

Chapter 3

THE MARGINAL EFFECT OF SCHOOL LEAVING AGE ON DEMOGRAPHIC EVENTS. A CONTRIBUTION TO THE DISCUSSION ON CAUSALITY

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1. INTRODUCTION

The age at first birth has increased in Sweden from 24.4 (1975) to 27.9 (2000) years (Council of Europe 2001). This trend has been shared with many other European and developed countries (Council of Europe 2001). In Norway, for instance, the mean age at first birth increased from 25.6 (1990) to 26.9 (2000), while in Denmark, women's age at first birth increased from 26.9 (1960) to 29.7 (2000).

The increases in women's age at first birth took place parallel to the expansion of education that resulted in young adults, and in particular women, spending more time in the school or university system and graduating at older ages. For example, the average duration of schooling, including primary, secondary and tertiary education, for Swedish women aged 25 and older increased during 1975 to 2000 by almost 3 years (Skirbekk et al. 2004). This phenomenon and its potential relation to fertility and fertility-related behaviors in early adulthood inspired considerable research interest, including many analyses about the effect of increased education on the timing and quantum of fertility and marriage.

Earlier investigations typically compare individuals with different educational attainment. This means that the individuals compared do not only differ in terms of the school leaving age, but also with other characteristics associated with different educational attainment (such as preferences, abilities and wealth) that are likely to influence fertility patterns irrespective of the school leaving age.

In the current study we utilize an exogenously determined change in the age at graduation from compulsory school¹ across birth months, and examine the impact from this variation on the timing of fertility and cumulated fertility. This approach allows us to overcome the problem of unobserved heterogeneity (i.e. the fact that education and fertility decisions are caused by common unobserved individual

characteristics) that has hampered previous attempts to measure the effects of variations in the school leaving age on fertility.

Exploiting the fact that an individual's birth month determines the age when graduating from compulsory schooling, our findings suggest an 11 months difference in the school leaving age does have a strong impact on the timing of first and second child, but is not related to the cumulated fertility.

2. SURVEY OF THEORY AND RESEARCH FINDINGS ON EDUCATION AND FERTILITY

Age at finishing school is an important determinant for the age at first child and other demographic events in early adulthood, as most women do not have children while being enrolled in education (Blossfeld and Huinink 1991). An important reason why individuals tend to finish education before entering parenthood is that young adults sequence their events in adulthood according to rigid scripts, where having completed educational careers typically precedes childbearing (Corijn 1996; Marini 1984).

Kohler et al. (2002) argue that the fertility postponement of the more educated is caused both by higher socio-economic costs of having children as well as social interaction effects that lead to postponement of childbearing. Further, Kohler et al. argue that delayed childbearing is an important causal factor towards reducing completed fertility, an argument which is supported by other studies (Bumpass et al. 1978; Kohler et al. 2001; Morgan and Rindfuss 1999; Rindfuss et al. 1996). Lutz and Goujon (2001), for instance, show that more educated women have lower fertility in most regions of the world, although the negative relation between education and total fertility is stronger in developing countries than in developed countries.

This effect of education on the timing and quantum of fertility is consistent with theoretical predictions. For instance, Becker (1991), Oppenheimer (1988), Heckman and Walker (1990) and Gustafsson (2001), along with many other studies, argue that (a) more schooling increases a woman's opportunity costs of having children, in particular as a result of higher wages for more educated women, and (b) a postponement of childbearing and lower completed fertility constitute a rational response of women (and couples) to these changes in opportunity costs due to increased education. Further, societal norms and individual preferences often imply that women are expected to finish education before establishing their own family, which means that increases in the educational length will delay the onset of childbearing.

In addition to the above factors, the effect of the educational expansion on fertility patterns has been reinforced during the second demographic transition, with increased focus on self-realisation, and a lowered importance of traditional values (van de Kaa 1987; Lesthaege 1998; Lesthaege and Meekers 1986).