

# Family trajectories among immigrants and their descendants in three European countries

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This study investigates partnership changes and childbearing among immigrants and their descendants in the UK, France and Germany born between 1950 and 1999. While there is a growing literature on immigrant family in Europe, little (if any) research has examined their fertility and partnership histories in tandem. We focus on two critical stages of individuals' family life course: first, pathways to family formation (e.g. transitions from singlehood to cohabitation, marriage or a birth outside of a union), and second, the evolution of individuals' family lives once they are in a union (e.g. having a(nother) child or experiencing union dissolution). We apply a series of competing-risks Poisson regression models to combined longitudinal data from the three countries, which are in the form of exposures (i.e. risk time) and occurrences (events). Our analysis shows significant diversity among immigrants and their descendants in Europe. The Caribbean population in the UK, Southern Europeans in France and Germany show family patterns similar to those of the native populations: many of them cohabit prior to marriage; some experience dissolution of their first unions; some have a birth outside of a union; their fertility levels in unions are similar to those of the natives. In contrast, South Asians in the UK and the Turkish population in France and Germany exhibit conservative family behaviour: they have high marriage rates and low separation levels; childbearing outside of marriage is uncommon. Many have three children. The differences between migrant groups persist even when adjusting for educational level. These findings suggest that cultural and normative factors shape family behaviour of immigrants and their descendants, and that some patterns may persist over migrant generations (e.g. preference for marriage among South Asians in the UK).

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## *Introduction*

Western and Northern European countries have experienced significant immigration streams over the past three decades. Southern Europe witnessed large migration waves in the first decade of this century. Although immigration streams rapidly declined during the economic recession, the region has still received more people than lost over the last decade (EAG 2019). Interestingly, the magnitude of the net migration in Europe has been largely similar to that in Northern America over the past decades, but population growth due to migration has been lower than in Australia and New Zealand; Eastern Europe is the only region in Europe that has lost population through migration (EAG 2019). The share of descendants of immigrants has also gradually increased in Western and Northern European countries. Although precise figures are not always available, immigrants and their descendants form about one-fourth to one-fifth of the population in Western and Northern Europe, which has been the destination of migration already since the 1950s or 1960s (Andersson 2004).

There is a large literature investigating integration of post-WWII labour migrants and recent migrants to Europe. Various aspects of immigrant integration have been investigated including employment and education, housing and residence, citizenship, health (Adsera and Chiswick 2007; Rendall et al 2010). There is also an increasing body of demographic literature on immigrant family and fertility. One research stream has investigated partnership patterns among immigrants, including the spread and fate of mixed marriages (Dribe and Lundh 2012). Another strand has examined immigrant fertility and compared childbearing patterns to those of the native-born population (Andersson 2004; Adsera 2011). Recent research has extended previous studies by also looking at changes across migrant generations, differences between countries of origin and destination. Overall, research has shown that there is a significant heterogeneity in family and fertility patterns among immigrants, which vary across migrant groups and between countries. Descendants of immigrants often exhibit family patterns similar to those of the native population (with two native-born parents), but for some groups they are still more similar to those of immigrants rather than the native population (Kulu et al. 2017).

This study investigates partnership changes and childbearing among immigrants and their descendants in three European countries: the UK, France and Germany. We develop previous research in four ways. First, we simultaneously study partnership changes and childbearing. Most studies to date have either examined partnership changes among immigrants or their fertility; to the best of our knowledge, no study has investigated these together. Partnership changes and childbearing are interrelated in individuals' lives – they are different sides of the same coin – and should thus be investigated in tandem. With increased family complexity and diversity (Thomson 2014) simultaneous analysis of partnership changes and fertility are of critical importance because behind the same childbearing patterns there may be different partnership trajectories and statuses. In the past, natives and immigrants had similar pathways to family formation: they married first and had children within marriage but immigrants, especially those from low-income countries, had more children. The situation may have changed. For example, similarly to the past, one group may marry first and then have children within marriage (e.g. follow a conservative family formation pathway), whereas another group may cohabit first, have a child, marry, and have another child. Yet another group may have children in a union, but experience separation thereafter. We argue that with increased family complexity and diversity studying partnership and fertility pathways is critical to understand how migrants and their descendants' lives evolve and whether and how these differ from those of the native population.

Second, we move beyond an one-event-at-a-time approach by investigating a significant part of migrants' family life course, i.e. transitions out of singlehood (e.g. forming a marital or non-marital

union, having a child) and transitions when people are already partnered (e.g. having a(nother) child or separating). Although recent longitudinal research has investigated migrant life trajectories, it is still common to examine only one life event in analytical studies, which move beyond the description of life trajectories. Third, we distinguish between the first, the 1.5 and the second generation. There is an increasing number of studies investigating family and fertility patterns among the descendants of immigrants; however, very few (if any) have distinguished the 1.5 generation; they are either included among immigrants (i.e. foreign-born population) or categorised as the descendants of immigrants. We argue that it is important to study patterns among those who arrived as children along with those who moved as adults and those who were born in destination countries to migrant parents. Although the 1.5 generation has mostly grown up in the destination country, their country of origin/birth may still have played a significant role in their lives. Whether we will observe a gradual change in family patterns between immigrants, the 1.5 generation and the descendants of immigrants or a clean break between the groups will significantly improve our understanding of the factors shaping immigrant and minority integration.

Finally, we propose an approach to analyse time-to-event data in comparative studies when sharing individual-level data is not possible for legal and confidentiality reasons. Previous studies have shown how to analyse life events (e.g. fertility or migration) and compare the patterns and their determinants across countries (Kulu et al. 2017). We extend this approach to a competing-risks framework or the situation where people can experience multiple life events (e.g. form a union or have a child).

#### *Immigrant and ethnic minority integration*

Migration research has been guided by two approaches to immigrant and ethnic minority integration: a) the *classical theory of assimilation*; and b) the *segmented assimilation theory*. The classical approach assumes that over time and generations, immigrant and minority populations become increasingly similar to the native population, ultimately becoming indistinguishable from them (Alba and Nee 1997). Although most recent studies in Europe use the notion of 'integration' instead of 'assimilation', integration is normally perceived as a process in which immigrant values and behaviour converge towards the average of the host society (Safi 2008) or, as the revised assimilation theory states, towards their peers in the majority groups who are similar in socio-economic origin, birth cohort etc (Alba and Nee 2003; Alba et al. 2009). In contrast, the segmented assimilation theory states that immigrants and their descendants adopt different integration pathways. Certain groups experience cultural and economic integration into the middle-class and upward social mobility. Other groups assimilate into the 'underclass': they experience cultural assimilation, but this is not coupled with socioeconomic or structural integration. Finally, a fraction of migrant and minority groups experience economic integration into the middle class but experience a delayed acculturation, resulting in the preservation of the immigrants' cultural characteristics (Portes 1995; Portes et al. 2009).

Although the two approaches have been developed to measure immigrant integration in holistic terms including both economic, political, social and cultural aspects of individuals' lives, they can be also applied to understand patterns and changes in various domains of migrants' life course including family life. Next, we review recent research on partnership changes and fertility among immigrants and their descendants in (selected) European countries.

#### *Partnership changes*

European countries have witnessed significant partnership changes over the past decades. Marriages have been postponed, non-marital cohabitation has become common; divorce, separation and re-marriage levels have also increased (Thomson 2014). Nordic countries were the first to experience

significant partnership changes, followed soon by Western European countries and later by Southern and Eastern Europe (Thomson 2014). Substantial partnership changes over time and across cohorts and new patterns are important to consider when comparing partnership patterns among immigrants and their descendants to those of the native population. Pailhé (2015) showed that in France the native French population has experienced a clear change from direct marriage to cohabitation as the main mode of union formation, whereas many immigrants still exhibit a high likelihood of marrying directly without prior cohabitation, particularly those from Turkey and North Africa. The descendants of immigrants showed lower rates of partnership formation than immigrants, suggesting a postponement of union formation among the immigrants' descendants. The analysis also showed high rates of cohabitation among the descendants of immigrants from Southern European countries, indicating increased similarity with patterns among the native French population. In contrast, early and universal marriage remains the dominant pattern among the descendants of immigrants from Turkey and North Africa.

The new partnership forms have also spread rapidly in other Northern and Western European countries in the last decades. Hannemann and Kulu (2015) investigated partnership formation among immigrants and their descendants in the UK and showed that similarly to France cohabitation has become the dominant mode of union formation among the native population. In contrast, cohabitation remains rare among immigrants from South Asia and their descendants; many of them marry directly, although the share of individuals who cohabit or experience separation is larger among UK-born South Asians than immigrants. Migrants from Western European countries to the UK show partnership behaviours similar to those of the native UK population. Specific patterns were observed among Caribbean immigrants and also among their descendants. The Caribbean population exhibit high cohabitation, low marriage, and high divorce risk. The authors attributed these to the specific notion of family in Caribbean countries.

Similar diversity of partnership forms has been observed in Germany. Windzio and Aybek (2015) showed that the relationship between leaving home and marriage has become weaker among the native German population over time, whereas there has been little (if any) change among the population of Turkish origin in Germany, especially among women. Many of them leave parental home to marry. The analysis of living arrangements by Kuhnt and Krapf (2020) supported these findings. Marriage is the most common partnership form among immigrants from Turkey, but also among ethnic German immigrants from the former Soviet Union. The share of cohabiting individuals remains very low among the descendants of immigrants from Turkey; however, interestingly, they are more likely than immigrants to live in an independent household without a partner in their twenties. The authors concluded that this could be a sign of changing partnership arrangements in an ethnic group who still discourages cohabitation.

Several other studies from Northern and Western Europe support heterogeneity of partnership patterns among migrant groups and gradual changes across migrant generations. A study by Andersson, Obućina, and Scott (2015) on first marriage, divorce, and re-marriage among immigrants and their descendants in Sweden showed that the marriage level of immigrants varies significantly across the different countries of origin, but most immigrant groups exhibit divorce risks similar to or higher than those of the native Swedish population, which the authors partly attributed to the disrupting effect of the migration process. However, immigrants from Turkey show high marriage and low divorce rates, suggesting that factors related to socialisation also shape partnership patterns. Most Swedish-born descendants of migrants exhibit marriage rates that are similar to those of native Swedes, whereas descendants of immigrants from Turkey and the Arab Middle East have high marriage rates, supporting the importance of the group-specific patterns. Kalmijn and Kraaykamp (2018) showed that Moroccan and Turkish migrants have considerably more conservative values

about marriage than natives in the Netherlands, but there is more variation within the second generation. Migrant children who were poorly integrated socially and culturally in their youth, have more conservative values about marriage than well-integrated children.

### *Childbearing trends and patterns*

Childbearing trends and patterns have significantly changed in Europe over the past decades. After the decades of low period fertility due to the postponement of parenthood fertility levels increased in Northern and Western European countries in the first decade of this century (Berrington et al. 2021); but they remained stable in Central and Southern European countries. However, over the past decade, fertility levels have gradually declined in most European countries (Berrington et al. 2021). Much of research on immigrant fertility has investigated whether and how childbearing levels differ between immigrants and natives in destination societies. Longitudinal research in the past decade has disaggregated fertility patterns by analysing fertility differences between immigrants and natives by birth order. What have been the findings of recent research?

Coleman and Dubuc (2010) investigated fertility among ethnic minority women in the United Kingdom and showed that the total fertility has significantly declined among ethnic minority populations over the last decades. Further, the total fertility of the descendants of immigrants is lower than that of immigrant women born outside the United Kingdom. However, although fertility levels are low among women of Indian and black Caribbean descent, fertility is relatively high among women of Pakistani and Bangladeshi origin. Kulu and Hannemann (2016) calculated parity-specific fertility rates to advance our understanding of fertility differences between natives, immigrants and their descendants in the UK. The study supported that many immigrant groups have higher fertility than the native population in the United Kingdom and that descendants of immigrants have lower fertility rates than immigrants. However, fertility levels are relatively high among women of Pakistani and Bangladeshi origin. Further analyses revealed that there is little variation in first- and second-birth rates between the groups, whereas third- and fourth-birth rates are relatively high among Pakistani and Bangladeshi women born in the UK. The authors explained high fertility among women of Pakistani and Bangladeshi origin by normative factors, including religiosity and the size of the family of origin. Similarly, Wilson and Kuha (2018) reported high fertility among the descendants of Pakistani and Bangladeshi immigrants and attributed this to the factors related to childhood socialisation in residentially segregated ethnic communities.

Pailhé (2017) compared the fertility of descendants of immigrants to that of native women in France by analysing the transition to first, second, and third births among the descendants of immigrants from the Maghreb region, sub-Saharan Africa, Turkey, and Southeast Asia. The study showed that the fertility behaviour of most groups of descendants of immigrants is converging towards that of native French women, although this convergence varies by group of origin. Women with Southeast Asian, sub-Saharan, and North African backgrounds postpone first and second births; they form unions later and most adopt the French model of late childbearing and comparatively small family size. In contrast, women of Turkish origin enter motherhood earlier and have higher first- and second-birth rates than native French women. Interestingly, once compositional differences are controlled for (especially cultural factors such as the language spoken at home and the number of siblings), these differences disappear. A study by Van Landschoot, de Valk, and van Bavel (2017) on Belgium supported that women of Turkish, but also of Moroccan origin have higher fertility than native women. The study demonstrated the importance of the spouse's background in explaining large families among some descendant groups: women of Turkish and Moroccan origin in endogamous unions exhibit higher rates of second and subsequent births than those who are in exogamous unions, although the latter are still a small group.

Higher fertility levels among Turkish population has been also reported in other countries. Milewski (2010) investigated childbearing patterns of the descendants of immigrants in Germany. The analysis showed little differences in fertility behaviour between native Germans and the descendants of immigrants from Southern European countries. In contrast, the descendants of migrants from Turkey exhibit distinct fertility patterns: they have their first child much earlier than native Germans and the likelihood of having a child and having three children was much higher in comparison to the native population. The study by Krapf and Wolf (2015) supported previous findings. They compared fertility of Turkish immigrants who moved as children and of the descendants of immigrants to that of native Germans. Women of Turkish origin who moved as children have significantly higher first- and second-birth rates than native Germans, whereas fertility levels of the descendants are in-between. Interestingly, further analysis showed that highly educated women of Turkish origin exhibit first- and second-birth rates similar to those of native Germans.

Recent studies show that the fertility levels of the descendants of immigrants from high-fertility countries are usually lower than that of their parents, but for some non-Western groups, fertility levels remain elevated. However, interestingly, the analysis by Andersson, Persson, and Obućina (2017) partly challenges some previous findings. The analysis of the childbearing behaviour of immigrants' descendants in Sweden showed that they are less likely to have a first birth than those who have two Swedish-born parents. The second-birth rates are also lower among almost all second-generation groups. However, many descendants of immigrants who have a second child display elevated third-birth rates. The authors argue that the depressed first- and second-birth rates among some descendant groups may reflect unrealised fertility intentions because of the challenges that young adults from minority families face when seeking to establish themselves as adults and to start a family. Similarly, Dupray and Pailhé (2018) observed low first-birth rates for the descendants of immigrants from North Africa in France. They have a first child later than native French women, which is attributed to employment uncertainty and the high level of unemployment among immigrants and their descendants.

To sum up, previous research has shown that there is a significant heterogeneity in partnership and childbearing patterns among immigrants and their descendants in Northern and Western Europe. Characteristic to immigrants from Turkey, South Asia and also North Africa is early and universal marriages, whereas cohabitation is spread among migrants from Caribbean, sub-Saharan countries and also from Southern Europe. Immigrants from countries with conservative family patterns have their first child earlier than those from other regions; there is little difference in the second birth rates (as many women with a child have another child), but most immigrant women with two children are more likely to have a third child than native population. The descendants of immigrants exhibit partnership and fertility patterns, which are similar to those of native populations. However, there are a few notable differences. Some groups, especially of Pakistani, Bangladeshi and Turkish descent have relatively high first- and third-birth rates, whereas some groups display low first birth rates suggesting the postponement of parenthood possibly because of discrimination on labour market. Most studies show that education and employment-related factors explain little differences in partnership and childbearing patterns across groups; important are family of origin and cultural-normative factors (Kulu et al. 2017). Still patterns among highly educated immigrants' descendants are often similar to those of native population (Krapf and Wolf 2015).

This study investigates partnership and childbearing patterns among immigrants and their descendants in three European countries: the UK, France and Germany. All three countries were destinations of post-WWII migration and have thus not only significant migrant populations, but also large communities of the descendants of immigrants. This makes them attractive for research on immigrant and ethnic minority integration over generations. The main novelties of the study are

simultaneous analysis of partnership and childbearing patterns, the critical stages in migrants' lives and the comparison of immigrants (1st generation), their children (1.5 G) and descendants of immigrants (2<sup>nd</sup> G). Based on previous research we expect to observe the following. First, we expect to observe a significant heterogeneity in pathways to partnership and family formation and subsequent transitions. On the one hand, immigrants from countries with conservative partnership forms and relatively high fertility are expected to marry first and then have a child. Once married and parents they are likely to have another child and many subsequently a third child. In contrast, those from countries with less conservative family forms and low fertility are expected to cohabit first, and then have a child, often in a non-marital union. Some are expected to have another child, whereas some experience separation or divorce. However, it would be important to determine differences across groups, for example, in the likelihood of having a child within or outside of a union and in the propensity of having a child in a union or of experiencing separation instead. Second, we expect to observe a gradual change across migrant generations. Immigrants who arrived as children are expected to exhibit pathways more similar to those of natives than immigrants; the partnership and childbearing patterns among the descendants of immigrants, in turn, are more similar to natives than those of the 1.5 generation. Finally, we also expect to observe some country differences, e.g. with cohabitation being more spread in France than in the UK and Germany and fertility levels lower in Germany than in the two other countries. However, it is interesting to determine the extent to which immigrants and especially their descendants exhibit some of these differences, e.g. patterns among people of Turkish descent being slightly different in France and Germany.

## **Data**

We combined data from three different sources. We focus on men and women, born between 1950 and 1999. We include individuals born in the destination country with no migration background ("natives"), those born abroad who migrated at age 16 or older ("first generation"), those who migrated before age 16 ("1.5 generation"), and those born in the destination country to at least one foreign-born parent ("second generation"). We used both prospective and retrospective partnership and fertility histories of individuals to fully capture their life course.

For the United Kingdom, we used 9 waves (2009-2019) of Understanding Society, the UK Household Longitudinal Study (University of Essex, 2020). This household panel study interviews all adult household members in over 30,000 households across the United Kingdom to capture family formation and relationships. To facilitate the study of the continuously changing British population, Understanding Society includes immigrant ethnic minority boost samples to ensure a sufficient number of individuals from the largest migrant groups (Indian, Pakistani, Bangladeshi, Caribbean, and African background). Parents' birthplace (with the mother's preferred) and self-reported ethnicity are used to identify second generation individuals. The UK sample contains 26,409 natives, 6,855 first generation, 3,093 1.5 generation, and 6,976 second generation individuals.

German Socio-Economic Panel (GSOEP), collected by DIW Berlin, is a household panel that started in 1984 and runs to the present day. Similarly to Understanding Society, GSOEP oversamples individuals of migrant households (Jacobsen et al., 2021). Following previous family research on Germany, which highlight differences among East and West Germans (e.g. Kreyenfeld, 2004), we separated the native group into East and West Germans. Former Soviet countries such as Russia, Kazakhstan, and Ukraine, are merged into one group; many individuals from these countries have ethnic German background ("Aussiedlers"). Large immigrant groups such as individuals from Turkey, Poland, and Southern Europe are included in the analyses. Second generation individuals are detected by using information on the respondent's parents' birth place and citizenship, in combination with the respondent's own birthplace, citizenship, and former citizenship.

For France, we used data from the *Trajectoires et Origines* [Trajectories and Origins] (T&O) study, a joint project that started in 2008 between the French National Institute of Demography (INED) and the French National Statistical Office. This dataset was created specifically to target issues such as social exclusion and limitations on access to resources for immigrants in France. Second generation individuals born in France are identified by their parents' birth place. In the French sample, 725 individuals born in French overseas territories and their descendants (656) are removed, leaving 19,445 individuals, comprised of 3,507 natives, 5,171 first generation, 2,674 1.5 generation, and 8,093 descendants.

Both UK and French data contain monthly biography of individuals, whereas German retrospective data is in yearly format, which is converted into monthly form by allocation random months to life events. If cohabitation and marriage occur in the same year, cohabitation is taken as the priority event. All individuals in this study are observed starting at age 16 and censored at age 50 or at the time of lost to follow-up. Our final sample size boasts over 92,000 individuals, covering 52 population subgroups from three countries. Detailed sample size of subgroups are shown in Table 1.

## Methods

We focus on modelling two stages of individuals' life course using a multistate approach. First, we analyse competing transitions out of singlehood: forming a non-marital union, becoming married or having a child outside of a union. Second, we examine competing transitions when people are in a union (either marital or non-marital): having a(nother) child or separating from a union. These are both critical transitions in individuals' life course. Further all people start from singlehood and most then follow choice between having another child or dissolving a union. Hence, such research design ensures that most of the family life events are analysed.

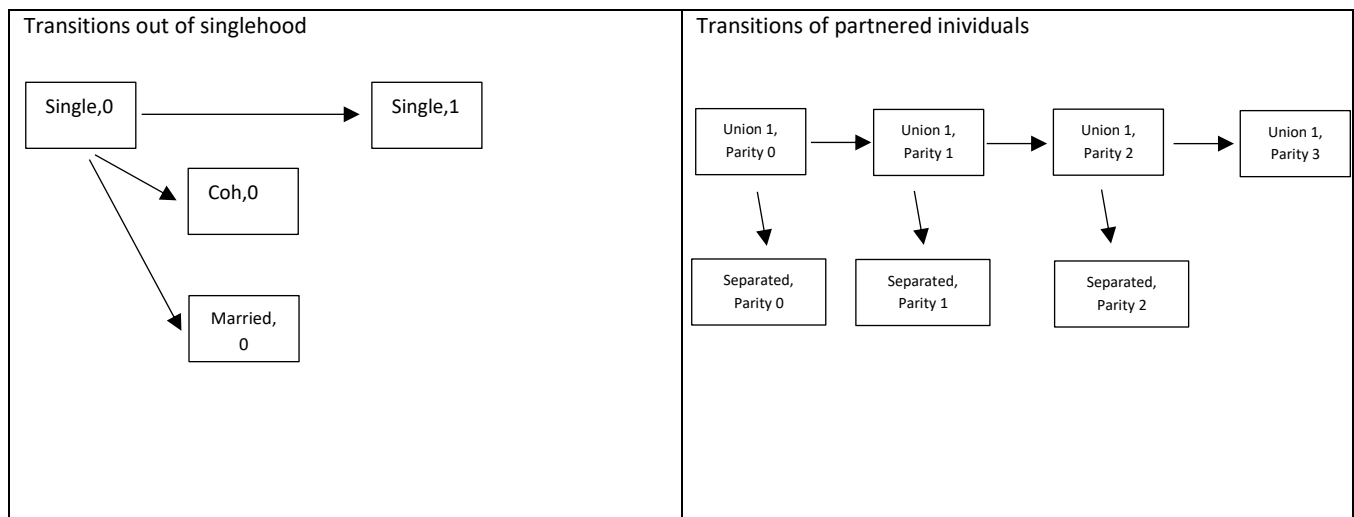


Figure 1. Partnership and fertility transition studied in this paper.

Competing risks event-history models are the core of multistate approaches (Putter et al. 2007). The transition-specific hazard function,  $h_k(t)$ , is defined as follows:

$$h_k(t) = \lim_{\Delta t \rightarrow 0} \frac{Pr(t \leq T < t + \Delta t, S = k | T \geq t)}{\Delta t}, k = 1, 2, \dots, K, \quad (1)$$

where  $S$  denotes either the transition out of singlehood or to  $n$ th parity with  $k$  as the number of different transitions and  $T$  represents an individual's age or time since previous birth (if any). We define a transition-specific proportional hazards regression model as follows:



$$\ln h_k(t) = \ln h_{k,0}(t) + \sum_l \beta_{kl} x_l(t) + \gamma_k z, \quad (2)$$

where  $h_k(t)$  denotes an individual's hazard of leaving singlehood or having a(nother) child and  $h_{k,0}(t)$  is the baseline hazard for transition  $k$  at age or time since previous birth (if any)  $t$ , which we define as piecewise constant;  $x(t)$  is a variable measuring individual socioeconomic characteristics (education) and  $\beta$  is the parameter estimate for this variable, with  $l$  variables; for models on birth transitions (while partnered) it also includes time since previous birth (if any).  $\gamma_k$  represents the effect of variable  $z$  (migrant status by country) on transition  $k$ .

The effect of baseline and other variables can vary by transition in the model defined in equation 2. However, it is not possible to measure the relative importance of each transition by migrant status and country from separate models. Therefore, we extend this model to also determine the relative importance of each transition by migrant status and country:

$$\ln h_k(t) = \ln h_0(t) + \sum_l \beta_l x_l(t) + \gamma_k z, \quad (3)$$

The model in equation 3 assumes a common baseline for all transitions and the same effect of control variables across the transitions. However, the effect of migrant status and country is allowed to vary by transition;  $\gamma_k$  is a transition-specific parameter for variable  $z$ , migrants status by country. All transition rates by migrant status can be now easily compared as they have a single reference point.

Normally, the event-history model described in equations 2 and 3 are fitted using individual-level data. Combining individual-level data is not always possible, e.g. for legal reasons when data come from different countries. In such circumstances a counted data approach can be used. Assume that we specify the baseline hazard as piecewise constant:

$$\ln h_0(t) = \ln h_j \quad \text{for } t \text{ in } [t_j, t_{j+1}) \quad (4)$$

The common-baseline model in equation 3 becomes then as follows:

$$\ln h_{jk} = \ln h_j + \sum_l \beta_l x_{jl} + \gamma_k z, \quad (5)$$

where  $h_{jk}$  is the hazard for time period  $j$  and transition  $k$ . Holford (1980) and Laird and Olivier (1981) have shown that log-linear models for the cell means of contingency tables with Poisson data are equivalent to log-linear hazard models for survival data, when the model baseline is specified piecewise constant and the model included categorical covariates. Therefore, we can use a count(ed) data approach, i.e. use a Poisson regression model to model piecewise constant transition rates. In order to fit such a model an event-time (or occurrence-exposure) table is prepared, which is defined by a cross-classification over a set of time intervals and covariate categories (Preston, 2005). Such a model has been used in family and fertility research to study transition rates with one outcome (Kulu et al 2017). In this study, we also extend it to a competing-risks framework.

## Results

Figures 2a to 2c show transitions out of singlehood in three countries. To facilitate presentation and comparison, we have allocated a separate graph for each country; however, transition rates of never partnered individuals for all groups (in three graphs) are relative to one reference point, which is the transition to marriage among the native population in the UK (denoted by 1). We see that in all three countries native men and women are most likely to cohabit, followed by marrying directly and having

a birth outside of union. There are some differences across countries. Cohabitation rates are slightly higher in France and lower in Germany than in the UK; direct marriage rates are also lower in Germany suggesting later union formation; first birth rates among never partnered are higher in the UK, but interestingly, also among the East German population. In all three countries, cohabitation is also common among immigrants from other European countries. In contrast, immigrants from South Asia to the UK, from Turkey and North Africa to France and from Turkey and Russia to Germany marry without prior cohabitation; cohabitation is thus uncommon and so is childbearing outside of marriage. Interestingly, immigrants from Caribbean countries to the UK have relatively low cohabitation and marriage rates, many of them have a child while never partnered. Immigrants from Sub-Saharan Africa to France have also relatively high propensity of having a child outside of a union.

What about patterns across migrant generations? There is very little change (if any) between immigrants who arrived as adults and those who arrived as children, although we observe some spread of cohabitation among those who arrived as children, especially in France and Germany. This is notable given that in this study we follow immigrants over their full life courses, i.e. we do not distinguish patterns prior and after migration. Interestingly, the patterns among the descendants of immigrants are relatively similar to those of immigrants: South Asians in the UK and people of Turkish origin in France and Germany exhibit high marriage and low cohabitation rates; childbearing among never partnered individuals is common among the population of Caribbean origin in the UK. Although we observe some increase in cohabitation rates across migrant generations suggesting a gradual spread of cohabitation among some groups (e.g. especially those from Russia, Poland and Southern Europe to Germany), and lower marriage rates suggesting the postponement of marriages, the similarity of pathways to union and family formation across migrant generations is striking in all three countries.

Figures 3a to c show transitions of partnered individuals to first birth or separation. We see that the propensity of having a child among partnered individuals is much higher than separate. First birth rates are slightly higher in France and lower in Germany than in the UK. There is also some variation across migrant groups. Immigrants from South Asia in the UK and most immigrants to France have higher first birth rates suggesting early and universal childbearing among these groups. Again, the patterns are relatively similar between immigrants who arrived as adults and those who came as children. Interestingly, first birth rates are slightly lower among the descendant of immigrants than immigrants in all three countries suggesting the postponement of childbearing; separation levels in turn are higher showing gradually increasing similarities to the native population.

Figures 4a to c present transition rates of partnered individuals to a second birth with separation as a competing event. Again, the propensity to have a(nother) child is much higher than the likelihood of separation for all groups in the three countries. Most importantly, there is relatively little variation across population groups suggesting that many who have a child are likely to have a second child whatever their background. We only observe somewhat lower second birth rates among Caribbeans and their descendants in the UK and individuals from Poland and Russia in Germany. In contrast, we observe significant differences in the propensity to have a third child. Figures 5a and c demonstrate that third birth rates are relatively similar among the native population in all three countries, except in East Germany where they are lower. Immigrants from Pakistan, Bangladesh and Africa to the UK, those from Africa, South East Asia and Turkey to France have significantly higher third birth rates than the native population or other migrant groups. Interestingly, migrants from Turkey to Germany have only slightly elevated third birth rates; however, these are still higher than those for other groups in Germany. The analysis also shows that third birth rates are lower among the 1.5 and 2nd generation compared to immigrants. However, the levels are still relatively high among the

population of Pakistani and Bangladeshi descent in the UK and those of African and Turkish origin in France.

### **Conclusion and discussion**

This is a first comparative study to simultaneously analyse partnership and childbearing changes in the critical stages in migrants' lives and to compare immigrants, their children and the descendants of immigrants. The study supported the findings of previous (separate) research streams on migrant partnerships and fertility, but also showed patterns, which separate research streams have been unable to detect. First, the analysis showed significant heterogeneity in pathways to partnership and family formation and subsequent transitions. European immigrants to the UK, France and Germany exhibited family patterns similar to those of the native populations: many of them cohabit prior to marriage, some experience dissolution of their first unions, and their fertility levels while partnered are similar to those of the natives. Family behaviour of immigrants from Caribbean region to the UK showed similarities to that of Europeans: many are in non-marital unions and experience separation. However, they have relatively high first birth rates outside of union. In contrast, South Asians in the UK and the Turkish population in France and Germany exhibited conservative family behaviour: they have high marriage rates and low separation levels, premarital cohabitation is rare, and childbearing outside of marriage is uncommon. Many have at least three children.

Second, we observed some changes across migrant generations. However, the magnitude of these changes varied across transitions. On the one hand, we observed very little change between immigrants who arrived as adults, those who arrived as children and the descendants of migrants in the transitions among never partnered individuals. For example, South Asians in the UK and people of Turkish origin in France and Germany exhibit high marriage and low cohabitation rates; childbearing among never partnered individuals is common among the population of Caribbean origin in the UK. On the other hand, individuals from the 1.5 and 2nd generation are more likely to experience separation than immigrants and have lower propensity of first and third births, although large families are still characteristic to the population of Pakistani and Bangladeshi descent in the UK and those of African and Turkish origin in France.

Our study thus shows that immigrants from countries with conservative family patterns differ from the native population in the UK, France and Germany in the pathways to union formation and in higher-order fertility: they marry without prior cohabitation and are likely to have a third child. Although we observed some changes across migrant generations – cohabitation is more common among the descendants than immigrants, the descendants of immigrants from countries with conservative family forms are still unlikely to cohabit prior to marriage, and, on average, have larger families than the native population. How to interpret these results in the light of competing approaches to migrant and minority integration? Clearly, there is a significant heterogeneity in family behaviour across migrant groups; this heterogeneity decreases, but does not vanish across migrant generations. It is thus difficult to conclude whether the findings support the (classical) assimilation or the segmented assimilation theory.

The different starting points for different groups is an additional challenge. For example, for (other) Europeans, family patterns of migrants largely resemble those of the native populations and the patterns among the descendants are already indistinguishable from those of the natives. In contrast, for migrants from conservative countries the original differences in family behaviour are remarkable. Even with a gradual change across generations the preference for (direct) marriage and the presence of large families are characteristics that distinguish descendants of immigrants from the native population. However, some tendencies are already visible. Although cohabitation has not yet spread to those populations, the declining marriage rates suggests that many of them have a

prolonged spell of singlehood before they marry and this is likely to be replaced by a spell of non-marital co-residence in the next generation. Also, the family of origin (e.g. the number of siblings) is known to play an important role in the likelihood of having a large family or not. As their family of origin is gradually changing across generations (e.g. fewer siblings) we can expect declining third birth rates in the next generations. To conclude, at first glance, the current heterogeneity in family patterns and slower changes across generations than anticipated seem to provide support to the segmented assimilation approach; however, in the longer run, we can expect the behavioural differences to further decrease, which would at the end support the classical assimilation theory.

It can be argued that it is important to also consider partner's characteristics. This is true to a certain extent. We know from previous research that most Europeans, especially descendants are in mixed marriages with the natives (Hannemann et al. 2019); therefore, their patterns should also resemble those of the natives. The same logic may also apply to some other groups, e.g. Caribbeans in the UK. However, previous research has shown that while many of them are in a relationship with the native man or woman, some are in endogamous unions and some are in a relationship with a member of other ethnic group (Kulu and Hannemann 2018). The diversity of partnership patterns may also explain the diversity of patterns we observed among them (e.g. a polarisation in childbearing patterns, indicated by low second, but high third birth rates). In contrast, most migrants from countries with conservative family forms and their descendants are married individuals from the same country or ethnic group. The preference for marriages and for endogamous marriages thus seem to be part of the same story.

What about the country context? At first glance it looks that the migrant group mostly matters and that the differences across countries are perhaps smaller than expected. However, a closer inspection reveals that the differences tend to vary by the type of event. For the transitions out of singlehood the migrant group seem to be more important discriminating factor than country. In contrast, for transition from unions (especially to births) the country context seems to become more important. We can thus argue that the migrant group is an important determinant of the pathway to partnership and family formation, whereas the country context has a strong effect on the timing of childbearing and the number of children the migrants and their descendants are likely to have. We observed similar patterns across migrant generations: changes in fertility happened faster across generations than changes in partnerships. Can we thus conclude that cultural-normative factors are more important for partnership behaviour, whereas structural-economic factors have stronger effect on fertility patterns? This is not an easy question to answer, but the evidence seems to support this conclusion. If this argument is true then we may expect to observe faster changes in childbearing patterns among migrants and across migrant generations, whereas partnership behaviour may be slower to change across generations and some patterns may persist (e.g. preference for marriage among some groups). We still need to bear in mind that some descendant groups have larger families than others, but this is likely to also depend on the country they live.

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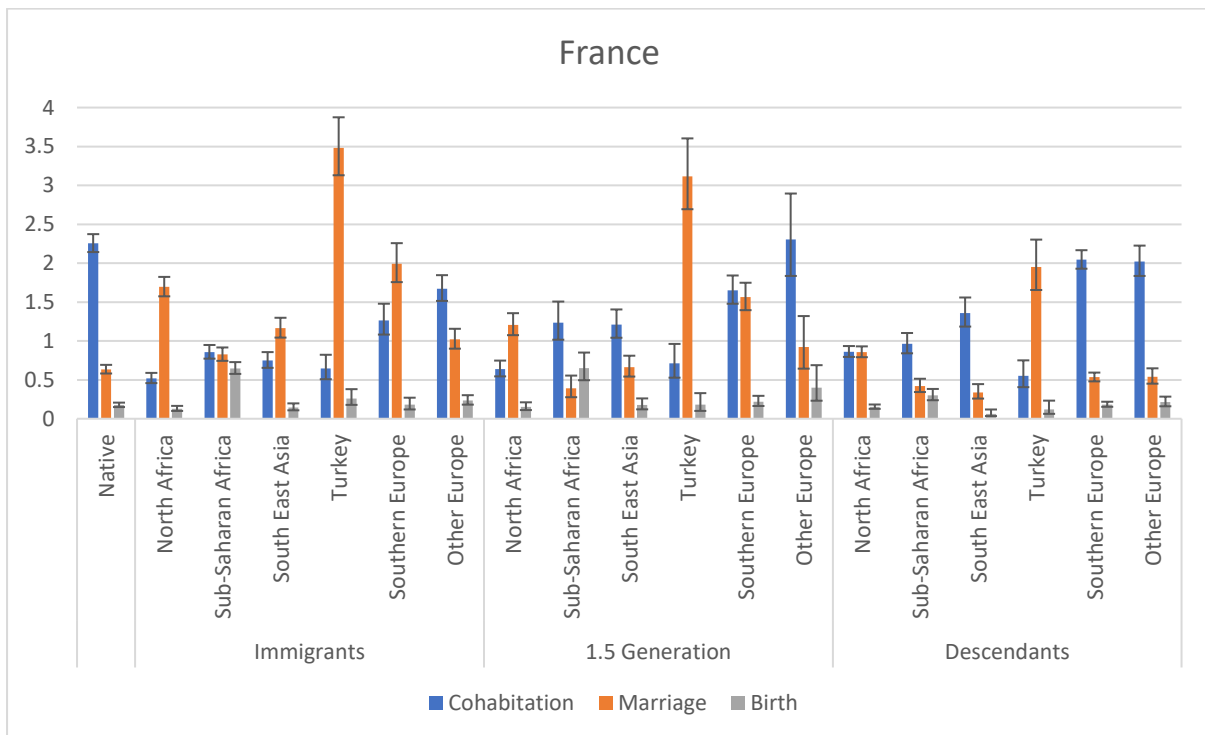
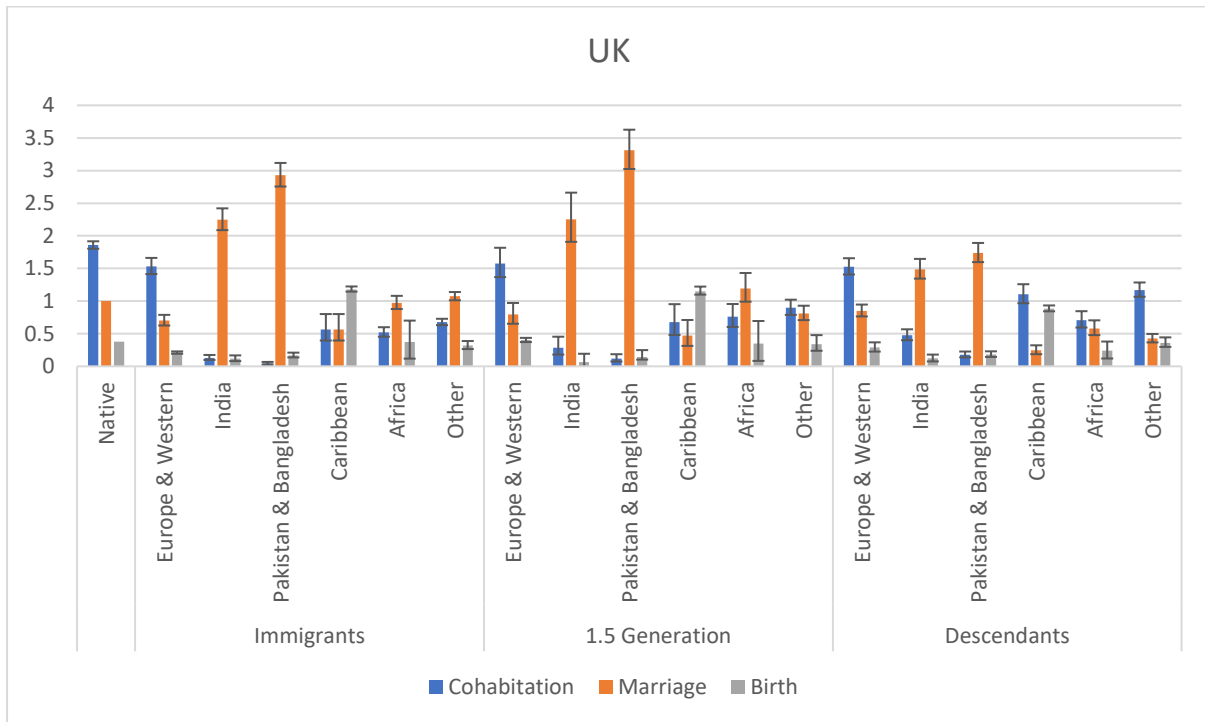
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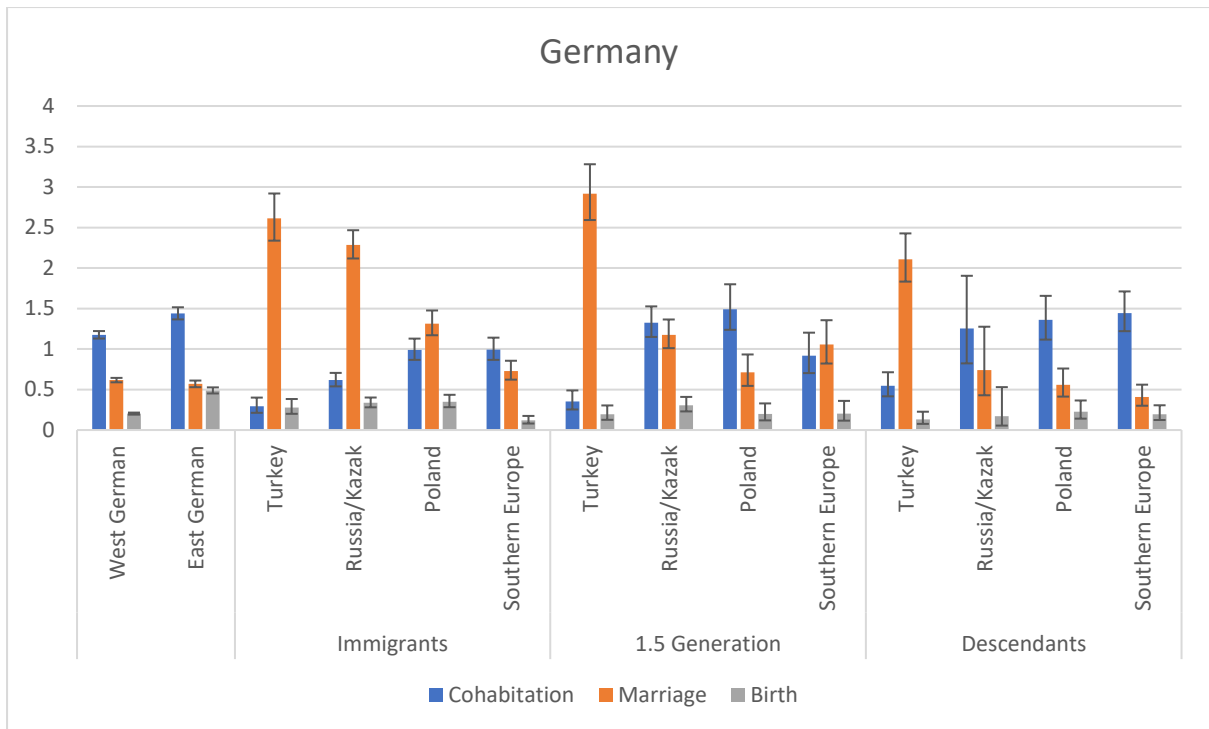
Table 1. Number of subjects (n) by group and sample

UK (Understanding Society)	Natives	26,409	France (Trajectoires et Origines)	Natives	3,507	Germany (German Socio-economic Panel Study)	Native (West Germans)	19,157
	1G, Europe	1,238		1G, North Africa	1,315		Native (East Germans)	5,298
	1G, India	290		1G, Sub-Saharan Africa	1,280		1G, Turkey	428
	1G, Pakistan/Bangladesh	1,472		1G, South East Asia	685		1G, Russia/Ukraine/Kazakhstan	1,212
	1G, Caribbean	140		1G, Turkey	509		1G, Poland	648
	1G, Africa	842		1G, Southern Europe	540		1G, Southern Europe	440
	1G, Other	3,134		1G, Other Europe	842		1.5G, Turkey	398
	1.5G, Europe	554		1.5G, North Africa	685		1.5G, Russia/Ukraine/Kazakhstan	650
	1.5G, India	231		1.5G, Sub-Saharan Africa	304		1.5G, Poland	256
	1.5G, Pakistan/Bangladesh	695		1.5G, South East Asia	398		1.5G, Southern Europe	172
	1.5G, Caribbean	143		1.5G, Turkey	320		2G, Turkey	301
	1.5G, Africa	342		1.5G, Southern Europe	798		2G, Russia/Ukraine/Kazakhstan	45
	1.5G, Other	1,128		1.5G, Other Europe	169		2G, Poland	173
	2G, Europe	1,446		2G, North Africa	2,558		2G, Southern Europe	228
	2G, Indian	964		2G, Sub-Saharan Africa	1,005			
	2G, Pakistan/Bangladesh	1,775		2G, South East Asia	710			
	2G, Caribbean	687		2G, Turkey	441			
	2G, Africa	617		2G, Southern Europe	2,577			
	2G, Other	1,487		2G, Other Europe	802			



Figure 2 Outcomes of unpartnered individuals: Relative risks of cohabitation, marriage, and childbirth in the UK, France and Germany

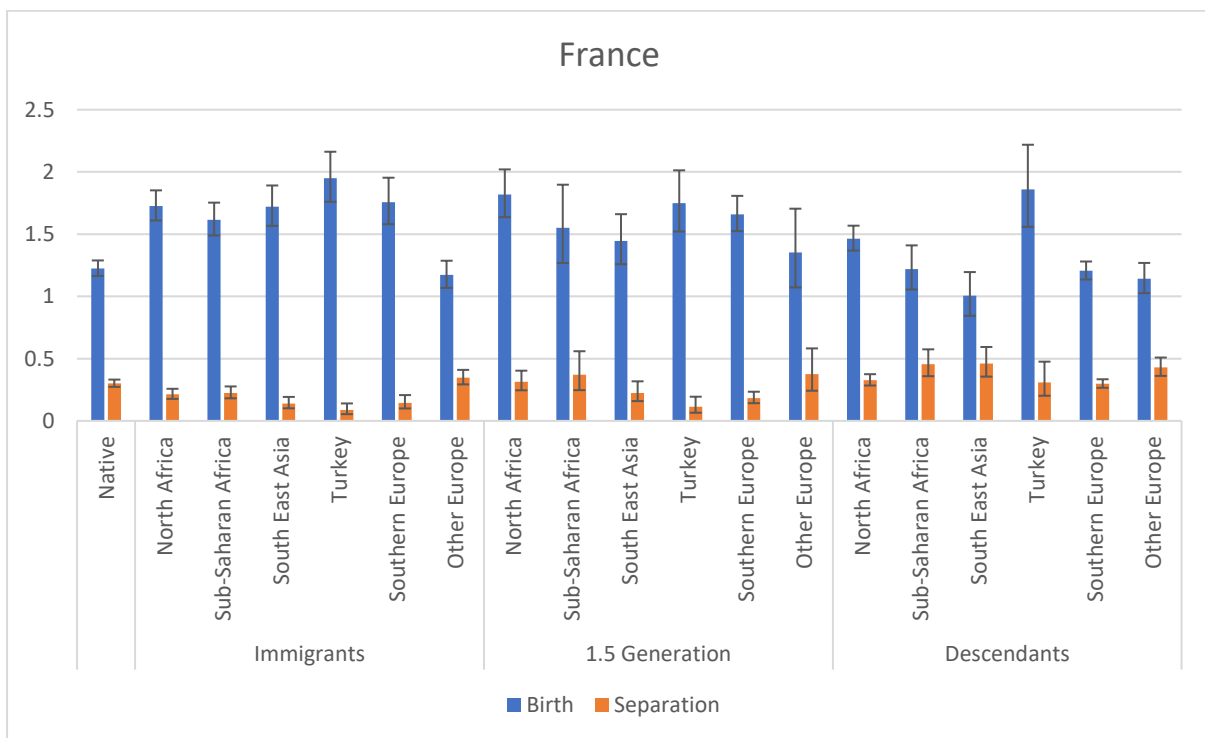
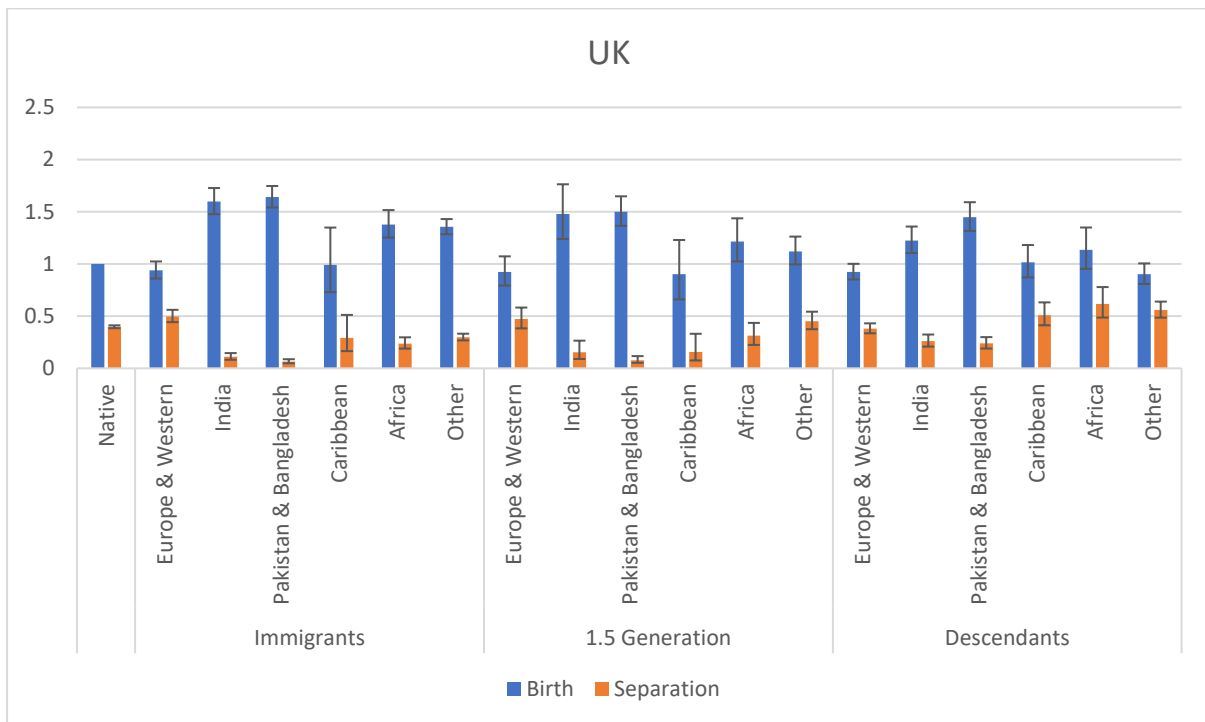


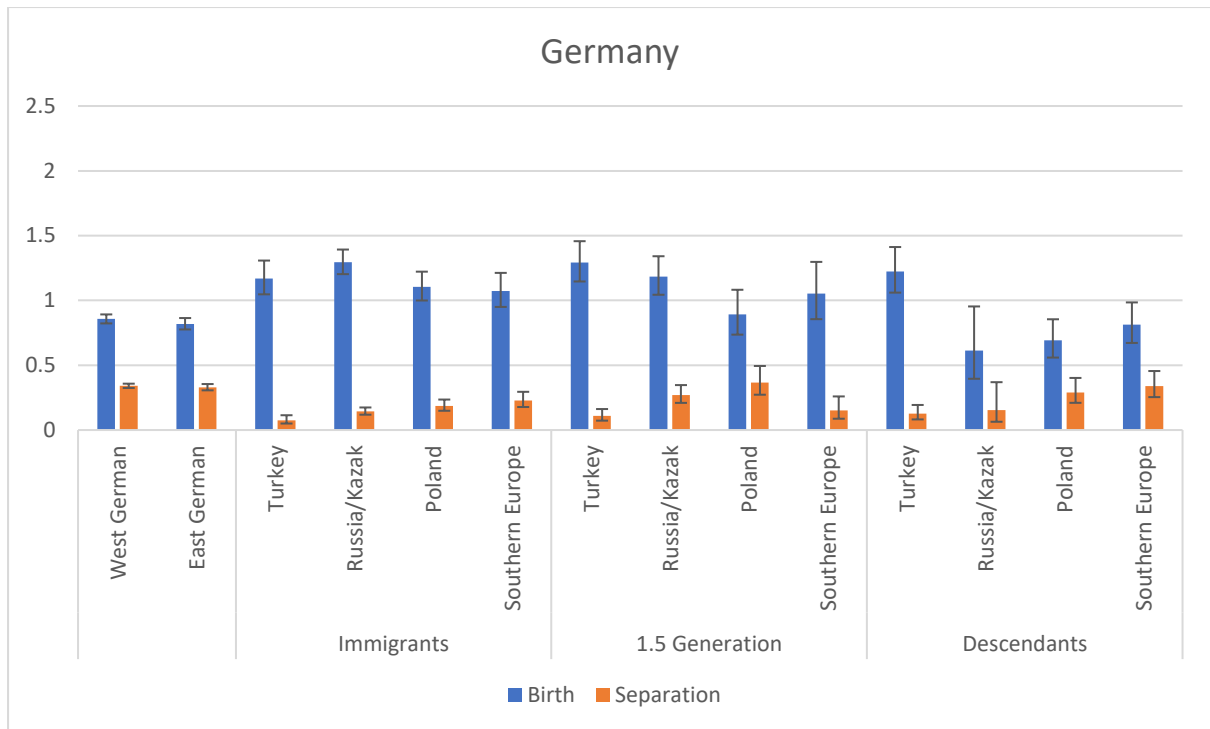


*Notes:* Whiskers indicate 95 per cent confidence intervals compared with the reference category. The analysis is controlled for age, cohort, sex, the number of siblings and level of education.

*Source:* Authors' calculations based on data from the UKHLS, GSOEP, T&O studies.

Figure 3 Outcomes of partnered individuals: Relative risks of first birth, and separation in the UK, France and Germany

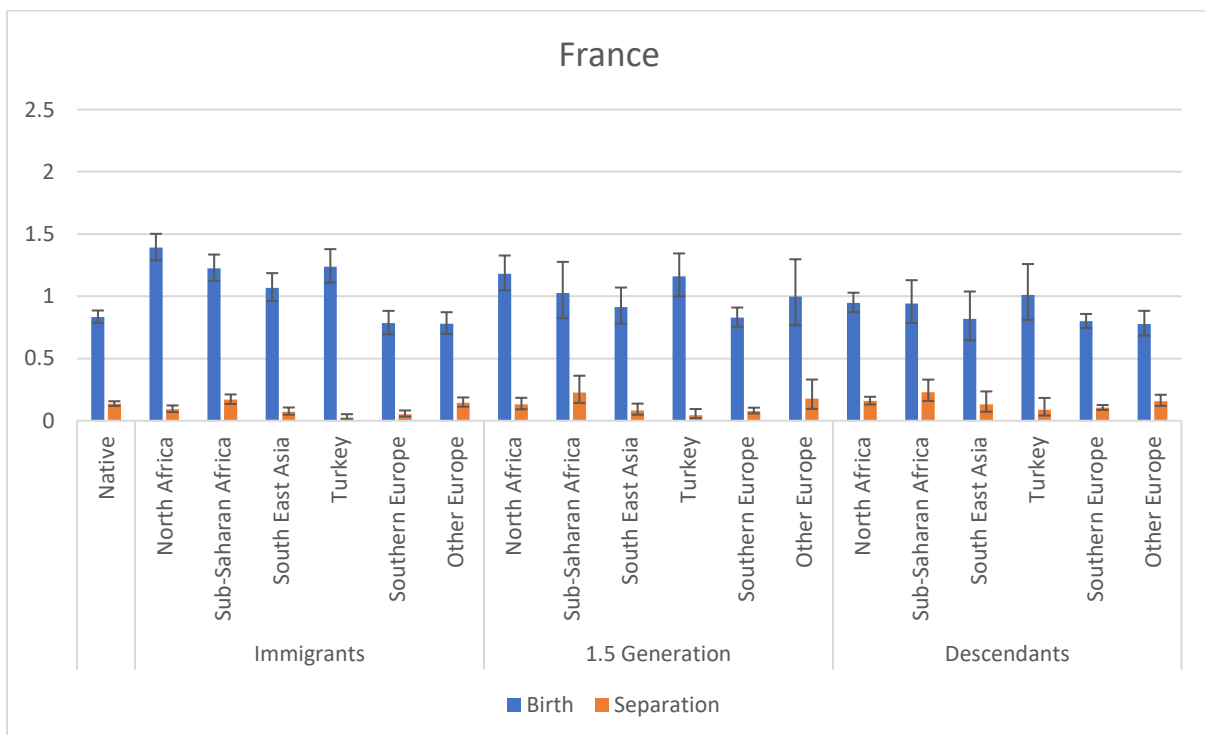
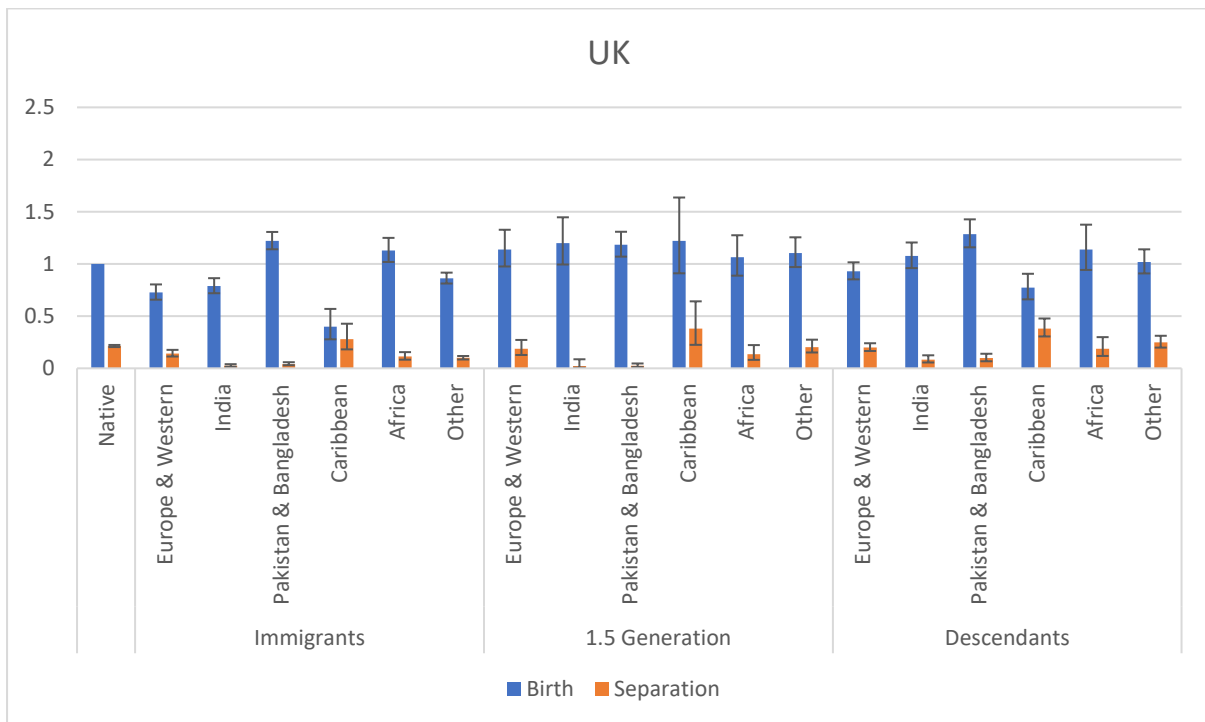


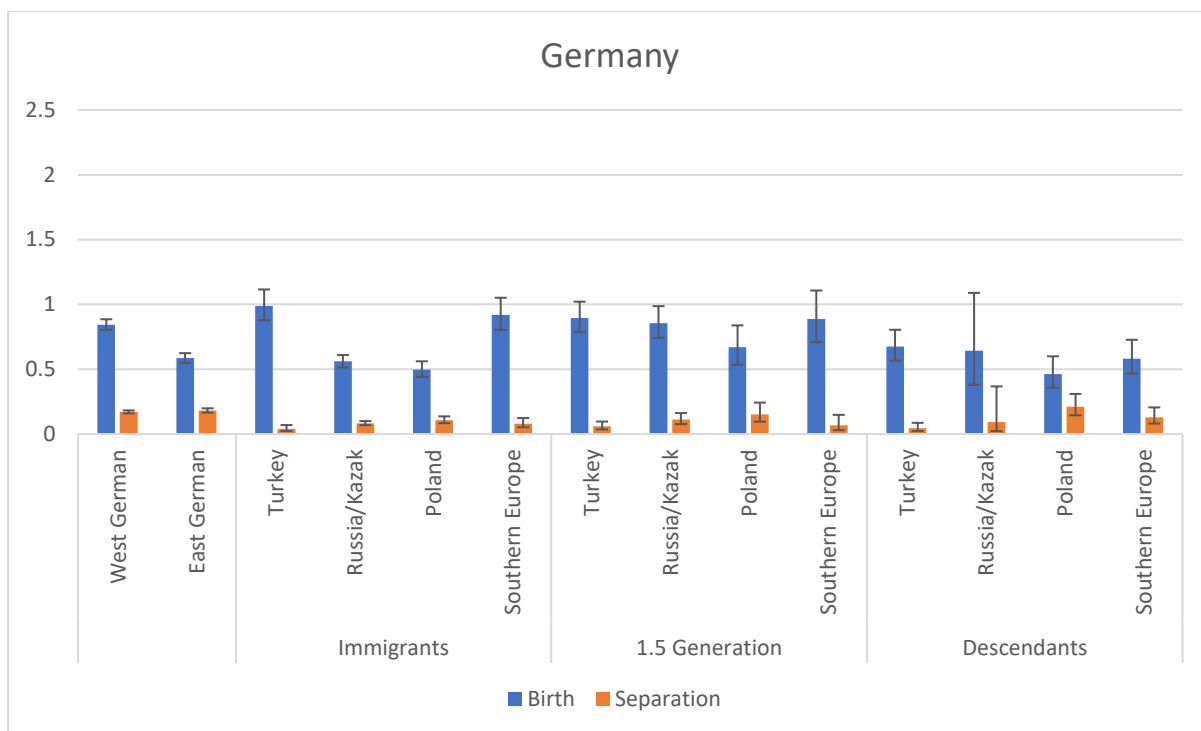


*Notes:* Whiskers indicate 95 per cent confidence intervals compared with the reference category. The analysis is controlled for age, cohort, union duration, union type, sex, the number of siblings, and level of education.

*Source:* Authors' calculations based on data from the UKHLS, GSOEP, T&O studies.

Figure 4 Outcomes of partnered individuals: Relative risks of second birth, and separation in the UK, France and Germany

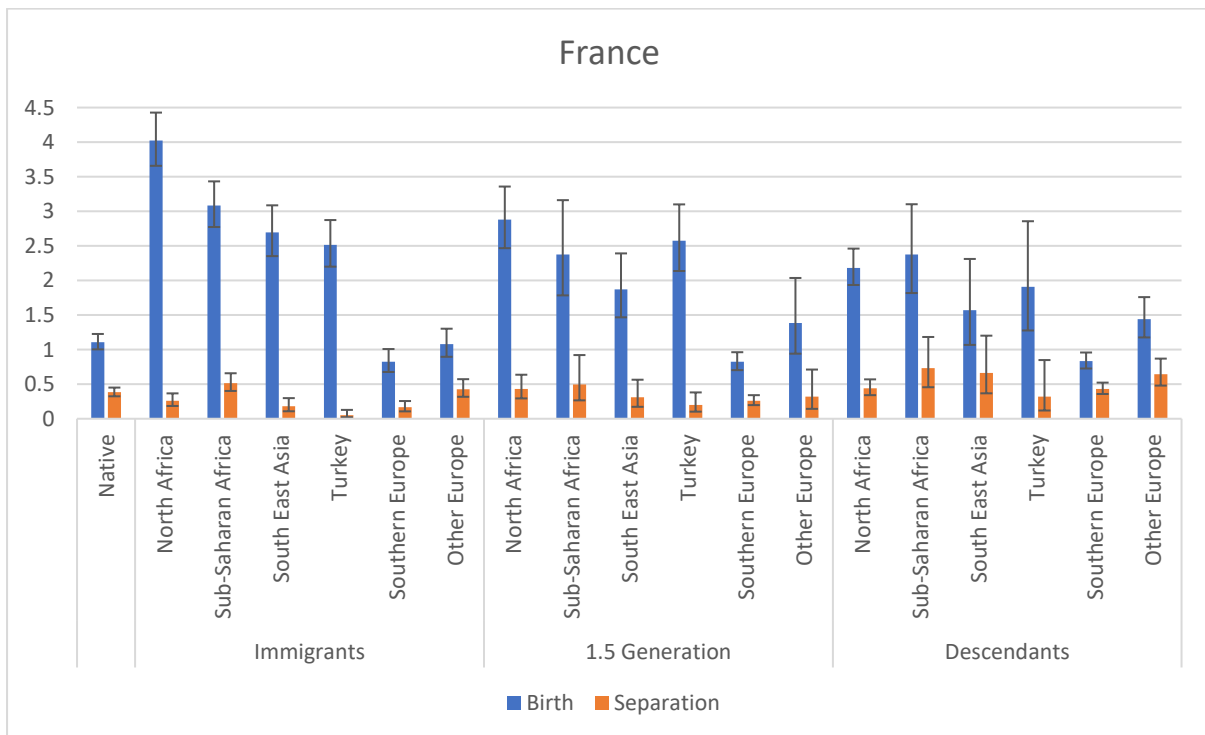
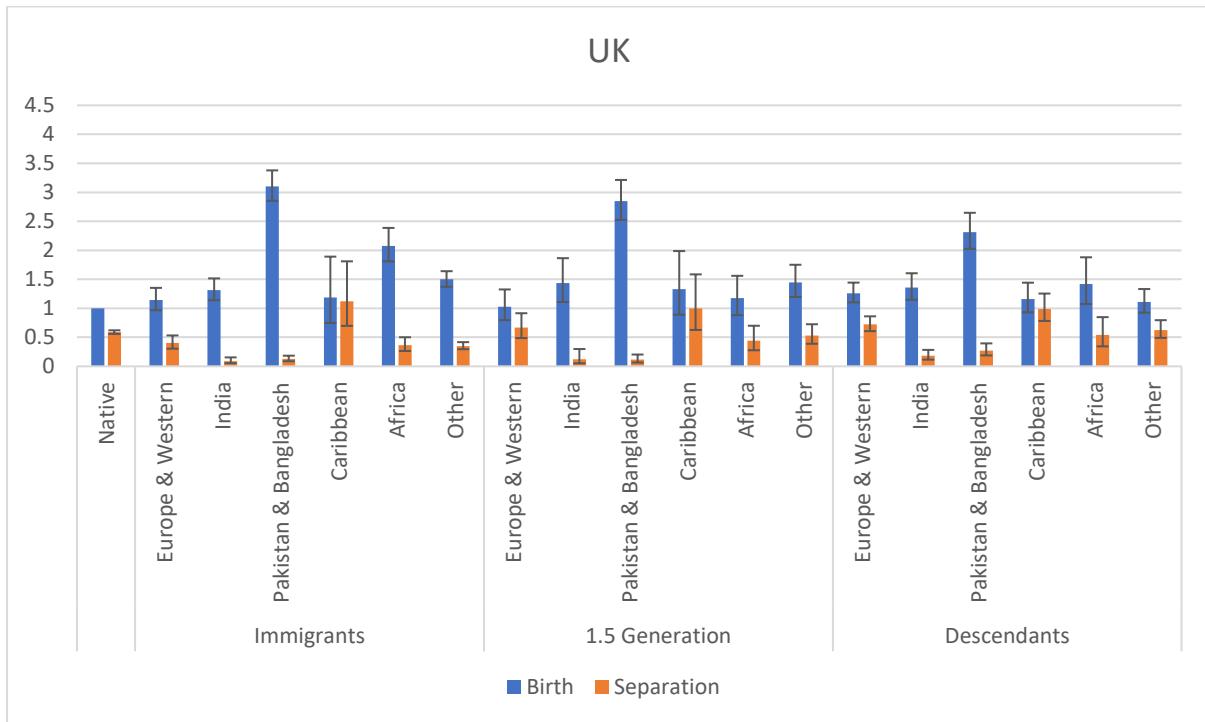


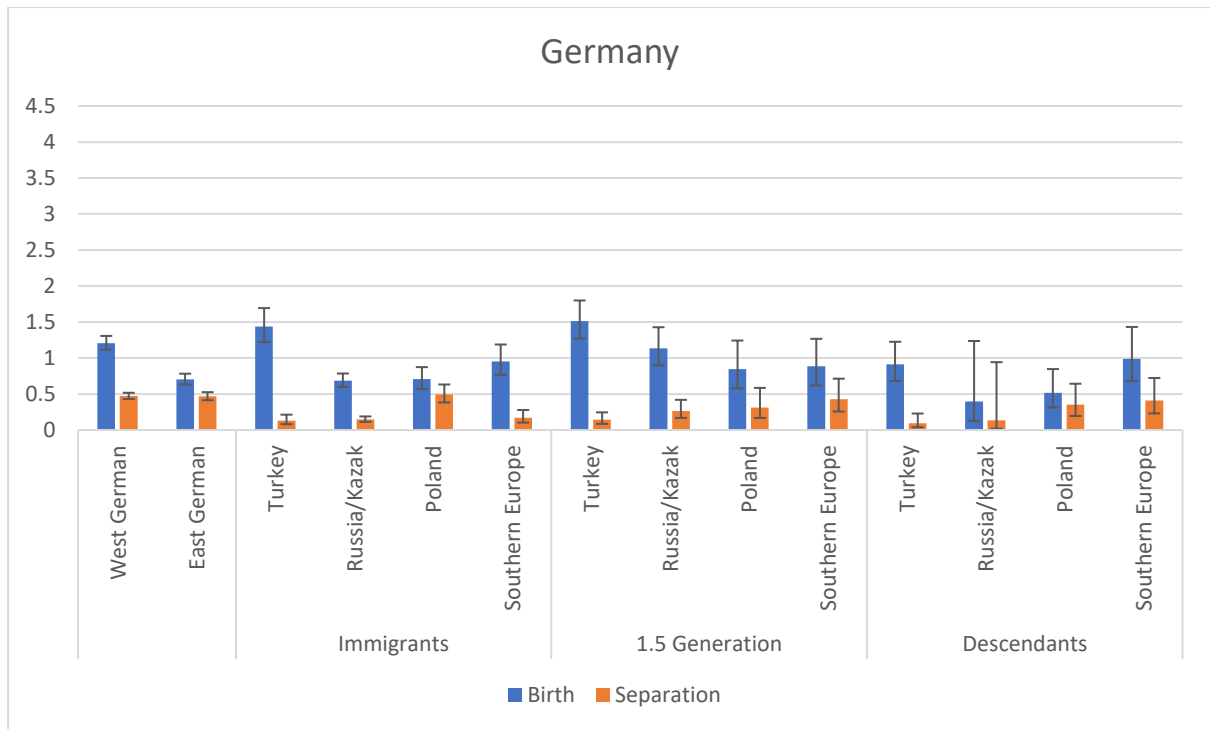


*Notes:* Whiskers indicate 95 per cent confidence intervals compared with the reference category. The analysis is controlled for age, cohort, union duration, union type, time since previous birth, age at first birth, sex, the number of siblings, and level of education.

*Source:* Authors' calculations based on data from the UKHLS, GSOEP, T&O studies.

Figure 5 Outcomes of partnered individuals: Relative risks of third birth, and separation in the UK, France and Germany





*Notes:* Whiskers indicate 95 per cent confidence intervals compared with the reference category. The analysis is controlled for age, cohort, union duration, union type, time since previous birth, age at first birth, sex, the number of siblings, and level of education.

*Source:* Authors' calculations based on data from the UKHLS, GSOEP, T&O studies.