

Employment Status Duration and First Birth in Great Britain

Introduction and theoretical considerations

The paper presents analyses on the influence of tenure in a specific employment status on first conception rates in Great Britain. Differences in these effects between women with different levels of education and those belonging to different birth cohorts are also investigated. The data used is from the British Household Panel Survey (BHPS).

A general assumption has originally been that higher female wages at any point in time have a negative effect on the decision to have children. Models of fertility timing, by contrast, involve weighing costs of having children earlier against costs of having children later in the life course. Gustafsson (2001), for example, points out that if one assumes that earnings profiles are steeper at younger ages and flatter as employees grow older, income losses resulting from time outside the labor market are smaller for late than early births. This relationship can be expected to be the stronger the steeper the earnings profile at younger ages. According to Gustafsson (2001), this type of an earnings profile is usually found by empirical research. In addition, employers tend to recruit younger workers for jobs that need longer phases of training, so that it becomes difficult to make up for lost training time later in life.

Besides being indicative of age-dependent earnings, work experience and employer tenure may be related to more stable working conditions and eligibility for parental leave arrangements. Women who have gained more work experience may have better chances of returning to their original jobs after short work interruptions related to childbirth (Taniguchi 1999).

These theories on the sensitivity of wages and employment prospects to birth timing have implications in both directions: as to how the timing of births actually affects wages, and also as to how women in different types of jobs with different levels of education, tenure, and experience will tend to time childbearing.

Some empirical research has found evidence for a relationship between fertility timing and wages, such as Blackburn, Bloom, and Neumark (1993) and Taniguchi

(1999). By contrast, Joshi (1990) found very little effect of timing of childbearing on the wage penalty for motherhood. Many studies find differences, varying strongly by country, in the timing of childbearing by education, employment status, or occupation (Cigno and Ermish (1989), Kantorova (2004), Kreyenfeld (2004), Kravdal (1994), Vikat (2004), Liefbroer and Corijn (1999)).

Some additional factors may be relevant for the timing of childbearing in Britain besides those generally related to earnings developments over the life-course. In Britain, childcare is often expensive and there has not been much general financial support for families with children. Until recently, maternity leave was not very extensive and there was no parental leave. The proportion of mothers working part-time is very high. If women expect to have to depend on part-time employment after having children, they may want to achieve a good enough relationship to their employer to be able to successfully apply for part-time employment, which may require some employment tenure. Another strategy might be to wait until one has high enough earnings to afford childcare. Another reason for acquiring some employment tenure before having children is to qualify for maternity leave. Maternity leave was introduced in 1979, and generally required two years of employer tenure.

The development of earnings over job tenure can be expected to differ by education and employment status. Women with higher levels of education as well as those in full-time jobs are likely to have steeper earnings profiles with more crucial phases at the beginnings of their careers than women with lower levels of education or those in part-time jobs. Thus, one might expect women with higher levels of education and women in full-time jobs to be reluctant to have children during crucial early phases of career building. In older cohorts, returning to work after having children may have been less common. If women in older cohorts do not plan to return to work, there will be no motive to gain employment tenure to improve labor market prospects after childbirth.

Data and Model

Respondents of the British Household Panel Survey are interviewed once a year. The first wave was in 1991. Data used here is from the first 11 waves of the BHPS, from

1991-2001. Most of the data collected in the BHPS refers to the one-year periods preceding each interview. However, there are also life-history elements in the BHPS. In wave 2 (in 1992) fertility, partnership, and employment status histories were collected.

In order to analyze the effect of employment durations on first birth rates (more precisely: first conception rates), monthly birth, partnership, education and employment histories were constructed using information from each wave as well as retrospective information collected at wave two. Using retrospective information permitted including a broad range of cohorts. Respondents included in the analysis were born between 1895 and 1982. Unfortunately, there is no information on partner's education or employment available from the retrospective parts of the BHPS.

The hazard model for first conception used in the analysis has the following form (for an individual i)

$$\ln h_i(t) = y(t-v_{ia}) + \sum_{k=1}^l \alpha_k x_{ik} + \sum_{k=1}^m \beta_k w_{ik}(t) + \sum_{k=1}^n z_k(t-v_{ik})$$

where $(t-v_a)$ gives the current age as a baseline duration, x_k are time-constant variables, $w_k(t)$ are time-varying variables, and $(t-v_k)$ give the duration since the beginning of a specific process. AML software is used to model the effects of duration in several different types of states in the same model, such as duration in full-time employment, part-time employment, non-employment, union duration, marriage duration, as well as age.

Time-varying variables included in the model were education, union order, previous months of self-employment, previous months of full-time employment, previous months of part-time employment, and previous months of non-employment. The birth cohort was included as a time-constant variable. The effects of age, union duration, marriage duration, current full-time employment duration, current part-time employment duration, current self-employment duration, and current non-employment duration were estimated in the form of duration splines.

Results

Full-time employment duration was found to have a positive effect on first conception risks among women born after 1960 (figures 2-4) and among women with a high level of education (results not shown here). This could have to do with greater career orientation and greater career prospects among younger cohorts as well as among those with higher levels of education. According to some theories of earnings and human capital development, especially early phases of careers are sensitive to interruptions (Gustafsson 2001, Taniguchi 1999). If this is the case, then that might explain the delay of childbearing among well-educated full-time employed women and among those in younger cohorts.

On the other hand, there are no significant effects of part-time employment durations. Usually, there is a non-significant negative effect, except among the youngest cohorts of women, where there is a non-significant positive effect of part-time employment duration on first conception risks. Possibly, the fact that there is generally no significant effect has to do with low career prospects among the part-time employed, so that timing of employment breaks is less important. However, in interpreting these results one must take into account that the number of events and total time at risk in part-time employment was very small.

The spline for non-employment differed strongly from that for full-time employment, generally beginning at a much higher level and then sloping steadily downward. Union duration and age are controlled for in these models, so a straightforward interpretation of this downward trend is difficult. Possibly those who are intentionally not employed will tend to decide to have a first child at the very beginning of this phase, while others postpone childbearing to wait for a chance to find employment.

The paper will also look into the effects of tenure with a specific employer, instead of only in a specific employment status.

Figure1: Effect of employment status duration on rate of first conception



Figure 2: Effect of employment status duration on rate of first conception cohorts 1895 - 1939

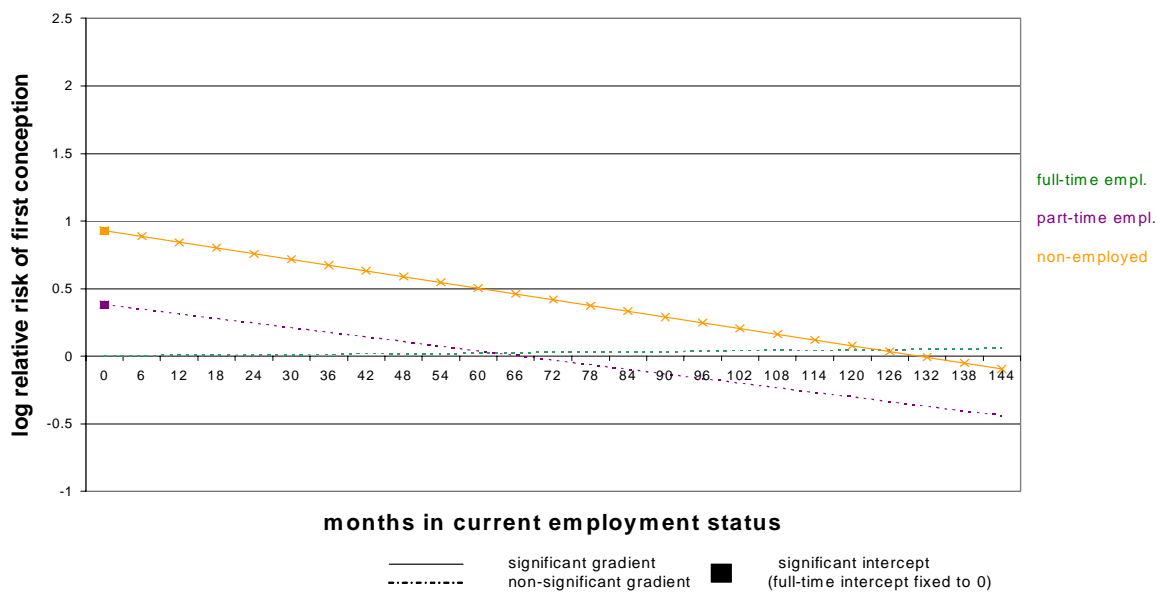


Figure 3: Effect of employment status duration on rate of first conception cohorts 1940 - 1959

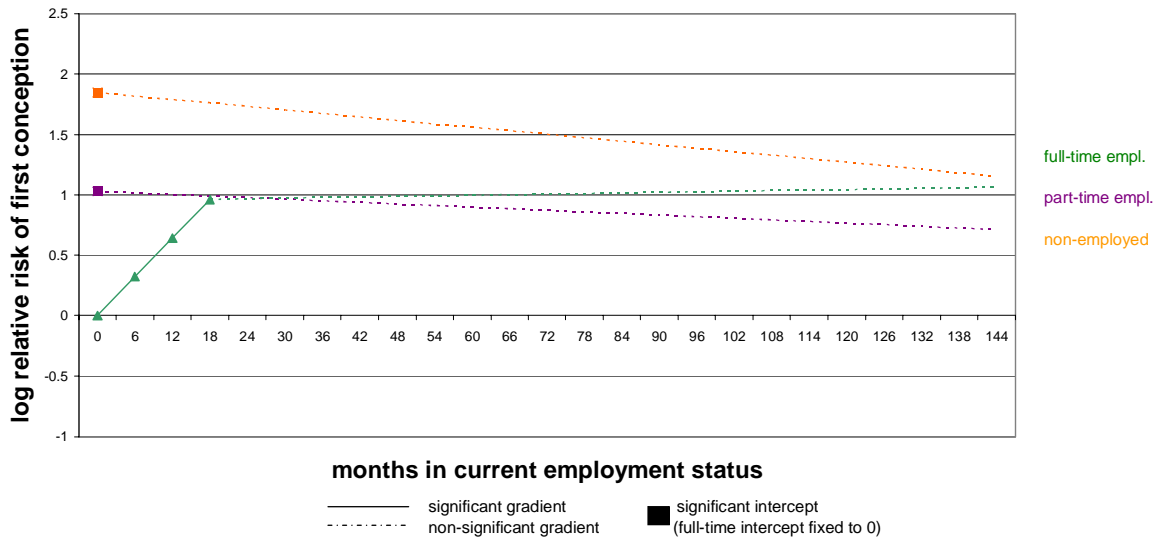
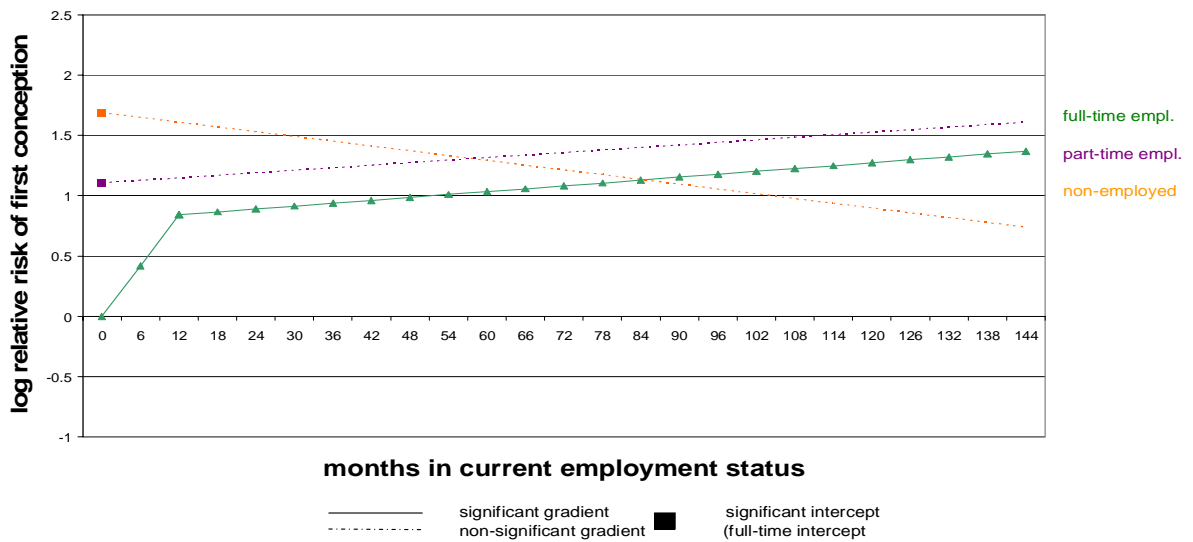


Figure 4: Effect of employment status duration on rate of first conception cohorts 1960-1982



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