

WOMEN'S EDUCATION AND FERTILITY IN ITALY AT THE ONSET OF THE DEMOGRAPHIC TRANSITION

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Abstract

The historical link between rising demand for education, rising women's employment opportunities, and the decline in fertility, has received much attention in the economic literature. However, no empirical study has focused so far on the relationship between women's education and fertility in Italian history. This paper is a first attempt to fill this gap.

In this paper we study the cross-sectional relationship between young women's education in 1881 and fertility behaviour in 1901 across Italian districts (*circondari*), while controlling for migration outflows, child mortality, female employment opportunities, the historical influence of the French empire, the presence of the Catholic Church, and other socioeconomic variables. We use a novel historical dataset combining information on 276 districts from the national censuses and other coeval sources. Our main explanatory variable is the literacy rate of females aged 6-14 in 1881. Fertility choices in 1901 are instead proxied by the child-to-woman ratio, constructed as the number of children aged 0-8 over the number of women aged 25-34 in 1901, in the spirit of Becker, Cinnirella and Woessmann (2013). The denominator of this ratio is expected to capture the female cohorts selected in 1881 twenty years later, while the numerator is expected to proxy for their offspring, born around their mothers' year of marriage (i.e. when these women turned 25).

For causal estimation we develop an instrumental variables strategy based on the scattered opening of the central government-financed normal schools. These schools were teacher-training colleges established by the 1859 Casati Law, the earliest legislation aimed at organising the Italian education system. To be eligible to teach in primary schools, aspiring teachers were required to attend a three-year training course in a normal school. Importantly, these training colleges opened in different years throughout the country. For each district we then instrument the young female literacy rate in 1881 with the length of exposure to a normal school by the district's population, from 1861 to 1873 (the last year by which we expect normal-school students to have affected the female cohorts of interest in 1881). Precise information on the location of normal schools over time is inferred from the series of *Annuari dell'Istruzione Pubblica* released annually since 1859. Armed with these data and identification strategy, we document a negative causal relationship between young women's education and fertility at the onset of the Italian demographic transition.