

Late Fertility Transition in Sardinia: Impact of the First and Second Demographic Transitions

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LATE FERTILITY TRANSITION IN SARDINIA

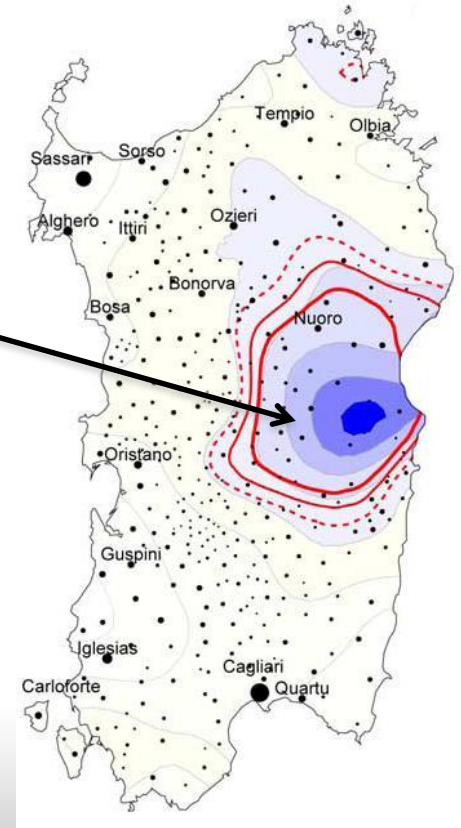
- ▶ The fertility transition in Sardinia occurred very late and high level of marital fertility has been recorded in Sardinia as late as the 1950's by numerous researchers (Livi Bacci 1977, Bernardi and Oppo 2007, Breschi 2012).
- ▶ In 1950, the province of Nuoro in the mountainous part of Sardinia showed the highest values for the Coale Index on marital fertility among all Italian provinces.



The setting : Villagrande Strisaili & Seulo

The villages of Villagrande and Seulo are located at more than 700 meters above sea level in the so-called *Longevity Blue Zone*.

On 1 January 2018, 3,300 inhabitants lived in Villagrande and 850 in Seulo, with agro-pastoral activities and traditional life style still prevalent.



Data used and method

- ▶ **Classical family reconstruction** covering the period 1800 till now.
- ▶ **3621** women born between **1840 and 1989**, alive at 18, of which **2521** married and have children and for whom we know their completed fertility history.
- ▶ **219** women were married before 50 but did not have any child whereas **881** girls reached 18 years but did not marry before age 50.
- ▶ **Data sources** : Parish registers, Civil registers since 1866 and *anagrafe* (population register) since 1930.



Selection criteria

- ▶ The **criteria for selecting the women** were the following:
 1. They were born in Villagrande or in Seulo from 1840 until 1989 whereas their children are observed until 2018
 2. For those who married, the marriage record was found
 3. They died when living in Villagrande or Seulo or were alive in 2018 in one of the two villages
 4. If married, their spouse also died in one of these villages or were still alive therein in 2018
 5. No emigration is detected during the fertility period of the mother (based on *anagrafe* or place of birth / death of children)



Number of women by decade of birth

Decades of birth	Villagrande	Seulo	Together
1840-1849	101	73	174
1850-1859	121	57	178
1860-1869	118	81	199
1870-1879	119	73	192
1880-1889	146	107	253
1890-1899	171	87	258
1900-1909	187	113	300
1910-1919	195	107	302
1920-1929	235	93	328
1930-1939	191	111	302
1940-1949	173	67	240
1950-1959	206	51	257
1960-1969	234	51	285
1970-1979	169	41	210
1980-1989	115	28	143
TOTAL	2481	1140	3621

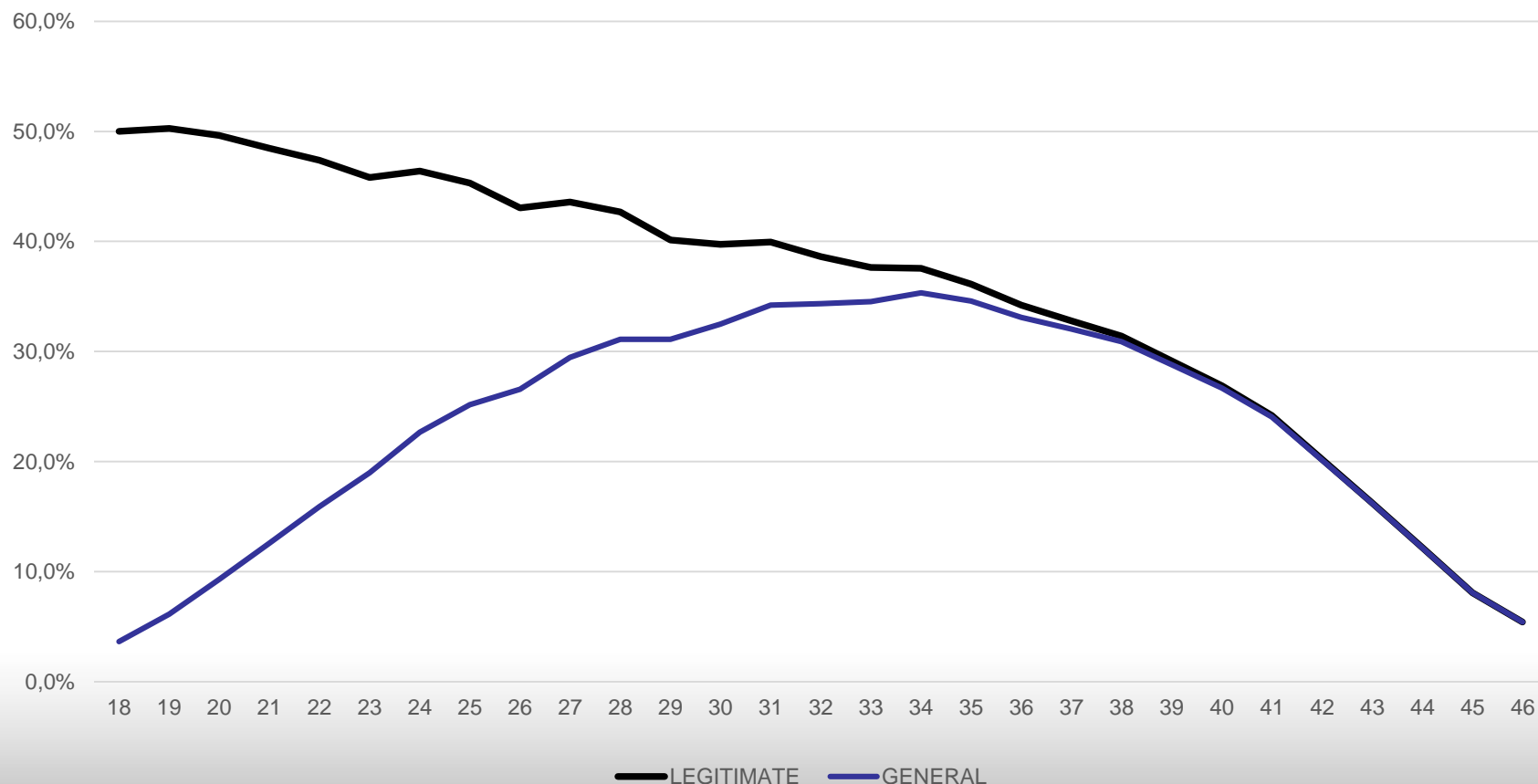


Number of women by decade of birth

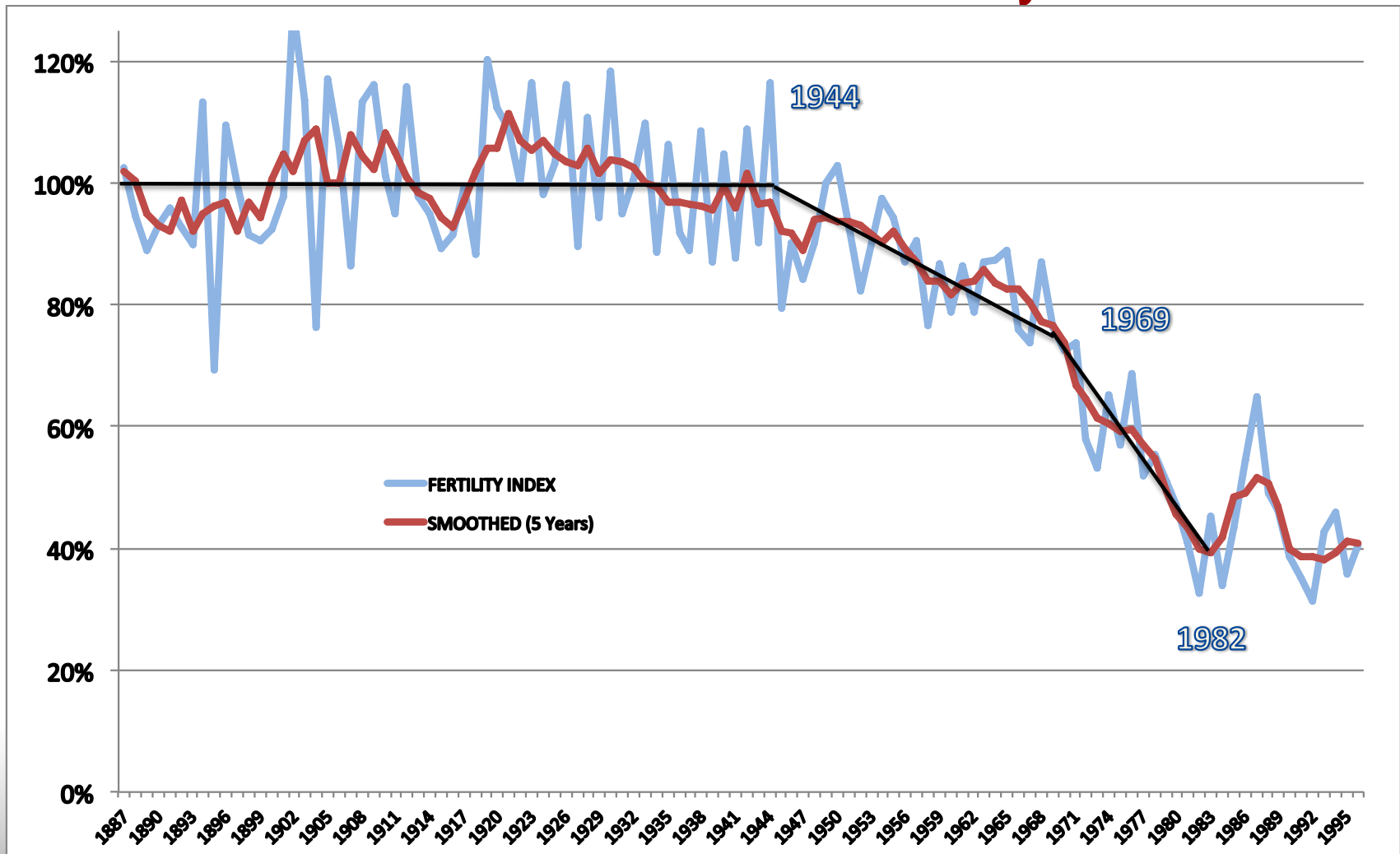
Decades of birth	Married with children	Married but no child	Unmarried
1840-1849	122	20	32
1850-1859	127	16	35
1860-1869	153	17	29
1870-1879	148	18	26
1880-1889	184	29	40
1890-1899	167	28	63
1900-1909	196	27	77
1910-1919	201	25	76
1920-1929	197	24	107
1930-1939	218	8	76
1940-1949	165	5	70
1950-1959	200	1	56
1960-1969	228	1	56
1970-1979	170		40
1980-1989	45		98
TOTAL	2521	219	881



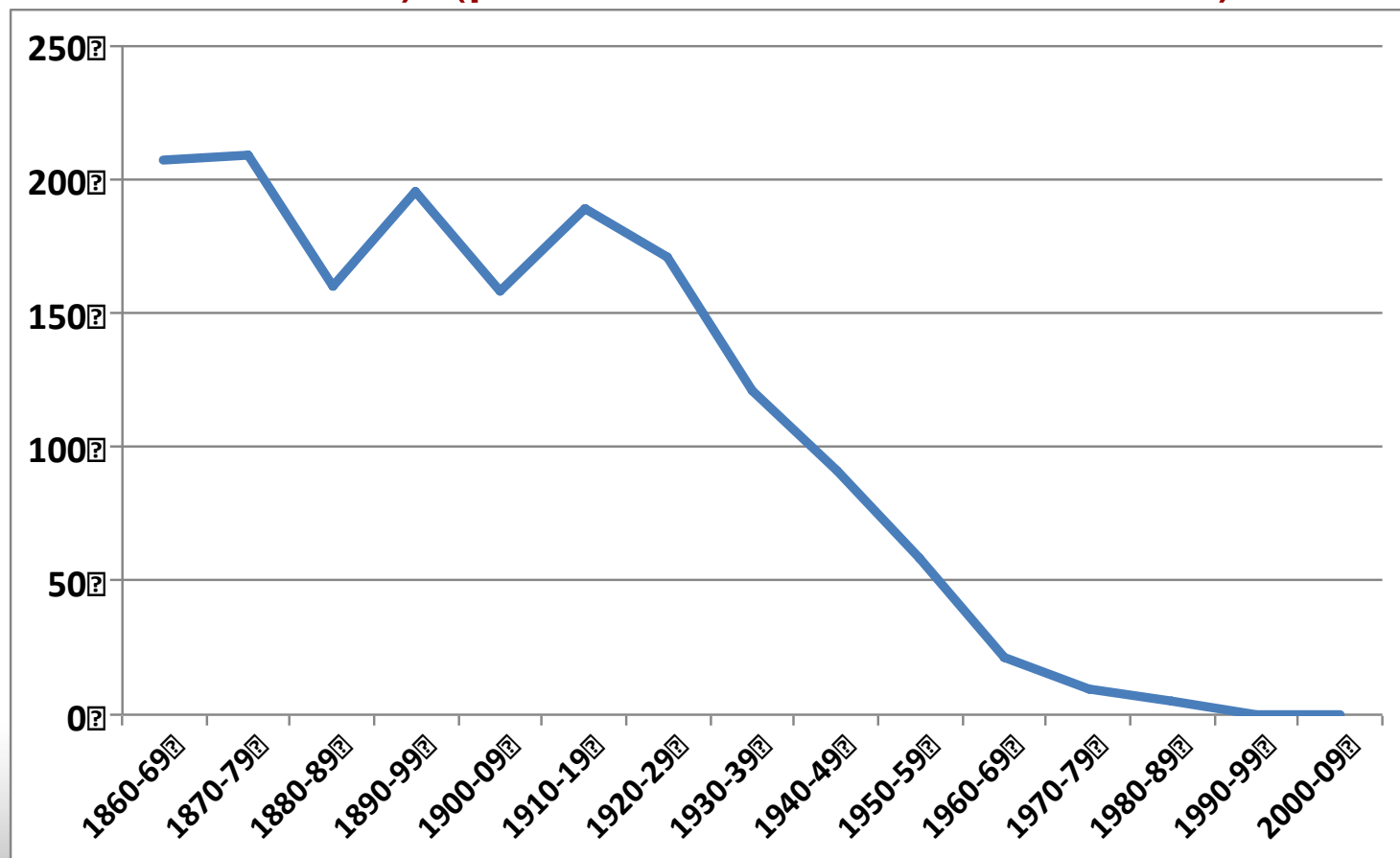
Natural fertility rates for women born between 1840 and 1889, with complete marital fertility history



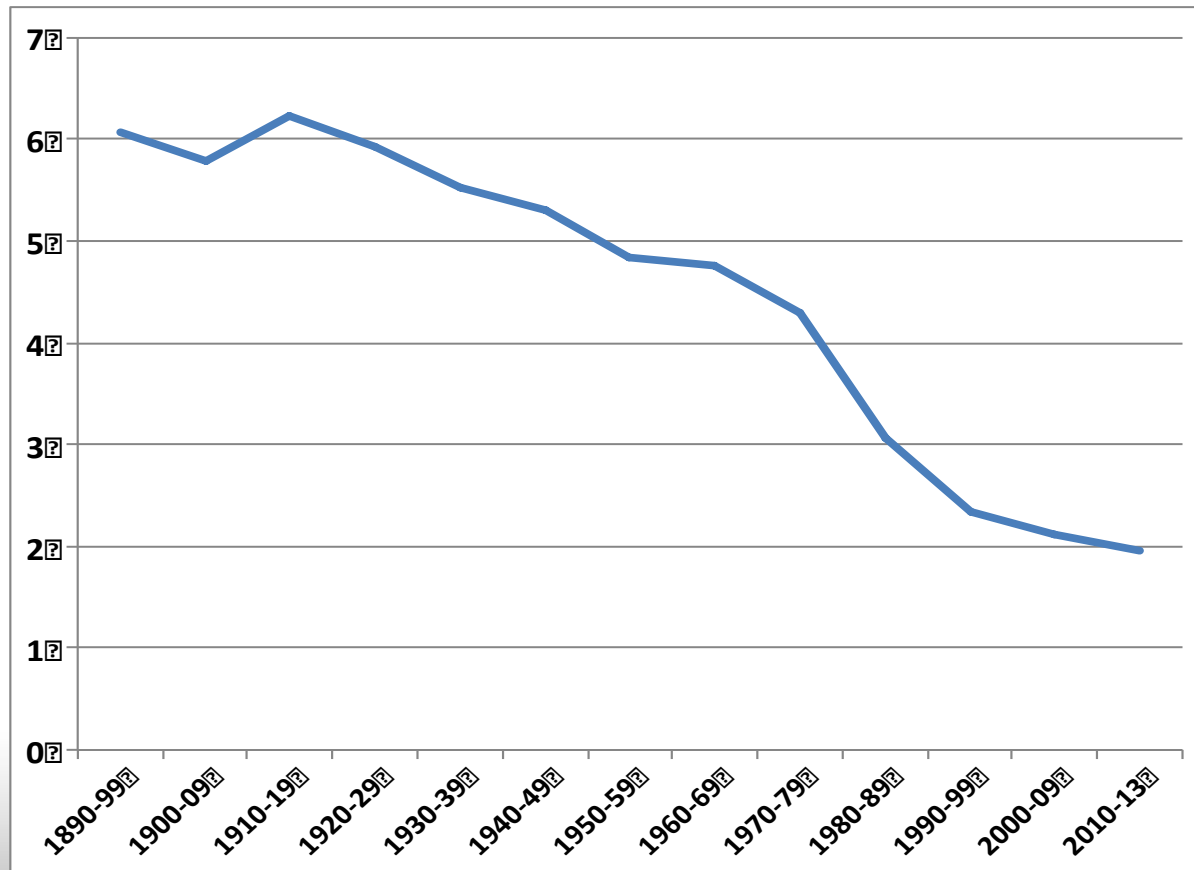
Standardised Marital Fertility Index



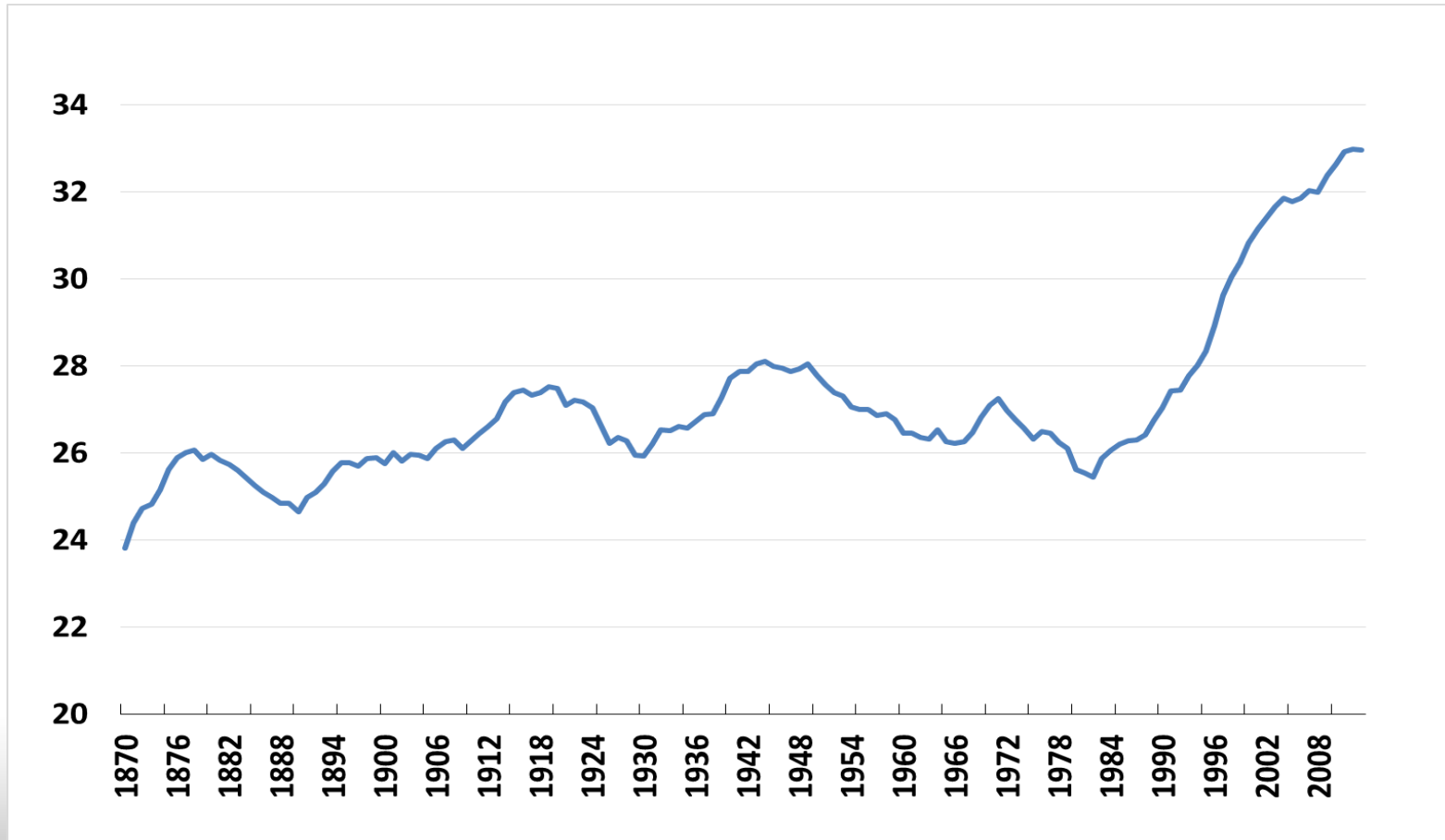
Infant mortality rate per decade of birth (1860-2009) (per thousand newborns)



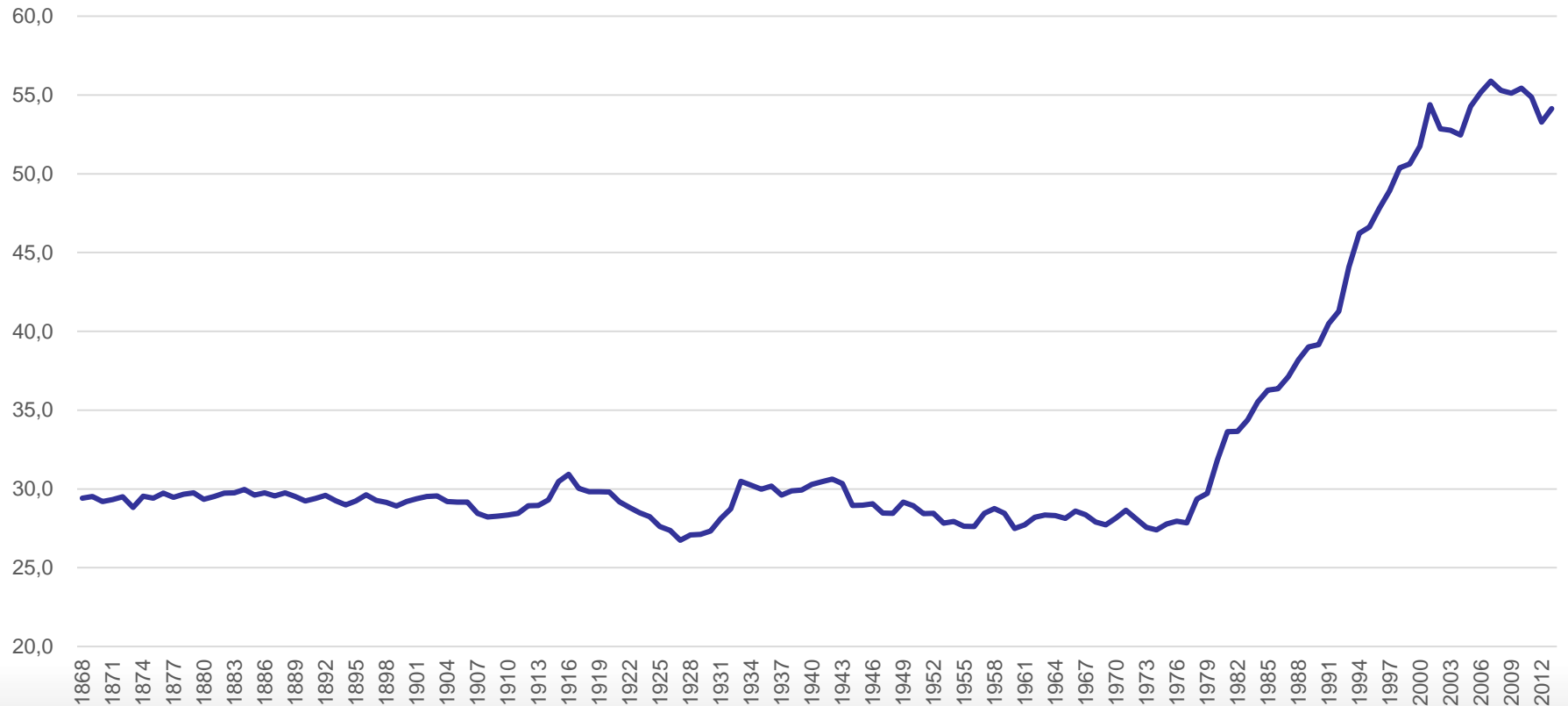
Number of children surviving at age 1 year by decade of last childbirth



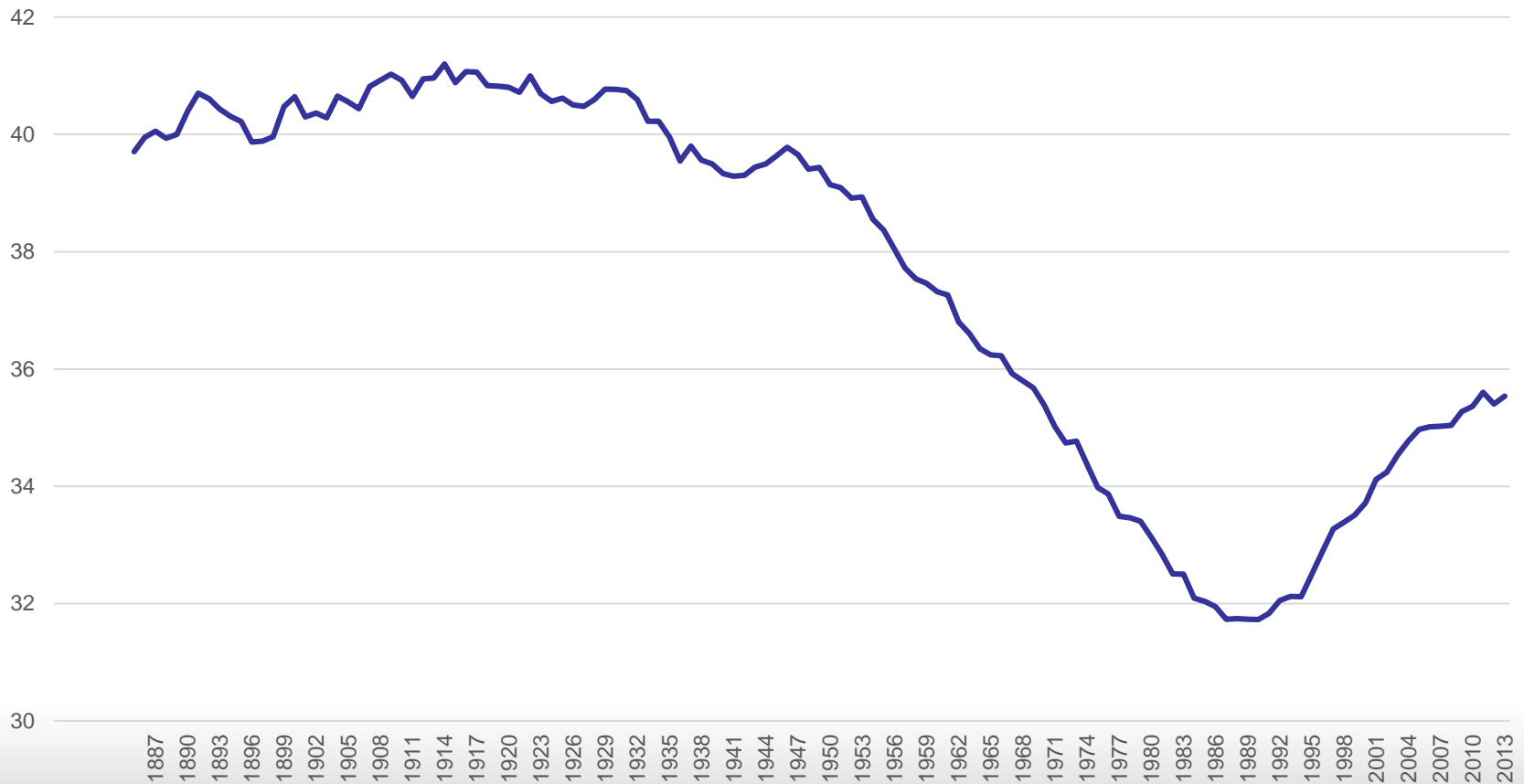
Mean age at first child by year of childbirth



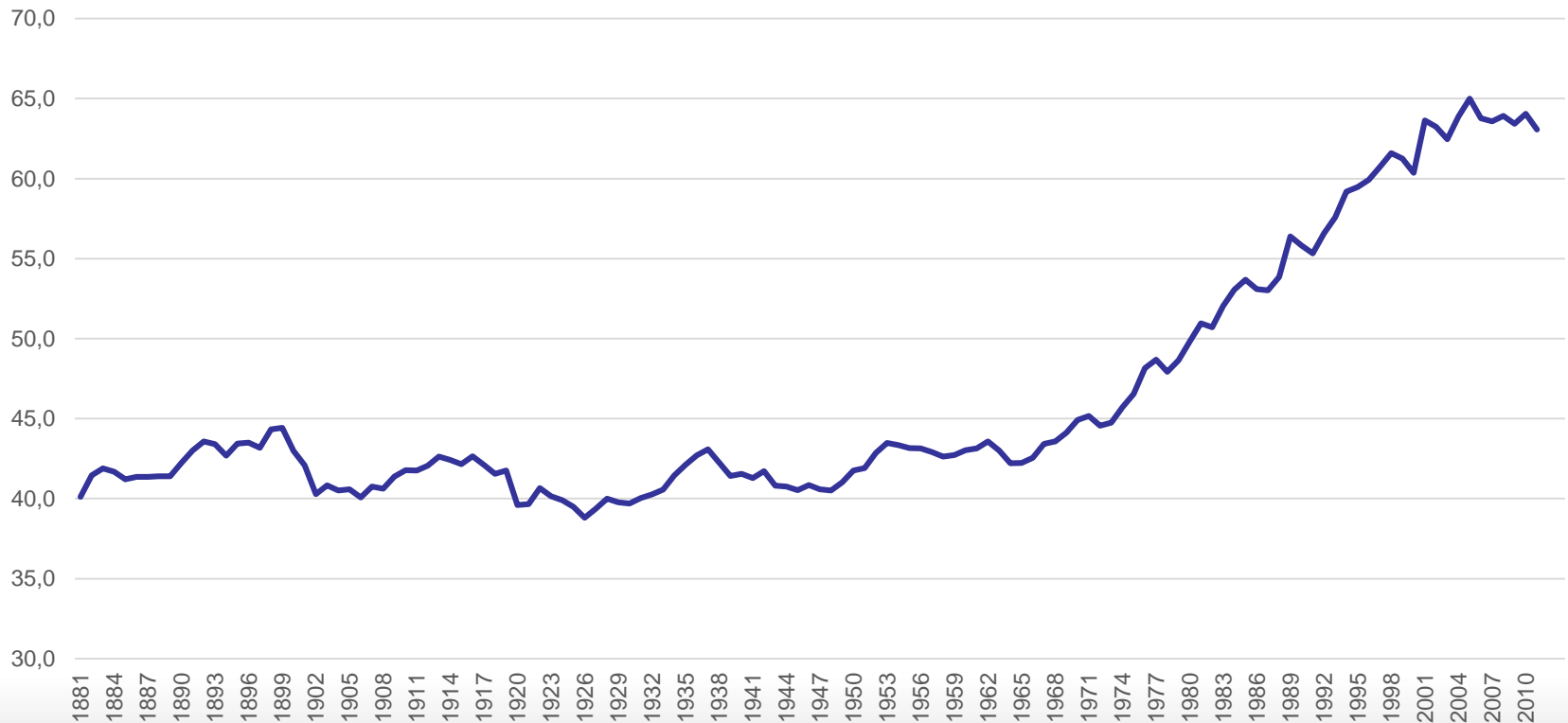
First intergenerational interval by year of the 2nd childbirth



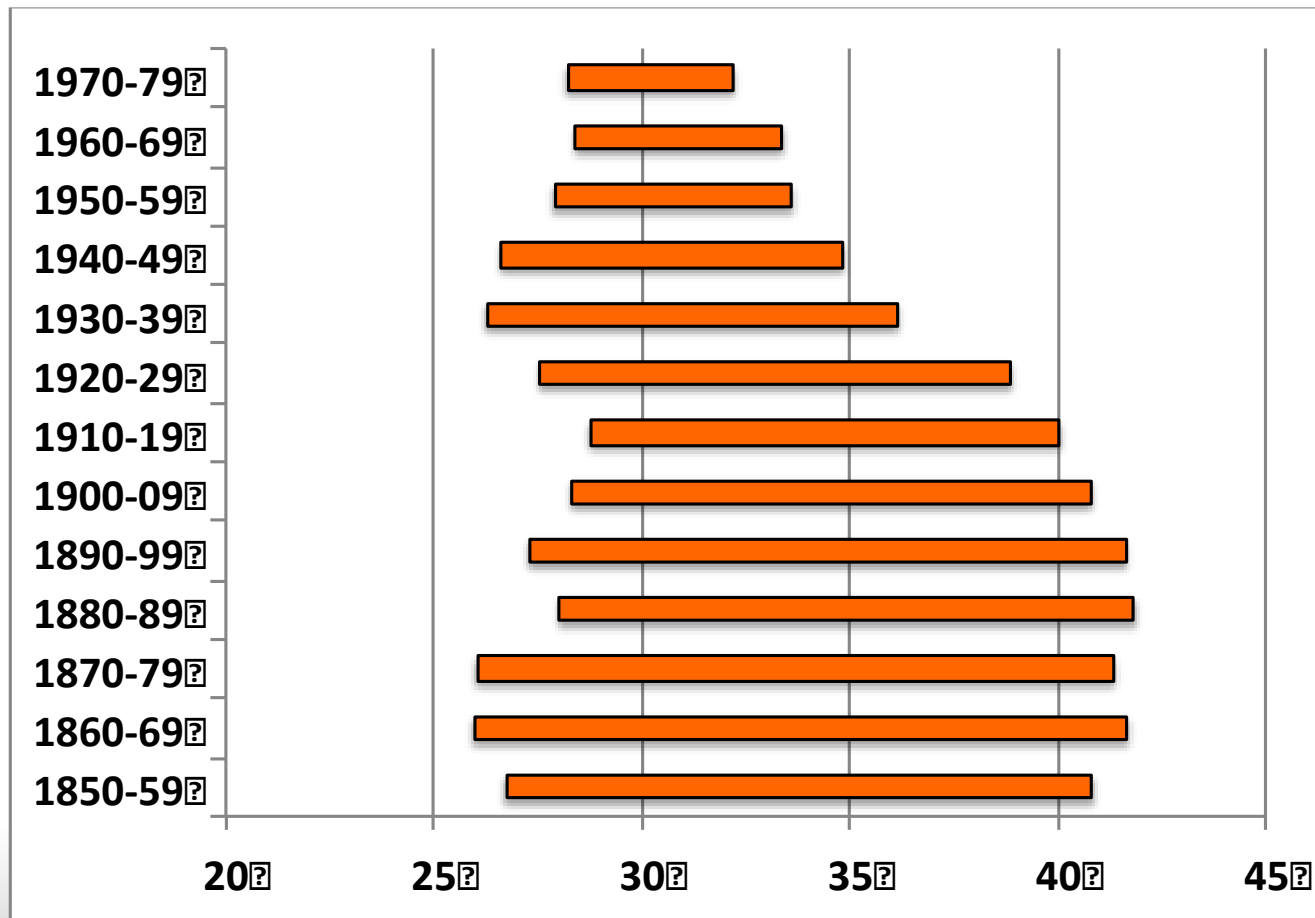
Mean age at last child by year of last childbirth



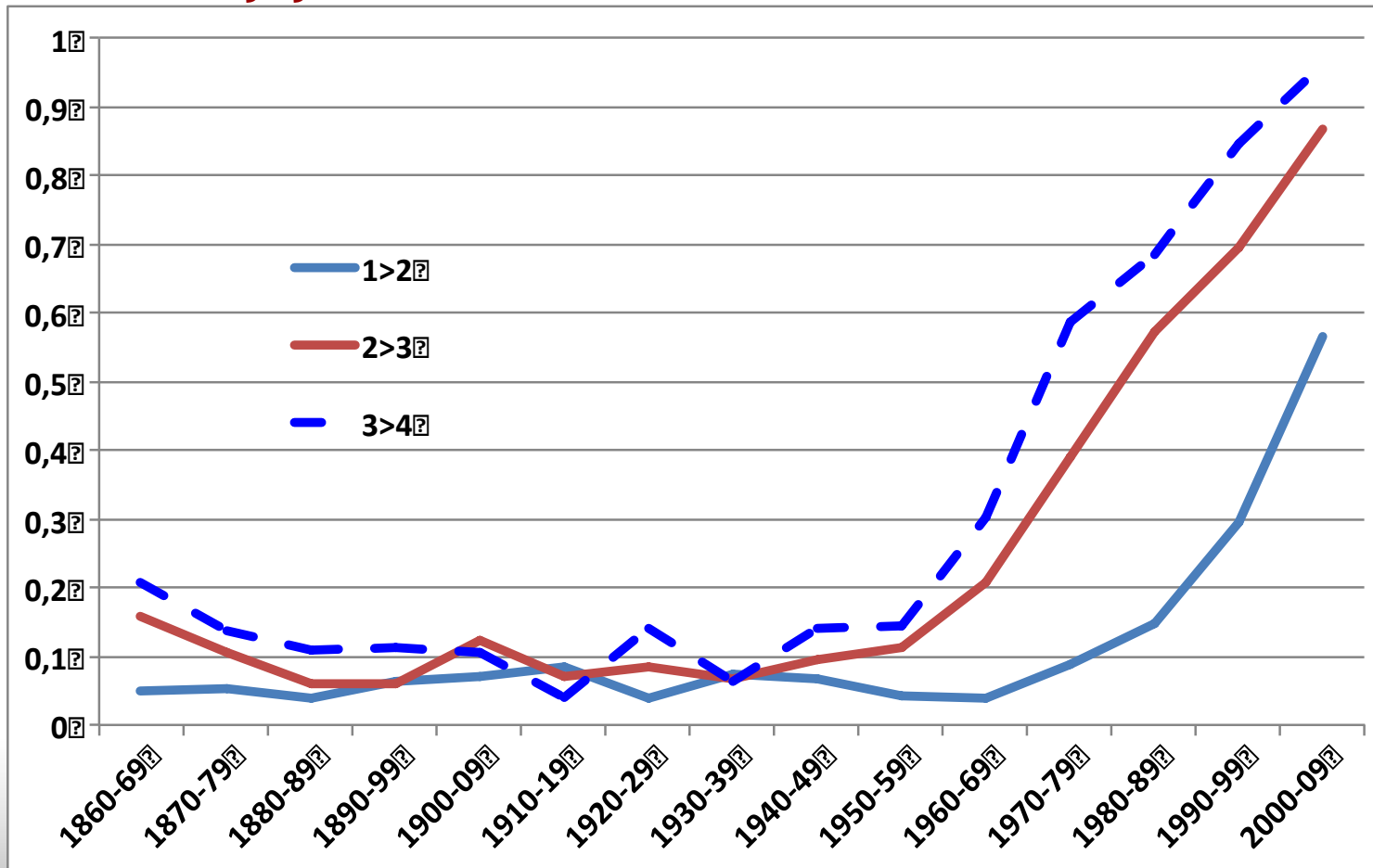
Last birth interval (in months) by year of birth of last child



Fertility period by decade of mother's birth



Proportion of mothers who stopped after 1,2 or 3 children by year of birth of their last child

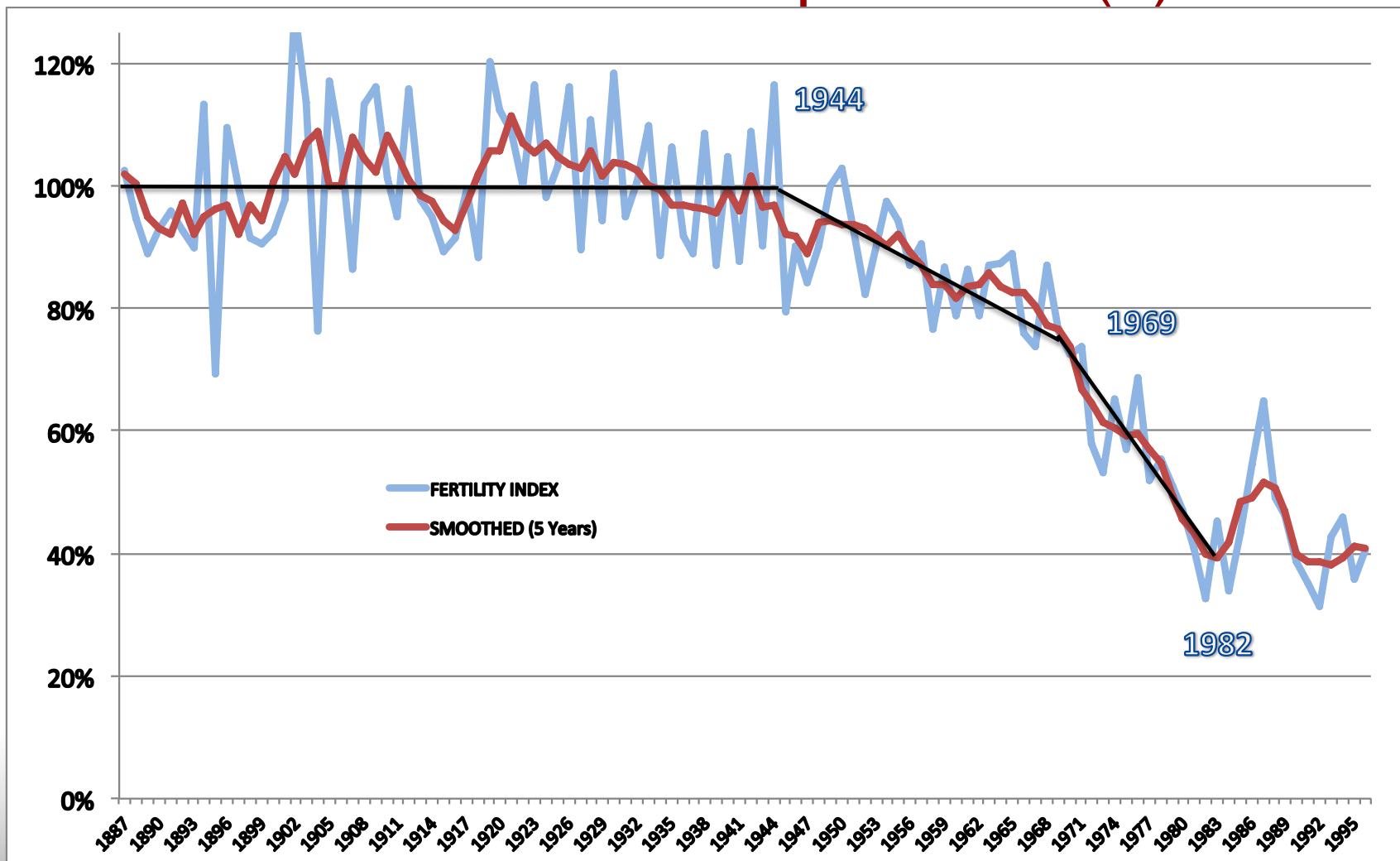


Innovative aspects

- ▶ The development of a research linking the **past and the present**
- ▶ The availability of **continuous individual data** allowing to analyze the evolution of fertility behavior until now
- ▶ The possibility to **compare two villages** with similar data
- ▶ The possibility to **survey the actors** of both the first and second demographic transitions to understand the main demographic changes that occurred during the last century



Discussion – Interpretation (1)



Discussion – Interpretation (2)

- ▶ Very **few signs** indicating a fertility decline prior 1950 even if the mainland Italy experienced a strong decline in fertility between the two World Wars, pushing Mussolini to introduce **pro-natalist incentives** to stimulate it around 1930.
- ▶ All changes started after WWII and more precisely in 1948 when the **anti-malaria campaign** was initiated with the support of Americans. The **opening** of the villages to the external world became effective with better communications, exchange of goods and ideas and migrations.



Discussion – Interpretation (3)

- ▶ Several **policies** introduced in the 50's are considered being important stimuli for the welfare of the local population and concrete changes concern social security system, pension and access to health services.
- ▶ In the 60's the **compulsory education of children** introduced in 1962 is considered as important to explain the limitation of the number of children as they were obliged to go to school until 14 and cannot help anymore their parents (at home for girls, in the field or with animals, for boys).



Discussion – Interpretation (4)

- ▶ The 60's are also characterized by strong emigration flows, **higher education also for women** and a larger proportion of exogamous marriages.
- ▶ Starting from mid '60s, most couples wanted to **limit the number of children at 2 or 3** depending the sex of children already born but the method used (coit interruptus and OGINO) were not effective resulting in a 3rd or 4th child arriving after a longer delay.



Discussion – Interpretation (5)

- ▶ In the year 1984, we found evidence that the **contraceptive pill** started to be used and that makes effective the contraception. Married couples reduced strictly their descendance.
- ▶ In the '90s, the **SDT** emerged with postponement of marriage and appearance of non-married couple with children born outside marriage.



Future work

The investigation is still ongoing to explain the variation of individual behavior in terms of fertility during the period of

- ▶ the natural fertility regime,
- ▶ the first demographic transition
- ▶ and the second demographic transition.

THANKS and SOON

