

Cohort Changes in First Birth Recuperation Rates by Educational Level in the United Kingdom

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Introduction

Women's educational level is strongly related to both quantum and tempo fertility. Higher educated women – usually referring to those with a university degree – have the lowest average family sizes, the highest incidence of childlessness, and the highest average age at (first) birth. The period after the Second World War is characterised by a growth in women's economic independence – exemplified by the rise in women's participation to higher education, rising female labour market participation rates and the narrowing of the gender pay gap – as well as greater gender equality, especially in the labour market. This has resulted in a delay of the entry into motherhood, though the recuperation of these delayed first births at more advanced childbearing ages has been incomplete. In this respect, the changing educational composition of the population is a key factor for understanding and explaining the precipitous decline observed throughout the industrialised world in total period fertility rates to below replacement level after the post-war baby-boom and the subsequent recovery in the second half of the first decade of the twenty-first century. The main aims of this study are to investigate the degree of recuperation of first births by educational level and to examine how this pattern has changed between cohorts (1930-1969) in the United Kingdom, a country characterised by relatively high period and cohort total fertility rates but also by one of the highest incidences of childlessness (see for instance Frejka, 2008) compared to the rest of Western Europe.

The relation between educational level and the timing of first births

Second Demographic Transition theory, rational choice theory and Oppenheimer's theory of marriage timing have been the dominant theoretical frameworks since the 1980s for identifying the processes which link women's educational level to the timing of entering motherhood (Happel, Hill & Low, 1984; Lesthaeghe & Meekers, 1986; Lesthaeghe & van de Kaa, 1986; Lesthaeghe & Surkyn, 1988; Oppenheimer, 1988; Cigno & Ermisch, 1989; Lesthaeghe, 1995, 1998). In particular, these theories postulate that educational groups differ in terms of values such as self-fulfilment and anti-authoritarianism, earning power and economic independence, leading to educational differentials in the timing of entering motherhood. Higher educated women are expected to delay becoming a mother as a consequence of, amongst others, their stronger emphasis on self-fulfilment which may compete with childbearing, the lower opportunity costs of childbearing and -rearing after accumulating a certain amount of work experience compared to the beginning of their career, and the time required to obtain job security. However, the longer women wait, the higher the risk of remaining childless as a consequence of biological limits to fecundity (Menken, 1985). Previous studies for the United Kingdom indeed show that there is a positive relation between on the one hand educational level and on the other hand the age at first birth and the incidence of childlessness (Rendall & Smallwood, 2003; Kenjoh, 2004; Rendall *et al.*, 2005; Kneale & Joshi, 2008). These findings suggest a pattern of incomplete recuperation of first births among

the higher educated compared to the low educated leading to the observed differentials by educational level in the incidence of childlessness. However, these studies have not investigated the degree of first birth recuperation by educational level.

In addition, some studies have found that higher educated women enter motherhood at a faster rate after leaving the education system than low educated women, so that they “catch up” with their lower educated counterparts who have left the education system earlier (Blossfeld & Huinink, 1991; Låppegard & Rønsen, 2005; Kreyenfeld, 2010). This resulted in a full recuperation of delayed first births among the higher educated, which indicates the importance of investigating the pace of entering motherhood after leaving the education system by educational level and how this influences first birth recuperation rates.

Changes in the relation between educational level and the timing of first births over time

Economic and sociological theories postulate that the gender-specific division of childcare and household tasks as well as traditional gender role attitudes lead higher educated women to delay the entry into motherhood. A more equal – or less unequal – division of household labour and a shift in gender role attitudes should therefore weaken the positive relation between educational level and first birth timing. In Great-Britain, the proportion supporting the statement that a woman has to have children in order to be fulfilled has decreased over time (2006). Furthermore, the combination of family and work has been facilitated over the years by the introduction and expansion of maternity leave schemes and associated remuneration and job protection, the larger availability of places in the public and private child-care sector, and cash benefits as well as tax deductions for families with children. In addition, in Second Demographic Transition theory, the higher educated are assumed to have a non-conformist value profile and to display innovative demographic behaviour, such as delaying the first birth, but also to disseminate these values to the wider population (Lesthaeghe & Meekers, 1986; Lesthaeghe & Surkyn, 1988). For these reasons, we would expect that differences between educational groups in the timing of first births have narrowed over time. However, the aforementioned studies have either focussed on a single birth cohort, did not examine the full reproductive period or did not adopt a cohort approach, which renders it impossible to assess whether the relation between educational level and the timing of first births has changed over time.

Research questions

1. What is the extent of recuperation of delayed first births by educational level? How do first birth recuperation rates differ by educational level, for instance between those with compulsory school qualifications and higher education, or between those with vocational and academic higher education qualifications?

2. Does the pace of entering motherhood after leaving the education system differ by educational level and how is it related to recuperation rates?
3. How have recuperation rates and the pace of entering motherhood after leaving the education system changed over time?

Data and methods

I will use data from the first wave of Understanding Society (USoc) to investigate first birth recuperation rates by educational level and how these have changed between cohorts (1930-1969). USoc is a multi-purpose large-scale panel survey which collects information on 40.000 households and 100.000 individuals on a large number of factors related to fertility, such as on ethnicity, nationality and migration; educational level and age at leaving education; family background; religion; partnership and fertility history; employment status and occupational history. The very large sample size makes it possible to examine both between- and within-cohort differentials in first birth timing.

First birth recuperation rates by educational level, age and birth cohort will be analysed using the Kaplan-Meier survivor function. Discrete-time complementary log-log hazard models will be estimated to investigate whether the findings are robust when controlling for other factors.

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