

The impact of education on marriage and cohabitation in western Germany

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Abstract

Many authors argue that changes in union formation behavior are directly linked to the changing role of women. The decline in marriages and rise in cohabitations are associated with women's longer participation in the educational system and the growth in female economic independence. Previous research found education to be a strong factor in explaining differences in marital behavior between social groups within a population. However, studies on the impact of education on union formation in western Germany came to mixed results. Whether education has a structural or a causal impact on individual behavior is still not clear. The aim of the following work is to study how educational level and educational enrollment impact first union formation risk of western German men and women. The data for this project comes from the German Familiensurvey 2000. A competing-risk framework is used to study direct marriage vs. non-marital cohabitation. For the descriptive results cumulative incidence curves were estimated. For the multivariate analysis piecewise-constant hazard-models are applied. We do not find a clear negative effect of education on marriage formation but even slightly higher marriage risks for highly educated women. Women with tertiary education enter cohabitation more often than other women only if they are still in education. This does not confirm the assumption that highly educated women are assumed to avoid marriage. First preliminary results for men indicate that, contrary to women, living in cohabitation does not seem to be defined to a certain educational or age group.

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1 Introduction

Even though the underlying assumptions and theoretical implications are different, the fact that changes in union formation behavior, such as decreasing marriage rates, a rising age at first-time marriage and an increase in non-marital cohabitations, are directly linked to the changing role of women is common to all theoretical approaches: the increase in female education, the growing labor-market participation of women and the consequential increasing options in life in the last decades. Next to the increase in women's education, the prolongation of education is also discussed as one factor: It is not the rise in human capital investments of women that leads to delayed marriages but women's longer participation in the educational system. Studies on the impact of education on union formation analyzing western Germany came to mixed results. They either found negative effects of female education on marriage (e.g. Baizán et al., 2003; Brüderl and Diekmann, 1994; Klein and Lauterbach, 1994; Timm, 2006), no clear negative pattern of education (e.g. Hullen, 2003; Nazio and Blossfeld, 2003), and/or found prolonged educational enrollment to be responsible for a delay in marriage (e.g. Blossfeld and Huinink, 1989, 1991; Blossfeld and Jaenichen, 1992; Nazio and Blossfeld, 2003; Sommer et al., 2000; Timm, 2006) and to a smaller extend also for a delay in cohabitations (Nazio and Blossfeld, 2003). Whether education has a structural or a causal impact on individual behavior is still not clear. The aim of the following work is to study how educational level and educational enrollment impact first union formation risk of western German women and men.

2 Data and Methods

For the analyzes the *Familiensurvey* (Familysurvey) of the DJI¹ has been used. Most of the variables concerning the timing of an event are monthly given. After excluding cases with missing values on the main variables and some necessary data cleaning a sample of 2,964 western German women and 2.364 men who were single and under the risk of a first cohabiting union or a first marriage respectively has been obtained. A competing-risk framework is used to study direct marriage vs. non-marital cohabitation. For the descriptive results cumulative incidence curves were estimated. For the

¹Deutsches Jugendinstitut / German Youth Institute.

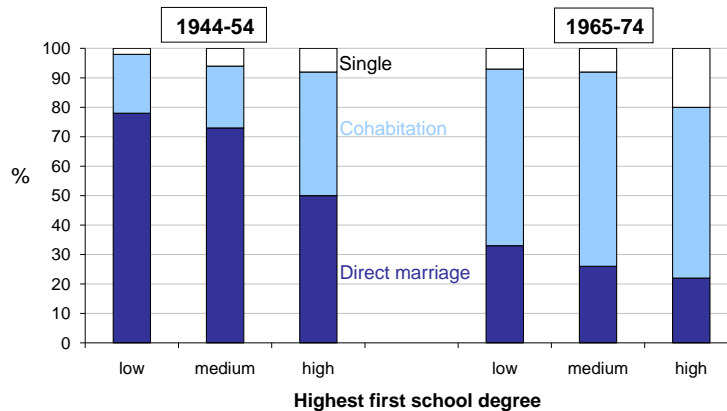
multivariate analysis we applied piecewise-constant hazard-models. The key variable is education. This can be taken as an indicator of the career opportunity of men and women. For descriptive reasons a time-constant variable of education which measures first school graduation is used. This variable is a very good proxy for overall educational outcome in western Germany since the tripartite school system in Germany is very selective in a way that it determines future educational outcomes. For the multivariate analyzes educational attainment and enrollment varies with the person's age. The reason why we estimated education differently is because for some part of the analysis we had to use a time-constant variable of education. Besides, we were interested whether different definitions of educational attainment might also lead to different results.

3 Preliminary Results

First, the process of diffusion of cohabitation is studied more closely: has cohabitation been an answer to unstable living arrangements of less educated western German women as has been shown for the United States, Great Britain or several post-communist countries; or are highly educated individuals the forerunners in values and behavior connected to new living arrangements such as non-marital cohabitation? First results indicate that women with higher education are "forerunners" of cohabitation (Figure 1). For younger cohorts an adoption of first union formation patterns can be observed: the majority of women enters cohabitation in all educational groups. However, less qualified women still display a 10% higher proportion of marriages.

In a second step, event-history models are estimated to evaluate whether the growing economic independence of women reduces the risk of marriage as has been predicted by the economic theory of the family, or whether marriage becomes delayed through the continuing prolongation of education and greater bargaining opportunities of women. We do not find a clear negative effect of education on marriage formation but even slightly higher marriage risks for highly educated women. Women with tertiary education enter cohabitation more often than other women only if they are still in education. After finishing education we observe a catch-up effect: highly educated women even display higher first marriage rates than less qualified women. This does not confirm the assumption that highly educated women

Figure 1: Cumulative incidence of cohabitation and direct marriage for first school graduation, western German women (n=2,920¹)



Sources: Familiensurvey 2000, own calculations

¹ We restrict this analysis to women who have already finished their first schooling. Therefore 44 respondents were deleted because they were still enrolled at school at interview.

are assumed to avoid marriage: more important is whether they are enrolled in education or not. The economic independence theory does not hold as explanation for decreasing marriage rates: women with a university degree do not refuse marriage but rather postpone it to later in life.

Preliminary results for men indicate a different union formation pattern in regard to education. First, men enter a first union later than women. Second, we do not find highly educated men to be "forerunners" of non-marital cohabitation. Men with medium education display a very similar behavior over generations compared to men with the highest school degree. Third, we do not find an enrollment effect of education as we found for women. Living in a non-marital cohabitation does not seem to be defined to a certain educational group or age group. The advantages and disadvantages of a particular type of partnership, either marriage or cohabitation, are not as important for men's union formation behavior as they are for women.

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