

Is education the primary determinant of childlessness in Switzerland?

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There is no doubt that high educational attainment is closely correlated with childlessness in Switzerland, as in many other countries. Around a third of tertiary educated women who have recently reached the end of their reproductive period are childless, compared to only around 15% of those with few qualifications.

However, is education the factor of over-arching importance in determining whether someone remains childless?

The census of 2000, covering the whole of Switzerland, has individual-level data which can answer this question. These include civil status, educational level, religion, country of birth, main language spoken and commune (local area) of residence. For comparable, more recent, data for cohorts born in the 1960s, the EFG sample survey was used (OFS, 2015). Data on primary language and country of birth were combined to produce a variable termed 'ethnicity'; people born in Switzerland are divided into Swiss-Germans, Swiss-French and Swiss-Italians and the foreign-born are defined by their country of birth. The typology of each commune (rural-suburban-urban) was also defined.

The primary factor associated with whether or not a person has children or not is, of course, whether they were ever married. However, this 'pre-requisite' for having a family has been declining over time with the rise in extra-marital births – although Switzerland still has a low level compared to other western countries (21% overall in 2013, with a higher proportion in the French-speaking parts).

To determine which factors, apart from marriage, were the most important in increasing the likelihood of remaining childless, binary logistic regression analyses were carried out separately for each decade of birth from the 1920s to the 1950s, for women/men using the census data, and similarly with the EFG data for the 1960s cohorts. The results are plotted on Figures 1a and 1b. The reciprocal of the odds ratio $\text{Exp}(B)$ is plotted in Figures 1c and 1d for those factors having the most influence in *increasing* the likelihood of *parenthood* (ie. *decreasing* the likelihood of childlessness).

There are several underlying trends which must be considered when interpreting these results. Firstly, there has been an ongoing increase in the proportion of people, and especially women, who have a tertiary education (4% to 15% between the 1920s and 1960s cohorts), and a decline in the proportion with only low educational attainment. Secondly, there has been an increase in those who declare they have 'no religion' (4% to 12% of women; higher for men). In the older generations, the religious 'nones' were mostly concentrated amongst the highly educated, but the younger generations have embraced this more widely across educational levels. One would expect that, with the increasing prevalence of high education and non-religion, these sub-groups would become less distinct in their fertility behaviour. However, this has not happened for highly educated women, although it has in the youngest generations for the non-religion subgroup.

What we can see from the figures is that, for women of most generations, tertiary education is the primary determinant for childlessness (Figure 1a). Until recently low education *increased* significantly the likelihood of *parenthood*, although this effect has now vanished (Figure 1c). The effect of education is opposite for men, with low educated men more likely to remain childless (Figure 1b) and highly educated men apparently finding it increasingly easy to transition to fatherhood (Figure 1d).

The influence of religion, however, is on a par with education. Non-religion became increasingly significant as a factor increasing childlessness from the 1920s to the 1950s cohorts, for both men and women, though recently it has declined for the 1960s cohorts, probably due to its increased prevalence. In contrast, being a Muslim increases the likelihood of parenthood for both sexes.

Living in an urban centre increases the likelihood of childlessness for men and women, and concomitantly, living in a rural area increases the likelihood of parenthood. However, this observation may also be due to mobility: single, childless people have a tendency to move to the city, whereas those with families are more likely to move out of the city to the countryside.

The effects of ethnicity are, in some ways, curious. Being born in the Swiss-Italian region of Switzerland has a significant effect on *increasing* the likelihood of childlessness for both men and women (Figures 1a and 1b). Yet, at the same time (and controlling for the other factors of education etc. included in the regression analysis), men and women who were born in Italy itself have a significantly *lower* likelihood of childlessness, on a par with immigrants from Spain (Figures 1c and 1d), who also have low levels of childlessness.

The Swiss-Germans and Swiss-French have increasingly diverged in their parenthood patterns in successive generations, as shown in Table 1:

Table 1: Relative likelihood of childlessness for Swiss-Germans compared to Swiss-French by decade of birth (with other control factors as stated)

	1920s	1930s	1940s	1950s	1960s
Women	0.98	1.04	1.15	1.34	1.66
Men	0.92	1.00	1.23	1.36	1.26

Initially the Swiss-French were slightly more likely to remain childless; for cohorts born in the 1930s there was no discernible difference, but since then the Swiss-Germans, especially Swiss-German women, have become increasingly less likely to enter motherhood compared to their Swiss-French counterparts. This may reflect the trends seen in Germany and France, and, perhaps, the pro-natalist stance of the French government. Perhaps the media messages seep across the borders?

To return to the question posed in the title: is education the primary determinant of childlessness in Switzerland? For women tertiary education is certainly a very important factor, although non-religion and being Swiss-Italian have been more important for, respectively, the 1950s and 1960s cohorts. For men, having no religion is more important than other factors (except for the 1960s generation), but low education, city living and being Swiss-Italian are also significant.

Major risk factors in comparison to reference category: Secondary education; Catholic; Suburban; Swiss-French

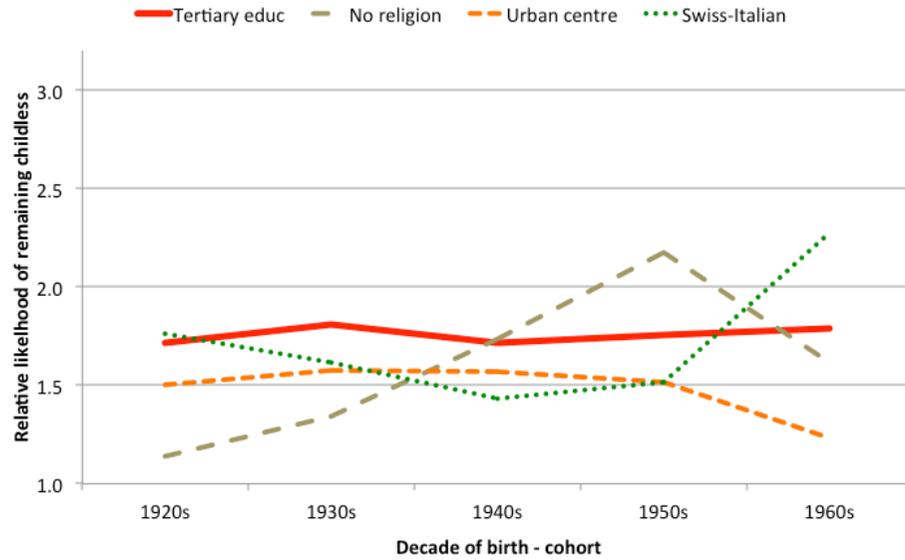


Figure 1a: Childlessness risk – women

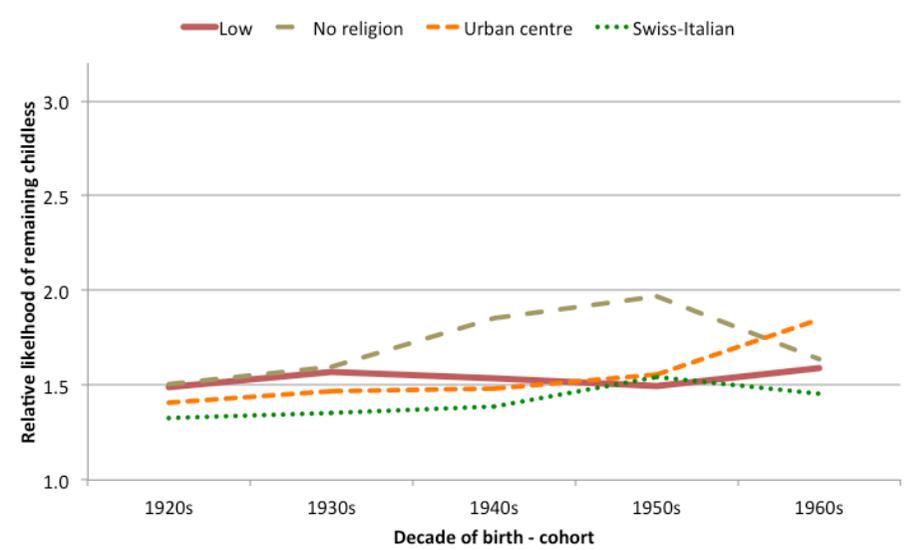


Figure 1b: Childlessness risk - men

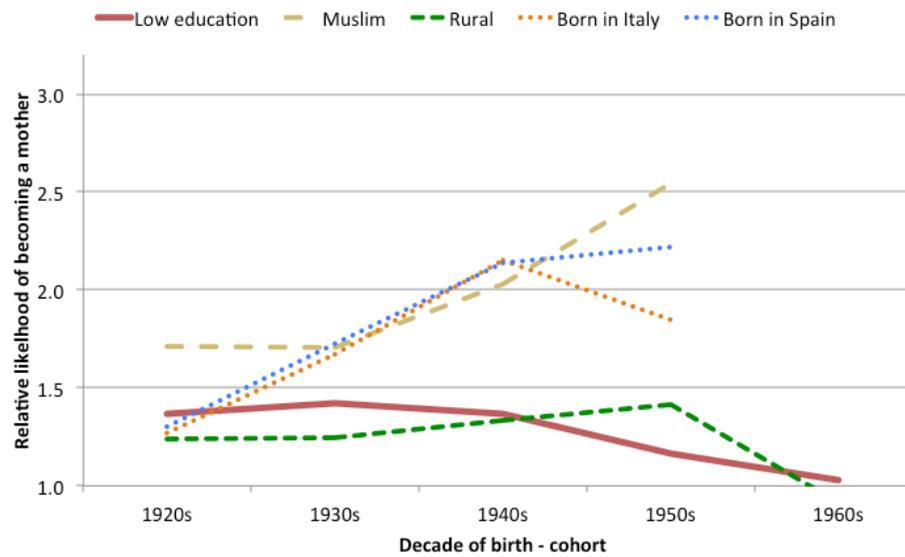


Figure 1c: Parenthood risk – women

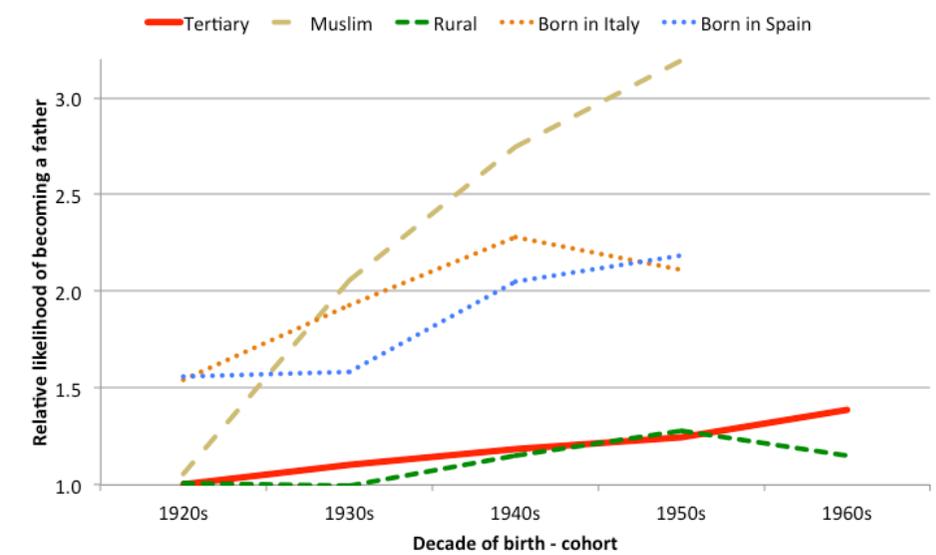


Figure 1d: Parenthood risk - men