

Determinants of Fertility among Immigrants and Descendants in the UK

Background

Different immigrant groups in Europe exhibit distinct fertility levels. Kulu and Hannemann (2016) demonstrated that South Asians in the UK have higher fertility levels than other migrant groups, and childlessness is rare among them. Milewski (2011) revealed that women with Turkish backgrounds entered parenthood earlier than the host population and had higher fertility rates in Western Europe. These studies showed that certain migrant groups have distinct fertility levels compared to the host population. Several scholars have also shown the differences in fertility levels *within* migrant groups across generations. Milewski (2009) investigated the childbearing behaviour of immigrants and their descendants based on theories that explain potential reasons for fertility rates in Germany. Hypotheses she introduced, such as *socialisation theory* explains the lower fertility rates of descendants than their parents from higher fertility level countries, whilst *subcultures* explain the higher fertility rates of certain descendant migrant groups compared to others. Pailhé (2017) examined the sociocultural impact on childbearing behaviour of the second generation, suggesting that factors such as religion and education level affect fertility trends among descendants in France.

In most previous research, however, the comparison of migrant generations is often limited to only two generations; mostly the first and second generation. Few studies have distinguished between those who immigrated as adults and those who immigrated as children. Additionally, the second generation has included all people who are born in the host society with at least one foreign-born parent. This approach, however, often fails to address the differences between those who have two foreign-born parents and those with one parent born in the host society. The two groups may have significant differences, as the latter group consists of individuals with one parent who has been socialised in the host society since their birth.

This research investigates the childbearing behaviours of immigrants and their descendants, distinguishing those who immigrated as adults (1G), those who immigrated as children (1.5G), those who were born in the UK to foreign-born parents (2G), and those who were born in the UK with one foreign-born and one UK-born parent (2.5G). By utilising UK Household Longitudinal Study data applying event history analysis, this study is answering the following questions:

1. How do fertility rates differ among immigrants and their descendants?
2. How do individuals' characteristics explain the differences in fertility across different immigrant and descendant groups?

This research can provide a better understanding of variations in fertility across migrant generations, while also disentangling the factors affecting their childbearing behaviours. Considering that there has been no research examining the fertility of migrant groups using the concept of generational subgroups in the UK – especially including 1.5G and 2.5G, this research has the potential to open a new chapter in understanding generational subgroups and their fertility in the UK.

Data and Methodology

This research uses individual-level data from the UK Household Longitudinal Study (UKHLS), which covers more than 40,000 individuals in the UK, including a large number of people from various ethnic

and migrant groups.

There are six groups of individuals with backgrounds from different regions in this study: Western Countries, India, Pakistan & Bangladesh, the Caribbean, Africa, and British Natives. Given the limited sample size but acknowledging their similar cultural attributes, individuals from Pakistan and Bangladesh are treated as a single group. Only including women, this research has 30,072 individuals who were born between 1960 and 2006 and participated in the UKHLS anytime between 2009 and 2021.

Place of birth information was used to decide the migrant group of the 1G and 1.5G, while place of birth of parents was utilised to decide the migrant group of the 2G and 2.5G. British natives are those who were born in the UK to UK-born parents. The 1G and 1.5G are people who were born outside of the UK. To distinguish between the 1G and 1.5G, a variable asking for the year of arrival in the UK was utilised, and individuals who arrived before reaching the age of 15 are categorised as the 1.5G. The 2G and 2.5G are those who were born in the UK. Among them, if both parents were born outside of the UK, they are classified as the 2G generation, and if one of the parents was born in the UK, they fall into the 2.5G category in this research. For individuals in the 2G category who have foreign-born parents, but each parent is from a different country, we considered the mother's place of birth to determine the individual's migrant group.

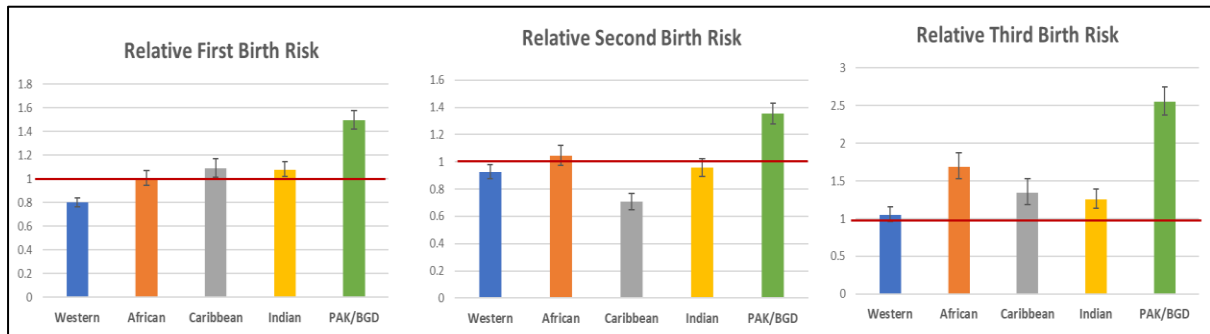
The composition of the generations in this dataset is as follows: Native (52%), 1G (10%), 1.5G (3%), 2G (3%), 2.5G (2%), missing (27%). The composition of the migrant group in this dataset is as follows: British Native (66%), Western (5%), African (3%), Caribbean (2%), Indian (3%), Pakistan & Bangladesh (5%), others (4%), and missing (7%). The 1G group is excluded from the analysis since this group may have already given birth before coming to the UK.

Event History Analysis (EHA), focusing on piecewise constant exponential models will be used to conduct this analysis. EHA is often used in the field of demography to explain the timing and determinants of events such as deaths, migration, or births. A piecewise constant exponential model assumes that the possibility of occurrence of events change exponentially within a certain period – which is referred to a piece in this model.

The analytical strategy involves the following steps. British native population is the reference for the analysis. The first step is to analyse the first, second and third birth risks by migrant groups, without considering generation and additional covariates. This step only takes into account women's age, birth cohort and migrant group. The second step involves analysing the fertility rate of each migrant group across different generations. In the third step, additional covariates examining individual characteristics, such as cultural attribution and socio-economic status (SES), are taken into account to understand how these variables explain the fertility rate of each group. These factors include religiosity and the number of siblings as cultural characteristics, and employment status and education as SES indicators. For this abstract, the third step only includes an investigation of the first birth risk considering the individual characteristics. The relative second and third birth risks considering the individual characteristics will be examined in the next step.

Preliminary Results

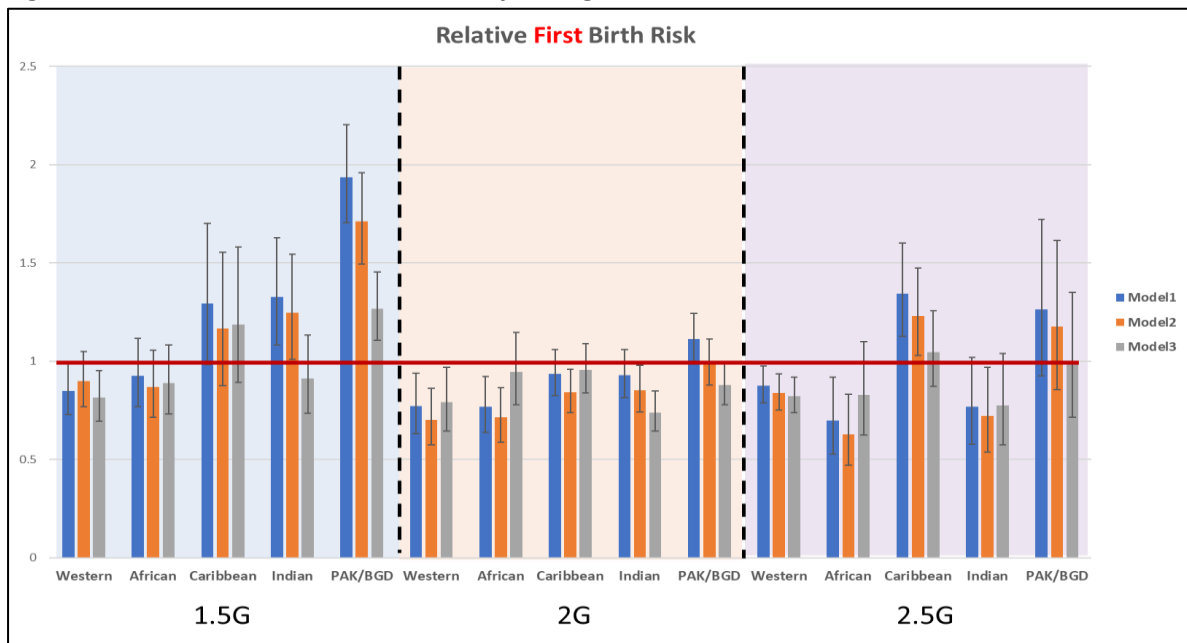
Figure 1. Relative Risk of the first, second and third birth by migrant group



(Reference line: British Native) Controlled for women's age at birth- for the first birth / time since previous birth - for the second and third birth, women's birth cohort and migrant group

Figure 1 shows the results from the relative birth risks by parity and migrant group. The first birth risks individuals from African, Caribbean, and Indian backgrounds are close to that of British Natives, whereas individuals from Western backgrounds have lower first birth risk. The second birth risk of the Western group becomes closer to that of British Natives, whilst that of Caribbeans is lower. The third birth risks of most migrant groups, apart from the Western group, are higher than that of British Native. Overall, the Pakistan/Bangladesh (PAK/BGD) groups consistently exhibit higher birth risks in the first, second, and third births.

Figure 2. Relative Risk of the First Birth by Immigrants and Descendants



(Reference line: British Native)

Model1: controlled for woman's age, birth cohort and migrant group

Model2: additionally controlled for religiosity and number of siblings (cultural characteristics)

Model3: additionally controlled for education level and employment status (SES)

Figure 2 demonstrates that, in most cases, 1.5G individuals have higher first birth risks compared to their descendant groups. The Indian group, in particular, displays a pattern of a gradual decline in first

birth risk over generations from the 1.5G to 2G to 2.5G. However, there is an exception with the Caribbean group, where the 2.5G Caribbean group exhibits a similar first birth risk to that of the 1.5G group. The Western and African groups consistently show lower first birth risks compared to the British natives across generations.

After controlling for additional variables to account for individual characteristics, a gradual decline in the first birth risk is observed among the 1.5G Indian group, the 2.5G Caribbean group, and all PAK/BGD groups. Notably, the difference in fertility rates among the 1.5G PAK/BGD group, when additionally considering socioeconomic status (SES) compared to the other two models that do not control for any individual characteristics and only control for cultural factors, is statistically significant.

Conclusion

Examining various perspectives, such as migrant groups, generations, and individual characteristics, allows us to observe differences across migrant groups and generations. For instance, when considering the first birth risk of the African group regardless of generation (see Figure 1), it is similar to that of British natives. However, the first birth risk of the 2.5G African group becomes lower than that of British natives (see Figure 2). This shows that the 2.5G African group may have different childbearing behaviours compared to other generations within the African group. The preliminary results also indicate that some descendant groups have significantly lower first birth risks compared to their 1.5G groups, such as the Indian and PAK/BGD descendant groups. Considering that the 1.5G individuals in these groups had higher first birth rates than British natives, this suggests that the first birth risks of the Indian and PAK/BGD descendant groups are becoming similar to those of British natives. Lastly, we found that the first birth rate of certain groups, such as the 1.5G Indian group, the 2.5G Caribbean group, and all PAK/BGD groups, is becoming similar to that of British natives across models. A decline in the first birth rate after controlling for individual characteristics in these groups demonstrates that cultural and socio-economic status factors partly explain the first birth risk of these groups.

The next phase of this project involves examining the second and third birth risks including individual characteristics. By considering birth risks by parity with multiple variables, this research aims to contribute to a comprehensive understanding of the fertility trends across immigrants and descendants in the UK.

Bibliographies

Kulu, H., & Hannemann, T. (2016). Why does fertility remain high among certain UK-born ethnic minority women? *Demographic Research*, 35, 1441–1488.

Milewski, N. (2009). *Fertility of immigrants: A two-generational approach in Germany*. Springer Science & Business Media.

Milewski, N. (2011). Transition to a first birth among Turkish second-generation migrants in Western Europe. *Advances in Life Course Research* 16(4): 178–189. doi:10.1016/j.alcr.2011.09.002.

Pailhé, A. (2017). The convergence of second-generation immigrants' fertility patterns in France: The role of sociocultural distance between parents' and host country. *Demographic*.

University of Essex, Institute for Social and Economic Research. (2022). *Understanding Society: Waves 1-12, 2009-2021 and Harmonised BHPS: Waves 1-18, 1991-2009*. [data collection]. 17th Edition. UK Data Service. SN: 6614, <http://doi.org/10.5255/UKDA-SN-6614-18>.