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Changing families and sustainable societies:

Change in the educational gradient of parental divorce in Spain and children's educational attainment: a simultaneous equation approach

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Extended Abstract

Marital disruption in the last four decades has become a more and more common phenomenon, and the literature on its determinants and consequences for children has flourished substantially even though without reaching conclusive findings.

Recent empirical evidence on the socioeconomic determinants of marital dissolution has shown the reversal over time of the educational gradient of divorce (De Graaf & Kalmijn, 2004, 2006a; Härkönen & Dronkers, 2006; Hoem 1997; Jalovaara, 2003; Lyngstad, 2004; Matysiak, Styrc, and Vignoli 2013; Teachman, 2002). Highly educated individuals divorce nowadays less frequently than low educated ones. Goode (1951, 1962) formulated first the theoretical argument that the observed positive correlation between social class and marital dissolution was a typical feature of societies where divorce was uncommon (or even illegal) and thus the possibility to separate was a privilege limited to the elite groups who were able to financially overcome the obstacles to marital dissolution.

However, as divorce becomes legal and common, it also becomes less costly and affordable by many more people, also from the lower classes. Moreover, the latter have on average a higher probability of relationship dissolution compared to highly educated couples. First, low income - low educated couples more likely face financial strain which increases the likelihood of conflicts; second, on average they lack the cultural, social and cognitive skills to choose the best partner and, third, they also tend to lack the communication skills to solve conflicts in the relationship (Amato 1996; Hoem 1997).

Other similar hypotheses argue that the diffusion of divorce reduces the normative stigma linked to marital separation (Blossfeld et al 1995) and therefore it reduces the advantage of

highly educated individuals in violating social norms, making divorce normatively accessible also to lower educated individuals.

The evidence regarding Spain is mixed: Harkonen and Dronkers (2006) find that the educational gradient of divorce in Spain in the mid-nineties was positive; Bernardi and Marinez-Pastor (2010) find that this positive gradient has more recently eroded but that it has not reversed yet. The authors find that while prior to the enactment of the Divorce Law of 1981 there was a positive correlation between education and divorce, after 1981, when marital dissolution became socially and financially less costly, the correlation between education and divorce in Spain becomes zero.

Given this evidence on the Spanish context, it is useful to see whether looking at more recent data the gradient has reversed or not. This is the first objective of this study: clarifying if the reversal of the educational gradient of divorce¹ has taken place in Spain the in the last years.

The second objective of this paper is to address the heterogeneous socioeconomic impact of divorce. The negative consequences for children of divorced parents compared to those raised in intact two-parent families, range from short-term physical and psychological distress, and a reduction in children's interpersonal wellbeing following separation, to the long-term much weaker relationship stability of the children of divorced parents, their lower educational achievements and larger economic insecurity (Amato 1994).

The sudden lack of one of the two parents and the consequent reduction in time and resources that this partner produced is one explanation for the lower achievements of children after parental separation (Amato and Keith 1991). Other reasons identified by the literature are the distress and conflict produced by the separation itself; the change in parenting style (Amato 2000; 1994); or the decline in economic resources (McLanahan 1991, 1994, 1999).

Empirical evidence on how children with different socioeconomic background fare after parental separation is controversial and findings are mixed.

Some studies show that the largest negative effects of divorce are concentrated in disadvantaged families (Albertini and Dronkers 2009; Budoki and Dronkers 2003; Fischer 2007; Lampard 2012).

Other studies, however, find that the divorce penalty is smaller among children with a lower socioeconomic origin and similar results have been found in the comparison between native and immigrants, with the latter suffering less negative consequences of parental separation (Kalmjin 2010). With this respect, Bernardi and Radl (2013) find in a cross-country study that children of high social origin are more negatively affected by divorce than children from lower socioeconomic groups. Similarly, Erola and Jalovaara (2012) find that the higher the

¹ Notice that we consider both legal divorce and separations together as marital disruptions.

² With this respect, evidence also suggests that when the level of conflict in the family is very large, children could actually benefit from parental separation, in terms of well-being (Amato, Loomis, and Booth 1995; Jekielek 1998).

father socioeconomic status, the more the child loses from a divorce, in terms of the intergenerational transfer of socioeconomic status.

One explanation put forward by the literature is that the educational level of the residential partner, usually the mother, becomes more relevant for the future educational outcome of the children after separation, therefore implying that children with highly educated fathers leaving the parental house suffer greater losses after separation in terms of socio-economic resources, compared to children of the low educated fathers (Erola and Jalovaara, 2012). This hypothesis is confirmed by the study on re-marriage by Biblarz and Raftery (1999) showing that, if present, the positive effect of stepparents is largely explained by the socioeconomic status of the stepparent; and also, that parental separation lowers the effect of intergenerational transmission in general, which makes it more detrimental to children of high socioeconomic origin.

Another explanation is the floor-effect hypothesis arguing that since for the low social origin kids, education and income are already low, and the difficulties of reaching higher levels of education are already very large, the added negative effect of divorce is smaller (in other words they have less to lose) (Kalmjin 2010). Only the very motivated and smart children reach high education (a selected group) so that parental separation does not add more to the already large difficulties due to the already detrimental effect of a family of origin with low socioeconomic background. Also in terms of parenting style, since low educated parents are much less involved in their children's lives compared to highly educated ones, a divorce might not change much of the already low parenting style in low educated families, but marital dissolution might instead largely affect highly educated parents (parental involvement in low educated families is low before and after the separation).

The final hypothesis is selection: since divorce is not a random event but is more likely to occur in troubled families, there might be unobserved characteristics that influence both parental separation and children educational outcome². This would also explain the larger negative effects of divorce for children of higher socioeconomic background, or non-immigrant families, since the latter may possess the cultural and communicational resources needed to reduce conflict and stay longer in the marriage, divorcing only in the most troubled cases. If this is true, comparing the children educational outcome across different parental socioeconomic status might mask the comparison between children coming from extremely troubled parental marriages and low-troubled ones³.

² With this respect, evidence also suggests that when the level of conflict in the family is very large, children could actually benefit from parental separation, in terms of well-being (Amato, Loomis, and Booth 1995; Jekielek 1998).

³ The evidence concerning the heterogeneous consequences of divorce for children coming from different socioeconomic background in Spain is extremely limited. At the moment of writing we did not find any study specific to the heterogeneous educational outcome of children after family disruption due to socioeconomic background.

The ultimate objective of this paper is to model these heterogeneous educational consequences of divorce in Spain controlling for the educational gradient in divorce, namely the different probability for low and high educated couples of marital disruption.

However, without an experimental setting randomly assigning divorce to families it is impossible to know the counterfactual, namely what would have been the educational outcome of the kid *had parental divorce not happened*. A strategy to control for selection frequently used in the literature is to use panel data and control for as many as possible pre-divorce characteristics, but it is clearly arduous to prove that all variables that affect the likelihood of divorce and children educational outcome are observable and controlled for. In other cases propensity score matching or siblings models have been used, exploiting the fact that siblings share the same parents but might differ in their exposure to parental separation (see for instance Ermisch and Francesconi 2001).

In the present paper, to control for selection into divorce, we do follow the same approach of Steele et al (2009) and estimate a system of simultaneous equations.

Children educational outcome depends on parental separation and the educational level of the parents; simultaneously, the likelihood of having divorced parents depends on parents' education. The simultaneous model is thus composed of a probit model of the probability of parental marital dissolution and a linear model of children educational attainment⁴. Each of the two models includes parents residuals that allow for the influence of unobserved time invariant characteristics of parents on each outcome, their likelihood of divorce and children's educational achievement. These residuals are thus allowed to be correlated to test whether there are common factors influencing both processes, namely if families select themselves into divorce and this also influence children outcomes. The sign of the residuals tells us the direction of the selection mechanism: a negative residual correlation would imply that couples with a large probability of marital disruption have children that tend to show a lower educational achievement.

The other way in which the two models are related is that the divorce explanatory variable in the model of children educational outcome is the result of the estimation of the model of the probability of parental separation.

The probability of divorce might depend on several parental characteristics like the educational level and their socioeconomic status, or marital features like the age difference between the spouses, the duration of the marriage, the existence of premarital births, the presence of a previous marriage or children from previous relationships.

⁴ Together with years of education we will also explore alternative children's educational outcomes such as the probability of enrolling in tertiary education and the probability of grade retention, namely the repetition of a year in secondary education.

The educational outcome of children might in turn depend on parental education and socioeconomic status, parental divorce and also on the age of the child when the parents separate, besides other children characteristics such as sex and age, and the birth order.

The data we use in the analysis come from the Encuesta social general Espanola (ESGE) conducted by the Centro de Investigaciones Sociologicas (CIS). In the survey Spanish 18+ residents have been interviewed in 2013, up to a total sample size of more than 5000 individuals. We limit the analysis to those younger than 45 in 2013 to limit as much as possible the very selected group of parents who divorced before the Divorce Law of 1981, but without reducing too much the final sample size (now composed of 2300 individuals). This survey is particularly suited for the present study since it collects information on parental background (education; occupation; citizenship) and parental separation (children's and parents' age at separation). We have also information on parental ideology and religiousness when the respondent was a child. The corresponding variables can be use to predict the risk of parental separation, under the assumption that they do not directly influence children's educational attainment. In the final sample we have 136 separations (around 5.9% of the sample) of which 118 are divorces and 10 are separations between cohabiters (the others are separations of other couples' typologies). From the survey we also know the relationship of the parents at the respondent's birth (more than 96% were married, 2.1% were cohabiting and 0.65% were not in a relationship at the time of the child's birth)⁵⁶. We also plan to replicate the basic analyses on the changes in the educational gradient and the heterogeneity in the consequences of parental separation on a much larger data-set that merges monthly national representative surveys since 2013. The merged data set consists of about 69000 observations.

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⁵ A drawback of the survey is that we do not have detailed information on the parental marital status (age at marriage for instance) and on the compositions of the family of origin (number of siblings and birth order for instance).

⁶ Finally, another reason why this survey is interesting is that besides investigating the educational consequences for children of divorced parents, many other long-term outcomes can be addressed, such as children's occupation or their relationship stability.

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