Gender equity and educational differences in life-long singlehood: A multilevel analysis

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Extended abstract

Introduction

In this paper we examine the association between gender-equity and life-long singlehood (hereafter also singlehood); we also explore the differences this association may have across educational groups. Our analysis is focused on 25 European countries and employs multilevel modeling.

Because earlier research lacks theoretical considerations that would specifically bind gendered context and singlehood, we base the conceptual model of our study on theories of marriage. These theories show how traditional and egalitarian societies diverge in their impact on partnering behavior. Together with other theories on demographic change they also generally acknowledge that shifts in gender roles affect first and foremost better-educated women, because such women face greater constraints to combine family responsibilities with career (Esping-Andersen and Billari 2015).

Where gender roles remain traditional, the better-educated women are expected to have comparatively low marriage rates because they have better employment/earning opportunities and therefore face a reduced economic need to get married (Oppenheimer 1997). On the other hand, in gender egalitarian societies better-educated women are believed to have more chances to get married: because in such societies men increasingly compete for women’s economic resources on the marriage market (Schwartz 2010) but also because an egalitarian division of gender roles allows to combine family and work and thus increases the attractiveness of marriage for better-educated women. Correspondingly, the effect of women’s education on marriage should be less negative when gender roles are more egalitarian (Kalmijn 2013). Here a linear relationship between gender equity and marriage is assumed. Accordingly, the magnitude of the effect of women’s education should decrease in more gender egalitarian contexts.

An alternative view offers the ‘multiple equilibrium’ framework (Esping-Andersen 2009, Esping-Andersen and Billari 2015) which suggests a U-shaped relationship between equitable gender roles/attitudes and marriage (and also fertility and union stability). It predicts that different stages of the transition from a traditional to a ‘gender-symmetric’ family model should be associated with different demographic responses. In the early stages, demographic change in response to changing gender attitudes should be minimal and this should increase difficulties of reconciling family and work life. However, as institutions and partnerships adapt to women’s new roles, we should see a ‘return to family’.
Moreover, as is well established, highly educated career women tend to be over-represented among the never-partnered. But since the higher educated eventually are also the vanguard of gender equality, we should expect a decisive decline in singlehood within this stratum once gender equality becomes normative.

The ‘multiple equilibrium’ framework we here adopt would predict a reversed U-shaped relationship over time. Singlehood will be especially high in the periods of transition from one dominant family model to another. When gender egalitarianism becomes the norm, we should expect that the share of single women will decline. In our study we test both linear and curvilinear relationships between gender equity and singlehood.

**Research questions and hypotheses**

Our main concern is with the influence of the diffusion of gender egalitarian attitudes on singlehood across educational strata. Our main hypotheses can be summarized as follows:

- in line with earlier research (Arpino et al. 2015), we expect to find that gender equity does affect singlehood;

- the differences in its diffusion across educational groups (the educational gap) will translate into differences in singlehood rates between educational groups;

- diffusion of gender egalitarian attitudes will first and foremost affect higher educated women at the individual level, i.e. we expect to find a comparatively strong effect of equity on this educational group; educational disparities in singlehood will be particularly wide in the transition from the conventional to the gender-symmetric family model, i.e. when gender egalitarianism takes hold among the highly educated, but has not yet gained broad acceptance within the less educated population;

- the effect of gender egalitarianism can be amplified or weakened depending on individuals’ social origin; we expect that highly educated women from high SES origins will be more susceptible to the effects of gender equity than women coming from the families with low educated (and more gender traditional) origins.

**Data, variables and methodology**

Our analyses are based on the European Social Surveys, 2002-2012. The ESS is a biannual survey that measures the values and behaviour of European citizens and how they change over time. The questionnaire for each round contains a core module, which is identical for each round, plus rotating modules. The core module monitors change and continuity on socio-economic, political and demographic variables.

We select 25 countries included in the ESS. We restrict our analyses to the sub-sample of women aged 40-55 (birth cohorts of 1947-1972). We compare women that are or that have been in a partnership (marriage and/or cohabitation) with those that have never partnered (defined as life-long single). Our sample is about n=34000.
To test our hypotheses we estimate a multilevel model. The ESS database has a hierarchical, multi-level structure with two levels, where level 1 units are individuals nested within level-2 units, that are (25) countries.

Our dependent variable assumes the value of zero if the interviewer has been (or is) in a partnership, while it assumes value one if she has never partnered.

The measures of gender egalitarianism (derived from the data on both sexes) in our study are based on the statement: “When jobs are scarce, men should have more right to a job than women”. The respondents who disagree or strongly disagree with the statement were classified as having gender-equitable views. Following earlier research (Arpino et al 2015) we examine the effects of Gender Equity and of the Educational Equity Gap. The first indicator represents the percentage of gender-equitable respondents in a specific country. The Educational Equity Gap is the difference between the share of gender-equitable high and low educated.

In the first set of models we include women’s age (and its squared term) and the level of education as explanatory variables. We codify the latter in four categories, low education (ISCED 0-2); medium education (ISCED 3-4); and high education (ISCED 5-6).

We additionally subdivide the group of highly educated women with regard to the education of their parents. We differentiate between those who come from families where at least one of the parents has higher education, and those where none of the parents have higher education. Parents’ education in our study serves as a marker of the women’s social origin. We hypothesize that while returns to education are irrespective of such origins, the intergenerational transmission of gender attitudes might play a role in partnering behavior. We expect to find that highly educated women whose parents also received higher education will be more likely to adopt gender egalitarian attitudes and adjust their partnering behavior accordingly. We hypothesize that gender equity is likely to be substantially stronger among those who combine high education levels with a similar parental background.

In the following models we include level 2 measures (one at the time):

*the diffusion of gender equity attitudes, as defined above and, additionally its squared term.

* the gap in the diffusion of equity values between higher and lower educated.

**Preliminary results**

The level of education has a positive effect on being life-long single. In particular, we note that higher educated women are more likely to be without a partner all through their life (results here not reported). Among higher educated women, those with lower educational origins have a higher probability to be single compared to higher educated women with a high educational background.
Graph 1 plots the predicted probability of being life-long single by educational level along the distribution of the macro variable incidence of Gender Equity. We can observe that the diffusion of equity has a negative effect on the likelihood of being single only for higher educated women with a high educational background. Increasing the incidence of equitable attitudes from 34% to 94%, the predicted value of being life-long single declines for this specific group from .13 to .03. The impact of the diffusion of equity does not show the same pattern for higher educated women with low educational background. This seems to confirm only partially the theories of marriage since it seems that the negative effect of the diffusion of gender equity values has no impact on both the groups of higher educated women.

Figure 1. Predicted probabilities of being life long single by equity diffusion at country level with 95% confidence level intervals.

Note: we name the group of higher educated women with low educational background “high selected” and the group of higher educated women with high educational background “high”

Graphs 2 plots the same predicted probability but adds an interaction with the squared term of the incidence of Gender Equity. This model has a better fit compared to the previous one. It is clear that, in this case, both groups of better-educated women have a relatively higher
likelihood of being life long single associated with intermediate values of the distribution of the contextual variable.

Figure 2. Predicted probabilities of being life long single by equity diffusion at country level with 95% confidence level intervals.

![Graph 2](image)

Note: we name the group of higher educated women with low educational background “high selected” and the group of higher educated women with high educational background “high”

According to the Multiple Equilibrium framework, a possible interpretation is that an increase in gender equitable attitudes promotes a better reconciliation of family and careers, improving the chances for higher educated women to be in a couple. As discussed earlier, we would expect rising rates of singlehood in the early stages of women’s role change, i.e. prior to the dominance of gender egalitarian norms. However, once gender egalitarianism approaches dominant status, we should observe a fall in singlehood rates – i.e. the dynamics over time follow an inverted U-shaped trajectory. This, indeed, is what we see in Figure 2.

Graph 3 plots the predicted probability of being life long single by educational level along the distribution of the Educational Equity Gap measure. Here we can observe that the educational equity gap (the distance in the diffusion of equity values between lower and higher educated)
has a positive effect on the likelihood of being single for higher educated women. Increasing the incidence of this variable from 5% to 35%, the predicted value of being life long single is expected to increase for both groups of higher educated women from .03 to more than .07.

Figure 3. Predicted probabilities of being life-long single by educational equity gap at country level with 95% confidence level intervals.

Note: we name the group of higher educated women with low educational background “high selected” and the group of higher educated women with high educational background “high”

References

