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Origin, generation, and context: Childbearing and employment changes among female immigrants and their descendants in the United Kingdom, France, and Germany

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Abstract

This study investigates the link between childbearing and employment changes of female immigrants and their descendants in three European countries: the UK, France, and Germany. Although childbearing significantly influences female labour force participation, the interrelationship between fertility and employment changes among migrant populations is poorly understood. We use Poisson regression models to study employment entry and exit by migration background and parity. Mothers are less likely to enter and more likely to exit employment than childless women among native women, immigrants, and their descendants. The largest differences in employment entry and exit are observed between migrant groups and generations, and between countries. European and Western immigrants are more likely to (re-)enter and less likely to exit employment than those from non-European countries. The descendants of immigrants have higher employment levels than immigrants and the differences compared to natives are smaller, but they persist, particularly among those of non-European descent. We also observe some differences across countries: mothers are the most likely to exit employment in Germany and the least likely in France. Our study highlights the importance of work-family reconciliation and immigration policies for reducing labour market disadvantage among mothers overall, and particularly among immigrants and their descendants.

Keywords: employment, childbearing, immigrants, descendants, event history analysis, cross-national comparison

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Introduction

Labour market participation is one of the key dimensions of immigrant integration. A large body of literature has focused on the employment and labour market outcomes of immigrants and their descendants across European countries. These studies have shown that both immigrants and their descendants experience labour market disadvantage; they have lower wages and employment levels than natives across Europe (e.g., Algan et al., 2010; Heath et al., 2008; Meurs et al., 2006; Rendall et al., 2010). Differences in the employment and labour market experiences of natives and immigrants and their descendants are especially large among non-white and non-European/non-Western groups.

One key reason why female immigrants and their descendants may experience lower levels of labour market attachment and higher levels of labour market disadvantage compared to native women is their differential childbearing trajectories. Studies have shown that immigrants and their descendants from countries that are culturally and geographically distant from the host countries tend to have higher fertility and larger families compared to native women in the host countries (e.g., Kulu et al., 2017; Kulu et al., 2022). However, it remains unclear to what extent the employment trajectories of immigrants and their descendants are related to their childbearing trajectories. Among majority populations, it is well-known that having children has a negative influence on women's labour market entry and participation across European countries (Matysiak & Vignoli, 2008). However, only a handful of studies investigated whether and how the employment trajectories of immigrants (e.g., Liu & Kulu, 2022; Mikolai & Kulu, 2022b; Vidal-Coso, 2019) or their descendants (e.g., Delaporte & Kulu, 2022; Holland & de Valk, 2017; Maes et al., 2021; Mikolai & Kulu, 2022a) are related to their childbearing.

Even fewer studies are available on the fertility-employment nexus among both immigrants and descendants (e.g., Kil et al., 2018; Wood & Neels, 2017). Studying both

immigrant generations is essential to understand whether and how immigrants' experiences change across generations. Immigrants' childbearing and labour market outcomes are influenced by their human capital and language skills (Borjas, 1994), the circumstances around migration (e.g., the reason for migration), migration and family policies in the host countries, as well as norms and values in their countries of origin. As the second generation is born and socialised in the host countries, it would be expected that their childbearing and employment patterns as well as the way in which these two life domains are interrelated would be similar to those among native women (assimilation hypothesis). Alternatively, it could be that immigrants' descendants are socialised into the norms and values of their parents' country of origin if these norms and values are particularly strong among certain communities implying that the link between childbearing and employment would be more similar to those among immigrants (minority group status hypothesis). The descendants of immigrants might also face discrimination on the labour market and/or other structural constraints, which could explain why they exhibit different labour market patterns upon childbirth compared to natives. Due to the lack of studies that have focused on both life domains among both immigrants and their descendants, we do not know whether differences between native women's experiences and those of immigrants persist or decrease across migrant generations.

Additionally, existing studies tend to focus on the experiences of immigrants' or immigrants' descendants in a single country even though women's fertility and labour market experiences are likely shaped by the institutional context of both work-family reconciliation as well as immigration policies. Although cross-national comparative studies are available on immigrants' (e.g., Dumont & Isoppo, 2005; Kogan, 2006; Rendall et al., 2010) or their descendants' (e.g., Algan et al., 2010; Heath et al., 2008) labour market or childbearing (e.g., Kulu et al., 2017), there is a paucity of cross-national evidence on the link between childbearing and employment changes across two generations of immigrants.

This paper aims to fill these knowledge gaps by studying the interrelationship between childbearing and employment among female immigrants and the female descendants of immigrants and compare their experiences to those of native women in the UK, France, and Germany, the three largest European immigration countries. Our study offers several novel contributions to the literature. First, we focus on (first and second) employment entries as well as first employment exit by parity. This allows us to explore women's employment and childbearing trajectories in tandem. Second, we study childbearing and employment changes among both immigrants and their descendants and compare their experiences to those of native women. This allows us to understand whether and how the interplay between childbearing and employment changes across migrant generations. This is important if we are to understand the role of adaptation and socialisation for childbearing and labour market disadvantage across migrant generations. Third, we compare the experiences of immigrants and their descendants across the UK, France, and Germany; three countries characterised by different welfare regimes with a range of different work-family reconciliation and family policies as well as immigration regimes. Doing so will allow us to improve our understanding of how the country context shapes childbearing and employment in the lives of immigrants and their descendants.

Employment and childbearing among immigrants

Employment

Immigrant women have traditionally been tied or family migrants with the implication that they were often either not allowed to work or faced particular challenges on the labour market such as discrimination, the lack of recognition of their qualifications, or language issues (Röder et al., 2018). Empirical evidence on the employment and labour market position of immigrants across European countries shows that compared to natives, immigrants are disadvantaged on the labour market. They have lower labour market participation (Dustmann et al., 2003), lower

employment probabilities (Blackaby et al., 1997; Dustmann & Fabbri, 2003; Wheatley Price, 2001), and lower earnings (Chiswick, 1980; Dustmann et al., 2003). This disadvantage is largely explained by immigrants' lower levels of human capital, education, and socio-economic status compared to native populations as well as their demographic characteristics at the time of migration (Borjas, 2013; Dustmann et al., 2003).

Immigrants from different origin countries have different labour market experiences. Those from non-European countries are at a particular disadvantage even after adjusting for differences in socio-economic characteristics between natives and immigrants. For example, in the UK, Black African, Pakistani, and Bangladeshi immigrants have much lower employment rates than white UK-born individuals or white immigrants (Blackaby et al., 1997; Dustmann & Fabbri, 2003; Dustmann et al., 2003). Female immigrants from Pakistan and Bangladesh are the least likely to be employed; these differences are largely explained by differences in their age and level of education compared to White British women (Dustmann et al., 2003). In France, immigrant women from North Africa have a significantly higher risk of unemployment compared to native women (Meurs & Pailhé, 2008). Similarly, in Germany, Southern European women are more likely to engage in the labour market compared to native women; and those of Turkish origin are the least likely to do so (Guveli & Spierings, 2022; Salikutluk et al., 2020).

Evidence from other Western European countries shows similar trends; migrant women had lower labour force participation rates than their native counterparts in Austria, Belgium, France, Luxembourg, and the Netherlands (Rendall et al., 2010). However, in Southern European countries (Greece, Portugal, and Spain), migrant women had similar levels of labour market participation rates to native women (Rendall et al., 2010). In EU countries, immigrant women from non-EU countries were more likely to be unemployed than native women (Kogan, 2006). Finally, in most OECD countries, immigrant women (especially those from African

countries) were less likely to participate in the labour market than native women; differences were not explained by individual factors (Dumont & Isoppo, 2005).

Over time, immigrants may get their foreign qualifications recognised or acquire additional skills and qualifications including language skills, training, or knowledge about the local labour market, all of which may increase their chances to access better employment opportunities (Dustmann et al., 2003). However, research shows that it is mainly white immigrants who experience such improvements in their labour market outcomes. For example, immigrants' initial lower employment rates and lower wages in the UK improved but remained lower among non-white immigrants than among natives (Bell, 1997; Chiswick, 1980; Denny et al., 1997; Dustmann & Fabbri, 2003; Wheatley Price, 2001). In Austria, Belgium, France, Luxembourg, the Netherlands, and the UK, immigrant women's labour force participation rates have increased over time and have become more similar to those of native women (Rendall et al., 2010). Similar findings have been shown for selected OECD countries as well as Germany (Liebig, 2007) and Sweden (Lemaître, 2007). However, in Southern European countries, native and immigrant women had comparable levels of labour force participation rates regardless of immigrant women's duration of stay (Rendall et al., 2010).

Childbearing and employment

Immigrant women from different origin countries have different childbearing patterns. Non-western immigrants tend to have children earlier and have larger families than native women (Kulu et al., 2017) whereas European or Western immigrants have similar childbearing patterns to native women (e.g., Milewski, 2007, 2010b). This means that many immigrant women not only have limited labour market opportunities and lower wages, but also care for several children. Given the costs of childcare and limited earnings opportunities, many immigrant women may not be able to afford to pay for childcare or the limited career opportunities and

low wages may not provide financial incentives to work (Röder et al., 2018). This position, coupled with traditional values in some origin countries regarding gender roles and expectations around marriage, childbearing, and employment may mean that some groups of immigrant women are unlikely to enter employment, but if they do, they are very likely to exit the labour force and do not re-enter employment once they become mothers.

The available evidence on the employment-fertility nexus among immigrants in European countries is limited. For example, in the UK, Mikolai and Kulu (2022b) showed that motherhood is coupled with heterogeneous employment patterns. South Asian (India, Pakistan, Bangladesh) women were characterised by early and universal marriage and childbearing; this pattern was coupled with economic inactivity. In contrast, immigrant women from European and Western countries started relationship and family formation later and were either in education or full-time employment. In Germany, immigrant mothers were less likely to work full-time, more likely to exit the labour market, and less likely to re-enter employment than childless immigrant women (Liu & Kulu, 2022). Women from Europe, former Yugoslavia, and the former Soviet Union were more attached to the labour market than other origin groups. In Belgium, the economic activity and employment levels of immigrant women from Europe, Morocco, and Turkey have decreased more than among native women after becoming a mother (Kil et al., 2018). These differences persisted even after adjusting for socio-economic and pre-childbearing job characteristics. Finally, in Switzerland, immigrants as well as native Swiss women experienced a substantial decline in working hours and employment levels following childbirth (Vidal-Coso, 2019).

Employment and childbearing among the descendants of immigrants

Employment

The descendants of immigrants (i.e., the second generation) are born in the host countries to immigrant parents. As they are educated and socialised in the host countries, it is expected that their values, preferences, and behaviours would be similar to those of natives according to the assimilation or integration hypothesis (Kulu et al., 2019; Pailhé, 2015). This suggests that the second generation should experience less disadvantage on the labour market compared to natives (Cheung & Heath, 2007). However, the second generation grows up in a family of immigrants (Adsera & Ferrer, 2015; Kulu et al., 2019), implying that some groups of descendants may be socialised into the norms, values, preferences and behaviours common in their parents' country of origin (minority subculture hypothesis) whilst other groups may grow up surrounded by norms, preferences, and behaviours common among the host countries' majority populations (Kulu et al., 2019). Additionally, some groups of descendants may face discrimination (Milewski, 2010a) (minority group status hypothesis), which may lead to choosing the 'motherhood track' due to reduced labour market opportunities (Kulu et al., 2019). To summarise, this means that some groups of descendants may experience labour market disadvantage both before and after becoming mothers.

Empirical evidence conclusively shows that the descendants of immigrants are disadvantaged on the labour market across European countries (e.g., Clark & Drinkwater, 2010; Clark & Ochmann, 2022; Meurs et al., 2006; Piton & Rycx, 2021; Zwysen & Demireva, 2020). For example, in a study comparing hourly wages and the probability of being employed among the second generation and natives in France, Germany, and the UK, Algan et al. (2010) showed that the descendants of immigrants have significantly worse labour market experiences than the natives. In France, women with Sub-Saharan and North African origin had lower net hourly wages and lower levels of employment than native women. Additionally, women with Turkish origin had lower levels of employment and those with a Southern European background had lower levels of net hourly wages compared to native French women. Similarly,

in Germany, all descendant origin groups (Central and Eastern Europe and other non-EU16, Turkey, other EU-16, Former Yugoslavia, Italy, Greece) had lower hourly wages and most groups (except other EU-16 and Greece) had lower employment levels than native German women. Similarly, in the UK, all second-generation groups (Indian, Pakistani, Bangladeshi, Black African, Black Caribbean, Chinese) had lower employment levels than White British women and almost all groups of women (except Bangladeshi and Chinese) had lower hourly wages. Another study focused on the second generations' labour marker outcomes in ten European countries (Heath et al., 2008). They found that immigrants' descendants from economically less developed countries (particularly women of Moroccan, Turkish, Pakistani, and/or Caribbean origin) were less likely to participate in the labour market and more likely to be unemployed than native women.

Childbearing and employment

Second-generation women whose parents are from countries that are geographically distant and culturally dissimilar from the host countries, tend to have fertility behaviours similar to those of immigrants. Thus, some descendant groups have higher levels of fertility and larger families than native women in the host countries (e.g., Kulu & Hannemann, 2016; Kulu et al., 2017; Milewski, 2007; Pailhé, 2017). Only a handful of studies have examined whether and how childbearing influences female descendants' employment levels and outcomes. Holland and de Valk (2017) compared the experiences of Turkish second-generation mothers with those of their childless counterparts in Germany, Sweden, the Netherlands, and France. Native as well as second-generation Turkish mothers were less likely to participate in the labour force than childless women. Whilst the gap in employment probabilities was similar among native and second-generation Turkish mothers and non-mothers in Germany and Sweden, it was larger in the Netherlands and France.

In Belgium, the economic activity and employment levels of the second generation decreased more than those of native women following childbearing (Kil et al., 2018). Whilst differences in economic activity were explained by socio-demographic factors and women's pre-birth job characteristics, differences in employment and unemployment levels persisted. Additionally, Maes et al. (2021) found that the lower maternal employment levels and working hours found among second-generation women (especially Moroccan or Turkish women) were explained by their lower employment rates and working hours already prior to childbirth compared to native women. Native and second-generation women alike were less likely to be employed or work more hours following childbirth if they had lower labour market attachment and lower working hours before birth. A recent French study found that all groups of second-generation mothers as well as native French mothers were more likely to exit employment than childless native French women (Delaporte & Kulu, 2022). At the same time, mothers with North African and Turkish heritage were also less likely to enter employment than childless native French women. Especially, the female descendants of Turkish immigrants were the least likely to enter and most likely to exit employment once becoming mothers. Finally, in the UK, the employment transitions of Pakistani and Bangladeshi women were less sensitive to childbearing than those of other groups of women probably because many of them were inactive before childbirth and remained inactive following the transition to motherhood (Khoudja & Platt, 2018). More recently, Mikolai and Kulu (2022a) showed that the descendants of European/Western immigrants had similar employment and family trajectories to native British women. Although women of Caribbean descent have different family and fertility patterns, their employment outcomes were similar to those of native women. However, among female South Asian descendants, conservative family formation patterns were coupled with low labour market attachment and persistent disadvantage on the labour market.

The Context of the UK, France, and Germany

Migration history

There are some similarities and differences in the immigration history of the UK, France, and Germany. In the UK, immigrants have typically arrived from former colonies. In the 1950s and 1960s, labour migration from countries of the New Commonwealth, such as the Caribbean, India, Pakistan, and Bangladesh was dominant, followed by family reunification (Dale & Ahmed, 2011; Dubuc, 2012). In the 1970s, immigration from sub-Saharan African countries had become common (Coleman & Dubuc, 2010; Dubuc, 2012). During the 1990s, the largest source of immigration was family reunification and asylum seeking (Sainsbury, 2012). In the 2000s, skilled migration was encouraged via a point-based immigration system (Sainsbury, 2012). More recently, the UK has received many immigrants from countries of the European Union who joined after 2004 (especially Poland) as well as from China (Dubuc, 2012; Robards & Berrington, 2016; Waller et al., 2014). As a result, the proportion of ethnic minorities has increased over time. Between 1991 and 2011, the proportion of those whose self-defined ethnicity was non-White has increased from 7% to 20%. In 2020, most non-UK-born individuals were from India, Poland, Pakistan, Romania, and the Republic of Ireland (Office for National Statistics, 2020).

In Germany, immigrants have arrived under different schemes including work, family reunification, or political refuge (Münz & Ulrich, 1998). During the 1960s and 1970s, Germany's rebuilding efforts required mass recruitment of labour migrants from abroad attracting individuals from Turkey, particularly from rural Anatolia (Münz & Ulrich, 1998). As many labour migrants settled permanently, this wave of labour migration was quickly followed by family reunification. Following the fall of the Iron Curtain, Ethnic Germans (*Aussiedlers*) from former Soviet countries sought asylum in large numbers. Around the same time, the creation of the European Union led to higher in-migration from European countries. The

majority of immigrants in Germany are from Turkey and Southern Europe (Algan et al., 2010). The descendants of immigrants represent a large share of the German population; around a quarter of foreign nationals were born in Germany (Worbs, 2003). Most immigrants and their descendants live in West Germany (Kreyenfeld, 2004).

In France, most immigrants arrived from Europe after 1945, but their proportion has fallen steadily since as significant numbers of migrants arrived from French colonies (Migration Policy Institute, 2004). For example, between 1945 and 1974, immigrants have arrived from Vietnam, Algeria, as well as Sub-Saharan African and Asian countries (Algan et al., 2010). Furthermore, the share of migrant workers has been steadily decreasing while family reunification has become the main reason for migration today (Migration Policy Institute, 2004). In 2021, the immigrant population represented 10% of the total French population (INSEE, 2018). The most common countries of birth were Algeria (12.7%), Morocco (12%), Portugal (8.6%), Tunisia (4.5%), Italy (4.1%), Turkey (3.6%), and Spain (3.5%). The descendants of immigrants now represent a significant share of the total French population. Taken together, the immigrant populations across the three countries are heterogeneous although there are also similarities. For example, all three countries have immigrants from the African continent; France and Germany have immigrants from Turkey and Southern Europe, and France and the UK had significant migration from former colonies.

Work-family policies

Women's labour market outcomes are substantially linked with work-family policies. The three countries belong to different policy regimes with respect to the gendered character of the welfare regime and the support available for families to combine paid work and childcare. The UK belongs to the 'market-oriented' regime or 'primary earner/secondary carer' strategy, which views both women and men as invested in employment but has limited support for

childcare (Kowalewska, 2023; Misra et al., 2007). Care is largely provided by the market and is costly. Although this regime provides full-time employment opportunities and higher earnings for women, it is debatable whether mothers actually benefit from these opportunities due to the market-based and gendered nature of the costs of caring (Misra et al., 2007). Employment among women tends to be low, especially among those with low to medium skills and many women work part-time (Kowalewska, 2023). Employed women are entitled to a one-year maternity leave but there is limited access to low-cost childcare between the child's first and third birthday. Once children turn 3, 30 hours of free childcare is available for 38 weeks to working parents who earn at least minimum wage (some additional hours are available from age 2 for disadvantaged children). As a result, mothers tend to adjust their working patterns. As children get older, there is less need for mothers to stay at home and the increasing expenses associated with childrearing may also motivate mothers to return to work (Khoudja & Platt, 2018; Mikolai & Kulu, 2022a).

Germany (especially West Germany) is part of the 'traditional-family' regime or the 'primary caregiver/secondary earner' strategy, where policies explicitly reward and encourage women to provide care instead of full-time employment (Kowalewska, 2023; Misra et al., 2007). Women's role in the labour market tends to either cease altogether or drastically reduce upon motherhood (Kreyenfeld, 2004) and the view that care work is women's work prevails (Van Bavel, 2010). Policies explicitly support families and attempt to compensate women for their time and effort via e.g., generous caregiver and family allowances and parental leave (Kowalewska, 2023; Misra et al., 2007). For mothers who wish to work, part-time employment is viewed as the optimal strategy (Misra et al., 2007). Altogether, this regime leads to low employment rates among women. Those who work tend to work part-time or have 'mini' jobs. This is not only true for medium and low skilled women but also for highly skilled women (Kowalewska, 2023). Although female labour force participation has increased in recent years

(World Bank, 2021), there has been a substantial reduction in women's hours worked (Sprengholz et al., 2021).

Compared to other European countries, French family policy is generous and comprehensive (Adema & Ladaique, 2005; Cukrowska-Torzewska, 2017; Pailhé & Solaz, 2013). France represents a separate regime; the so-called 'choice strategy'. Policies encourage women to provide care as well as engage in employment though the provision of high-quality public subsidised childcare, generous parental leave allowance, and support for part-time employment (Kowalewska, 2023; Misra et al., 2007). As a result, a high share of children attend formal childcare and female labour market participation is high, even among mothers (Pailhé & Solaz, 2013). The societal acceptance of mothers working, even those with young children, is high (Pailhé & Solaz, 2013). The French system encourages women to balance paid and unpaid work instead of encouraging men to play an equal role in caring for children (Misra et al., 2007). In principle, the regime allows women to choose whether to stay at home or be employed. However, in practice, the level of the flat-rate benefit available for stay-at-home mothers is low, encouraging low-income women to choose this option over being employed. This leads to comparatively low employment rates among low-skilled women (Kowalewska, 2023).

Rights of immigrants and descendants

The above typologies are insufficient to explain the relationship between family policies and family practices because access to benefits might differ between migrant and native populations and across migrant origin groups. Additionally, the way in which countries view immigrants and ethnic minorities (i.e., immigration regime), influences immigrants' and their descendants' access to policies. Countries' immigration regimes can be characterised as either inclusive or restrictive incorporation regimes (Sainsbury, 2006, 2012).

The UK belongs to the so-called 'restrictive incorporation regime' (Sainsbury, 2012). At first, both UK citizens and those from the Commonwealth enjoyed citizenship rights including full access to social benefits (except for access to social housing) and the right to employment. These rights were gradually removed during the 1960s to 1980s with the introduction of the requirement for immigrants to be able to support themselves and their families without accessing public funds. To be able to access such financial support, immigrants had to acquire permanent residence, which takes between 4 and 10 years depending on their entry category. After 1981, British citizenship was no longer automatically awarded to those who were born in the country and access to social assistance was restricted based on citizenship. After joining the European Economic Area (in 1972), EU nationals' rights have become the same as those of British citizens. Since the 2000s, requirements for naturalisation have become more restrictive and citizenship is awarded on a discretionary basis.

Germany's migration regime is categorised as 'restrictive incorporation'. German ethnicity has been an advantage in acquiring German citizenship, exemplified by the favourable legal path toward full integration for ethnic German immigrants (*aussiedler*), including the possibility of gaining dual citizenship, compared to their non-ethnic German counterparts, who could only apply for naturalisation after 15 years of continuous residence and (Sainsbury, 2006). Social rights in Germany are often tied to employment. Although immigrants who work, are entitled to the same social rights and benefits as native Germans who work, immigrant women, many of whom arrived as family migrants, often face employment restrictions in the first two years following arrival, exposing them to economic dependence on their male partner (Sainsbury, 2006). Children of immigrants who are born in Germany are entitled to German citizenship but have to renounce any other citizenship they may have by age 23.

France belongs to the inclusive incorporation regime, where naturalisation and assimilation are considered the norm. The right to citizenship is based on place of birth either

at birth (if one parent was born in France) or upon reaching adulthood (Sainsbury, 2012); regardless of residence. This is important given that access to equal rights strongly depends on nationality (Nicholls, 2012). Whilst French nationality is not a requirement to gain access to certain rights, residence in France remains an important requirement (Isidro & Math, 2020). As the French system of social insurance has been based on work and contributions derived from employment, foreign workers have formally had access to many benefits shortly after arrival. However, ensuring foreign nationals' access to non-contributory benefits (including family benefits) took longer (Sainsbury, 2012). Pro-natalist measures have led to the rise in allowances, tax benefits, and benefits in kind (e.g., goods and services provided by employers) available to families (Lenoir, 1991). Over time, benefits have increasingly been targeted to support larger and low-income families. Those with larger families have access to a larger amount of allowances and longer maternity leave and maternity benefits (SSPTW, 2010). These changes have benefited immigrant families (Morissens & Sainsbury, 2005) as they tend to have larger families than French natives. The condition of regular residence still constitutes an obstacle to social protection for some immigrants, especially non-EU foreigners and undocumented migrants, who may have resided in the country for a sufficient length of time but lack the paperwork to prove this (Isidro & Math, 2020; Sainsbury, 2012). However, this condition has not been extended to family benefits for now.

Expectations

Taken together, we have the following expectations regarding the intersection between female immigrants' and descendants' employment and childbearing across the UK, France, and Germany:

H1: Non-European immigrant women's employment is expected to be more affected by childbearing than that of European immigrant women. In other words, among non-European immigrant women, the change in levels of employment (re-)entry and exit due to childbearing

is expected to be larger than among European immigrant women (immigrant childbearing disadvantage hypothesis).

H2: The employment trajectories of second-generation women are expected to be influenced in the same way by childbearing as those of native women (assimilation hypothesis).

H3: We expect that mothers in France (natives, immigrants, and their descendants alike) will be the most likely to enter employment and the least likely to exit it whereas mothers (especially immigrants and their descendants) in Germany will be the least likely to (re-)enter and the most likely to exit employment. We expect native, immigrant, and second-generation mothers' employment (re-)entry and exit patterns in the UK to be in-between those of French and German mothers (welfare and migration regime hypothesis).

Data

For the UK, we use data from Waves 1 to 9 (2009–2019) of the UK Household Longitudinal Study (UKHLS); a nationally representative household panel survey that interviews approximately 30,000 households (~51,000 individuals) annually (University of Essex, 2020). The UKHLS contains detailed and reliable retrospective information on the year and month of employment changes and the birth of all children since age 16. Additionally, prospective information on changes in employment status and the birth of (additional) children is collected from annual interviews. Although employment histories in the UKHLS have only been collected for a subset of individuals (in wave 1 from respondents who were interviewed in the first 6 months of the data collection and in wave 5 among the rest of the sample), previous studies have shown that the employment sample does not seem to be selective when studying immigrants and descendants' partnership, fertility, and employment trajectories (Mikolai & Kulu, 2022a, 2022b). The UK sample consists of 12,607 native women, 1,922 immigrant women, and 3,142 female descendants.

For Germany, we use data from the German Socio-Economic Panel (SOEP, version 37); a household panel study of over 19,000 households that started in 1984 and is still ongoing (Wagner et al., 2007). We use data from all waves (1984–2020) for individuals who reside in West Germany due to West Germany's far higher concentration of foreign-born populations compared to East Germany. The SOEP collects yearly retrospective information on individuals' employment histories from age 16 recording the age at which individuals experience a change in employment status. Information on childbirth is also available annually. As many life events can happen in the same year, we assume that immigration (for immigrants) or leaving education (for natives and immigrants' descendants) happen at the beginning of the year, followed by entering employment, exit from employment, and employment re-entry. Those who have a first child and exit employment in the same year are considered to have exited in the previous year (as maternity leave often starts prior to birth) to ensure the comparability of data across countries. As partnership histories are not available for many individuals, incorporating partnership status in the analyses has reduced the sample size from 26,530 to 14,391. Additional sensitivity analyses (not shown) revealed similar rates of first entry into employment, exit from employment, and employment re-entry in the two datasets indicating that the missingness is at random, i.e., due to certain waves of the questionnaire not including questions on partnership status. The German sample includes 10,864 native women, 1,397 immigrant women, and 2,130 female descendants.

For France, we use the Trajectories and Origins (TeO) survey, which was conducted in 2008/2009 (Beauchemin et al., 2016). It contains information on a nationally representative sample of more than 20,000 individuals, including immigrants, immigrants' descendants, and French natives. The survey collected retrospective information on the year and month of childbirths. Additionally, it contains retrospective yearly information on individuals' education and employment status starting from the time of arrival for immigrants and from the time of

birth for natives and immigrants' descendants. We convert employment histories to a monthly format by assuming that employment changes occur at the end of the year. If childbirth and employment change happen in the same month, we assume that the birth precedes the employment change. The French sample includes 1,842 French native women, 2,923 immigrant women, and 5,365 female descendants.

Information collected in the three datasets is of high quality and highly comparable. These datasets provide a unique opportunity to study the lives of immigrants and descendants across countries from different origin countries in detail. The UKHLS includes two immigrant and ethnic minority boost samples (in waves 1 and 6) ensuring a sufficiently large sample size among individuals from the largest ethnic groups (Indian, Pakistani, Bangladeshi, Caribbean, and African) for the first time in the UK (McFall et al., 2019). The SOEP has oversampled individuals with a migration background (Jacobsen et al., 2021). Additionally, in 2013, around 2,700 households were interviewed, each containing at least one person who either immigrated to Germany since 1994 or whose parents had done so (Brücker et al., 2014). Finally, TeO's sampling over-represented certain origins specifically to provide ample information on minorities who are typically underrepresented or unidentifiable in general demographic surveys in France (Beauchemin et al., 2016). In addition to detailed information about migrant origin, migration background, employment changes and childbirths, all data sources contain detailed information on individuals' sociodemographic characteristics such as birth cohort, year of migration, partnership changes, and educational level. We select individuals who were born after 1940.

Methods

We study transitions into first employment, out of first employment, and employment re-entry (i.e., transition into second employment) across countries and population subgroups. To do so,

we use the so-called count data approach following Kulu et al. (2021) as individual-level data cannot be shared across team members. For each country, we prepare an occurrence-exposure (or event-time) table, defined by cross-classifying over a set of time intervals and variable categories (Hoem, 1987; Preston, 2005). The cells of the resulting table include the number of events and risk time (i.e., person-months) for each possible combination of covariate categories for each time period *j* and variable category *k*.

We estimate a series of Poisson regressions on the pooled occurrence-exposure dataset for three countries. This approach is equivalent to estimating piecewise constant event history models with categorical variables (Holford, 1980; Laird & Olivier, 1981). The log-linear model for the hazard of first and second employment entry and employment exit is specified as:

$$\ln \mu_{jk} = \alpha_j + \beta x_k$$

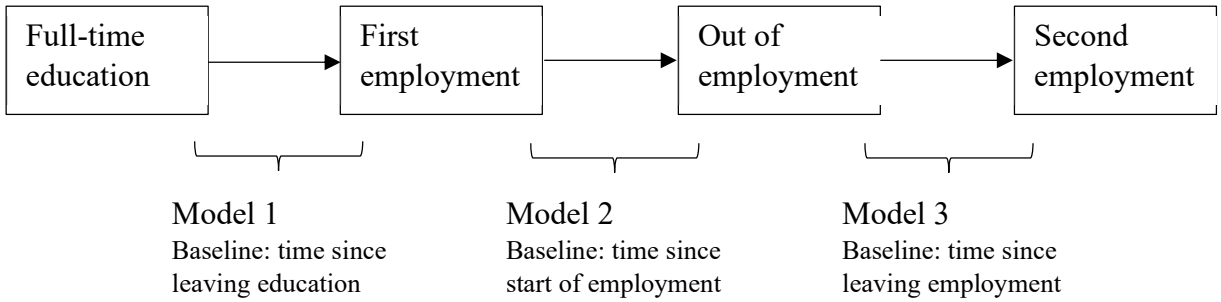
where α_j is the baseline hazard, i.e., the hazard of first or second employment entry or employment exit by the relevant duration variables (see below); x_k is a vector of the covariates and β is a vector of parameters to measure the effect of the covariates.

We conduct the analyses in three steps separately for immigrants as well as descendants and natives (Figure 1). Model 1 estimates the risk of entering first employment among immigrants and descendants. In this model, the baseline differs between immigrants and descendants. Among the descendants, those who left full-time education are at risk of entering first employment; hence the baseline is time since leaving education (0–1 year, 1–3 years, 3–5 years, and 5+ years). Among immigrants, the baseline is time since migration (0–1 year, 1–3 years, 3–5 years, and 5+ years) as they enter the risk set of entering first employment after arriving to the UK, France, or Germany. For immigrants whose employment started in the same year and month as when they have arrived in the host countries, we have imputed a one month waiting time. Among descendants, if information is not available on the age at leaving education, we impute the average age of leaving education by level of education. This

imputation due to missing information is necessary in the UK (the mean ages of leaving education are 16, 18, and 21 for low, medium, and highly educated women respectively) and Germany (the mean ages are 17.8, 18.8, and 21.2 for low, medium, and highly educated women respectively). In France, there is no missing information on the age of leaving education. However, there is a lot more variability in the age at which individuals with similar levels of education leave education. As we assume a common baseline among native women and the descendants of immigrants across the three countries, these difference in the age pattern of leaving education in France compared to the other two countries have an impact on the results leading to depressed rates of entry into first employment not because of lower levels of entry but simply because of a later timing of first employment entry for some individuals. To solve this issue, we have replaced the age of leaving education with the mean age of leaving education by level of education for all individuals in the French sample (the mean ages are 18, 20, and 24 for low, medium, and highly educated individuals, respectively). A small proportion of the sample leaves education and enters first employment before age 18. For these individuals, we retain the original information on the age at leaving education so we can keep them in the sample.

Model 2 estimates the risk of exiting first employment among those who entered first employment. The baseline is time since start of first employment for both immigrants and descendants. Finally, Model 3 estimates the risk of re-entering employment among those who exited first employment; the baseline is time since leaving first employment among both immigrants and descendants. Model 3 is only estimated for the UK and Germany as the information on higher-order employment entries is limited in the French data.

a) Descendants and natives



b) Immigrants

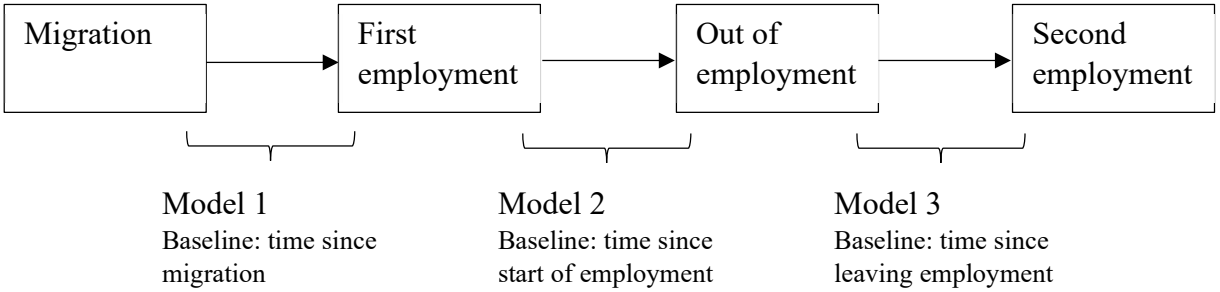


Figure 1. Modelling strategy.

In all analytical steps, we first examine the role of migrant origin (in case of immigrants) or migration background (in case of the descendants) and parity separately on the risk of the examined transitions whilst controlling for other important variables. Second, we explore the link between employment transitions and parity to understand whether mothers from a different migrant origin/migration background have different patterns of employment entry and exit than childless women from the same origin/background groups. To do so, we include interaction terms between migrant origin/migration background and parity. As we estimate separate models for immigrants as well as descendants and natives, the estimates from the models are not directly comparable. However, we can indirectly compare patterns and trends in the levels of immigrants' and descendants' employment entry and exit rates. When studying immigrants, the reference category is European and Western immigrants in the UK whereas when studying natives and descendants, the reference group is native women in the UK. When comparing

across generations, we can calibrate our indirect comparisons by comparing the experiences of European immigrants and descendants across countries. Individuals in our analysis are observed until age 50 or the end of the observation.

Variables

The definition of individuals' employment status is key to the construction of the dependent variables (entry into first employment, employment exit, employment re-entry). Individuals can either be employed for the first or second time (i.e., in paid part- or full-time employment, salaried, self-employed, military service, or on maternity leave) or not employed (i.e., unemployed, looking for work, looking after family or home, homemaker, student, long-term sick or disabled, on a government training scheme, something else, retired, or not in the labour force).

Migrant origin (for immigrants) and migration background (for descendants) are the key independent variables of interest. We use information on individuals' own and their parents' country of birth to determine their migration background. Natives are defined as individuals who were born in the host countries with two parents who were also born in the host countries. Immigrants are those who were born outside the host countries. Descendants were born in the host countries but at least one of their parents was born abroad. In this study, the so-called 1.5 generation (i.e., those who migrated to the host countries as children younger than 15) is included in the same analyses as the second generation to boost cell sizes as additional analyses (not shown) revealed that their patterns are very similar. To derive this variable, in the UK we combine information on individuals' and their mothers' country of birth (or ethnicity if country of birth is missing as well as information on father's country of birth or ethnicity if the mother's information is missing or the mother is UK-born). In Germany, we use information on respondents' own and their parents' country of birth and (current or former) citizenship. In

France, we also use information on respondents' own and their parents' country of birth and citizenship. We have excluded (around 3% of the sample) the descendants of immigrants with mixed background (i.e., mother and father born in different regions). The resulting groups are immigrants and descendants from European and Western countries, India, Pakistan, Bangladesh, the Caribbean, and African countries in the UK; North Africa, sub-Saharan Africa, South-East Asia, Turkey, Southern Europe, and other European countries in France; and Poland, Russia/Kazakhstan, Southern Europe, and Turkey in Germany.

Next to including the relevant duration variables in the models, we also control for the relevant age variables such as age at leaving education (in Model 1 for descendants categorised as <20 or 20+), age at migration (in Model 1 for immigrants grouped as 16–19, 20–24, or 25+), age at starting first employment (Model 2 for immigrants and descendants categorised as <20, 20–24, 25–29, 30+), and age at leaving first employment (Model 3 for immigrants and descendants grouped as <25, 25–29, 30–34, 35+). The models are also adjusted for level of education (low, medium, high), birth cohort (for descendants categorised as 1940–1949, 1950–1959, 1960–1969, 1970–1979, 1980–1989, 1990+) or migration cohort (for immigrants grouped as 1956–1989, 1990–1999; 2000+), and partnership status (single, cohabiting, married, and separated). Parity is categorised as having no children vs having one or more children. Tables A1 to A4 in the Appendix show the number of events and person-months by the categories of all covariates included in the analyses.

Results

First employment entry

Figure 2 shows the hazard ratios of first employment entry (Model 1) among immigrant women (panel a) and female natives and descendants (panel b). For immigrants, the reference category is the risk of European and Western immigrants in the UK to enter first employment whereas

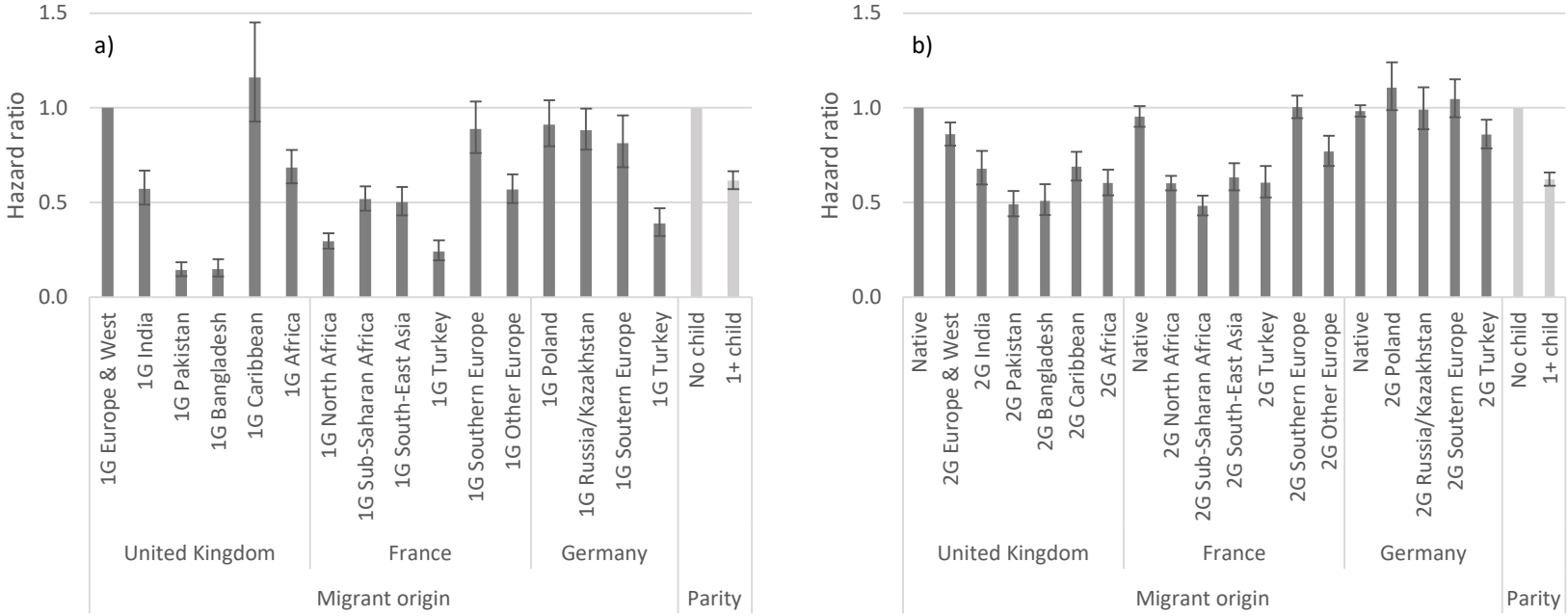
for the descendants, it is the risk of native women in the UK to do so. In the UK, immigrants from Pakistan and Bangladesh have the lowest rates of entry into first employment following migration whereas immigrants from Europe or other Western countries and from the Caribbean have the highest entry rates (Figure 2, panel a). Immigrants' first entry risks from India and Africa are in-between these two groups. In France, immigrants from Southern Europe have the highest risks to enter first employment after arrival whereas those from Turkey and North Africa have the lowest risks. The entry risks of the other migrant groups in France are in-between the risks of these two groups. Finally, in Germany, Turkish immigrants have the lowest entry risks into first employment after arrival; the other migrant groups are all more likely to enter first employment. Regarding the role of childbearing, immigrant women who have children have a 40% lower likelihood of entering first employment following migration than those who are childless.

We find largely similar patterns among native women and second-generation origin groups (Figure 2, panel b) although the magnitude of the differences between the entry risks of native women and descendants tends to be smaller than the differences were between European/Western and other immigrants among the first generation. In the UK, all groups of descendants have lower risks of first employment entry than native women. This is particularly the case for descendants of Pakistani and Bangladeshi immigrants. In France, those with a Southern European origin have similar entry risks to native French women whereas descendants of immigrants from North Africa, sub-Saharan Africa, South-East Asia, and Turkey are 40% less likely to enter first employment than French native women. We see far fewer differences between the first employment entry risks of natives and different groups of descendants in Germany. Those with Turkish origin have somewhat lower risks of first employment entry than native German women whereas all other groups have comparable risks

to native women. Regarding the role of parity, we find that mothers are also less likely to enter first employment than childless women among native women and the second generation.

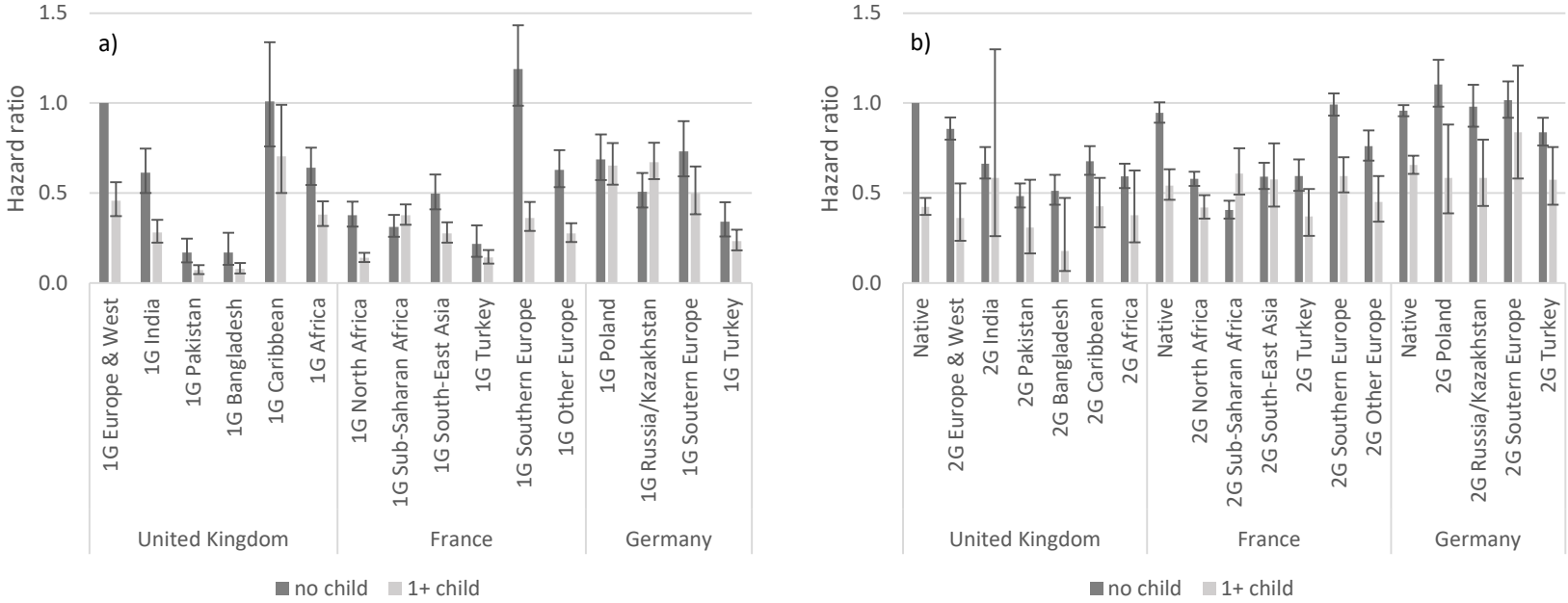
The interaction models reveal that the role of motherhood for entering first employment tends to be similar across all migrant groups in all three countries. Overall, immigrant mothers are less likely to enter first employment than childless immigrant women (Figure 3, panel a). The differences between the entry risks of childless women and mothers are most pronounced among immigrants from Europe and Western countries, India, and Africa in the UK and among immigrants from Europe, North-Africa, and South-East Asia in France. The overall patterns are similar among native women and the female descendants of immigrants across all three countries. Childless women are more likely to enter employment than those who have children among all origin groups including native women. This is especially the case among native women and the female descendants of European and Western immigrants in the UK, native women and the descendants of European and North African immigrants in France, and native women as well as the female descendants of Polish and Russian/Kazakh immigrants.

Figure 2. Hazard ratios of first employment entry among immigrant women (panel a) and female natives and descendants (panel b) by migrant origin and parity



Source: Authors' calculations using data from the UK Household Longitudinal Study (UKHLS) for the UK, Trajectories and Origins (TeO) for France, and the German Socio-Economic Panel (SOEP) for Germany.
Note: Whiskers indicate 95% confidence intervals compared to the reference category (European and Western immigrants in the UK for panel a) and native women in the UK for panel b)). Full regression results are shown in Appendix Table A5 (immigrants) and Table A6 (descendants).

Figure 3. Hazard ratios of first employment entry among immigrant women (panel a) and female natives and descendants (panel b) by migrant origin and parity



Source: Authors' calculations using data from the UK Household Longitudinal Study (UKHLS) for the UK, Trajectories and Origins (TEO) for France, and the German Socio-Economic Panel (SOEP) for Germany.
Note: Whiskers indicate 95% confidence intervals compared to the reference category (childless European and Western immigrants in the UK for panel a) and childless native women in the UK for panel b)).

Employment exit

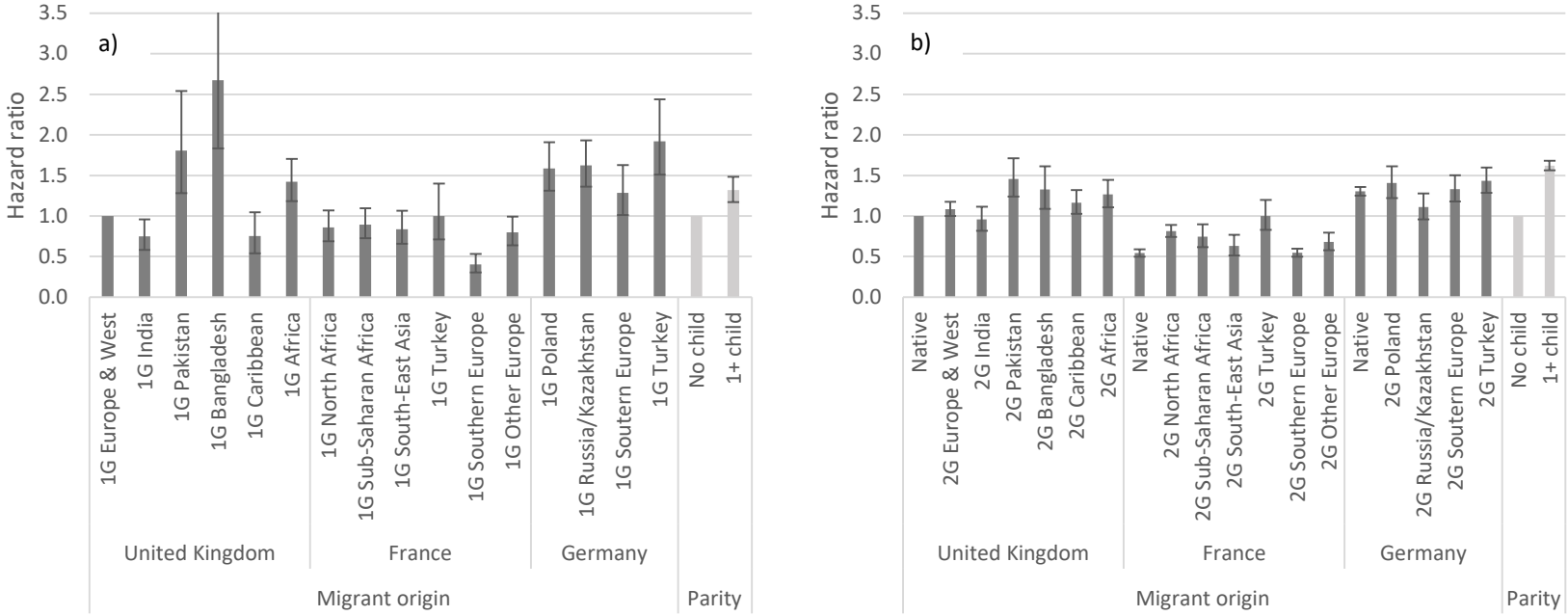
Figure 4 shows the hazard ratios of exiting first employment (Model 2) among immigrants (panel a) as well as native women and the female descendants of immigrants (panel b). The reference categories are the risks of European and Western immigrants in the UK for the model on immigrants, and the risks of native women in the UK for the model on natives and descendants. First, we find that in all three countries, some groups of immigrants are more likely to exit first employment than European immigrants. For example, in the UK, immigrants from Pakistan, Bangladesh, and African countries have higher exit risks than those from Europe or other Western countries. At the same time, those from the Caribbean have comparable risks to European or Western immigrants whereas those from India have somewhat lower risks. In France, all immigrant groups have a higher likelihood of exiting first employment than immigrants from Southern Europe. Finally, in Germany, we find smaller and fewer significant differences between different groups of immigrants; nonetheless immigrants from Turkey tend to have the highest likelihood and those from Southern Europe tend to have the lowest likelihood of exiting first employment. Regarding the role of motherhood, we find that immigrant women with children have higher risks of exiting first employment than their childless counterparts.

Overall, we find smaller differences in the likelihood of employment exit among natives and the descendants of immigrants than among immigrants. In the UK, Pakistani, Bangladeshi, and African second-generation women stand out as having a higher likelihood than native women in the UK to exit first employment. In France, descendants of immigrants from North Africa, Sub-Saharan Africa and Europe are more likely to exit employment than French native women whereas in Germany, second-generation Russian and Kazakh women are less likely to exit employment than native German women. The lower overall exit risks among French natives compared to native women in the UK and Germany are in line with previous studies

showing that employment rates among women are lower in France than in Germany and the UK (Algan et al., 2010). Additionally, native and second-generation women who have children are more likely to exit employment than those who are childless.

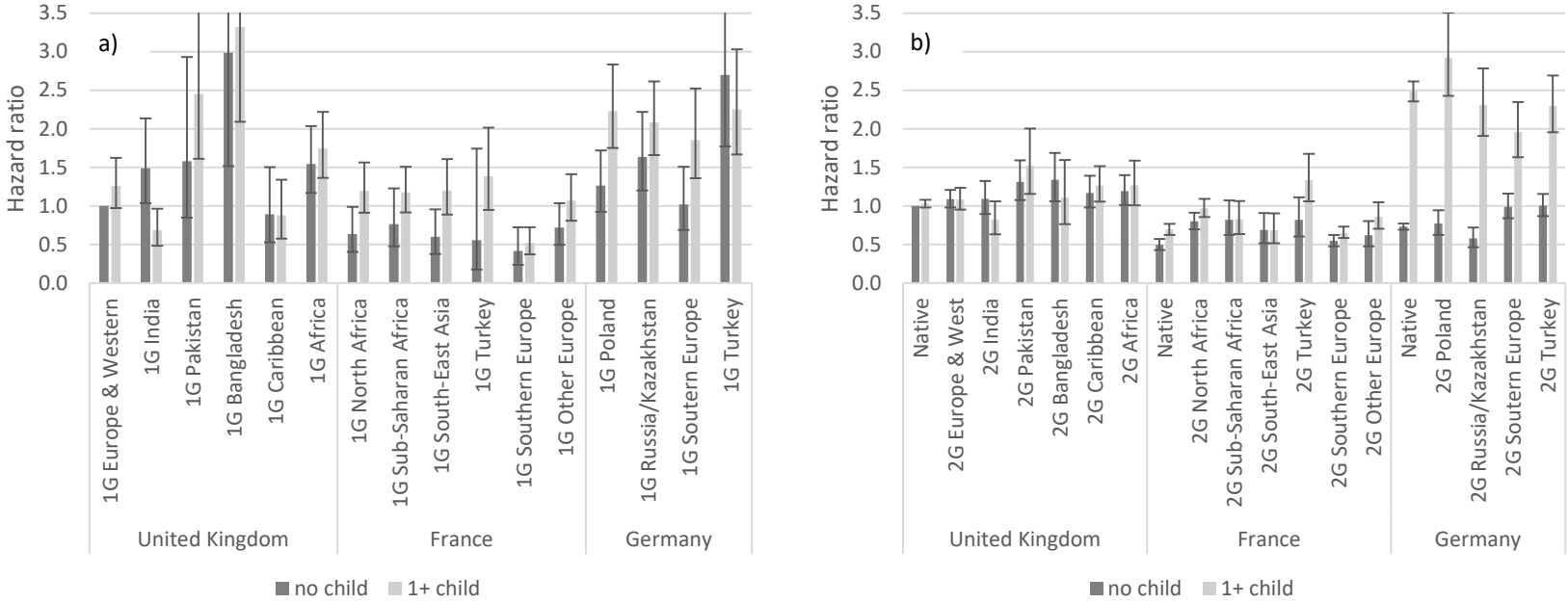
The interaction models (Figure 5) show that the patterns by parity largely hold among all immigrant and descendant groups. We note the large confidence intervals and often not significant differences between immigrant mothers and childless women. We find the most remarkable differences in Germany; German native women as well as all groups of descendants of immigrants are considerably more likely to exit employment if they have children than if they do not have children.

Figure 4. Hazard ratios of employment exit among immigrant women (panel a) and female natives and descendants (panel b) by migrant origin and parity



Source: Authors' calculations using data from the UK Household Longitudinal Study (UKHLS) for the UK, Trajectories and Origins (TeO) for France, and the German Socio-Economic Panel (SOEP) for Germany.
Note: Whiskers indicate 95% confidence intervals compared to the reference category (European and Western immigrants in the UK for panel a) and native women in the UK for panel b)). Full regression results are shown in Appendix Table A5 (immigrants) and Table A6 (descendants).

Figure 5. Hazard ratios of employment exit among immigrant women (panel a) and female natives and descendants (panel b) by migrant origin and parity



Source: Authors' calculations using data from the UK Household Longitudinal Study (UKHLS) for the UK, Trajectories and Origins (TEO) for France, and the German Socio-Economic Panel (SOEP) for Germany.
Note: Whiskers indicate 95% confidence intervals compared to the reference category (childless European and Western immigrants in the UK for panel a) and childless native women in the UK for panel b)).

Employment re-entry

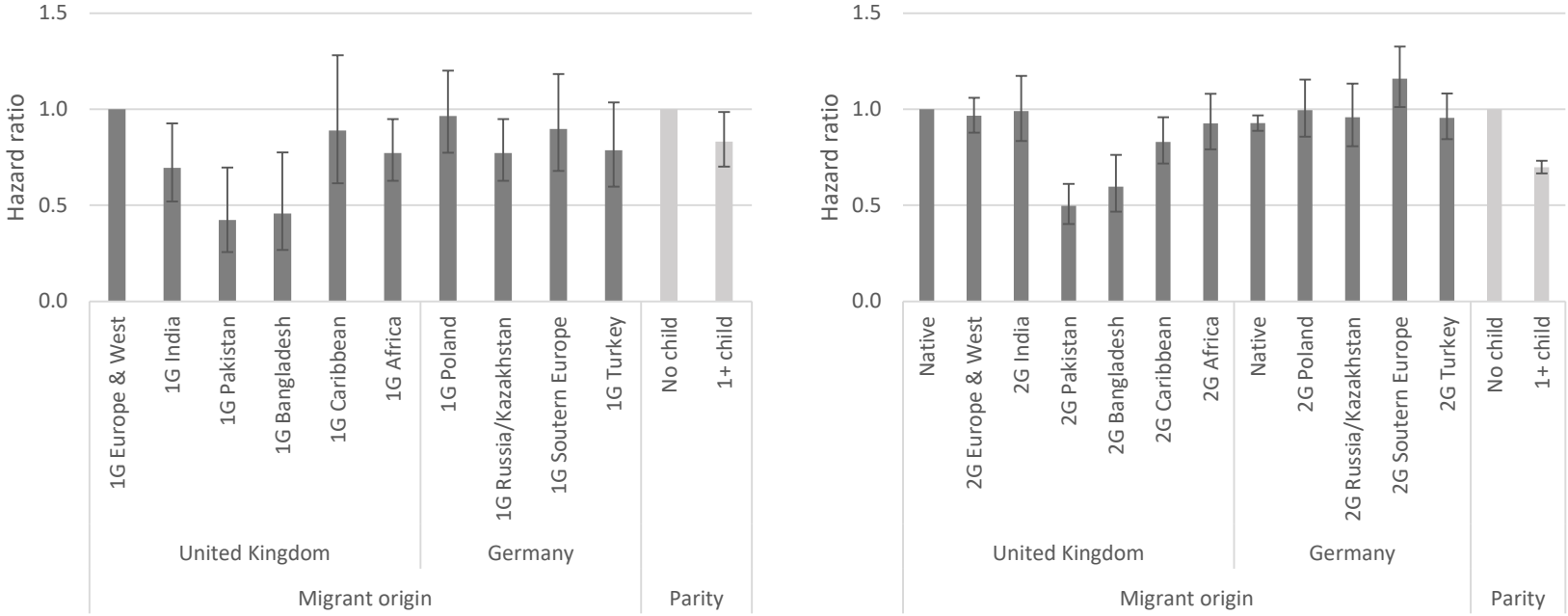
Figure 6 shows the results of Model 3 (employment re-entry) for the UK and Germany. As mentioned previously, Model 3 is only estimated for the UK and Germany as the information on higher-order employment entries is limited in the French data. For immigrants, the reference group is the re-entry risks of European and Western immigrants in the UK whereas for the descendants, it is the re-entry risks of native women in the UK. In the UK, immigrant women from India, Pakistan, Bangladesh, and African countries are less likely to re-enter employment than their counterparts from European or Western countries (Figure 6, panel a). Caribbean immigrant women have comparable employment re-entry risks to those of European and Western immigrants. We do not find significant differences between the re-entry risks of immigrant women from different origin countries in Germany. Nonetheless in Germany, re-entry rates tend to be somewhat higher among Polish and Southern European immigrants and lower among Russian/Kazakh and Turkish immigrants. Regarding the role of motherhood, we find that childless immigrant women are somewhat more likely to re-enter employment than mothers.

Among the descendants, those with a Pakistani, Bangladeshi, or Caribbean background in the UK are less likely to re-enter employment than native women whereas in Germany, Southern European descendants have somewhat higher likelihood to re-enter employment than native German women (Figure 6, panel b). All other descendant groups in Germany have similar re-entry risks to native German women. Similarly to immigrants, childless native women and female descendants are more likely to re-enter employment than mothers.

Figure 7 shows the results of the interaction models for employment re-entry. The overall pattern of childless women being more likely to re-enter employment than mothers seem to hold for immigrant women (panel a) although due to small numbers of events among childless women, it is difficult to draw firm conclusions about these patterns. Among native

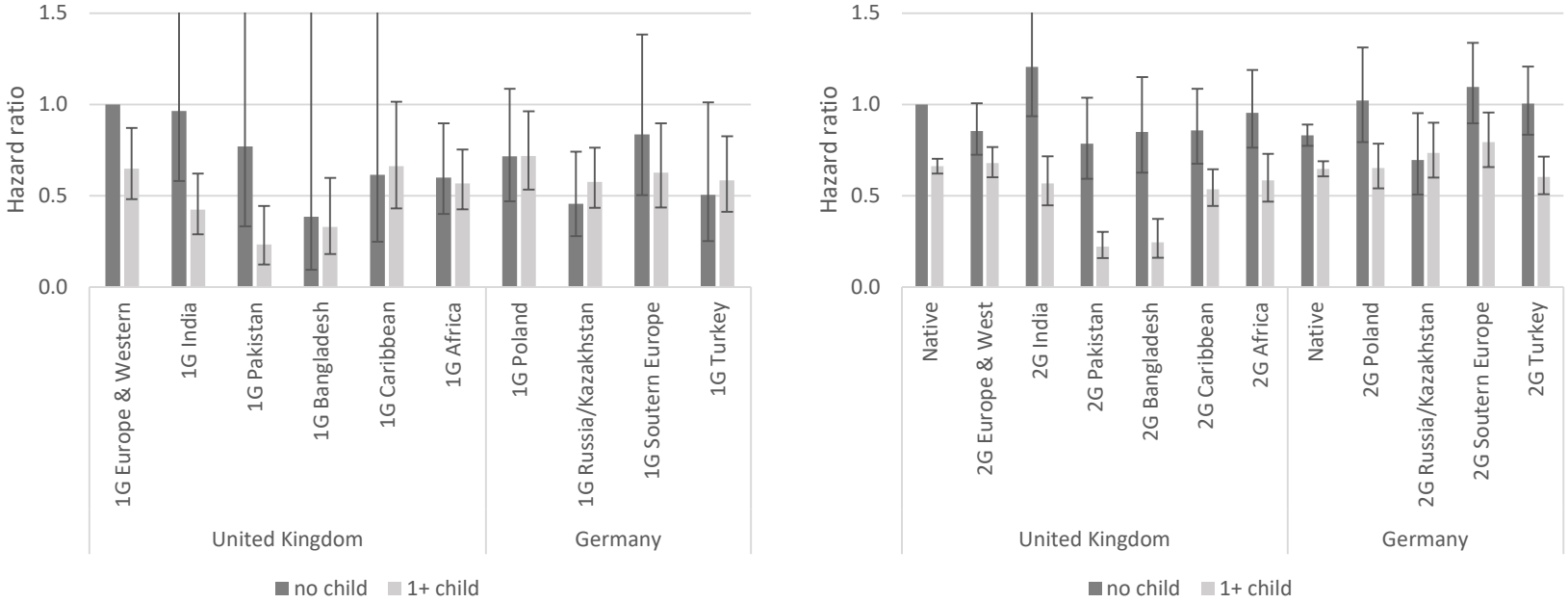
women and immigrants' descendants (panel b), we find significant evidence for this relationship among most origin groups. The differences in re-entry risks between mothers and childless women are particularly striking among native women, and women with Indian, Pakistani, or Bangladeshi origin but they are also significant among Caribbean and African descendants in the UK. In Germany, the differences are significant between mothers and childless women among natives as well as among Polish and Turkish descendants.

Figure 6. Hazard ratios of employment re-entry among immigrant women (panel a) and female natives and descendants (panel b) by migrant origin and parity



Source: Authors' calculations using data from the UK Household Longitudinal Study (UKHLS) for the UK, Trajectories and Origins (TeO) for France, and the German Socio-Economic Panel (SOEP) for Germany.
Note: Whiskers indicate 95% confidence intervals compared to the reference category (European and Western immigrants in the UK for panel a) and native women in the UK for panel b)). Full regression results are shown in Appendix Table A5 (immigrants) and Table A6 (descendants).

Figure 7. Hazard ratios of employment re-entry among immigrant women (panel a) and female natives and descendants (panel b) by migrant origin and parity



Source: Authors' calculations using data from the UK Household Longitudinal Study (UKHLS) for the UK, Trajectories and Origins (TEO) for France, and the German Socio-Economic Panel (SOEP) for Germany.
Note: Whiskers indicate 95% confidence intervals compared to the reference category (childless European and Western immigrants in the UK for panel a) and childless native women in the UK for panel b)).

Conclusions and Discussion

This study focused on the interrelationship between employment trajectories and childbearing among immigrant women, the female descendants of immigrants, and native-born women in the UK, France, and Germany; the three largest European immigration countries. We found that employment changes and childbearing are interrelated not only among native women but also among immigrants and their descendants. Overall, across the three countries, mothers are less likely to enter employment than childless women and, at the same time, they are also more likely to exit and less likely to re-enter the labour market. However, we not only found differences between the labour market trajectories of mothers and childless women, but also detected significant heterogeneity between migrant generations, origin groups, and host countries. These differences are more striking than the differences between the employment patterns of childless women and mothers.

First, we expected that childbearing would be associated with employment disadvantage among immigrant women from non-European countries. In other words, non-European immigrant women's employment was expected to be affected by childbearing more than those of European immigrants, who tend to be more similar to native women (H1). In this case, differences in the (re-)entry and exit rates of childless women and mothers from non-European countries would be larger than these differences between European immigrant childless women and mothers. Although in line with previous studies (Kil et al., 2018; Mikolai & Kulu, 2022b; Vidal-Coso, 2019) we found that immigrant mothers were overall less likely to (re-)enter and more likely to exit employment than childless immigrant women, we did not find support for this expectation. Contrary to our expectation, the largest difference between childless immigrant women's and mother's employment entry rates were among European women. We also found significant differences between Indian and African childless women's and mothers' entry rates in the UK and between those of North African and South-East Asian

women in France. These are also the groups who had higher employment entry rates in the first place. Regarding employment exit and re-entry, we found few significant differences between mothers and childless immigrant women.

These findings indicate that differences between the experiences of mothers and childless immigrant women primarily stem from not entering the labour market in the first place rather than from their propensity to exit and/or re-enter the labour market. We might even speculate that immigrant women who enter employment against all odds are highly selected and hence more resilient against challenges that lead to labour market exit. Particularly, certain groups of immigrant women (e.g., Pakistani and Bangladeshi women in the UK or Turkish women in Germany and France) tend not to enter the labour market. This may be due to attitudes or preferences toward women's employment among these groups or due to legal restrictions which mean that women from certain origin countries arriving as family migrants are not allowed to work. Additionally, we conclude that European immigrant women's employment entry is influenced by childbearing to a larger extent compared to non-European women because they are more likely to be employed in the first place. This is in line with what Khoudja and Platt (2018) argued for the employment transitions of Pakistani and Bangladeshi ethnic groups. Among immigrant women who are unlikely to enter the labour market, rates are low regardless of whether they have children or not. Thus, we found the largest differences in employment (re-)entry and exit risks between different origin groups of immigrant women and not between mothers and childless women.

Second, we expected that the influence of childbearing on the employment trajectories of native women and the second generation would be the same in light of the assimilation theory (H2). We found that native women as well as the descendants of immigrants from European countries in the UK and France were significantly less likely to enter employment if they had children than if they were childless. This provides partial support for our expectation

but only among the female descendants of European immigrants. However, we did not find such differences among the other groups of descendants except in Germany (among Russian and Kazakh descendants). This indicates that similarly to what we found among immigrants, the fact that some second-generation origin groups are less likely to enter employment in the first place is what leads to differences in employment trajectories and not childbearing. Hence, even in the second generation, among some groups, there may be cultural differences, differences in norms and preferences regarding employment and childbearing, or discrimination leading to some groups of second-generation women being less likely to enter the labour market in the first place. Taken together, these results indicate that heterogeneity and labour market disadvantage persist across migrant generations, thus providing evidence for uneven assimilation trajectories among different origin groups.

At the same time, results of employment exit and (re-)entry provide partial evidence for our expectation (H2) that native and second-generation women would have similar patterns. Childless women and mothers had similar rates of employment exit in the UK and France. Furthermore, all groups of descendants (except European and Western) as well as native women in the UK had similar patterns of employment re-entry (mothers less likely to re-enter employment than childless women), and this was also the case in Germany for native women and Turkish descendants. This suggests that among the female second generation, it is also primarily entry into first employment where the patterns are most different compared to native women's employment experiences. This conclusion is in line with that of Maes et al. (2021) who showed for Belgium that the lower levels of maternal employment among native women and the second generation were explained by their lower employment rates and labour market attachment already before childbirth.

The large differences we found in Germany between the exit risks of mothers and childless native as well as second generation women stand out when comparing it to patterns

in the UK and France. Nonetheless, this finding is in line with previous research showing that female labour force participation rates are considerably lower in Germany than in the UK both immediately following childbearing as well as later (Vlasblom & Schippers, 2006). In Germany, three months after childbearing, only 11% of women participated in the labour market and this has increased to 44% if women had one child and to 33% if they had two children 24 months after the birth. In the UK, these proportions were 40%, 57%, and 54%, respectively. Thus, considering previous studies and the differences in the characteristics of the welfare regime and work-family reconciliation policies across countries, a likely explanation for the German patterns is that in Germany women's attachment to the labour market is a lot weaker overall and especially after having children than in the UK and France.

Finally, we expected that differences in the nature of work-family reconciliation policies and the immigration systems across the three countries meant that (native, immigrant, and second generation) mothers in France would be the most likely to enter and the least likely to exit employment whereas they will be most likely to exit and least likely to enter in Germany; the UK was expected to take an intermediate position (H3). We found support for this expectation but only when looking at the propensity of employment exit among native women and the second generation. Indeed, exit risks were the smallest among French and the largest among German native and second-generation mothers. These findings highlight the importance of work-family reconciliation policies as well as inclusive immigration policies allowing second generation immigrants to access all benefits and welfare support that are available to their native counterparts. The results highlight that such policies are most important for mitigating the consequences of childbearing for exiting employment.

This study has some limitations. First, we focus on changes in employment status but there are other employment characteristics that are likely to be important, such as the number of working hours, the type of contract, whether the employment is full- or part-time, or whether

flexible working arrangements (e.g., teleworking) are available. Furthermore, the importance of these characteristics and their interplay with motherhood might differ between native women, immigrants, and the descendants of immigrants as well as between different origin groups of immigrants and descendants and across countries. Unfortunately, information on these important dimensions was not available in all three datasets. Second, although all efforts were made to harmonise data from the three countries, some differences in the data design present challenges. Whilst the SOEP and the UKHLS have very similar panel designs, the TeO survey is cross-sectional. Although it contains retrospective biographical information, it did not collect information on full employment histories and hence data is not available on repeated employment entries. Another limitation common to all three datasets is related to the use of retrospective information, where recall bias can be an issue. Finally, some questions remain unanswered. For example, the family of origin may play an important role in explaining women's strategies to reconcile work and family. While exploring the links between the economic behaviour of mothers and daughters before and after childbearing is beyond the scope of this study, future research could examine whether women whose mothers worked are more likely to be in the labour force and to work more hours themselves following childbearing. Similarly, the origin background of the partner is likely to influence women's propensity to enter and exit the labour market following childbirth. Last, it could be interesting to examine how access to (in)formal childcare and maternity leave uptake influences the link between childbearing and women's employment.

Taken together, we have shown that overall mothers are less likely to (re)-enter employment and more likely to exit it among native women as well as immigrants and descendants. However, the largest differences were not between mothers and childless women but between different origin groups, migrant generations, and host countries. Labour market disadvantage among all mothers (native as well as first- and second-generation women) stem

from low levels of labour market activity prior to childbearing as well as a larger propensity to exit the labour market following childbearing. Our study highlights the importance of work-family reconciliation and immigration policies for reducing labour market disadvantage among mothers overall, and particularly among immigrant and second-generation mothers. To do so, policies need to enable women to enter the labour market in the first place and to remain economically active following childbirth.

Appendix

Table A1. Number of events and person-months among immigrant women in the UK, France, and Germany by categories of covariates included in the analyses for first employment entry and re-entry

		First employment entry						Employment re-entry			
		United Kingdom		France		Germany		United Kingdom		Germany	
		Events	Person months	Events	Person months	Events	Person months	Events	Person months	Events	Person months
Time since migration	0-1 year	761	15,140	631	27,580	757	12,975				
	1-3 years	207	23,463	373	45,700	74	14,746				
	3-5 years	174	17,625	296	34,314	97	11,402				
	5+ years	286	68,072	634	119,509	272	32,483				
Age at migration	15-19	244	33,827	295	41,873	221	25,912				
	20-24	472	46,843	675	85,693	260	20,654				
	25+	712	43,630	964	99,536	719	25,040				
Time since employment exit	0-1 year							226	6,672	304	8,503
	1-3 years							137	7,703	142	8,120
	3-5 years							59	4,684	64	4,781
	5+ years							82	12,055	92	8,596
Age at employment exit	<25							108	7,208	10	274
	25-29							136	9,163	76	5,003
	30-34							110	7,263	159	9,425
	35+							150	7,480	357	15,298
Migrant origin	1G Europe & Western	583	18,773					195	8,964		
	1G India	230	16,964					63	4,853		
	1G Pakistan	68	31,738					17	2,056		
	1G Bangladesh	48	25,714					15	1,619		
	1G Caribbean	92	3,663					35	2,160		
	1G Africa	407	27,449					179	11,462		

	1G North Africa			375	79,106						
	1G Sub-Saharan Africa			513	51,168						
	1G South-East Asia			277	24,897						
	1G Turkey			100	28,928						
	1G Southern Europe			273	17,373						
	1G Other Europe			396	25,630						
	1G Poland					351	13,804			181	7,155
	1G Russia/Kazakhstan					521	24,224			270	14,354
	1G Southern Europe					181	7,677			74	3,043
	1G Turkey					147	25,901			77	5,447
Migration cohort	1956-1989	326	43,875	913	135,794	109	10,713	125	13,136	61	3,986
	1990-1999	297	37,263	588	55,700	465	35,223	135	8,470	239	13,291
	2000+	805	43,162	433	35,608	626	25,670	244	9,508	302	12,723
Parity	No child	906	34,900	859	50,584	475	21,895	148	4,707	81	2,938
	One or more children	522	89,399	1,075	176,518	725	49,711	356	26,406	521	27,062
Partnership status	Single	570	25,728	429	31,973	252	15,176	77	3,248	37	1,984
	Cohabiting	136	3,921	189	12,335	140	4,032	51	1,782	54	2,347
	Married	600	85,858	1,150	167,585	725	49,354	317	22,484	458	23,428
	Separated	122	8,792	166	15,209	83	3,044	59	3,600	53	2,241
Level of education	Low	458	79,318	753	136,884	435	39,746	153	14,844	205	11,628
	Medium	347	22,328	651	67,104	451	21,416	95	4,941	236	11,454
	High	623	22,654	530	23,114	314	10,444	256	11,328	161	6,917
Total		1,428	124,299	1,934	227,102	1,200	71,606	504	31,113	602	30,000

Source: Authors' calculations using data from the UK Household Longitudinal Study (UKHLS) for the UK, Trajectories and Origins (TeO) for France, and the German Socio-Economic Panel (SOEP) for Germany.

Table A2. Number of events and person-months among immigrant women in the UK, France, and Germany by categories of covariates included in the analyses for employment exit

		First employment exit					
		United Kingdom		France		Germany	
		Events	Person months	Events	Person months	Events	Person months
Time since start of employment	0-1 year	200	15,248	45	21,862	159	12,477
	1-3 years	162	23,489	174	37,344	233	19,238
	3-5 years	90	18,168	128	30,915	152	13,668
	5+ years	227	74,962	299	131,263	226	37,153
Age at start of employment	<20	76	18,780	46	21,699	32	3,856
	20-24	208	43,650	158	64,554	213	20,593
	25-30	203	35,462	203	57,796	225	26,054
	30+	192	33,975	239	77,335	300	32,033
Migrant origin	1G Europe & Western	250	52,690				
	1G India	86	22,991				
	1G Pakistan	39	4,263				
	1G Bangladesh	31	1,920				
	1G Caribbean	43	16,242				
	1G Africa	230	33,763				
	1G North Africa			137	40,846		
	1G Sub-Saharan Africa			169	44,374		
	1G South-East Asia			102	37,382		
	1G Turkey			41	9,895		
	1G Southern Europe			70	47,970		
	1G Other Europe			127	40,917		
	1G Poland					225	22,989
	1G Russia/Kazakhstan					343	35,668

	1G Southern Europe					98	13,876
	1G Turkey					104	10,004
Migration cohort	1956-1989	167	59,204	336	154,939	72	12,713
	1990-1999	174	30,816	203	51,058	300	38,374
	2000+	338	41,846	107	15,387	398	31,449
Parity	No child	289	51,090	118	50,247	178	21,329
	One or more children	390	80,776	528	171,137	592	61,207
Partnership status	Single	131	24,630	54	25,311	78	9,522
	Cohabiting	70	11,600	62	16,214	79	8,600
	Married	409	81,990	441	152,277	557	57,928
	Separated	69	13,646	89	27,582	56	6,486
Level of education	Low	245	43,563	282	101,244	278	29,443
	Medium	137	24,546	207	70,184	294	31,832
	High	297	63,757	157	49,955	198	21,262
Total		679	131,866	646	221,383	770	82,536

Source: Authors' calculations using data from the UK Household Longitudinal Study (UKHLS) for the UK, Trajectories and Origins (TeO) for France, and the German Socio-Economic Panel (SOEP) for Germany.

Table A3. Number of events and person-months among the female descendants of immigrants and native women in the UK, France, and Germany by categories of covariates included in the analyses for first employment entry and re-entry

		First employment entry						Employment re-entry			
		United Kingdom		France		Germany		United Kingdom		Germany	
		Events	Person months	Events	Person months	Events	Person months	Events	Person months	Events	Person months
Time since leaving education	0-1 year	8,279	104,693	2,721	47,894	9,881	102,667				
	1-3 years	3,268	69,210	1,505	54,845	243	35,585				
	3-5 years	469	29,911	605	30,383	195	27,289				
	5+ years	605	134,539	705	97,794	707	136,722				
Age at leaving education	<20	10,229	290,867	1,783	82,090	6,859	215,823				
	20+	2,392	47,486	3,753	148,827	4,167	86,440				
Time since employment exit	0-1 year							2,370	89,660	2,938	82,045
	1-3 years							1,654	124,297	1,363	79,435
	3-5 years							856	91,458	607	50,217
	5+ years							2,445	297,477	1,166	139,056
Age at employment exit	<25							1,511	133,879	295	10,349
	25-29							2,604	226,788	1,983	112,353
	30-34							1,631	135,697	1,728	119,625
	35+							1,579	106,528	2,068	108,426
Migration background	Natives	10,547	257,498	1,588	48,510	9,394	263,106	6,208	516,442	5,250	312,446
	2G Europe & Western	817	22,981					470	36,479		
	2G India	234	8,107					136	9,241		
	2G Pakistan	216	13,326					90	11,318		
	2G Bangladesh	155	8,450					65	5,744		
	2G Caribbean	330	14,840					191	14,148		
	2G Africa	322	13,152					165	9,521		
	2G North Africa			1,224	75,378						

	2G Sub-Saharan Africa			360	23,246						
	2G South-East Asia			320	12,715						
	2G Turkey			220	12,361						
	2G Southern Europe			1,438	41,435						
	2G Other Europe			386	17,272						
	2G Poland					311	5,822			183	10,209
	2G Russia/Kazakhstan					331	8,117			144	5,716
	2G Southern Europe					447	8,231			223	8,164
	2G Turkey					543	16,987			274	14,217
Birth cohort	1940-49	2,137	57,347	91	3,894	550	12,865	1,392	178,561	270	48,139
	1950-59	2,394	72,634	710	35,533	880	14,114	1,502	147,243	459	56,371
	1960-69	2,631	73,097	1,637	75,770	2,515	99,005	1,718	133,319	1,648	109,239
	1970-79	2,287	58,252	1,929	72,768	2,894	100,368	1,341	89,654	1,980	88,557
	1980-89	1,781	37,414	1,157	42,550	2,362	49,272	910	42,068	1,243	37,867
	1990+	1,391	39,610	12	402	1,825	26,639	462	12,048	474	10,580
Parity	No child	12,152	242,852	4,817	134,975	9,925	174,739	2,441	95,592	1,900	55,306
	One or more children	469	95,500	719	95,941	1,101	127,524	4,884	507,299	4,174	295,446
Partnership status	Single	11,237	212,494	3,530	102,885	8,830	144,039	1,585	71,379	1,329	45,430
	Cohabiting	643	25,094	903	31,820	993	36,699	912	62,058	1,017	42,646
	Married	557	81,249	829	77,774	897	100,531	3,959	402,554	3,039	234,098
	Separated	184	19,515	274	18,437	306	20,994	869	66,900	689	28,578
Level of education	Low	7,494	184,147	827	82,895	1,934	86,642	3,681	398,535	842	70,193
	Medium	2,374	73,041	2,863	110,982	6,638	165,832	2,361	149,762	3,845	224,871
	High	2,753	81,166	1,846	37,040	2,454	49,789	1,283	54,594	1,387	55,688
Total		12,621	338,353	5,536	230,916	11,026	302,263	7,325	602,891	6,074	350,752

Source: Authors' calculations using data from the UK Household Longitudinal Study (UKHLS) for the UK, Trajectories and Origins (TeO) for France, and the German Socio-Economic Panel (SOEP) for Germany.

Table A4. Number of events and person-months among the female descendants of immigrants and native women in the UK, France, and Germany by categories of covariates included in the analyses for employment exit

		First employment exit					
		United Kingdom		France		Germany	
		Events	Person months	Events	Person months	Events	Person months
Time since start of employment	0-1 year	1,146	157,000	202	62,924	370	125,639
	1-3 years	1,639	268,811	527	109,285	1,459	211,496
	3-5 years	1,241	229,380	360	91,974	1,101	168,784
	5+ years	5,776	1,358,361	1,071	442,959	4,504	664,677
Age at start of employment	<20	7,436	1,509,092	828	245,794	2,057	315,332
	20-24	1,992	422,172	1,013	339,721	4,281	705,453
	25-30	191	48,518	264	99,597	761	123,980
	30+	183	33,770	55	22,029	335	25,830
Migration background	Natives	8,273	1,733,129	603	241,198	6,376	1,043,437
	2G Europe & Western	630	132,793				
	2G India	164	34,319				
	2G Pakistan	155	15,705				
	2G Bangladesh	102	10,169				
	2G Caribbean	251	52,656				
	2G Africa	227	34,783				
	2G North Africa			513	123,485		
	2G Sub-Saharan Africa			113	28,181		
	2G South-East Asia			99	31,658		
	2G Turkey			118	15,990		
	2G Southern Europe			556	213,150		
	2G Other Europe			158	53,480		
	2G Poland					212	31,863

	2G Russia/Kazakhstan					200	22,306
	2G Southern Europe					278	37,057
	2G Turkey					368	35,933
Birth cohort	1940-49	2,139	389,892	44	20,909	371	100,506
	1950-59	2,120	460,506	318	165,076	585	172,779
	1960-69	2,050	574,010	748	291,027	1,903	360,212
	1970-79	1,618	394,273	764	190,336	2,276	310,869
	1980-89	1,161	159,063	283	39,713	1,547	160,240
	1990+	714	35,809	3	81	752	65,989
Parity	No child	5,797	1,214,174	847	318,629	3,149	804,181
	One or more children	4,005	799,378	1,313	388,513	4,285	366,415
Partnership status	Single	2,760	691,303	456	181,101	2,089	491,680
	Cohabiting	1,225	255,913	396	117,198	1,239	204,709
	Married	5,039	876,787	1,070	322,302	3,555	382,868
	Separated	778	189,549	238	86,540	551	91,339
Level of education	Low	5,231	964,362	478	116,401	1,188	142,795
	Medium	2,054	400,652	1,290	374,068	4,656	733,287
	High	2,517	648,539	392	216,673	1,590	294,514
Total		9,802	2,013,552	2,160	707,142	7,434	1,170,596

Source: Authors' calculations using data from the UK Household Longitudinal Study (UKHLS) for the UK, Trajectories and Origins (TeO) for France, and the German Socio-Economic Panel (SOEP) for Germany.

Table A5. Hazard ratios (HR) of first employment entry, employment exit, and employment re-entry among immigrant women

		First employment entry			First employment exit			Employment re-entry		
		HR	Std. Err.	Sig	HR	Std. Err.	Sig	HR	Std. Err.	Sig
Time since migration	0-1 year (ref)	1								
	1-3 years	0.238	0.011	***						
	3-5 years	0.304	0.015	***						
	5+ years	0.257	0.011	***						
Age at migration	15-19 (ref)	1								
	20-24	1.248	0.059	***						
	25+	1.586	0.077	***						
Time since start of employment	0-1 year (ref)				1					
	1-3 years				0.893	0.058				
	3-5 years				0.771	0.056	***			
	5+ years				0.483	0.033	***			
Age at start of employment	<20 (ref)				1					
	20-24				0.840	0.080				
	25-30				0.780	0.076	*			
	30+				0.627	0.062	***			
Time since employment exit	0-1 year (ref)							1		
	1-3 years							0.551	0.042	***
	3-5 years							0.433	0.044	***
	5+ years							0.309	0.029	***
Age at employment exit	<25 (ref)							1		
	25-29							0.831	0.100	
	30-34							0.820	0.100	
	35+							0.964	0.116	
Migrant origin	1G Europe & Western (ref)	1			1			1		
	1G India	0.572	0.046	***	0.749	0.095	*	0.694	0.102	*
	1G Pakistan	0.143	0.019	***	1.806	0.315	**	0.422	0.108	**

	1G Bangladesh	0.149	0.023	***	2.673	0.514	***	0.456	0.124	**
	1G Caribbean	1.161	0.132		0.753	0.127		0.888	0.166	
	1G Africa	0.684	0.045	***	1.422	0.132	***	0.772	0.082	*
	1G North Africa	0.295	0.021	***	0.860	0.096				
	1G Sub-Saharan Africa	0.518	0.033	***	0.894	0.094				
	1G South-East Asia	0.502	0.038	***	0.838	0.103				
	1G Turkey	0.241	0.027	***	0.999	0.173				
	1G Southern Europe	0.888	0.069		0.405	0.057	***			
	1G Other Europe	0.569	0.038	***	0.799	0.089	*			
	1G Poland	0.911	0.062		1.584	0.151	***	0.964	0.108	
	1G Russia/Kazakhstan	0.882	0.055	*	1.623	0.145	***	0.771	0.081	*
	1G Southern Europe	0.813	0.070	*	1.285	0.155	*	0.896	0.127	
	1G Turkey	0.389	0.037	***	1.921	0.234	***	0.786	0.111	
Migration cohort	1956-1989 (ref)	1			1			1		
	1990-1999	0.966	0.041		1.641	0.106	***	1.437	0.138	***
	2000+	1.024	0.044		2.447	0.165	***	1.664	0.153	***
Parity	No child (ref)	1			1			1		
	One or more children	0.617	0.024	***	1.320	0.079	**	0.832	0.072	*
Partnership status	Single (ref)	1			1			1		
	Cohabiting	1.378	0.078	***	1.276	0.121	*	1.070	0.150	
	Married	1.103	0.049	*	1.265	0.096	**	1.035	0.117	
	Separated	1.285	0.082	***	1.247	0.122	*	1.210	0.173	
Level of education	Low (ref)	1			1			1		
	Medium	1.233	0.047	***	0.904	0.050		1.218	0.097	*
	High	1.984	0.081	***	0.841	0.049	**	1.410	0.107	***
Constant		0.041	0.003	***	0.004	0.001	***	0.028	0.004	***

Source: Authors' calculations using data from the UK Household Longitudinal Study (UKHLS) for the UK, Trajectories and Origins (TeO) for France, and the German Socio-Economic Panel (SOEP) for Germany.

Table A6. Hazard ratios (HR) of first employment entry, employment exit, and employment re-entry among the female descendants of immigrants and native women

		First employment entry			First employment exit			Employment re-entry		
		HR	Std. Err.	Sig	HR	Std. Err.	Sig	HR	Std. Err.	Sig
Time since leaving education	0-1 year (ref)									
	1-3 years	0.424	0.007	***						
	3-5 years	0.209	0.006	***						
	5+ years	0.091	0.003	***						
Age at leaving education	<20 (ref)									
	20+	1.007	0.017							
Time since start of employment	0-1 year (ref)									
	1-3 years				1.254	0.037	***			
	3-5 years				1.063	0.034				
	5+ years				0.721	0.022	***			
Age at start of employment	<20 (ref)									
	20-24				0.927	0.018	***			
	25-30				0.863	0.030	***			
	30+				1.072	0.049				
Time since employment exit	0-1 year (ref)									
	1-3 years							0.589	0.014	***
	3-5 years							0.464	0.014	***
	5+ years							0.439	0.011	***
Age at employment exit	<25 (ref)									
	25-29							1.080	0.032	**
	30-34							1.079	0.036	*
	35+							1.263	0.043	***
Migration background	UK natives (ref)									
	2G Europe & Western	0.860	0.031	***	1.085	0.045	*	0.965	0.046	

	2G India	0.679	0.045	***	0.957	0.076		0.990	0.086	
	2G Pakistan	0.491	0.034	***	1.458	0.119	***	0.497	0.053	***
	2G Bangladesh	0.509	0.041	***	1.326	0.133	**	0.596	0.075	***
	2G Caribbean	0.689	0.039	***	1.165	0.075	*	0.829	0.061	*
	2G Africa	0.602	0.034	***	1.268	0.086	***	0.925	0.073	
	French natives	0.954	0.028		0.544	0.024	***			
	2G North Africa	0.601	0.019	***	0.815	0.038	***			
	2G Sub-Saharan Africa	0.482	0.027	***	0.744	0.071	**			
	2G South-East Asia	0.632	0.037	***	0.631	0.064	***			
	2G Turkey	0.605	0.042	***	0.999	0.094				
	2G Southern Europe	1.004	0.030		0.547	0.025	***			
	2G Other Europe	0.769	0.041	***	0.681	0.055	***			
	German natives	0.983	0.015		1.305	0.027	***	0.927	0.020	**
	2G Poland	1.107	0.064		1.406	0.099	***	0.995	0.076	
	2G Russia/Kazakhstan	0.992	0.056		1.109	0.082		0.957	0.083	
	2G Southern Europe	1.047	0.051	**	1.333	0.083	***	1.159	0.080	*
	2G Turkey	0.859	0.038		1.434	0.079	***	0.955	0.061	
Birth cohort	1940-49 (ref)									
	1950-59	0.908	0.023	***	0.822	0.022	***	1.167	0.039	**
	1960-69	0.742	0.017	***	0.893	0.023	***	1.448	0.046	***
	1970-79	0.699	0.017	***	1.224	0.032	**	1.789	0.058	***
	1980-89	0.669	0.017	***	1.963	0.058	***	2.271	0.083	***
	1990+	0.565	0.015	***	3.562	0.129	***	2.718	0.129	***
Parity	No child (ref)									
	One or more children	0.624	0.018	***	1.621	0.030	***	0.699	0.017	***
Partnership status	Single (ref)									
	Cohabiting	1.072	0.024	**	1.449	0.036	***	0.986	0.031	
	Married	0.821	0.023	***	2.061	0.047	***	0.890	0.026	***
	Separated	1.083	0.042	*	1.412	0.045	***	1.151	0.040	***
Level of education	Low (ref)									

	Medium	1.080	0.016	***	0.873	0.017	***	1.427	0.033	***
	High	1.174	0.022	***	0.668	0.015	***	1.779	0.044	***
Constant		0.117	0.002	***	0.003	0.000	***	0.016	0.001	***

Source: Authors' calculations using data from the UK Household Longitudinal Study (UKHLS) for the UK, Trajectories and Origins (TeO) for France, and the German Socio-Economic Panel (SOEP) for Germany.

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