

Heterogeneous Effects of Parental Separation on Children's Educational Attainment: Evidence from Italy

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Introduction

Numerous empirical studies conducted in Europe and the US have indicated that children who undergo parental separation, or those raised in single-parent households from birth, have lower educational outcomes than those living with both parents (Amato 2010; Bernardi & Radl 2014).

Recent research has pursued two major avenues of investigation in this area. First, several studies have striven to comprehend if the negative correlation between parental separation and children's educational attainment results from a causal relationship or whether issues of selection and unobserved heterogeneity influence it. Second, scholars have closely examined the potential variation across social groups in the adverse consequences of parental separation.

An emerging general principle argues that the effects of parental separation (like those of other potentially disruptive events) are stronger for children who were less likely to experience the event (Brand et al. 2019a; Aquino et al. 2022). This would explain why, for instance, parental separation has been found to be more detrimental for white children compared to non-white children in the US (Brand et al. 2019b; for the Netherlands, Kalmijn 2010) and for children with tertiary-educated parents than children with low-educated parents (Guetto et al. 2022a). Given that, at least in the US, family disruptions are more common for children of non-white and low-SES families, these children would be better able to anticipate or adjust to the parental union dissolution. However, an alternative explanation for these findings is that children of advantaged families have more resources to lose from parental separation (Bernardi & Radl 2014; Guetto et al. 2022b) and are thus more negatively affected by family disruptions.

In this paper, we aim to address the heterogeneity in the effects of parental separation on children's educational attainment while also dealing with selectivity issues, focusing on Italy. This country represents an interesting case study for at least two reasons. First, the evidence is limited and often based on old data (Albertini & Dronkers 2009). Second, the diffusion of new family forms began later than in other Western countries, although it is proceeding at a sustained speed.

Our main research questions can be summarised as follows: Do the effects of parental separation vary according to parents' propensity to separate – that is, are children whose parents were least likely to split more strongly affected by parental separation? Can such heterogeneity be attributed to differences in anticipation of (and adjustment to) parental separation, or does parental socioeconomic background matter?

Data and Methods

We use pooled data from three cross-sectional rounds of the 'Families and Social Subjects' (FSS) survey conducted in Italy by the Italian National Institute of Statistics (ISTAT) in 2003, 2009, and 2016. After data harmonization and elimination of a few cases with missing information on crucial variables, our analytical sample consists of 74,737 individuals aged at least 19 at the interview, born between 1945 and 1997, 2,791 of whom experienced parental separation.

We assess how experiencing parental separation¹ affects children's educational attainment. In the first analytical step, we implement linear probability models (LPMs) with two outcomes: *outcome1* contrasts children who only reached lower secondary education at most (=0) to those who have at least obtained a vocational upper-secondary title (=1); *outcome2* contrasts children who have an upper-secondary title at most (=0) to those who completed tertiary education (=1). Regarding tertiary education completion (outcome 2), we restricted the analytical sample to 66,821 individuals aged at least 25 at the interview, 1,979 of whom experienced parental separation within their 18th birthday. The association between parental separation and children's education is estimated by including a dichotomic variable signalling if the parental separation occurred before the child turned 19 years old.

In the second analytical step, we estimate a propensity score for parental separation by child's age 18 by including several pre-treatment variables, referred to both the respondent and his/her parents: child's birth order and number of siblings; mother's and father's year of birth, and age difference between them; mother's and father's level of education, employment condition, sector, and type of occupation; survey year. In doing so, we assess how the effects of parental separation on children's educational attainment vary with children's likelihood of experiencing parental separation, following the methodology suggested by Xie et al. (2012).

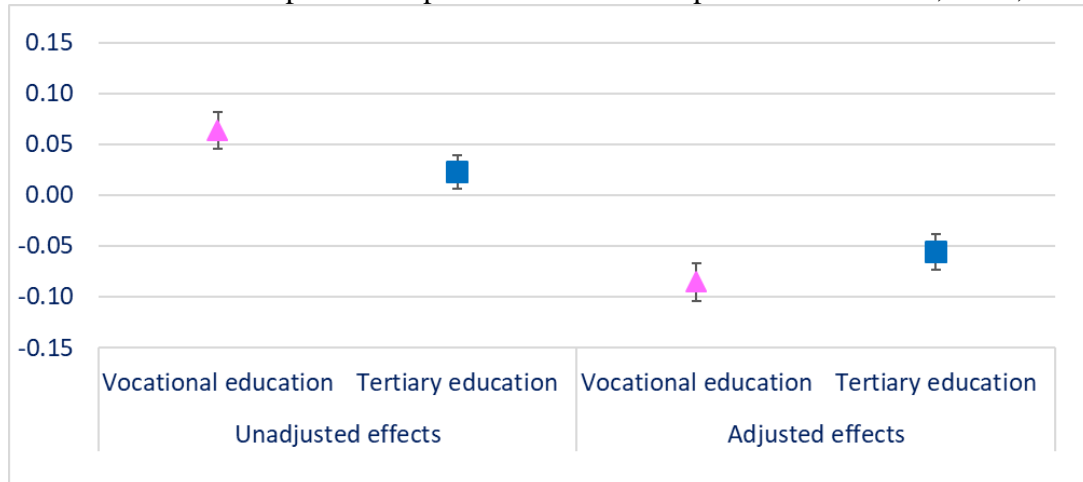
Preliminary Results

Figure 1 shows preliminary results of the effects of parental separation on children's educational attainment concerning the first analytical step. That is, we show estimated coefficients with 95% confidence intervals from four LPMs: two models for *outcome1*, and two models for *outcome2*. In all models, the key explanatory variable is a dummy about parental separation (by child's age 18). Unadjusted models (on the left) do not have any control variables, whereas adjusted models (on the right) control for the propensity score (namely for the propensity of parental separation) and additional child confounders.

Unadjusted estimates suggest that parental separation is *positively* associated with children's educational attainment, and the effect is higher for completing at least a vocational education (6 p.p. increase) than for getting a tertiary education (2 p.p.). This result can be traced back to the positive socioeconomic gradient of separation in a low-divorce context. When adjusting for the propensity of parental separation, that is for the fact that high-SES parents are more likely to separate, parental separation becomes negatively associated with children's educational attainment. The effect is stronger for vocational education completion, with children of separated parents showing a nine p.p. decrease in the probability of completing at least a vocational education. Nevertheless, the effect is non-trivial for tertiary education, too: children with separated parents show a six p.p. decrease in reaching tertiary education when taking into account the parental propensity to divorce.

¹ In the following, for ease of simplicity we use the expressions "parental separation" and "living in a non-intact family" as synonyms, even if we consider children whose parents never lived together as having experienced parental separation (at age 0).

Figure 1: LPM estimates for parental separation. Pooled sample from FSS 2003, 2009, and 2016.



Notes: Adjusted models control for the propensity score of parental separation, child’s year of birth, gender, and area of residence.

Further developments

We will extend the empirical analyses in order to address our research questions:

- 1) We will test the robustness of our preliminary results by testing to what extent our conclusions are robust to (different degrees of) unobserved heterogeneity, following the methodology suggested by Cinelli & Hazlett (2020);
- 2) Then, we will assess whether and how the effects of parental separation vary with children’s likelihood of experiencing parental separation;
- 3) Finally, we will test to what extent the (possible) heterogeneity by children’s propensity to experience parental separation could be attributed to differences in children’s anticipation of and adjustment to parental separation, or whether it is the parental socioeconomic background that matters.

Bibliographical references

- Albertini, M., & Dronkers, J. (2009). Effects of divorce on children’s educational attainment in a Mediterranean and catholic society. *European Societies*, 11(1), 137–159.
- Amato, P. R. (2010). Research on divorce: Continuing trends and new developments. *Journal of Marriage and Family*, 72(3), 650–666.
- Aquino, T., Brand, J. E., & Torche, F. (2022). Unequal effects of disruptive events. *Sociology Compass*, 16(4), e12972.
- Bernardi, F., & Radl, J. (2014). The long-term consequences of parental divorce for children’s educational attainment. *Demographic Research*, 30(1), 1653–1680.
- Brand, J. E., Moore, R., Song, X., & Xie, Y. (2019a). Parental divorce is not uniformly disruptive to children’s educational attainment. *Proceedings of the National Academy of Sciences of the United States of America*, 116(15), 7266–7271.
- Brand, J. E., Moore, R., Song, X., & Xie, Y. (2019b). Why does parental divorce lower children’s educational attainment? A causal mediation analysis. *Sociological Science*, 6, 264–292.
- Cinelli, C., & Hazlett, C. (2022). Making Sense of Sensitivity: Extending Omitted Variable Bias. *Journal of the Royal Statistical Society. Series B, Statistical Methodology*, 82(1), 39–67.
- Guetto, R., Bernardi, F., & Zanasi, F. (2022a). Parental education, divorce, and children’s educational attainment: Evidence from a comparative analysis. *Demographic Research*, 46(3), 65–96.
- Guetto, R., Zanasi, F., & Carella, M. (2022b). Non-intact Families and Children’s Educational Outcomes: Comparing Native and Migrant Pupils. *European Journal of Population*, 38(5), 1065–1094.
- Kalmijn, M. (2010). Racial differences in the effects of parental divorce and separation on children: Generalizing the evidence to a European case. *Social Science Research*, 39(5), 845–856.
- Xie, Y., Brand, J. E., & Jann, B. (2012). Estimating Heterogeneous Treatment Effects with Observational Data. *Sociological Methodology*, 42(1), 314–347.