Social class, income and fertility: a European cross-country comparison

Marco Albertini (University of Bologna; marco.albertini2@unibo.it),
Teodora Maksimovic (Bocconi University; teodora.maksimovic@studbocconi.it),
Letizia Mencarini (Bocconi University, letizia.mencarini@unibocconi.it),
Giorgio Piccitto (Bocconi University, giorgio.piccitto@unibocconi.it)

Aim of the study

The literature studying the association between acquired individual characteristics like social class and income and below replacement fertility behaviour appears to be generally undertheorized, and the results are quite mixed (Skirbekk 2008; Bar et al. 2018). On the one side, scholars devoted to stratification studies have generally neglected the study of fertility, focusing instead on the educational and consumption choices driven by belonging to a specific social class (Gerhards et al. 2013; Breen and Goldthorpe 1997). On other side, the negative relationship between income and fertility, traditionally taken for granted (Jones and Tertilt 2008), has been challenged by recent studies (Heathcote et al. 2010).

What is more, it is missing in literature a systematic attempt to combine these two streams of research and approaching them from a European cross-country perspective: the heterogeneity of different socio-economic contexts in terms of macro level characteristics (welfare regimes, labour market regulation and stratification of educational systems) may moderate the link between social class, income and fertility behaviour. This moderation effect may also be further problematize taking into account the Great Recession of 2008, which may have had a stratified effect on the individual's fertility behaviour hitting their life chances differently.

Hence, we define three research questions:

(RQ1) Is there any association between social classes and fertility behaviour? And if so, to what extent is this association moderated by income?

(RQ2) Does the association between social classes, income and fertility behaviour hold irrespective for the macro socio-economic context?

(RQ3) Did the economic crisis modify the pattern of association between social classes, income and fertility behaviour?

Data and empirical strategy

The data derives from the European Union Statistics on Income and Living Conditions (EU-SILC). This survey captures individual and household situations by using a large number of economic and social variables that have been documented to be important determinant of fertility decisions. It displays basic information on age and education level as well as variables on an individual's labour market status and individual and household income.

This study combines the use of the cross-sectional (to 'set the scene' from an explorative perspective) and the longitudinal components of data from 2004 to 2015. There are 15 countries in the EU-SILC covered for this whole interval: Belgium, Denmark, Estonia, Ireland, Greece, France, Spain, Italy, Luxembourg, Austria, Portugal, Finland, Sweden, Iceland and Norway. The EU-SILC data does not provide direct information on the number of children, but report simply the number of children, and their age, living in the household at the moment of the interview.

The aim is testing different fertility behaviours (in terms of probability of having a child) in the European countries in the periods before, during and after the economic crises, exploring to what extent they are driven by individual social class and income. To the best of our knowledge, this is the first study inquiring this issue with such a large cross-country design.

For the first descriptive stage of analysis (based on the cross-sectional component of data) we define three 4-year periods: "pre-crisis" from 2004 to 2007, "crisis" from 2008 to 2011 and "post-crisis" from 2012 to 2015. We look at the male workforce, since men have been generally under analysed in this kind of literature and to avoid severe problems of endogeneity or reverse causality. Indeed, especially for women, it would be extremely challenging to determine if life course circumstances (such as belonging to a given social class) are actual determinants of fertility or if these circumstances and fertility behaviours are simultaneously affected by other unobserved common determinants (Balbo et al. 2013). Furthermore, it may well exists a strong self-selection of women in the sample, since they are (especially in some countries) less attached to labor markets than men.

The dependent variable is an indicator variable that assigns value 1 to an individual who has had a child in a given period. We run a Linear Probability Model separately for all each period and, estimating the effect of the social class on the probability of having a child.

Our independent variable is the ESeG (European Socio-economic Groups), an indicator of social position designed to be applicable to the social statistics of European Union which uses information on the occupation and working conditions of the individuals.

It is based on nine different classes:

1. Managers
2. Professionals

2

3. Technicians and associated professionals

4. Small entrepreneurs

5. Clerks and skilled service employees

6. Industrial skilled employees

7. Less skilled employees

8. Retired persons and non-employed persons aged over 65

9. Other non-employed persons aged under 65

This classification has been preferred to ESeC (European Socio-economic Classification) because it can be attributed also to individuals currently unemployed by taking the information about their previous occupations and working conditions. Thus, since the fertility does not produce an immediate outcome, by doing so we control for the lag between the decision of having a child and the observed event (the birth).

Preliminary descriptive results and discussion

Table 1. Having a (another) child and social class. Linear probability model by country and period

Social classes	Italy, men			France, men		
	2004-2007	2008-2011	2012-2015	2004-2007	2008-2011	2012-2015
Professionals [ref.cat.: managers]	0.026**	-0.014	0.004	-0.027	-0.019	-0.022
Technicians and associated professional employees	0.006	-0.034***	-0.000	-0.038**	-0.003	-0.036**
Small entrepreneur	0.010	-0.028**	-0.004	-0.035	-0.000	-0.037*
Clerks and skilled service employees	0.016	-0.040***	-0.006	-0.135***	0.073*	-0.032
Industrial skilled employees	0.011	-0.039***	-0.008	-0.032*	0.003	-0.019
Less skilled employees	0.003	-0.042***	-0.014	-0.045**	-0.016	-0.057***
Other non-employed persons aged < 65	-0.000	-0.040***	-0.016	-0.026	-0.004	-0.030*
Constant	0.307***	0.365***	0.302***	0.333***	0.271***	0.338***
Obs.	29,936	24,367	20,988	12,013	12,244	12,250
R-squared	0.239	0.249	0.258	0.207	0.200	0.178

Controlled also for: age groups, number of children previously had, equalized disposable household income quintiles, partner's ESeG class

As example, we report here the results only for Italy and France. The estimations suggest some relevant insights related to our research questions. First of all, social class seems to matter in defining fertility behaviours. In Italy this is particularly true if looking at the immediate post-economic crisis period (08-11), when all the social classes show a lower association with the probability of having a child with respect to managerial class. In France the trend appears to be similar, with managers more likely to have a child with respect to other social classes. Differently from Italy, this finding holds both in the period before the economic crisis (2004-07) and in the last period under analysis (2012-15). These preliminary results lead to some reflections related to our

3

goal: firstly, social class appears to be a meaningful concept yet, affecting the life course of individuals. The fact that we control for household income, indeed, allows to refer our results not to the economic disposal of an individual (that is certainly associated to his social class) but to the genuine association between social class and fertility behaviour.

Secondly, managers are in both countries the most advantaged class in term of chance of having a child, but their advantage comes out in different temporal spans. In Italy, it emerges during the crisis, while in France the Great Recession seems to equalize the chances among different classes. This evidence may trigger some speculations about the extent to which the crisis has hint the different European countries and how the social classes reacted to it.

In the second step of the analysis, based on the longitudinal component of the data, we will explore to what extent the income moderate the emerged association between social class and fertility. Preliminary results are encouraging in this sense, and seem to suggest that income shape differently the fertility behaviours of different social classes.

References

Balbo, N., Billari, F. C., and Mills, M. (2013). Fertility in advanced societies: A review of research. *European Journal of Population/Revue européenne de Démographie*, 29(1): 1-38.

Bar, M., Hazan, M., Leukhina, O., Weiss, D., and Zoabi, H. (2018). Why did rich families increase their fertility? Inequality and marketization of child care. *Journal of Economic Growth*, 23(4), 427-463.

Breen, R., and Goldthorpe, J. H. (1997). Explaining educational differentials: Towards a formal rational action theory. *Rationality and society*, 9(3): 275-305.

Gerhards J., Hans, S. and Mutz, M. (2013). Social class and cultural consumption: The impact of modernization in a comparative European perspective. *Comparative Sociology*, 12(2): 160–183.

Heathcote, J., Perri, F., & Violante, G. (2010). Unequal we stand: An empirical analysis of economic inequality in the United States 1967–2006. *Review of Economic Dynamics*, 13(1): 15–50.

Jones, L. E., and Tertilt, M. (2008). An economic history of fertility in the U.S.: 1826–1960. In P. Rupert (Ed.), *Frontiers of family economics*: 165–230, Bradford: Emerald.

Skirbekk, V. (2008). Fertility trends by social status. *Demographic research*, *18*(5): 145-180.