Is increasing life-course complexity a main factor behind the childless boom? Evidence from the trajectories of Italian cohorts born between 1916 and 1971

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Short Abstract

A few studies (Jalovaara2017, Tocchioni 2018, Tocchioni et al. 2022) have clearly shown that childlessness needs to be studied in relation to individuals' life trajectories and that there is an extreme heterogeneity in paths leading to childlessness on the whole. What it remains unclear however is whether the growing complexity in the individual life course, with particular regard to relationship and career instability, fuels the increase of childlessness prevalence among the younger cohorts. From the most recent Families, Social Subjects, and Life Cycle survey (2016), a sub-sample of 2,135 childless individuals born between 1916 and 1971 (women aged at least 45 and men at least 50 at the time of the interview) have been selected. Using sequence and cluster analysis on individual biographies, five clusters have been identified whose importance changes substantially across cohorts and by sociodemographic characteristics. Calculating the complexity index of each individual trajectory, this paper shows that the growing complexity of biographies and the increasing importance of turbulent sequence of events in the life-course are becoming more and more important among the cohorts born after 1945 and if they are not a major factor yet, they could become crucial for the generations born after 1971.

Keywords: childlessness, life course, sequence analysis, index of complexity

Background and objective

Permanent childlessness is booming in many Western and Eastern Asian Societies (Sobotka, 2017; Tanturri et al., 2015). In Italy, in the last decades, fertility decline has been attributable mainly to a decline in the number of first births: if we compare the cohorts of women born in the mid-40s with those born 30 years later - in the mid-70s - we notice that the prevalence of childlessness more than doubled (from 10 to 22%).
It is well known that in some cases, the paths leading to childlessness is part of a rational choice process, adopted consciously to reject parenthood since the beginning, but very often is the outcome of a continuous series of postponing childbearing for several life circumstances (Berrington, 2004, 2017): the lack of a partner, partnership instability, precarious employment conditions and the economic uncertainty. A few studies indeed (Jalovaara and Fasang, 2017; Tocchioni, 2018; Tocchioni et al., 2022) have clearly shown that this process needs to be studied in relation to individuals' life trajectories and that there is an extreme heterogeneity in paths leading to childlessness on the whole.
What it remains unclear however is whether the growing complexity in the individual life course, with particular regard to relationship and career instability, fuels the increase of childlessness among the younger cohorts. In this paper we try to answer this research question with a special focus on Italy that represents an interesting case study in this regard. Italy indeed is characterized by persistent low fertility, a booming prevalence of childlessness, and at the same time a late diffusion of the Second Demographic Transition's features, as the spread of cohabitation or Living Apart Together forms of union, as well as of couple instability. At the same time the challenge of globalization, the deregulation policies of the Nineties, the Great Recession in the 2000s have make the Italian labor market participation less stable and uncertain. In addition, Italy has been always characterized by a late transition to adulthood even recently.
The primary objective of this study is to examine childlessness in relation to the life trajectories of men and women in Italy, following a longitudinal approach. More specifically, this study is aimed to identify typical longitudinal union and work trajectories that characterize permanent childless women and men, belonging to different generations, in order to understand whether the increase of childlessness is the result of the spread of these specific paths across cohorts. Secondly the study analyses individual trajectories in order to measure the degree of complexity intrinsic to each path leading to permanent childlessness, with an adequate indicator. The aim is to evidence whether the indicator increases among the younger cohort of permanent childless individuals.

Data and Methods

This study relies on data from the Multipurpose Survey on Families "Families, Social Subjects, and Life Cycle" conducted by the Italian National Institute of Statistics (ISTAT) in 2016. We select a sub-sample of 2,135 childless individuals (1,195 women and 940 men) born between 1916 and 1971, women aged at least 45 and men aged at least 50 at the time of the interview. An individual is considered childless when he/she declare not to have any biological, adopted, foster, or stepchildren (including those of a cohabiting partner). The resulting sample comprises 2,135 individuals (1,195 women and 940 men) born between 1916 and 1971.
The distinctive feature of this survey, which renders it particularly valuable for investigating an individual's reproductive, employment, and marital history, is its employment of retrospective inquiries. The analyses conducted considered the universe's recalibrated weighting coefficients to correct for the representativeness bias of the sample data.
For each childless individual in the sample, we created a reconstructed individual sequence of states month by month, from age 16 until age 45 for women or 50 for men. The resulting sequence for each individual consists of eight possible states, as a combination of four states representing union histories (*single, in a non-cohabitating relationship, cohabitating, married*) and two states representing employment histories (*unemployed, employed*). The complexity index is also calculated for each individuals trajectory and by cohort (Gabadinho et al., 2010). By employing sequence analysis, cluster analysis, and multinomial logistic regression methods, we compare and group individuals' histories based on the timing, occurrence, and ordering of events. This approach yielded

five distinctive profiles for childless women and men, with four profiles demonstrating congruence across both genders. We illustrated how these clusters diverge in terms of key socio-demographic characteristics (sex, education level, geographical region of residence, cohort, number of siblings, parents' separation, limitation in the daily activities), individual opinions (on cohabiting without marriage, on the necessity of having children for women's fulfillment), and the degree of complexity of the trajectories. Finally we also illustrate how the clusters' relative importance changes across the cohorts.

Results

In Figure 1, we present the state distribution plots for each of the five clusters identified through cluster analysis, derived from the life trajectories of childless individuals. Based on the patterns observed in the trajectories of the childless, the clusters are named: *No Work Single*, *No Work Married*, *Turbulent*, *Work Single*, and *Work Married*.

The *Work Married* cluster (13,8% of the sample), embodies a more "traditional" life trajectory, predominantly culminating in marriage and employment by the end of the reproductive age, with individuals often spending time single or in engagement before marriage. The likelihood of belonging to this cluster is higher for men and for those born between 1945 and 1956. However, individuals in this cluster exhibit less differentiation in other aspects compared to those in other clusters, as they follow a standard trajectory common across various demographic categories.
The *Work Single* cluster (12.3% of the sample), is characterized by a life trajectory largely outside of a relationship, with the majority of time spent working. Men, individuals with higher levels of education and belonging to the oldest cohorts, residing in the central-northern regions, and in good health have a higher likelihood of belonging to this cluster.
The *Turbolent* cluster (5.8% of the sample) consists of individuals whose life paths involve employment from a certain age onward, along with a relationship, which can be either cohabitating or non-cohabitating (engaged or living apart together). The probability of belonging to this cluster is higher for younger cohorts, individuals residing in the central-northern regions, those whose parents have separated/divorced, and those who believe that cohabitation is possible without planning to get married.
The *NoWork Married* cluster - the largest one of the sample (37.9%) - is characterized by a longer duration spent in the "No-Work Married" state, with a high likelihood of belong to this cluster for women, individuals with lower levels of education, residing in the southern regions or islands, and generally more traditional individuals. Opinions become particularly significant for this cluster, especially the notion that cohabitation should precede marriage and that a woman's fulfillment is contingent upon having children. For individuals belonging to this group, childlessness may not be a voluntary choice, but rather a condition experienced due to infertility impairments.
Lastly, the *NoWork Single* cluster (30.1% of the sample) comprises individuals who spend all or most of the analyzed period outside of a relationship and not working. The likelihood of belonging to this cluster is higher for women, for individuals with no education, residing in the southern regions or islands, born between 1946 and 1966, and experiencing health limitations at the time of the survey.
Furthermore, among childless individuals, higher sequence complexity increases the likelihood of belonging to the first, third, and fourth clusters while decreasing the likelihood of belonging to the second and fifth clusters. After repeating the analysis on separate samples of only women and only men, we conclude that four clusters are common to both sexes, while only the *No Work Married* cluster is more prevalent among women.
Regarding the distribution across the five clusters for each analyzed cohort, Figure 2 illustrates the distribution by birth cohort for both sexes. These plots reveal a more evident change in cluster composition across cohorts for women. In particular, it is noted that the proportion of women oriented solely towards work (Work Single cluster) does not seem to increase, while the number of women in the No Work Married cluster significantly decreases. This decrease is accompanied by a noticeable increase in the proportion of women in the Turbulent cluster, which rises to 13% in the last cohort of those born between 1966 and 1971.

For men, the significance of the Turbulent cluster also shows an increasing trend, although to a lesser extent compared to women and, for the remaining clusters, no other significant changes in composition across cohorts are observed. In addition (as illustrated in fig.2), across cohort it is possible to observe a growing level of complexity in childless individuals trajectories. This results is also corroborated by a linear regression estimate, net to other confounders. In conclusion, this study provides some preliminary evidence that the growing complexity of biographies, and the increasing importance of turbulent sequence of events in the life-course, are becoming more and more important among the younger cohorts and if they are not not a major factor behind childlessness yet, they could become crucial for the generations born after 1971.

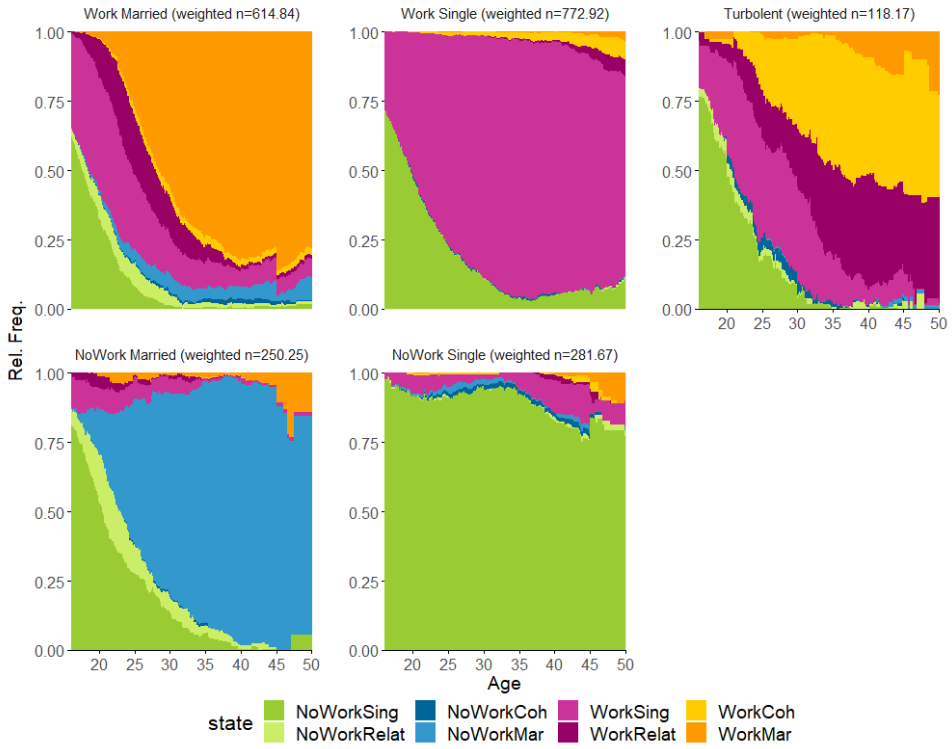

Figure 1: State distribution plot representing life-course trajectories of childless individuals by cluster membership. Five-cluster solution obtained by OM(Trate). Results calculated and presented for both men and women combined. The x-axis shows age in years while the y-axis indicates the proportions in each state for the given month.

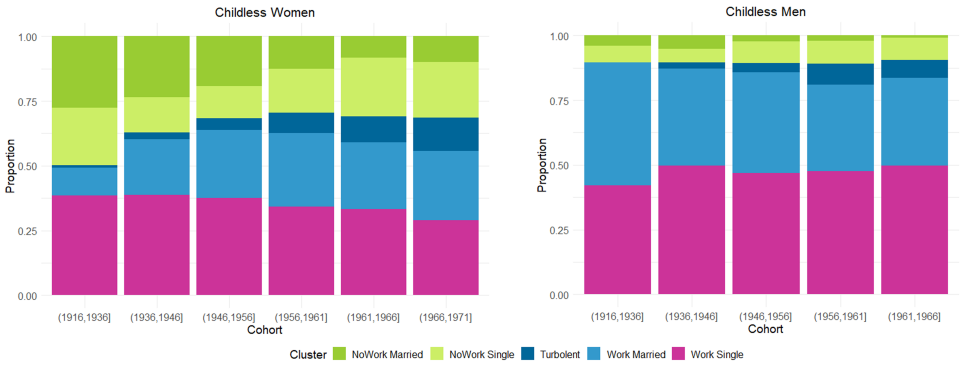

Figure 2: Distribution on cluster by birth cohort for women and male.

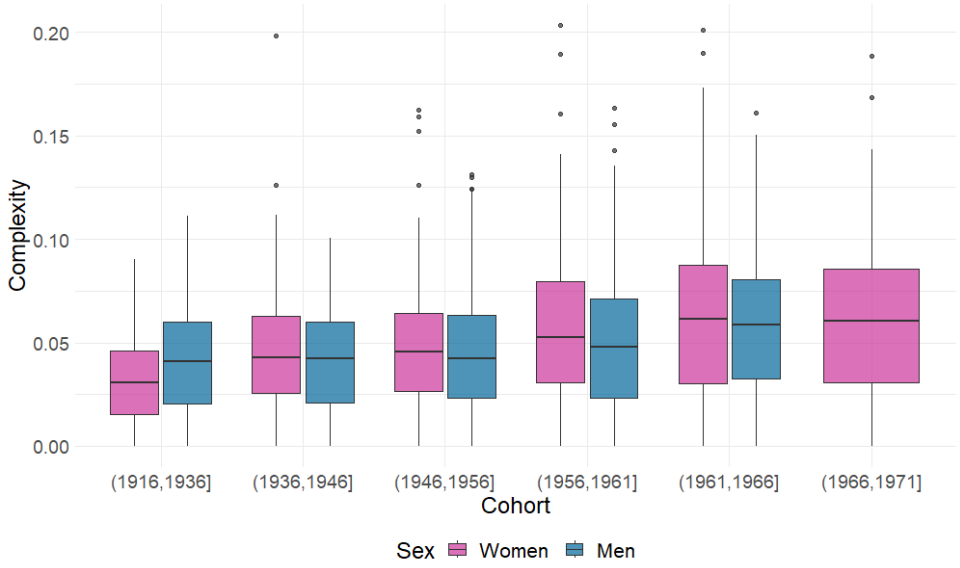

Figure 3: Boxplot of the complexity index by birth cohort and sex.

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