled men. A similar pattern is observed among women, with the most pronounced differences occurring during childbearing ages. Unemployment rates are generally higher among lower-skilled adults, while the higher-skilled retire later.

When examining child-related career breaks through the lens of skill levels, the differences become less pronounced. For men, parental leave remains a relatively rare occurrence regardless of skill level. In contrast, childcare periods represent a substantial portion of employment histories for both lower-skilled and higher-skilled women. The highest proportion of adults on paid parental leave (including maternity leave) is found among higher-skilled women at 12 percent at the age of 32, while among lower-skilled women it peaks at 9 percent at the age of 29. However, lower-skilled women are more likely to remain out of labour force after their paid parental leave ends, leading to potentially longer career breaks.

The above results also hold when examining literacy proficiency tests instead of numeracy (Fig. A1 in the Online Appendix). While tested skills are related to labour market outcomes, differences in parental leave behaviour by skill level may, in fact,

Fig. 2: Employment patterns over the life course by gender and numeracy skill level



Notes: This graph shows all PIAAC participants (higher-skilled men N = 1,541; higher-skilled women N = 1,247; lower-skilled men N = 936, lower-skilled women N = 1,300); skill level is defined based on PIAAC numeracy proficiency: lower-skilled comprises proficiency levels 0, 1, and 2 (< 276 points); higher-skilled comprises proficiency levels 3, 4, and 5 (≥ 276 points); PIAAC weights are applied.

Source: PIAAC and Statistics Austria register-based labour market careers (*Registerbasierte Erwerbsverläufe)*, 2010-2021.

be a consequence of selection effects resulting from other characteristics that differentiate lower-skilled from higher-skilled parents. For instance, higher-skilled women are often overrepresented in urban regions, where childcare facilities are typically also more accessible. Both skills and employment behaviour also differ across educational attainment groups and by country of origin. To isolate these effects, supplementary analyses for educational attainment (Fig. A2), place of residence (Fig. A3), and country of birth (Fig. A4) have been conducted.

When we stratify by formal education rather than measured skills (Fig. A2), the overall life-course patterns look very similar, which is consistent with the high correlation between tested skill measures and educational attainment found in the literature (*OECD* 2013, 2016). For men, employment shares appear slightly lower for the group classified as lower-skilled compared to those with lower education. Among women, we find differences in labour market behaviour both between skill levels and between education categories, but the skill-based comparison highlights somewhat sharper contrasts in parental leave shares. Taken together, this suggests that education and skills provide complementary perspectives, each capturing distinct dimensions of human capital and its relationship to parental leave behaviour and labour market attachment.

When exploring differences by place of residence (Fig. A3), we find that rural women are on parental leave slightly longer and show lower employment attachment during childbearing years, while urban women appear out of the labour force more often later in life. We further find that urban men and women spend more time in education during early adulthood and also show somewhat higher unemployment shares than their rural counterparts. These patterns likely reflect both population composition (e.g., higher education levels and more immigrants in cities) as well as differences in childcare infrastructure and labour market opportunities between urban and rural areas.

Turning to heterogeneities by country of birth (Fig. A4), men and women born abroad show markedly weaker labour market attachment than those born in Austria, with higher shares in unemployment and out of the labour force across most of the life course. Among women, this gap is particularly pronounced: Austrian-born women reach much higher employment shares in midlife, while foreign-born women remain disproportionately out of the labour force. These differences are consistent with well-documented disparities in educational attainment, values, and labour market integration (*Expert Council for Integration* 2024).

4.2 Short- and medium-term employment patterns around the first birth by skill level

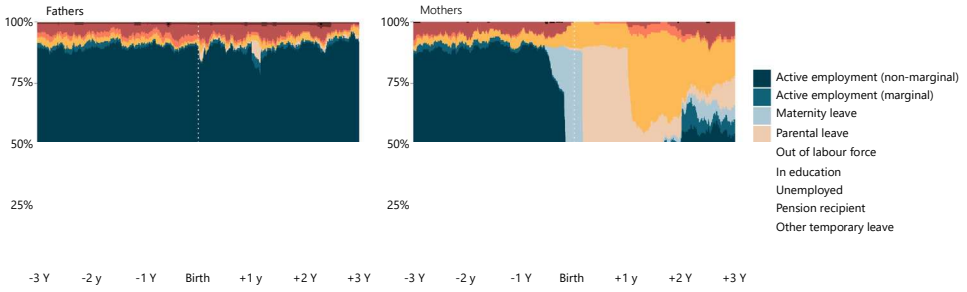
Having explored general life course patterns by skill level, we now zoom in on employment trajectories during the three years surrounding the birth of a first child. Figure 3 highlights significant gender disparities in employment patterns post-birth. Prior to childbirth, gender differences are virtually non-existent, with approximately 90 percent of both men and women actively employed. However, this dynamic undergoes a substantial shift in the post-birth period. For men, the

overall employment pattern remains relatively stable, with only minor disruptions in the month immediately following childbirth (the "daddy month" in Austrian parental policy) and approximately one year thereafter, when a small proportion of fathers is on leave. This reflects a peculiarity of the Austrian parental leave system, where parents can extend their income-dependent childcare allowance from 12 to 14 months if each partner is on parental leave for at least two months.

In stark contrast, the transition to motherhood marks a pivotal change in the labour market behaviour of women. One year post-birth, only 25.6 percent of first-time mothers are in active non-marginal employment, with this figure rising to 49.5 percent two years after childbirth, and to 54.5 percent three years after childbirth. Given that more than 70 percent of Austrian mothers work part-time (*Statistics Austria* 2023a), these figures are likely to reflect mostly part-time employment. This pattern is confirmed by Table A3 in the Online Appendix, which shows the part-time/full-time distribution during the six years surrounding the birth of a first child by gender and skill level. For fathers, full-time work remains by far the dominant status both before and after birth, with only a modest increase in part-time shares by the third year after their first child is born. For mothers, by contrast, the change is pronounced: whereas roughly 80 percent work full-time in the years before birth, part-time quickly becomes the predominant arrangement, accounting for around 90 percent of employed mothers in the first three years after birth.[4] Overall, the table highlights that part-time work is the main re-entry strategy for Austrian mothers, whereas fathers remain in full-time employment.

Notably, the proportion of women out of the labour force increases significantly after the first year post-birth, rising from 10.7 percent at one year to 38.2 percent at 18 months. Despite completing their paid parental leave, many women remain at

Fig. 3: Employment patterns around the first birth by gender



Notes: This graph shows a subsample of all PIAAC participants who had their first child between 2015 and 2022 (fathers N = 226; mothers N = 234); PIAAC weights are applied.

Source: Statistics Austria register-based labour market careers (*Registerbasierte Erwerbsverläufe*) and birth register (*Statistik der Standesfälle*).

[4] Here, full-/part-time includes both the categories "full-/part-time" and "mostly full-/part-time; percentages exclude cases coded as "unknown." Table A3 provides the detailed distributions, including the substantial share of cases without information.

home, now without receiving benefits. Relatedly, many women have their second and third child while still on parental leave or out of the labour force (Fig. A5 in the Online Appendix). Additionally, a noticeable rise in the proportion of women in education one year after birth suggests that many mothers use government-funded educational leave (*Bildungskarenz*) as an extension of their parental leave (*Austrian Court of Audit* 2023). Marginal employment also increases considerably for women after childbirth, again likely reflecting that many of these women are formally still on parental leave.

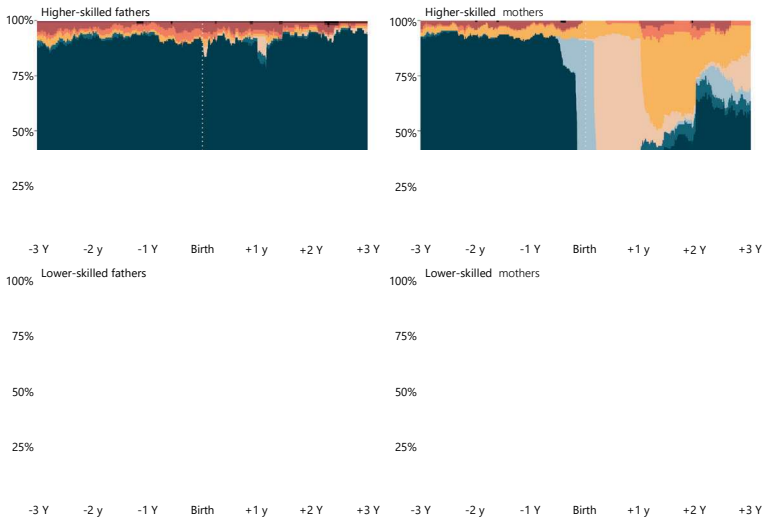
Figure 4 further disaggregates employment patterns based on skill levels. At first glance, skill level differences seem minimal compared to gender disparities. However, closer examination reveals some important distinctions. Higher-skilled parents, both fathers and mothers, generally show higher rates of labour force participation before childbirth. Post-birth, higher-skilled fathers are slightly more likely to take parental leave than their lower-skilled counterparts, though most still adhere to the minimum two-month duration plus the "daddy month."

For mothers, the contrast is sharper. Lower-skilled mothers often take slightly longer parental leave and experience more extended periods out of the labour force compared to their higher-skilled counterparts. Particularly in the first two years after childbirth, the differences are notable: 18 months post-birth, 41.9 percent of higher-skilled mothers are in active non-marginal employment, compared to 19.6 percent of lower-skilled mothers. These patterns are consistent with the literature showing that lower-educated and lower-income mothers are more likely to opt for the flat-rate allowance and to use it for the maximum duration. In contrast, higher-educated mothers are more often found to choose the shorter but (for them) more lucrative income-dependent scheme (*Lorenz/Wernhart* 2022).

When looking at working-time arrangement (Table A3), differences by skill level are modest but visible: Higher-skilled mothers tend to move back into full-time employment slightly more quickly, while lower-skilled mothers re-enter more slowly (on average, 15 percent of higher-skilled mothers work full-time within the first three years after birth, compared to only 4 percent of lower-skilled mothers). Both groups, however, show a significant increase in the percentage out of the labour force, though this trend is more persistent among lower-skilled women. In addition, lower-skilled women increasingly select into marginal employment during this period, which is possible while on parental leave and thus may not always represent a full return to the labour market. Higher-skilled mothers, on the other hand, are more likely to utilise educational leave immediately after parental leave.

Furthermore, the transition to a second child varies by skill level: Higher-skilled women seem to plan the birth of their second child (as evidenced by the second maternity leave period on the graph) as soon as they can again receive the full amount of childcare allowance (approximately two years after the first birth, contingent on the selected paid parental leave scheme). In contrast, for lower-skilled women, second births are observed more continuously from about one year after the birth of their first child onwards. The visibly higher share of mothers entering a second maternity-leave episode is also consistent with demographic research showing that more educated women, who typically enter motherhood later, often

Fig. 4: Employment patterns around the first birth by gender and skill level



Notes: This graph shows a subsample of all PIAAC participants who had their first child between 2015 and 2022 (higher-skilled fathers N = 157; higher-skilled mothers N = 150; lower-skilled fathers N = 69; lower-skilled mothers N = 83); skill level is defined based on PIAAC numeracy proficiency: lower-skilled comprises proficiency levels 0, 1, and 2 (< 276 points); higher-skilled comprises proficiency levels 3, 4, and 5 (≥ 276 points); PIAAC weights are applied.

Source: PIAAC and Statistics Austria register-based labour market careers (*Registerbasierte Erwerbsverläufe)* and birth register (*Statistik der Standesfälle*).

experience more compressed spacing once childbearing begins (*Bavel/Rózanska-Putek* 2010; *Kreyenfeld* 2002; *Spielauer/Städtner* 2002).

Supplementary analyses of employment patterns around the first birth by gender and birth order (Fig. A5) show that fathers' employment remains largely unaffected by childbirth, regardless of whether it is the first, second, or third child. Mothers, by contrast, experience sharp employment interruptions that intensify with each additional child. After the first birth, most mothers gradually return to employment within three years, but following the second and especially the third child, re-entry is weaker and inactivity rises more strongly, underscoring the cumulative effect of repeated births on women's labour market attachment. These patterns may, however, also reflect selection effects, as women with weaker labour market attachment can be more likely to have larger families (*Andersson et al.* 2014).

Analogously to the results from the life course analyses, employment patterns around birth by skill level do not differ by the type of skills (Fig. A6 presents results for literacy instead of numeracy). Results by educational attainment (Fig. A7) show patterns around childbirth that are largely similar to those by skills, again reflecting the strong correlation between the two measures. However, the gradient in leave-taking and re-entry is somewhat steeper when using skills, suggesting that education and skills capture complementary aspects of human capital, with skills more closely related to labour market behaviour around childbirth than formal education is.

When exploring differences by place of residence (Fig. A8), we find that fathers' employment remains stable across urban and rural regions, with only minor fluctuations before and after childbirth. For mothers, patterns are more differentiated: in both regions, employment drops sharply into maternity and parental leave, but rural women return more slowly and show higher shares out of the labour force within three years after birth. Urban women, by contrast, more often re-enter (marginal) employment, consistent with better access to childcare and labour market opportunities in cities. Analyses by country of birth were excluded due to small sample sizes ($N \leq 30$ for mothers and fathers born outside Austria).

Finally, the observed employment patterns discussed above have direct implications for earnings. Figure A9 illustrates the changes in annual gross real income of parents around the birth of their first child by gender and skill level. Although the income drop is larger for higher-skilled mothers than for lower-skilled mothers in absolute terms (left panels), changes in standardised income (right panels) do not reveal substantial differences across skill levels.

4.3 Parental leave duration by skill level

To better understand the skill-specific employment patterns of parents, this section compares the parental leave duration taken by men and women with different skill levels. Table 1 presents the mean number of days of parental leave taken during the initial three years after the birth of the first child, broken down by gender and skill level. Once again, we see striking gender differences. While the average father in our sample takes only nine days of parental leave, mothers take, on average, 416 days, corresponding to nearly 14 months. It is important to note that these figures only include paid parental and maternity leave; as shown in Figures 3 and 4, many mothers extend their absence from the labour force beyond these paid periods without financial compensation, or by taking up marginal employment on the side.

These gender-based patterns persist across skill levels. Higher-skilled fathers take slightly more days of parental leave on average than their lower-skilled counterparts. While the absolute difference is small in comparison to mothers' extensive leave, it is relatively large given the very low uptake among men, and is statistically significant.[5] In contrast, the parental leave duration taken by higher- and lower-skilled mothers does not differ significantly, underscoring a consistent trend: women, regardless of their skill level, tend to take substantial child-related career breaks. However, since parental leave days are summed across the three years after first birth, our measure may include leave for second births. Given that higher education is commonly associated with compressed birth spacing after first birth (*Bavel/Rózanska-Putek* 2010; *Kreyenfeld* 2002; *Spielauer/Städtner* 2002), part of the similarity in leave durations across skill groups may reflect differences in the timing of higher-order births.

[5] Significance is assessed using a two-sided Z-test for differences in means, based on group-specific means and standard errors.

Tab. 1: Mean parental leave by gender and skill level (in days)

	Mean parental leave days during three years following first birth			
	Mean	(SE)	95% CI	p
Fathers	8.8	(2.4)	[4.1, 13.5]	<0.001
Mothers	415.7	(31.6)	[353.7, 477.6]	
Higher-skilled fathers	11.8	(3.5)	[5.0, 18.6]	0.040
Lower-skilled fathers	3.6	(2.0)	[-0.3, 7.5]	
Higher-skilled mothers	414.8	(40.1)	[336.3, 493.4]	0.904
Lower-skilled mothers	422.5	(48.9)	[326.6, 518.3]	

Notes: This table shows a subsample of all PIAAC participants who had their first child between 2015 and 2018 (fathers N = 122; mothers N = 113; higher-skilled fathers N = 82; lower-skilled fathers N = 40; higher-skilled mothers N = 67; lower-skilled mothers N = 45); standard errors are shown in round brackets; 95% confidence intervals are shown in square brackets; p-values refer to tests of differences in mean parental-leave days between the respective subgroups, based on two-sided Z-tests using group-specific standard errors; parental leave also includes maternity leave; skill level is defined based on PIAAC numeracy proficiency level: lower-skilled comprises proficiency levels 0, 1, and 2 (< 276 points); higher-skilled comprises proficiency levels 3, 4, and 5 (≥ 276 points); PIAAC weights are applied.

Source: PIAAC and Statistics Austria register-based labour market careers (*Registerbasierte Erwerbsverläufe*) and birth register (*Statistik der Standesfälle*).

Supplementary analyses presented in Table A4 show that this overall pattern holds across a range of socio-demographic groups (including literacy proficiency, educational attainment, urban versus rural residence, and country of birth), highlighting the robustness of the observed gender gap in parental leave duration. Compared to gender differences, subgroup differences by literacy skill level, education, residence, and country of birth are modest and often not statistically significant. Where significant, higher-skilled fathers take longer leave than lower-skilled fathers, and urban fathers more than rural fathers, but these nuances are small compared to the overwhelming gender gap that persists across all groups.

5 Discussion and conclusion

This study has investigated if and how child-related employment patterns differ by skill level in the short, medium, and long term. Using an entirely new dataset that combines tested skills data with administrative records, our study highlights several critical findings regarding gender- and skill-specific employment trajectories in Austria. First, our results demonstrate significant gender disparities in parental leave duration and labour market behaviour following childbirth. Austrian women take extended career breaks following the birth of their first child, which are associated with lower labour market participation throughout the life course. On average, fathers take only nine days of paid parental leave up until the third birthday of the

child, whereas mothers take 416 days. Moreover, many women stay absent from the labour market even after their paid parental leave has ended, underscoring a stark contrast in child-rearing responsibilities typical for German-speaking countries (*Kleven et al*. 2019; *Spitzer et al.* 2022).

Second, we find that these discrepancies persist regardless of skill level, indicating that traditional gender roles remain deeply entrenched, affecting both lower- and higher-skilled individuals. This finding aligns with recent research documenting the dominant role of gender in shaping employment and family outcomes across different contexts (*Andresen/Nix* 2022; *Kleven* 2022; *Kleven et al.* 2025). At the same time, our analyses reveal meaningful skill differences. Higher-skilled fathers are more likely to take parental leave than their lower-skilled counterparts, though still at very low levels. Higher-skilled mothers also tend to re-enter employment more quickly and are slightly more likely to return to full-time work, whereas lower-skilled mothers more often remain out of the labour force entirely. While modest relative to the gender gap, these differences are nonetheless important from a policy perspective, as they show that parents with different skill levels face different constraints in navigating leave and labour market re-entry.

The extended absences of mothers from the workforce challenge the frequently proposed solution of increasing female labour market participation to combat skilled labour shortages (*European Commission* 2024; *Austrian Court of Audit* 2024). With mothers staying at home for years after giving birth and most women working part-time upon re-entry, the labour market faces a substantial loss of human capital – both because skilled mothers remain absent from the labour market and because skills may deteriorate during times away from work. Our study shows that while higher-skilled mothers re-enter the labour market more quickly, their initial extended leave may still contribute to the overall skill gap. This is a particularly concerning issue in light of Austria's demographic challenges and the urgent need to address skill shortages (*Austrian Court of Audit* 2024; *Dornmayr/Riepl* 2022).

Our findings further indicate that reforming the parental leave system in Austria may not be sufficient to encourage women's return to the labour market – neither for the higher skilled, nor for the less skilled. Indeed, many women continue to remain out of the workforce even after their paid leave has concluded. There may be other structural or cultural barriers at play that deter women from re-entering the workforce after their parental leave ends. This may be partially attributable to the lack of early childcare facilities in Austria (*Austrian Federal Economic Chamber* 2025; *Makay* 2023), but also reflects the pervasiveness of cultural and societal norms regarding gender roles in German-speaking countries (*Gambaro et al.* 2023; *Kleven et al*. 2019). The very generous parental leave system, while supportive in many ways, may inadvertently reinforce traditional gender roles and prolong absences from the labour market.

The robustness of our results is confirmed through various sensitivity checks and the findings on gender differences hold across different socio-demographic groups, birth orders, and when analyses are based on literacy proficiency tests rather numeracy proficiency tests. However, our study also has several limitations. First, the life course patterns we present combine different birth cohorts, and

part of the observed gender differences may therefore reflect long-term and past cohort trends in employment and parental leave behaviour. Second, we assume that skills remain constant over the life course, which may not accurately reflect real-world dynamics. Major life events, including the birth of a child or extended career interruptions, have the potential to alter skill levels. Third, the relatively small sample size – stemming from the nature of the data linkage between survey-based skill assessments and administrative employment and birth records – may reduce statistical power in some subgroup analyses and limit the generalizability of certain findings. To address this, we conducted robustness checks, including comparisons with the broader Austrian population (Online Appendix A1), and reported confidence intervals and standard errors where feasible to reflect the precision of our estimates. Although small case numbers in some subgroups warrant cautious interpretation, the consistency of results across checks lends credibility to our conclusions. Finally, our analysis is descriptive and purely shows correlations, without establishing causality. Future research could adopt a more dynamic perspective, examining how parental career interruptions influence skill development over time and testing the widely assumed link between time out of work and skill depreciation. While recent work (e.g., *Jessen et al.* 2025) has examined child penalties in labour market skills around the transition to parenthood, there is still no longitudinal evidence on how parental leave affects skills, an important avenue for further research.

Despite these limitations, our research makes an important initial contribution by highlighting differences in employment trajectories by skill level in the context of parenthood. The study underscores the need for policies that support both mothers and fathers in balancing work and family responsibilities, which – in addition to gender equity – may be essential for mitigating skill shortages and maximising the utilisation of human capital in the labour market. These findings also have implications for fertility: when childbearing leads to prolonged absences and lower earnings, the opportunity costs of having children rise – particularly for higher-skilled women.

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The administrative data that support the findings of this study are subject to legal restrictions and cannot be made publicly available. Researchers may apply for access through Statistics Austria under the same conditions as the original investigators. All analysis code and synthetic example datasets will be provided upon request.

References

Adda, Jérôme; Dustmann, Christian; Stevens, Katrien 2017: The Career Costs of Children. In: Journal of Political Economy 125,2: 293-337. https://doi.org/10.1086/690952

Adsera, Alícia; Querin, Federica 2023: The Gender Wage Gap and Parenthood: Occupational Characteristics Across European Countries. In: European Journal of Population 39,1. https://doi.org/10.1007/s10680-023-09681-4

Andersson, Gunnar; Kreyenfeld, Michaela; Mika, Tatjana 2014: Welfare state context, female labour-market attachment and childbearing in Germany and Denmark. In: Journal of Population Research 31,4: 287-316. https://doi.org/10.1007/s12546-014-9135-3

Andresen, Martin Eckhoff; Nix, Emily 2022: What Causes the Child Penalty? Evidence from Adopting and Same-Sex Couples. In: Journal of Labor Economics 40,4: 971-1004. https://doi.org/10.1086/718565

Arntz, Melanie; Dlugosz, Stephan; Wilke, Ralf A. 2017: The Sorting of Female Careers after First Birth: A Competing Risks Analysis of Maternity Leave Duration. In: Oxford Bulletin of Economics and Statistics 79,5: 689-716. https://doi.org/10.1111/obes.12158

Austrian Court of Audit 2023: Educational Leave. ACA Report No. 2023/11 [https://www.rechnungshof.gv.at/rh/home/news/news/news_3/Weiterentwicklung_der_Bildungskarenz_notwendig1.html, 27.01.2026].

Austrian Court of Audit 2024: Stocktaking Report on Skills Shortage. ACA Report No. 2024/12 [https://www.rechnungshof.gv.at/rh/home/news/Meldungen_2024/Fachkraeftemangel_erfordert_Zusammenarbeit_in_vielen_Poli.html, 27.01.2026].

Austrian Federal Chancellery 2025: Partnership Bonus [https://www.oesterreich.gv.at/de/themen/familie_und_partnerschaft/finanzielle-unterstuetzungen/3/2/Seite.080631, 27.01.2026].

Austrian Federal Economic Chamber 2025: Agenda Child Education & Child Care. WKO – Wirtschaftskammer Österreich [https://www.wko.at/oe/oesterreich/kinderbetreuung, 27.01.2026].

Bavel, Jan Van; Rózanska-Putek, Joanna 2010: Second birth rates across Europe: Interactions between women's level of education and child care enrolment. In: Vienna Yearbook of Population Research 8: 107-138. https://doi.org/10.1553/populationyearbook2010s107

Bogusz, Honorata 2024: Task content of jobs and mothers' employment transitions in Germany. In: Journal for Labour Market Research 58,25. https://doi.org/10.1186/s12651-024-00384-9

Bogusz, Honorata; Matysiak, Anna; Kreyenfeld, Michaela 2025: Structural labour market change, cognitive work, and entry to parenthood in Germany. In: Population Studies 79,2: 225-251. https://doi.org/10.1080/00324728.2024.2372018

Borck, Rainald 2014: Adieu Rabenmutter – Culture, fertility, female labour supply, the gender wage gap and childcare. In: Journal of Population Economics 27,3: 739-765. https://doi.org/10.1007/s00148-013-0499-z

Christl, Michael; Köppl-Turyna, Monika 2020: Gender wage gap and the role of skills and tasks: Evidence from the Austrian PIAAC data set. In: Applied Economics 52,2: 113-134. https://doi.org/10.1080/00036846.2019.1630707

Cukrowska-Torzewska, Ewa; Matysiak, Anna 2020: The motherhood wage penalty: A meta-analysis. In: Social Science Research 88-89: 102416. https://doi.org/10.1016/j.ssresearch.2020.102416

Deming, David J. 2017: The Growing Importance of Social Skills in the Labor Market. In: The Quarterly Journal of Economics 132,4: 1593-1640. https://doi.org/10.1093/qje/qjx022

Dobrotić, Ivana et al. 2024: 20th International Review of Leave Policies and Related Research 2024: In: Comparative tables 2023-2024. https://doi.org/10.17605/OSF.IO/J3DPW

Dornmayr, Helmut; Riepl, Marlis 2022: Unternehmensbefragung zum Fachkräftebedarf/-mangel 2022. ibw-Forschungsbericht 210. Wien: Institut für Bildungsforschung der Wirtschaft – Research & Development in VET [https://ibw.at/resource/download/2432/ibw-forschungsbericht-210.pdf, 27.01.2026].

Edin, Per-Anders et al. 2022: The Rising Return to Noncognitive Skill. In: American Economic Journal: Applied Economics 14,2: 78-100. https://doi.org/10.1257/app.20190199

Edin, Per-Anders; Gustavsson, Magnus 2008: Time out of Work and Skill Depreciation. In: Industrial and Labor Relations Review 61,2: 163-180. https://doi.org/10.1177/001979390806100202

Engelhardt, Henriette; Kögel ,Tomas; Prskawetz, Alexia 2004: Fertility and women's employment reconsidered: A macro-level time-series analysis for developed countries, 1960-2000. In: Population Studies 58,1: 109-120. https://doi.org/10.1080/0032472032000167715

Eriksson, Helen; Billingsley, Sunnee; Brandén, Maria 2022: Parental Leave within the Workplace: A Re-assessment of Opposite Educational Gradients for Women and Men. In: Sociology 56,5: 1032-1044. https://doi.org/10.1177/00380385221109743

European Commission 2024: Labour and skills shortages in the EU: an action plan [https://ec.europa.eu/social/BlobServlet?docId=27473&langId=en, 27.01.2026].

Eurostat 2025: Gender pay gap in unadjusted form [https://ec.europa.eu/eurostat/databrowser/view/SDG_05_20default/table?lang=en, 27.01.2026].

Expert Council for Integration 2024: Integration Report 2024 [https://www.bundeskanzleramt.gv.at/dam/jcr:9989ac49-dae8-46b0-a6ce-41bb81840a2d/ib2024-en-web.pdf, 27.01.2026].

Gambaro, Ludovica et al. 2023: Should Mama or Papa Work? Variations in Attitudes towards Parental Employment by Country of Origin and Child Age. In: Comparative Population Studies 48: 339-368. https://doi.org/10.12765/CPoS-2023-14

Geisler, Esther; Kreyenfeld, Michaela 2019: Policy reform and fathers' use of parental leave in Germany: The role of education and workplace characteristics. In: Journal of European Social Policy 29,2: 273-291. https://doi.org/10.1177/0958928718765638

Glauber, Rebecca 2018: Trends in the Motherhood Wage Penalty and Fatherhood Wage Premium for Low, Middle, and High Earners. In: Demography 55,5: 1663-1680. https://doi.org/10.1007/s13524-018-0712-5

Grip, Andries De; Loo, Jasper Van 2002: The economics of skills obsolescence: A review. In: *Grip, Andries De; Loo, Jasper Van, Mayhew, Ken:* The Economics of Skills Obsolescence. Research in Labor Economics 21: 1-26. Emerald Group Publishing Limited. https://doi.org/10.1016/S0147-9121(02)21003-1

Hanushek, Eric A. et al. 2015: Returns to skills around the world: Evidence from PIAAC. In: European Economic Review 73: 103-130. https://doi.org/10.1016/j.euroecorev.2014.10.006

Hanushek, Eric A.; Woessmann, Ludger 2008: The Role of Cognitive Skills in Economic Development. In: Journal of Economic Literature 46,3: 607-668. https://doi.org/10.1257/jel.46.3.607

Heckman, James J.; Humphries, John Eric; Veramendi, Gregory 2018: Returns to Education: The Causal Effects of Education on Earnings, Health, and Smoking. In: Journal of Political Economy 126,S1: 197-246. https://doi.org/10.1086/698760

Ishizuka, Patrick 2021: The Motherhood Penalty in Context: Assessing Discrimination in a Polarized Labor Market. In: Demography 58,4: 1275-1300. https://doi.org/10.1215/00703370-9373587

Jessen, Jonas; Kinne, Lavinia; Battisti, Michele 2025: Child Penalties in Labour Market Skills. CESifo Working Paper 11874. Munich Society for the Promotion of Economic Research - CESifo GmbH.

Kleven, Henrik 2022: The Geography of Child Penalties and Gender Norms: A Pseudo-Event Study Approach. NBER Working Paper 30176. Cambridge: National Bureau of Economic Research. https://doi.org/10.3386/w30176

Kleven, Henrik; Landais, Camille; Leite-Mariante, Gabriel 2025: The Child Penalty Atlas. In: The Review of Economic Studies 92,5: 3174-3207. https://doi.org/10.1093/restud/rdae104

Kleven, Henrik et al. 2019: Child Penalties across Countries: Evidence and Explanations. In: AEA Papers and Proceedings 109: 122-126. https://doi.org/10.1257/pandp.20191078

Kleven, Henrik et al. 2024: Do Family Policies Reduce Gender Inequality? Evidence from 60 Years of Policy Experimentation. In: American Economic Journal: Economic Policy 16,2: 110-149. https://doi.org/10.1257/pol.20210346

Kreyenfeld, Michaela 2002: Time Squeeze, Partner Effect or Self-Selection?: An Investigation into the Positive Effect of Women's Education on Second Birth Risks in West Germany. In: Demographic Research 7: 15-48. https://doi.org/10.4054/DemRes.2002.7.2

Kunze, Astrid 2016: Parental leave and maternal labor supply. In: IZA World of Labor. https://doi.org/10.15185/izawol.279

Lappegard, Trude 2008: Changing the Gender Balance in Caring: Fatherhood and the Division of Parental Leave in Norway. In: Population Research and Policy Review 27,2: 139-159. https://doi.org/10.1007/s11113-007-9057-2

Levy, Frank 2010: How Technology Changes Demands for Human Skills. In: OECD Education Working Papers 45. https://doi.org/10.1787/5kmhds6czqzq-en

Lorenti, Angelo et al. 2024: Gendered Parenthood-Employment Gaps from Midlife: A Demographic Perspective Across Three Different Welfare Systems. In: European Journal of Population 40,16. https://doi.org/10.1007/s10680-024-09699-2

Lorenz, Theresa; Wernhart, Georg 2022: Evaluierung des neuen Kinderbetreuungsgeldkontos und der Familienzeit. Quantitativer Teilbericht. In: ÖIF Forschungsbericht 35. https://doi.org/10.25365/phaidra.327

Lu, Yao; Wang, Julia Shu-Huah; Han, Wen-Jui 2017: Women's Short-Term Employment Trajectories Following Birth: Patterns, Determinants, and Variations by Race/Ethnicity and Nativity. In: Demography 54,1: 93-118. https://doi.org/10.1007/s13524-016-0541-3

Lutz, Wolfgang et al. 2021: Skills-adjusted human capital shows rising global gap. In: Proceedings of the National Academy of Sciences 118,7. https://doi.org/10.1073/pnas.2015826118

Makay, Zsuzsanna 2023: Paid Parental Leave Reforms and Mothers' Employment in Austria, France and Hungary. In: Comparative Population Studies 48: 425-456. https://doi.org/10.12765/CPoS-2023-17

Massing, Natascha; Schneider, Silke L. 2017: Degrees of competency: The relationship between educational qualifications and adult skills across countries. In: Large-Scale Assessments in Education 5,6. https://doi.org/10.1186/s40536-017-0041-y

Matysiak, Anna 2009: Employment first, then childbearing: Women's strategy in post-socialist Poland. In: Population Studies 63,3: 253-276. https://doi.org/10.1080/00324720903151100

Matysiak, Anna; Węziak-Białowolska, Dorota 2016: Country-specific conditions for work and family reconciliation: An attempt at quantification. In: European Journal of Population 32: 475-510. https://doi.org/10.1007/s10680-015-9366-9

Mincer, Jacob; Ofek, Haim 1982: Interrupted Work Careers: Depreciation and Restoration of Human Capital. In: The Journal of Human Resources 17,1: 3-24. https://doi.org/10.2307/145520

Mincer, Jacob; Polachek, Solomon 1974: Family Investments in Human Capital: Earnings of Women. In: Journal of Political Economy 82,2: 76-108. https://doi.org/10.1086/260293

Muller, Joanne S.; Hiekel, Nicole; Liefbroer, Aart C. 2020: The Long-Term Costs of Family Trajectories: Women's Later-Life Employment and Earnings Across Europe. In: Demography 57,3: 1007-1034. https://doi.org/10.1007/s13524-020-00874-8

OECD 2019: The Survey of Adult Skills: Reader's Companion. Third Edition. OECD Skills Studies. Paris: OECD Publishing. https://doi.org/10.1787/f70238c7-en

OECD 2016: Skills Matter: Further Results from the Survey of Adult Skills. In: OECD Publishing. https://doi.org/10.1787/9789264258051-en

OECD 2013: Skilled for Life? Key findings from the Survey of Adult Skills. In: OECD Publishing.

oesterreich.gv.at-Redaktion 2025: Geringfügige Beschäftigung [https://www.oesterreich.gv.at/de/lexicon/G/Seite.990083, 27.01.2026].

Pessin, Léa; Damaske, Sarah; Frech, Adrianne 2023: How Education Shapes Women's Work and Family Lives Across Race and Ethnicity. In: Demography 60,4: 1207-1233. https://doi.org/10.1215/00703370-10878053

Raybould, Alyce; Sear, Rebecca 2021: Children of the (gender) revolution: A theoretical and empirical synthesis of how gendered division of labour influences fertility. In: Population Studies 75,2: 169-190. https://doi.org/10.1080/00324728.2020.1851748

Rebollo-Sanz, Yolanda F.; Rica, Sara De La 2022: Gender gaps in skills and labor market outcomes: Evidence from the PIAAC. In: Review of Economics of the Household 20,2: 333-371. https://doi.org/10.1007/s11150-020-09523-w

Redmond, Paul; Mcguinness, Seamus 2019: The Gender Wage Gap in Europe: Job Preferences, Gender Convergence and Distributional Effects. In: Oxford Bulletin of Economics and Statistics 81,3: 564-587. https://doi.org/10.1111/obes.12282

Reiter, Claudia 2022: Changes in Literacy Skills as Cohorts Age. In: Population and Development Review 48,1: 217-246. https://doi.org/10.1111/padr.12457

Spielauer, Martin; Städtner, Karin 2002: The Influence of Education on quantum, timing and spacing of births in Austria. Working Paper 29. Österreichisches Institut für Familienforschung an der Universität Wien.

Spitzer, Sonja; Greulich, Angela; Hammer, Bernhard 2022: The Subjective Cost of Young Children: A European Comparison. In: Social Indicators Research 163,3: 1165-1189. https://doi.org/10.1007/s11205-022-02942-5

Staff, Jeremy; Mortimer, Jeylan T. 2012: Explaining the Motherhood Wage Penalty During the Early Occupational Career. In: Demography 49,1: 1-21. https://doi.org/10.1007/s13524-011-0068-6

Stahl, Juliane Frederike; Schober, Pia Sophia 2018: Convergence or Divergence? Educational Discrepancies in Work-Care Arrangements of Mothers with Young Children in Germany. In: Work, Employment & Society 32,4: 629-649. http://dx.doi.org/10.1177/0950017017692503

Statistics Austria 2025: Average number of children per woman falls to all-time low in 2024 [https://www.statistik.at/fileadmin/announcement/2025/02/20250226GeburtenbilanzEN.pdf, 27.01.2026].

Statistics Austria 2024: Part-time work, part-time rate. Part-Time Rates by Sex – in Percent [https://www.statistik.at/en/statistics/labour-market/working-time/part-time-work-part-time-rate, 27.01.2026].

Statistics Austria 2023a: Family and employment [https://www.statistik.at/en/statistics/labour-market/employment/family-and-employment, 27.01.2026].

Statistics Austria 2023b: Family benefits. Child Care Allowance Recipients by Gender [https://www.statistik.at/en/statistics/population-and-society/social-benefits/family-benefits, 27.01.2026].

Stewart, Kitty 2014: Employment Trajectories and Later Employment Outcomes for Mothers in the British Household Panel Survey: An Analysis by Skill Level. In: Journal of Social Policy 43,1: 87-108. https://doi.org/10.1017/S004727941300055X

Stijepic, Damir 2020: Employment effects of skills around the world: Evidence from the PIAAC. In: International Labour Review 159,3: 307-338. https://doi.org/10.1111/ilr.12162

Tamborini, Christopher R.; Kim, ChangHwan; Sakamoto, Arthur 2015: Education and Lifetime Earnings in the United States. In: Demography 52,4: 1383-1407. https://doi.org/10.1007/s13524-015-0407-0

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