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Intergenerational transmission of preferences for redistribution

Martín Leites

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Abstract

We explore whether preferences for redistributive policies are transmitted from parents to children, focusing on the formation of preferences among young people residing in Uruguay. Furthermore, we study the empirical relevance of three modulators of intergenerational transmission of preferences that are suggested by theoretical models: family income mobility and parental perceptions, personality traits of parents, and the abilities of their children. We draw on a novel dataset for a middle-income country, the Longitudinal Study of Well-being in Uruguay, which contains information on parents' preferences for redistribution in the years 2011/12 and 2016/17, and for their children in the year 2016/17. The richness of this information, and the exhaustive group of variables available, allows us to make precise estimates of the three modulators of transmission. First, we find that, on average, intergenerational persistence of redistributive preferences is relatively high. Second, there is heterogeneity in the intergenerational transmission process, which is associated with parents' learning. Finally, the transmission of preferences from parents to children is more relevant when mobility is lower, when there is greater self-control on the part of parents, and when children score higher on measures of their abilities.

Keywords: preferences for redistribution, social mobility, personality traits, cultural transmission

JEL codes: D31 D64, H23

1 Introduction

In the last decades, a consensus has arisen in the field of economics that people have heterogeneous social preferences, which guide their behavior and establish their tolerance for inequality and their demand for redistributive policies. These advances have resulted in different formulations that model the formation of redistributive preferences as a socio-cultural characteristic (see e.g., Luttmer and Singhal, 2011), and various empirical contributions that have improved the understanding of them. However, there is no evidence on these preferences' intergenerational transmission and the mechanisms that explain it. The aim of this paper is to provide evidence responding to both questions based on a data panel for Uruguay, which allows us to link the preferences of parents and children (aged 18 to 20).

The intergenerational transmission of socio-cultural traits was addressed theoretically by Cavalli-Sforza and Feldman (1981) and Boyd and Richerson (1985), who apply evolutionary models from biology. More recent contributions have appeared in the economic literature, in which attempts have been made to analyze the mechanisms that underlie the transmission of attitudes. In this vein, Bowles

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(1998) states that preferences and beliefs are endogenous, and are acquired through genetic and cultural transmission. Bisin and Verdier (2000b, 2001, 2011) make several contributions to this field of study, distinguishing between socialization processes within the family (direct vertical transmission) and other processes that arise from learning and imitation (oblique and horizontal transmission); they also introduce the endogeneity of parents' choices regarding the vertical socialization process. In these models, there are costs to socializing children that depend on their characteristics and the corresponding distributions at the population level. Parental behavior is founded on the assumption of imperfect empathy, in which altruism is biased towards the cultural characteristics of the parents. Relatedly, some authors point out that children reproduce the attitudes they observe in parents (Dohmen et al., 2012), and that parents can deliberately affect their children's preferences through investments made during their upbringing (Zumbühl et al., 2018).

Among socio-cultural traits, a relevant candidate to be explored is preferences for redistributive policies. The models developed in Piketty (1995) and Benabou and Tirole (2006) postulate alternative mechanisms to explain the intergenerational transmission of preferences for redistribution. According to these models, parents with the same features and preferences will have different degrees of intergenerational transmission based on their economic performance, their personality traits, and their learning process. Another group of economic models assumes that the transmission of preferences responds to parents' optimization decisions and can be interpreted in the traditional human capital investment frameworks (Becker and Tomes, 1986). In this case, the characteristics of children and the beliefs of parents about their returns on investments are key.

Each of these models suggests alternative mechanisms to explain intergenerational persistence or transmission of redistributive preferences. However, there is little evidence on the extent to which intergenerational persistence explains redistributive preferences and which mechanisms are empirically relevant. Aiming to fill this gap, this paper focuses on the preferences for redistribution among young people and the relevance of intergenerational transmission in establishing these preferences. In addition, there is little existing evidence about how individuals form their preferences before they begin their productive life, accumulate their own experience, and have active political participation. The literature discusses the relevance of this period in the life cycle. The "hypothesis of impressionable years" suggests that during adolescence and early adulthood, people are most susceptible to forming and changing their preferences and attitudes (Inglehart and Baker, 2000). This willingness to change decreases with age, as attitudes become more stable. In contrast, Hogg and Vaughan (2008) pose the "lifelong openness hypothesis," which suggests that attitudes are malleable and can be altered in the face of certain events, even in adulthood. In more general terms, Borrell-Porta et al. (2018) point out that evidence of both hypotheses are inconclusive, and that results depend on the dimensions considered.

The evidence about both hypotheses is inconclusive when considering the relevance of this period of life in the preferences for redistribution. On the one hand, social psychology suggests that historical experiences, especially in youth, can leave permanent marks on individuals' political and economic beliefs. Giuliano and Spilimbergo (2013) and Alesina and Giuliano (2011) show that a history of macroeconomic volatility or recession experienced in the critical years of youth has a long-term effect on people's beliefs. Individuals who grow up in periods of recession or volatility tend to believe that

success depends more on luck than on effort and are therefore more supportive of redistribution. On the other hand, there is evidence about a relationship between age and preferences for redistribution, suggesting that these preferences can be modified in adulthood. For example, Alesina and Giuliano (2011) find an inverted U-shaped relationship in which young people view such policies more favorably at an early age. Pittau et al. (2013), on the other hand, find varied results when considering the US and Europe, although they do not suggest possible reasons for such differences.

Regarding intergenerational transmission, Giavazzi et al. (2019) study the persistence of cultural traits among US immigrants. They conclude that persistence is not the same across cultural traits; while some of them converge to the prevailing norm in the US, others show a high persistence, as in the case of attitudes towards politics and redistribution. In the same vein, there is evidence of the intergenerational transmission of other attitudes, like trust, risk aversion, and time preferences (Dohmen et al., 2012; Arrondel, 2013). Using information about donations, Wilhelm et al. (2008) find that generosity is positively correlated across generations and that families play an essential role in cultivating a sense of charity.

Based on the Longitudinal Welfare Study in Uruguay (ELBU, by its Spanish acronym), we estimate the intergenerational transmission of parents' redistributive preferences to their children. We considered children's contemporaneous preferences for redistribution (in 2016/17), and this variable for parents at the same time and a few years lagged (in 2011/12). Therefore, we explore the intergenerational transmission of preferences based on both generations' direct responses, which has not been used in previous papers. Also, we consider a parental learning component associated with changes in preferences during the period. Finally, we exploit the information available about parents and children to explore the mechanisms underlying the transmission process.

First, the results suggest that persistence between generations is relevant. Second, the findings support the idea that transmission between generations also involves a less stable component associated with parental learning based on recent experiences. As a result, the transmission processes are not homogeneous, and some modulators are found that alter the persistence of preferences between generations. Transmission is higher when parents do not experience income mobility, have self-control and are more risk-averse, and are optimistic about their children's abilities. Our result that higher intensity of transmission occurs when income mobility is low, and parents have self-control could be related with the finding of Giuliano and Nunn (2017), who suggest that cultural transmission is higher in a more stable environment.

The contributions of this paper are related to two fields of literature. First, the findings of this research contribute to the economic literature on cultural transmission. Building on previous research that has focused on the intergenerational transmission of socio-cultural traits, we shed light on a less explored dimension, confirming a relatively high persistence of redistributive preferences between parents and children. Second, this paper contributes to the field of preferences for redistribution by providing new evidence for an age group that has received less attention. We analyze the main modulators of intergenerational transmission of redistributive preferences suggested by the literature. The predictions of these models have not been tested in depth. The results suggest that mobility and parental learning matter in explaining the intergenerational transmission of preferences (hypothesis

suggested by Piketty). In agreement with the previous findings of Cojocaru (2014) and Choi (2019), our evidence suggests that individuals' perceptions also matter in explaining the transmission of preferences. Finally, other determinants that have been scarcely analyzed empirically are explored, such as personality traits, which have relevance in explaining the transmission of redistributive preferences, as discussed in Benabou and Tirole (2006).

These results are relevant in light of the predictions of theoretical models on intergenerational learning and preference formation. Individuals' parental household matters in explaining redistributive preferences, but parents' recent experiences are also crucial determinants of transmission. The latter finding suggests that parental preferences may not be stable over time and may depend on their life trajectory. This generates a learning process that affects the intergenerational transmission of preferences significantly. The aforementioned learning dynamics could lead to temporary inconsistencies since preferences for redistribution, through some aggregation mechanisms, are translated into actual redistributive policies. Even if there were a set of policies that resulted in a socially optimal redistribution level, the intergenerational transmission process hardly allows us to arrive at the expected preferences from these models. This is consistent with the predictions of Piketty (1995), in which people's beliefs lead to an equilibrium that is not Pareto optimal. Finally, the relatively high persistence between generations helps explain the striking variation in income inequality and redistributive policies worldwide. For example, this could explain why there is no direct relationship between the level of income inequality in a country and the redistributive preferences of its citizens (Atkinson et al., 2011).

This article is organized as follows. First, the basic conceptual framework and hypotheses for our analysis are considered in Section 2. In Section 3, the characteristics of the ELBU and the main variables used in our work are presented, as well as the empirical strategy that will help us to contrast the different hypotheses. The main results are in Section 4, where we investigate the transmission of redistributive preferences from parents to children, and Section 5 explores different sources of heterogeneity in that transmission. Our conclusions are presented in Section 6.

2 Conceptual framework and hypotheses

To analyze the intergenerational transmission of redistributive preferences, we first take as a reference the model developed by Piketty (1995), which proposes a learning process and focuses on intra-home transmission between parents and children. This model allows us to consider how parents learn from their life trajectory and to incorporate the role of mobility (one of the determinants of preferences that has received the most support empirically). Furthermore, it has been recognized as an unavoidable starting point for more recent modeling on the transmission of political attitudes, beliefs, and preferences (Breen and García-Peñalosa, 2002; Benabou and Tirole, 2006; Hjorth-Trolle, 2018). As a result, this model dialogues with more recent ones, which will allow us to consider other modulators that could affect the transmission process between parents and children.

The model developed by Piketty (1995) is based on three premises. The first is that people have imperfect information about the magnitude of the parameters that explain their economic outcomes (effort versus circumstances such as inheritance, social capital, or abilities). Second, people choose

their level of effort and desired level of redistribution based on their a priori beliefs. Third, based on the outcomes obtained, they update their beliefs through bayesian learning mechanism, and transmit them to their offspring.

The model establishes two stylized facts: first, the beliefs of children have a direct link with the previous beliefs of their parents, generating an intergenerational persistence of family preferences for redistribution; second, throughout the life cycle, parents' beliefs and preferences change as their a priori beliefs are adjusted based their own mobility experience (the signal they receive). As a result, the transmission is mediated by the trajectory of the parents, which then creates heterogeneity among the families. These two stylized facts are directly related to the following hypotheses:

H.Ia) There is a high positive correlation between the redistributive preferences of parents and those of their children.

H.Ib) Changes in parental preferences mediate the intensity of transmission from parents to children. Those parents with more stable (or consolidated) preferences are those who transmit them with higher intensity, while, conditional on their initial preferences, individual experience introduces confirmatory (or revisionist) mechanisms that stimulate (or discourage) intergenerational transmission.

Favorable evidence for the hypothesis H.Ib suggests that parental learning matters in explaining the intergenerational transmission of preferences, and it may explain heterogeneity in the transmission process among families. This opens the question of which modulators affect parental learning and the intensity of intergenerational transmission. Bayesian learning allows us to interpret why two individuals with the same a priori beliefs can transmit very different beliefs to their children, based on the signals they receive. The learning process modeled in Piketty's model reflects a relationship between mobility (the signal to update beliefs) and preferences for redistribution, mediated by parents' beliefs about what explains the generation of income — effort versus circumstances. The belief-updating mechanism states that when the parents' mobility confirms their a priori expectations, they reinforce their a priori beliefs and increase the intensity of intergenerational transmission to their offspring.¹

Benabou and Tirole (2006) build on Piketty's model, but they emphasize the influence of some psychological and personality characteristics. First, they incorporate the possibility that individuals have imperfect willpower. This leads to parents facing incentives to transmit motivational beliefs so that their children are resilient to adversity and prioritize effort, thereby reducing the risk of dependence. Second, people tend to need to believe in a fair world. When their experiences run counter to this belief, to avoid the cost of cognitive dissonance, they tend to reinterpret their experience to preserve their initial beliefs. In these circumstances, optimistic people believe that the world is fair and that every effort will be rewarded. Therefore, they have more incentives to transmit to their children the idea that effort is important. This vision of fairness and optimism leads to an equilibrium with low preferences for redistribution. In contrast, a more pessimistic vision will lead to support for a broader welfare state and more significant redistribution. Thus, this model suggests that, when parents believe that effort

¹Note that the results of this model are also consistent with the assumption of imperfect empathy used by Bisin and Verdier (2000b), where altruism towards children is biased towards parents' own beliefs.

is relevant and anticipate that redistribution will be low, they have higher stimuli to transmit those same beliefs to their children. This could even happen when their own mobility experiences suggest that effort is not enough, introducing a source of additional heterogeneity in the intergenerational transmission process. This could be associated with personality traits of parents and children, in particular with levels of self-control (or with perceptions of their mastery over their own fate). These arguments support hypothesis H.II.

H.II) Parents' experienced mobility, their personality traits, and their beliefs about fairness affect the intensity of the transmission of redistributive preferences from parents to children.

Finally, other models explain the transmission of preferences from parents to children as an investment decision, in which parents are optimizing the utility of two generations (Becker and Tomes, 1986). Bisin and Verdier (2011, 2000a) incorporate the imperfect empathy assumption, which implies that parents perceive the welfare of their offspring through the filter of their own preferences. They decide how much to invest in socializing their children to their own preferences, and this socialization imposes a cost for the parents. The latter models assign relevance to investment costs (generally associated with the allocation of time, the abilities of the child, and competitive socialization modulators) and expected benefits. Because these aspects are not explicitly considered in the models of Benabou and Tirole (2006) and Piketty (1995), they generate an additional source of heterogeneity in intergenerational transmission and offer a framework to support the third hypothesis.

H.III) Some characteristics of the children (real or perceived by their parents) change the intensity of the transmission of preferences because they affect parental expected returns on their human capital investments in their children. Particularly, the intensity of the transmission of preferences is higher when the number of children is lower, and when the children have greater abilities.

This last hypothesis establishes that the characteristics of children and the return on the time allocated by parents to socialize their children are critical determinants of the parents' decision to transmit their preferences. The fact that some characteristics of children are unobservable (the strength of their abilities) and that parents have imperfect information about the returns on their investments, once again places relevance on the parents' perceptions of their children's abilities.

3 Data and Methodology

3.1 The ELBU

The data source used is the ELBU. This is a longitudinal survey, whose sample frame is households that in 2004 had children attending the first year of public school in the departmental capitals of Uruguay. This accounts for 85% of the cohort. As a result, households with children that at that time were located on the high tail of the income distribution are underrepresented, since there is no information on those who attended private schools in that year. However, in the 2016/17 wave, some homes had moved up to the top decile of the income distribution.

After the first wave of the survey, carried out in 2004, two more waves were completed throughout the country in 2011/12 and 2016/17.² These last waves are the ones that contain relevant information for this article. In particular, in the last wave, information on the same adult as in the previous waves—in general, the mother of the child—and on the children themselves, who by that time were between 18 and 20 years old, is presented. Therefore, the data has low variability in the age of the children and the sex of the parents. Table 1 shows the number of cases of parents in each wave and children in the last wave. The last column refers to instances in which information is available in 2016/17 for both parents and children, which is the relevant group for this paper.

Table 1: Number of observations in each ELBU wave. Parents and children

	Parents			Children	Parents and children
	2004	2011-12	2016-17	2016-17	2016-17
Total observations	3187	2138	1515	1532	1425
Observations with information on preferences for redistribution	--	2117	1426	1263	1020 (806)

Note: In the last column, the number of cases includes the parent-child binomial, where both are present. In parentheses is the number of observations where information on preferences for redistribution is available from the child (2016/17) and parents (2011/12 and 2016/17).

To verify that household characteristics do not bias the information collected in the last wave, we estimate the probability of finding in 2016/17 the children and/or parents, given that the latter were interviewed in the first wave. As shown in Table A1 in the Annex, when the estimates identify the probability of finding simultaneously in the family both the children and the adult, none of the variables studied are significant.

3.2 Preferences for redistribution

Previous papers in the field used a variety of measures of redistributive preferences, some of them focus on absolute redistribution, others on relative redistribution, and others on social expenditure (Choi, 2019). The most common operationalization of redistributive preferences considers the degree to which respondents agree that firm actions are needed to reduce the gap between the rich and the poor. A drawback of this question is that responses may be affected by respondents' evaluations of their own relative position in the distribution and that this type of question doesn't mention the potential cost of redistribution (Choi, 2019; Holland, 2018; Cruces et al., 2013).

In our paper, preferences for redistribution are measured based on perceptions of the level of taxes paid in Uruguay. From the seminal work of Meltzer and Richard (1983), in which the highest preferences for redistribution were associated with higher optimal taxes, different papers have used, with different formulations, perceptions of the appropriate tax rates as a proxy for this type of preference (e.g., Alesina et al., 2018; Durante et al., 2014; Corneo and Fong, 2008; Fong, 2001). We use the following question: *Do you think that in Uruguay: (i) people pay low taxes, (ii) what people pay in taxes is*

²In 2006 another wave was carried out, but only in the metropolitan area.

appropriate, or (iii) people pay high taxes. Due to the small number of responses in (i), we use a dichotomous variable, grouping the responses (i) and (ii), which correspond with a high preference for redistribution.

One potential limitation of this question is that it does not explicitly consider the degree of the progressivity of the tax. However, this question has some advantages compared with other alternatives. First, it is easier to understand for respondents than other questions, and it is directly related to the concept used in the theoretical models (e.g., Piketty, 1995 uses the income tax rate). Secondly, it focuses on tax preferences, which is one of the main redistributive instruments used for public policy and to finance welfare state (a fact that is known to respondents). Furthermore, because it focuses on taxes, it implicitly considers the cost of redistribution.³

Holland (2018) notes that measuring preferences for redistribution in Latin America poses an additional challenge since the responses usually used may be distorted by the scope and coverage of the welfare state. Thus, people who are averse to inequality, or are potential beneficiaries of redistributive policies, may not support them if they perceive that they are outside the protection provided by the welfare state. It is expected that this problem manifests itself with less intensity in Uruguay, where coverage is higher, and the level of informality in the labor market is the lowest in Latin America (Amarante and Gómez, 2016).

While our measure of preferences for redistribution presents some specific concerns, it is also true that it shows a high correlation with other questions that have been used in the literature. In the first place, it has a positive association with preferences for higher taxes levied on the richest but not on the middle class, so the answers have an implicit notion of progressivity. Also, it is correlated with support for cash transfers for the poorest households (but not in food). Unfortunately, these alternative questions are only available in the last wave of the ELBU. Therefore they are not useful for the objectives of this work.⁴

The question used in this paper is present in the 2011/12 and 2016/17 waves for parents (PR_p), and 2016/17 for children (PR_{ch}), so it is possible to observe the dynamics of the preferences. Table 2 shows the parents' transitions between the two waves (Panel a), and between parents and children in the 2016/17 wave (Panel b). Three results are interesting. On the one hand, there is a decrease in parental redistributive preferences (high preferences are reduced from 22.7% to 12.8%). On the other hand, there are considerable differences between parents and children. In 2016/17, 24.2% of children have high preferences for redistribution compared to 12.8% of parents. Finally, the persistence of preferences between generations is relatively high, and is even more pronounced than intragenerational persistence, mainly when parents present high preference. This suggests the relevance of studying intergenerational transmission modulators and indicates that, when there are deviations, it is important to contrast

³A methodological concern is that the responses of the participants might be motivated by a desire to obtain 'moral satisfaction' or to reinforce specific characteristics of their identity as 'self-image motive' (Gaertner and Schokkaert, 2011; Akerlof and Kranton, 2000; Kahneman and Knetsch, 1992; Beshears et al., 2008). Since the question about tax support is formulated in abstract terms, it is possible to argue that it does not have a direct relationship with the taxes paid by the respondents, and therefore these effects might be mitigated. However, it is expected that the respondents consider how they are affected by the current level of taxation. Still, the same effect might also be present in a question about the reduction of the gap between rich and poor.

⁴For space reasons, the table with these associations is not included in the article but is available if the authors are required.

empirically which modulators amplify or reduce said transmission.

Table 2: Transition matrix. Preferences for redistribution

		PR _p 2016/17			Distribution (PR _p 2011/12)
		Low	High	Total	
PR _p 2011/12	Low	89.4	10.6	100.0	77.3
	High	79.9	20.1	100.0	22.7
Distribution (PR _p 2016/17)		87.2	12.8	100.0	100.0
		PR _{ch} 2016/17			Distribution (PR _p 2016/17)
		Low	High	Total	
PR _p 2016/17	Low	79.8	20.2	100.0	87.2
	High	48.5	51.5	100.0	12.8
Distribution (PR _{ch} 2016/17)		75.8	24.2	100.0	100.0

Note: The number of observations in the transition matrices is 806.

The described evolution of the parent’s preferences for redistribution during the period opens the question about the potential role of the Uruguay tax system. Tax reform was introduced in Uruguay in 2007, creating a personal income tax system. Furthermore, indirect taxes like VAT and other specific taxes on consumption were slightly reduced. In 2012, a reform in the personal income tax made some changes to the progressive tax schedule of the top labor incomes (Bergolo et al., 2019). This reform particularly affected those in the top two income brackets, who are not the bulk of our sample. The tax burden is still heavily based on indirect taxes, and only one-third of formal workers paid personal income taxes during this period. Although tax collection increased, the overall tax burden in terms of GDP is still much lower than the OECD average and slightly larger than the Latin America average. Finally, the general increase in preferences for lower taxes does not seem to be directly related to the institutional changes or modifications in the Uruguayan Tax system.

3.3 Empirical strategy

3.3.1 Intergenerational persistence and parental learning processes

Firstly, we consider a flexible model to explain children’s preferences, which incorporates the lagged and contemporary values of parental preferences through the parameter β_1 and β_2 , respectively:

$$PR_{ch,t}^H = \alpha + \beta_1 \cdot PR_{p,t-1}^H + \beta_2 \cdot PR_{p,t}^H + \eta_p \cdot x_{p,t} + \eta_{ch} \cdot x_{ch,t} + \epsilon_{ch,t} \quad (1)$$

where the subindex *ch* refers to the child and the subindex *p* to the parent, *H* indicates that the dummy variable for the preference for redistribution takes value 1 when it is high, while *x* represents a set of controls and η is a vector of parameters that measure their incidence. Finally, *t* and *t* – 1 refer to the time when the information is collected, respectively, in 2016/17 and 2011/12.

The significance of $\beta_1 + \beta_2$ allows us to test hypothesis Ia regarding intergenerational persistence, while the the analysis of β_2 allows us to consider hypothesis Ib and explore the role of parental

learning in intergenerational transmission.⁵ Note that the parameter β_2 allows us to identify the effects of a change in parental preferences, regardless of its direction (a downward or upward change in preferences). To advance our understanding of hypothesis Ib, we adapt equation 1 to take into account the direction of the movement of parental preferences. We distinguish between parents who experienced upward movement in preferences (Δ^U) and those with downward movement in preferences (Δ^D) in the analyzed period, conditioned on their starting point (high preferences for redistribution, $PR_{p,t-1}^H$, or low preferences for redistribution, $PR_{p,t-1}^L$). Two specifications are made; the first considers parents whose starting point is a high preference for redistribution:

$$PR_{ch,t}^H = \alpha + \beta_1^* \cdot PR_{p,t-1}^H + \beta_2^* \cdot \Delta^D \cdot PR_{p,t-1}^H + \eta_p^* \cdot x_{p,t} + \eta_{ch}^* \cdot x_{ch,t} + \epsilon_{ch,t}^* \quad (2)$$

where

$$\Delta^D = \begin{cases} 1 & \text{if } PR_{p,t}^L = 1 \text{ and } PR_{p,t-1}^H = 1 \\ 0 & \text{if otherwise} \end{cases}$$

The second specification considers parents whose starting point is a low preference for redistribution:

$$PR_{ch,t}^H = \alpha' + \beta_1' \cdot PR_{p,t-1}^L + \beta_2' \cdot \Delta^U \cdot PR_{p,t-1}^L + \eta_p' \cdot x_{p,t} + \eta_{ch}' \cdot x_{ch,t} + \epsilon_{ch,t}' \quad (3)$$

where

$$\Delta^U = \begin{cases} 1 & \text{if } PR_{p,t}^H = 1 \text{ and } PR_{p,t-1}^L = 1 \\ 0 & \text{if otherwise} \end{cases}$$

Taking Piketty's model as a reference, the parameter β_2^* (or β_2') represents the incidence of parental learning: the parents learned "something" during the period, altered their preferences, and transmitted them to their children.⁶ If $\beta_1^* = 1$ and $\beta_2^* = 0$ (or $\beta_1' = 1$ and $\beta_2' = 0$), we would be in a world where the learning process has been exhausted, the persistence between generations is complete, and there is no more room to update beliefs.

We carried out an F test to identify whether the direction of parental learning affects the persistence coefficient, which is assessed by testing the null hypotheses $\widehat{\beta}_1^* + \widehat{\beta}_2^* = 0$ (or $\widehat{\beta}_1' + \widehat{\beta}_2' = 0$). The sum of both coefficients reflects the extent of intergenerational transmission in cases where there was parental learning, while the persistence coefficient $\widehat{\beta}_1^*$ (or $\widehat{\beta}_1'$) is associated with parental transmission where preferences for redistribution were stable.

⁵Observe that $PR_{p,t}^H$ could be rewritten as $PR_{p,t-1}^H + \Delta$, where Δ reflects the change in parental preferences ($PR_{p,t}^H - PR_{p,t-1}^H$). If we introduce this term in the equation 1, we arrive at the fact that $\beta_1 + \beta_2$ reflects the persistence or the long-term effect, while β_2 represents the short-term effect of parental preferences.

⁶Note that equations 2 and 3 are analogous only if $\Delta^D = 0$ and $\Delta^U = 0$ in all cases. Furthermore, these equations are not a linear combination of them, since the $\sum_p (\Delta^D \cdot PR_{p,t-1}^H + \Delta^U \cdot PR_{p,t-1}^L) \neq N_p$, with N_p being the total number of parents. As was described in Table 2, there are groups of parents who do not change their preferences for redistribution in the period.

3.3.2 Heterogeneity in the intergenerational transmission of redistributive preferences

An additional specification is introduced to incorporate another source of heterogeneity, inspired by the conceptual framework proposed in the previous section. This specification explains the modulators that affect the transmission of redistributive preferences from parents to children. These modulators are identified by d and are expected to enhance or mitigate the intensity of intergenerational transmission. The following specification allows us to contrast hypotheses II and III.

$$PR_{ch,t}^H = \alpha'' + \gamma_1 \cdot PR_{p,t-1}^H + \gamma_2 \cdot d_{m,s} \cdot PR_{p,t-1}^H + \gamma_3 \cdot d_{m,s} + \eta_p'' \cdot x_{p,t} + \eta_{ch}'' \cdot x_{ch,t} + \epsilon_{ch,t}'' \quad (4)$$

where s is the moment when the modulator is considered (in almost all cases $t - 1$), while m refers to whether the modulator is an attribute of the parents (hypothesis II) or the child (hypothesis III). The parameter γ_2 allows us to test the existence of different modulators that enhance or mitigate transmission, associated with the characteristics of parents or children.

Again, we performed an F test, in this case to identify whether the effects of the modulators generate significant heterogeneities. For this, we take into account whether the modulator is a dummy or continuous variable. Thus, we perform the test $\hat{\gamma}_1 + \hat{\gamma}_2 \times Modulator = 0$, where *Modulator* takes a value of one if the modulator is a dummy variable and the sample's mean if it is a continuous variable.

This proposed strategy will allow us to explore the origin of heterogeneity in the intensity of intergenerational transmission based on different potential modulators. In Table A2 of the Annex, we detail the questions used to measure each of the modulators and present some descriptive statistics. The first group of variables is linked to the characteristics of the parents and allows us to test hypothesis II. On the one hand, we consider parents' mobility, which is one of the main modulators used in the literature to explain the transmission of preferences for redistribution. Following the discussion of Cojocar (2014) and Choi (2019), we alternatively use perceptions of mobility and objective measures of mobility. On the other hand, variations in parents' perceptions of their level of empowerment are identified; that is, if parents think that the level power they possess in "society" increased or fell (Power 1 and Power 2). When parents have been successful, or perceive they have been (high mobility or increased empowerment), they will transmit to their children a low preference for redistributive policies. Finally, the revised models suggest that parental perceptions about fairness are key modulators in explaining intergenerational transmission of preferences. To address this issue, we consider a notion of fairness based on the equal opportunity approach (Fairness), which identifies the individual's beliefs about the role of effort and circumstance. In terms of Piketty's model, when parents believe that effort "pays," they will transmit to their offspring weaker preferences for redistribution.

Within the characteristics of the parents, a second group of variables is related to their personality traits, which have received much less attention in the literature. Firstly, these traits can be approximated by the Big Five Inventory (*BFI*). In base on previous literature about political preferences, in this paper we consider only two dimensions for the parents: Openness to Experience (*Open.*), which is associated with liberalism, and Conscientiousness (*Conscient.*), associated with more conservative at-

titudes (Gerber et al., 2011).⁷ Parents with greater Openness to Experience could give more freedom to their children, resulting in lower transmission in parents with this trait. *Conscient.* can be associated with a higher valuation of either the effort (high *Conscient.*) or circumstance (low *Conscient.*). Thus, this dimension reflects parental beliefs about what constitutes a "just world," and as a result, it may affect the intensity of intergenerational transmission of redistributive preferences (Benabou and Tirole, 2006). Secondly, as was mentioned in section 2, heterogeneity in intergenerational transmission may be associated with levels of self-control. To address this issue, we consider the locus of control (*LoC*), given that lack of self-control is associated with external *LoC* (the belief that what happens is a matter of destiny or luck), while greater self-control is related to internal *LoC* (the belief that what one does matters) (Cobb-Clark, 2015). We expect that parents who have an internal locus perceive that they have a higher capacity to influence their children when transmitting their beliefs, which would result in a higher intensity of transmission.⁸ Finally, another personality trait that can be related to the transmission of preferences for redistributive policies is risk aversion of individuals. On the one hand, risk-aversion may directly affect the intensity of transmission due to the decisions of parents, who may prefer to reduce the incidence of the horizontal/oblique socialization. On the other hand, Dohmen et al. (2012) show that risk aversion is transmitted from parents to children, which would indirectly result in the higher transmission of redistributive preferences. People with a higher degree of risk aversion view taxes and income transfers as insurance against adverse events (Harsanyi, 1953; Benabou and Ok, 2001; Alesina and Giuliano, 2011). For these reasons, the intensity of the transmission of redistributive preferences may be higher when parents have a greater risk aversion.

The third group of variables refers to the characteristics of children and allows us to test hypothesis III. First, strongly exogenous traits are considered: sex, the presence of siblings, and the order of birth. Regarding children's sex, the relevance of intergenerational transmission modulators of social norms and gender identity is documented in the literature, both in terms of preferences regarding gender roles and the link between women and the labor market (Johnston et al., 2013; Bütikofer, 2013; Farré and Vella, 2013; Morrill and Morrill, 2013; Fernández and Fogli, 2009; Fernández et al., 2004). The number of children parents have could also affect the intensity of transmission. Becker et al. (1974) predicts a trade-off between the quality and the number of children, while Bisin and Verdier (2011) suggests that the number of children increases the cost of socialization, and then the transmission may be weak when the number of children is higher.

Finally, the abilities of the child are expected to play a role in intergenerational transmission, either because of parents' time investment decisions or their children's receptive capacity (we expect a higher transmission when the child's abilities are more elevated). We approximate low non-cognitive abilities with two instruments: i) Neuroticism (*Neurot.*), a dimension of the *BFI*; and ii) internalized

⁷The *BFI* is a questionnaire that identifies five personality traits, whose origins and characteristics are explained in Goldberg (1993). *Conscient.* describes impulse control, such as thinking before acting, delaying gratification, following rules and regulations, and planning, organizing, and prioritizing tasks; *Open.* pertains to the breadth, depth, originality, and complexity of mental and experiential life (John and Srivastava, 1999).

⁸*LoC* is an instrument that shows how individuals perceive the causal connection between their actions and the achievements they obtain (Rotter, 1966; Levenson, 1981; Lefcourt, 1991). Individuals with external *LoC* think that many aspects of their lives are beyond their control. The opposite happens in individuals with internal *LoC*.

and externalized problems as identified by the Strengths and Difficulties Questionnaire (*SDQ*).⁹ Children’s cognitive abilities are captured by another psychometric instrument, the Similarities subtest of the Wechsler Adult Intelligence Scale-IV (*WAIS*).¹⁰ So far, we consider children’s abilities through objective variables. However, these abilities are not perfectly observable by their parents, and parental decisions are, therefore, based on their perceptions. To take this into account, some parental beliefs about the abilities of their children are included. Three variables are considered that identify whether parents i) believe that their children should work harder to achieve, in adulthood, a set of goals they deem desirable; ii) aspire for their children to finish university, and iii) consider their children to be students who are below the average of their classmates.

3.3.3 Estimation procedure

All estimates used in this paper are based on Ordinary Least Squares regression models with robust standard errors. The estimated model does not have a causal interpretation, so it may face endogeneity problems, either due to issues of measurement error in parents’ preferences and/or the omission of relevant variables. Considering the theoretical models cited, we expect parents’ preferences to influence the formation of their children’s preferences, and reverse causality is not likely to be a problem.¹¹ To mitigate potential effects caused by problems of reverse causality and contemporaneous measurement errors, the longitudinal nature of the ELBU is exploited, which makes it possible to reconstruct the parent-child bond, and evaluate how preferences are affected by the redistribution preferences of the latter in 2016/17, compared to what was expressed by their parents in 2011/12.

Additionally, in the case of parents, this information is available for two points in time (2011/12 and 2016/17), which allows us to explore whether changes in parental preferences have a specific effect on transmission.¹² When identifying the modulators that can enhance or mitigate the transmission of these beliefs, lagged data for parents is also used, which gives more support for a potential causal interpretation. The information on the modulators related to children’s characteristics is only available for 2016/17. In this case, we have to be even more cautious about the implications of this relationship. However, most of the children’s characteristics considered are fixed (sex, the order of birth) or expected

⁹*Neurot.* measures the child’s feelings of anxiety, nervousness, sadness, and tension (John and Srivastava, 1999), and the *SDQ* allows us to identify problems with peers and emotional symptoms (internalized problems) and group behavior and hyperactivity problems (externalized problems) (Goodman, 1997)

¹⁰The similarities subtest is one of the components of WAIS that allows evaluation of the cognitive area "verbal comprehension". It consists of 18 items in which the interviewee is presented with two words that represent common objects or concepts, with the objective that the interviewee determines how these objects or concepts are linked and thus approximates their capacity for verbal abstraction and associative thinking (Amador Campos, 2013).

¹¹It is pertinent to mention that there is evidence that suggests caution with this assumption. Some papers suggest that gender explains changes in parents’ attitudes and find, for example, that having a daughter (assumed to be exogenous) leads to US members of Congress being more open to liberal policies (Washington, 2008; Iacus et al., 2011), and parents voting for more left-wing parties (Oswald and Powdthavee, 2010) and adopting more liberal attitudes about gender roles (Borrell-Porta et al., 2018) There is some controversy on this point, as some papers have found effects in the opposite direction (Conley and Rauscher, 2013) or that have found that the sex of the child does not affect the ideological identification of the parents (Lee and Conley, 2016)

¹²Changes in preferences for redistribution between periods can respond to a measurement error problem. Table ?? in the Annex shows estimates of the persistence of the parents’ responses between 2011/12 and 2016/17, and we can observe a temporal correlation between these preferences. This result generates confidence that the measurement error problems are not significant.

to be relatively stable (personality traits) (Cobb-Clark and Schurer, 2012; Cobb-Clark et al., 2014; Cobb-Clark, 2015).

4 Transmission of redistributive preferences from parents to children

This section presents evidence on the dynamics of the intergenerational transmission of redistributive preferences and focuses on persistence of preferences and the role of parental learning. Table 3 presents the results of five specifications based on equations 1 to 3. In all cases the dependent variable is the children’s preferences for redistribution, and included as controls are their characteristics, those of their household, those of their parents, and the redistributive preferences of their parents.

In the first and second specification, we use a reduced version of equation 1, assuming respectively, $\beta_1 = 0$ and $\beta_2 = 0$. Thus, estimates of the persistence coefficients based on contemporaneous or lagged PR_p^H are presented in Col. 1 and Col. 2, respectively. Intergenerational transmission seems to be a very relevant factor in explaining the PR_{ch}^H , with a highly significant relationship with recent dynamics. Persistence is found to have a considerable effect on children’s preferences, both when the contemporary preferences of their parents are considered (0.317) and when a lag of parental preferences is included (0.113). Both coefficients are statically significant at the 1% level. Furthermore, the magnitude of the coefficient on intergenerational persistence is relatively high when compared with other papers that study the stability over time of preferences for the same respondents (Chuang and Schechter, 2015).

The third specification (Col. 3) is based on equation 1, but we do not impose a priori constraints on β_1 and β_2 . This allows us to consider the long-term relationship and to assess whether the intensity of transmission to their children varies when parents have more or less stable preferences. Both coefficients are positive and statistically significant. Our results suggest that among parents who have more stable preferences over time (potentially reflecting more consolidated preferences), the sum of persistence coefficients reaches the value of 0.390. This magnitude is comparable with the estimates of Dohmen et al. (2012) about the intergenerational transmission of risk attitudes and trust. When parents have more unstable preferences and there is parental learning, the coefficients of persistence is 0.305 among those parents that increased their preferences (if $PR_{p,t-1}^H=0$ and $PR_{p,t}^H=1$), and it is only 0.085 among those who decreased them (if $PR_{p,t-1}^H=1$ and $PR_{p,t}^H=0$). These results suggest that parental learning is relevant in explaining the intensity of intergenerational transmission.

The last two specifications include the lagged preferences of the parents, and their interaction with the conditioned change in parental preferences (equation 2 and 3). On the one hand, we include a dummy variable that identifies whether parents have high preferences for redistribution in 2011/12 ($PR_{p,t-1}^H$, Col. 4). On the other hand, we changed the covariables and included a dummy variable that identifies parents with low preferences ($PR_{p,t-1}^L$, Col. 5). As a result, this allows us to discuss the role of the direction of parental learning on intensity of transmission, given their initial preferences. A significant correlation in the expected direction is confirmed between the PR_{ch}^H and the level of lagged parents’ preference ($PR_{p,t-1}^H$ or $PR_{p,t-1}^L$). Furthermore, conditional on initial parental preferences, changes in parental preferences lead to an adjustment in their children’s preferences. Specifically, the persistence coefficient falls by 78%, from 0.303 to 0.066 ($0.303 - 0.237$), when parents reduce their

initial preferences. Even for this group of parents, parental learning compensates for the incidence of the persistence coefficient since the joint F test does not reject the null hypothesis. In the case of the last estimate, in which the parents' preferences increase, the intensity of transmission also increases. In this case, the intensity is higher, since it goes from -0.150 to 0.186 (-0.150 + 0.336). Additionally, the null hypothesis of the joint test F is rejected. Therefore, the persistence coefficient is positive and statistically significant when parental learning leads them to increase their preferences.

In sum, these results contribute favorable evidence in support of hypotheses Ia and Ib. We confirm significant persistence between generations. The parent's current preferences matter more than the initial preferences to explain the child's preferences. However, the parent's initial preferences also matter, and it represents 22% of the total intergenerational persistence (0.085/0.39). Furthermore, parental learning, which is captured through the changes in PR_p^H , modify the intensity of intergenerational transmission. Finally, our result suggests that parental learning direction could be relevant in explaining the intensity of intergenerational transmission.

Table 3: Dynamics of the intergenerational transmission of preferences for redistribution

	(1)	(2)	(3)	(4)	(5)
$PR_{p,t}^H$	0.317*** (0.052)		0.305*** (0.053)		
$PR_{p,t-1}^H$		0.113*** (0.039)	0.085** (0.038)	0.303*** (0.087)	
$PR_{p,t-1}^H \times \Delta^D$				-0.237** (0.093)	
$PR_{p,t-1}^L$					-0.150*** (0.039)
$PR_{p,t-1}^L \times \Delta^U$					0.336*** (0.064)
F test				2.572	6.870
p-value				0.109	0.009
Obs.	806	806	806	806	806
R2	0.079	0.032	0.086	0.043	0.076

Notes: The dependent variable is children's preferences for redistribution. $PR_{p,t-1}^H$ ($PR_{p,t-1}^L$) is parents' preferences for redistribution in 11/12, and $PR_{p,t}^H$ is parents' preferences for redistribution in 16/17. $PR_{p,t-1}^H \times \Delta^D$ ($PR_{p,t-1}^L \times \Delta^U$) is a variable that refers to whether parental preferences for redistribution decreased (increased) between the two waves. The F test considers the significance of the following null hypothesis: $\beta_1^* + \beta_2^* = 0$ (or $\beta_1' + \beta_2' = 0$). Controls include age (parents), race (children), marital status (parents and children), years of education (parents and children), sex (children), region of residence (household), unemployment (children), family income (divided by 10000), and family income² (divided by 10000000). Coefficients are OLS estimates. Robust standard errors in parentheses. *, **, and *** indicate significance at 10%, 5%, and 1% level, respectively.

It should be noted that few control variables are statistically significant: only children's gender (males children are associated with greater preferences for redistribution) and household income, although the latter is weakly significant. When we estimate the same model for children but without considering the incidence of parental preferences, the explanatory capacity of the model is low, and few variables are statistically significant (see Col. 1 Table A3 in the Annex).

Our results indicate that most of the variables usually considered in the literature cannot be concluded to be relevant at this stage in the life cycle. This is to be expected, to the extent that young people are just entering the labor market and receiving their first paychecks (with expectations

that their incomes will improve in the future). Surely they do not have much experience in how state transfers and taxes will affect them. This does not imply that these variables will not be relevant at later stages in the life cycle when individuals begin to display the rationality implicit in economic models. These results also support the interest in exploring the mechanisms by which preferences for redistribution are formed during adolescence and early adulthood, which for some authors, plays a crucial role in the formation of preferences for the rest of people's lives (Inglehart and Baker, 2000). This starting point may determine the trend around which young people's preferences will fluctuate throughout their life cycle, depending on their trajectories. Furthermore, it is relevant to explore whether the transmission of these preferences presents heterogeneities, leading us to inquire whether parents' and children's specific characteristics affect persistence between generations. These questions inspire hypotheses II and III, and their results are presented in the next section.

5 Modulators of intergenerational transmission of redistributive preferences

This section explores the modulators that may explain why the transmission of preferences from parents to children is heterogeneous. Estimates are based on equation 4, which contains parents' preferences in 11/12 as the regressor variable; this variable interacts with each of the modulators presented in section 3.3.2. We consider three groups of modulators: first, the mobility and perceptions of the parents; second, the personality traits of the parents; and finally, a set of characteristics of the children.

5.1 The role of parental mobility

Mobility could affect the transmission of redistributive preferences from parents to children through two mechanisms, the first related to the learning and updating of beliefs, as suggested by the models of Piketty (1995) and Benabou and Tirole (2006). Upwardly mobile trajectories could lead to a strengthening of the belief that effort "pays" and that therefore redistributive policies might not be justified. The second mechanism, based on Benabou and Ok (2001) and Meltzer and Richard (1983), describes how people perceive that redistributive policies will benefit them. An upwardly mobile trajectory could place households above the average voter's income or might increase children's future income expectations. Both mechanisms would affect the intensity of intergenerational transmission, and the results obtained in the previous section support the potential of this modulator.

Mobility measurements of the parents' households are incorporated based both on their generation (intragenerational) and in relation to the grandparents' generation (intergenerational). The results are presented in Table 4 using the parent's perceptions of mobility (or subjective mobility) (Cols. 1 and 2) and the real mobility (or objective measures) (Cols. 3 and 4). A first relevant result is that in all cases (except intergenerational objective mobility), we find that the lagged variable $PR_{p,t-1}^H$ of the parents is positively related to the children's preferences for redistribution, which in this framework should be interpreted as the persistence of preferences among those who did not either experience or perceive mobility.

A second result confirms the relevance of mobility in explaining heterogeneity in the intensity of intergenerational transmission. Greater intragenerational mobility of parents (perceived -Col. 2- or real -Col. 4-) and subjective improvement of the household's situation during the children's adolescence (Col. 1) are both associated with a weaker transmission of preferences. However, only the coefficient related to subjective intergenerational mobility is statistically significant. These variables take values ranging from 9 when the mobility is high to -9 when it is low, and we find that the greater the upward mobility of the parents, the intensity of transmission is lower. An increase of one step in perceived intergenerational mobility implies a fall of 4 percentage points in the intergenerational intensity of transmission of preferences. It represents 30% of their initial persistence coefficient. For the other two interaction terms, the relationship is weaker. However, for those parents with very high intragenerational mobility (more than two or three positions in the subjective and objective variable, respectively), the learning process reduces the persistence coefficient significantly (that is, the hypothesis $\gamma_1 + \gamma_2 \times \text{Mobility} = 0$ is not rejected).

This result is consistent with the literature. Upward mobility leads to an adjustment in parents' previous beliefs insofar as they now perceive that effort "pays." Thus they tend to revise their initial preferences and reduce the intensity of transmission of preferences. However, it is pertinent to mention that this transmission may not be related directly to the beliefs of the parents; children from these families may instead be responding to their perception that their parents were successful. In this case, children prefer less redistribution because given that they are in a better economic situation, they believe that redistributive policies will not result in improvements in their well-being.

When upward intergenerational mobility is considered in educational terms (objective indicator - Col. 3-), some differences arise. First, the persistence coefficient is not significant. Also, the sign of the interaction coefficient changes, indicating that parents with upward educational mobility tend to transmit their preferences more strongly. However, the interaction term is non-significant according to the individual test of significance. Still, the joint test suggests that the aggregate effect of the two coefficients, $\gamma_1 + \gamma_2$, is statistically significant at 5%. This result indicates that for this group of parents, the sum of persistence coefficients is 0.133, remaining at levels similar to those in the rest of the specifications. These results might suggest that intergenerational educational mobility is not directly related to the income mobility that affects the formation of beliefs. However, more analysis is necessary to understand this result.

Table 4: Modulators of intergenerational transmission of preferences for redistribution: parental/household mobility

	(1)	(2)	(3)	(4)
$PR_{p,t-1}^H$	0.139*** (0.040)	0.157*** (0.049)	0.094 (0.059)	0.109*** (0.040)
$PR_{p,t-1}^H \times$ Intergenerational Subjective Mob.	-0.043** (0.018)			
Intergenerational Subjective Mob.	0.022*** (0.007)			
$PR_{p,t-1}^H \times$ Intragenerational Subjective Mob.		-0.038 (0.028)		
Intragenerational Subjective Mob.		0.020 (0.013)		
$PR_{p,t-1}^H \times$ Intergenerational Objective Mob.			0.039 (0.085)	
Intergenerational Objective Mob.			-0.032 (0.040)	
$PR_{p,t-1}^H \times$ Intragenerational Objective Mob.				-0.005 (0.016)
Intragenerational Objective Mob.				0.001 (0.007)
F test	9.01	8.82	4.91	7.42
p-value	0.003	0.003	0.027	0.007
Obs.	803	805	680	785
R^2	0.043	0.036	0.042	0.031

Notes: The dependent variable is children's preferences for redistribution. $PR_{p,t-1}^H$ is parents' preferences for redistribution in 11/12. A higher score on modulators means more mobility. The F test considers the significance of the following null hypothesis: $\gamma_1 + \gamma_2 \times \text{Modulator} = 0$. In cases where the variable is continuous, the F test is performed on the mean value of the variable. The definition of the variables and their mean values are presented in Table A2 of the Annex. The control variables used are the same as in Table 3. Coefficients are OLS estimates. Robust standard errors in parentheses. *, **, and *** indicate significance at 10%, 5%, and 1% level, respectively.

To further explore the role of learning and mobility in the transmission of redistributive preferences, in Table 5 some beliefs of parents which are associated with perceptions of fairness or improvements (deterioration) in levels of empowerment are incorporated into the regression. The persistence coefficients remain statistically significant and have comparable magnitudes in all cases. The interaction coefficient is still negative but is statistically significant only in the case of Power 1. However, the joint F test results suggest that the interaction term leads to a significant reduction in the persistence coefficient when Power 1 (or Power 2) is higher than 2 (the F test does not reject the hypothesis: $\gamma_1 + \gamma_2 \times \text{Power} = 0$). Consistent with the mobility results, when parents perceives that their Power had increased then they revise their a priori beliefs and reduce the intensity of transmission of preferences for redistribution. In the case of the Fairness variable, the joint significance test does not reject the null hypothesis, which shows that there are no heterogeneous effects associated with this modulator.

5.2 Intergenerational transmission and personality traits of the parents

As discussed in previous sections, the Benabou and Tirole (2006) model incorporates aspects of parents' personalities to explain differences in the degree of intergenerational transmission of preferences.

Table 5: Modulators of intergenerational transmission of preferences for redistribution: parents' perceptions

	(1)	(2)	(3)
$PR_{p,t-1}^H$	0.162** (0.064)	0.146*** (0.043)	0.121*** (0.041)
$PR_{p,t-1}^H \times \text{Fairness}$	-0.083 (0.081)		
Fairness	-0.040 (0.034)		
$PR_{p,t-1}^H \times \text{Power 1}$		-0.037*** (0.014)	
Power 1		0.004 (0.006)	
$PR_{p,t-1}^H \times \text{Power 2}$			-0.018 (0.023)
Power 2			-0.009 (0.011)
F test	2.55	9.05	8.28
p-value	0.111	0.003	0.004
Obs.	790	770	777
R2	0.037	0.040	0.034

Notes: The dependent variable is children's preferences for redistribution. $PR_{p,t-1}^H$ is parents' preferences for redistribution in 11/12. A higher score on modulators means an upward in the empowerment (Power 1 and 2), and beliefs that the effort is important in the mobility (Fairness). The F test considers the significance of the following null hypothesis: $\gamma_1 + \gamma_2 \times \text{Modulator} = 0$. In cases where the variable is continuous, the F test is performed on the mean value of the variable. The definition of the variables and their mean values are presented in Table A2 of the Annex. The control variables used are the same as in Table 3. Coefficients are OLS estimates. Robust standard errors in parentheses. *, **, and *** indicate significance at 10%, 5%, and 1% level, respectively.

To address this issue, the estimates included in Table 6 consider the following parental variables: risk aversion, a variable that identifies *LoC* and distinguishes those who have internal locus from those who have an external locus, and the two *BFI* dimensions that were mentioned in section 3.3.2 (Conscientiousness and Openness to experience).

First, the most risk-averse parents are the ones who transmit their preferences most strongly to their children. The joint test rejects the hypothesis $\gamma_1 + \gamma_2 = 0$ (see Col. 1 in Table 6). For these parents, the persistence coefficient is 0.188 (0.048+0.140). On the one hand, when parents are more risk-averse, they may directly transmit to their children their preferences due to imperfect empathy and to avoid the risk of horizontal/oblique socialization. Alternatively, previous evidence supports the idea that risk aversion itself is a characteristic that is transmitted intergenerationally, which suggests an indirect modulator (Dohmen et al., 2012): parents transmit risk aversion to their children, and the correlation between parents' and children's preferences for redistribution is an indirect effect.

Based on equation 4 we cannot distinguish which of these two mechanisms underlies the results. To explore the empirical relevance of these two alternatives, we introduce an auxiliary specification. The children's preferences are modeled by an additive component that reflects the direct contribution of parental preferences and the indirect contribution of risk aversion transmission. The specification incorporates a dummy variable, which equals one when parents and children are simultaneously highly

risk-averse and an interaction term of that variable with parental preferences. Under this specification, if the intergenerational transmission of risk aversion is the mechanism that explains the correlation between parents' and children's preferences for redistribution, the magnitude of the persistence coefficient should be reduced, and there would be a positive and significant correlation between children's preferences for redistribution and the interaction term. In Table A4 of the Annex, we present the results, which suggest that the direct transmission of preferences dominates. The coefficient of lagged parental preferences is the only coefficient that is statistically significant, and its magnitude is relevant (0.103; see Col. 1).

Additionally, we estimate the coefficient of persistence for two sub-samples. On the one hand, we consider those parent and child pairs with the same degree of risk aversion (Col. 2); on the other hand, we consider the sub-sample in which the risk aversion differs between parent and child (Col. 3). The persistence coefficient is only significant in the second case (and at 1%), which suggests that the transmission of redistributive preferences is higher when the correlation between parental and child risk aversion is low. Again, this result is consistent with the direct transmission of preferences for redistribution.

Second, we consider another personality trait of the parents, their Locus of control. The results suggest that only parents with an internal Locus transmit their preferences for redistribution to their children. While the results of the individual significance test indicate that coefficients γ_1 and γ_2 are not statistically significant, the joint test rejects the null hypothesis $\gamma_1 + \gamma_2 = 0$ (see Col. 2 in Table 6). In this case, $\gamma_1 + \gamma_2 = 0.131$, which suggests that when parents believe that the outcomes they achieve are a consequence of their actions, they have a proactive attitude in transmitting their own beliefs to their children. Furthermore, the coefficient of the internal Locus coefficient is significant and positive, suggesting that these parents also have higher preferences for redistribution.

Finally, some previous literature has studied the link between the *BFI* and political preferences. Our results suggest that the persistence coefficient is only statistically significant, with a relevant magnitude, when the $PR_{p,t-1}^H$ interacts with the *Conscient.* dimension. The joint significance test rejects the hypothesis $\gamma_1 + \gamma_2 \times \text{Modulator} = 0$ in the case of *Conscient.* (see Col. 3 in Table 6). Furthermore, the coefficient $\gamma_2 < 0$ and is significant, which suggests that those parents who had high preferences for redistribution in 2011/12 and greater conscientiousness are associated with a lower intensity of transmission.

Table 6: Modulators of intergenerational transmission of preferences for redistribution: personality traits of parents

	(1)	(2)	(3)	(4)
$PR_{p,t-1}^H$	0.048 (0.051)	0.087 (0.060)	0.451** (0.202)	0.020 (0.204)
$PR_{p,t-1}^H \times \text{Risk Aversion}$	0.140 (0.079)			
Risk Aversion	-0.064 (0.034)			
$PR_{p,t-1}^H \times \text{LoC}$		0.044 (0.079)		
<i>LoC</i>		0.063* (0.034)		
$PR_{p,t-1}^H \times \text{Conscient.}$			-0.010* (0.007)	
<i>Conscient.</i>			0.004 (0.003)	
$PR_{p,t-1}^H \times \text{Open.}$				0.003 (0.006)
<i>Open.</i>				0.001 (0.002)
F test	9.48	6.38	7.66	9.27
p-value	0.002	0.011	0.006	0.002
Obs.	776	778	799	789
R2	0.037	0.039	0.035	0.033

Notes: The dependent variable is children’s preferences for redistribution. $PR_{p,t-1}^H$ is parents’ preferences for redistribution in 11/12. The Risk aversion and *Loc* variables correspond to the 3rd wave and the *BFI* to the 4th wave. A higher score on modulators means more risk aversion, internal locus, and better performance in the *BFI*. The F test considers the significance of the following null hypothesis: $\gamma_1 + \gamma_2 \times \text{Modulator} = 0$. In cases where the variable is continuous, the F test is performed on the mean value of the variable. The definition of the variables and their mean values are presented in Table A2 of the Annex. The control variables used are the same as in Table 3. Coefficients are OLS estimates. Robust standard errors in parentheses. *, **, and *** indicate significance at 10%, 5%, and 1% level, respectively.

In addition, our a priori hypothesis was that parents whose traits are associated with a higher score in *Open.* would give their children more freedom, and therefore intergenerational persistence of preferences would be lower. In this case, neither the $PR_{p,t-1}^H$ nor the interaction of this variable with *Open.* is significant. However, the F test of the aggregate effect is significant for the mean value of this dimension. This implies that there is persistence and that the intensity of transmission is increasing with the score of this variable. When verifying the significance of the F test for the different values of the *Open.* score, we find that the persistence coefficient becomes significant and positive when the score is higher than 27. This result is contrary to our a priori hypothesis, and suggests that a more in-depth analysis is needed. However, one possible explanation is that, in contrast to parents with a high *Conscient.* score, parents with relatively high *Open.* score may be more liberal as a result of their positive response to unconventional and complex stimuli (Gerber et al., 2010, 2011), conveying a stronger intensity of intergenerational transmission.

5.3 Intergenerational transmission and characteristics of children

In this section, we present a group of estimates which allow us to explore whether some characteristics of children alter the intensity of the intergenerational persistence of distributive preferences. This could be explained by parents having different behaviors regarding how and how much to invest in the formation of their children’s preferences, or because the characteristics of children affect their level of receptivity. We consider three groups of variables. The first refers to exogenous characteristics of children, such as their sex, the presence of siblings, and their birth order. The second group includes some instruments that measure children’s abilities (cognitive and non-cognitive), while the third group corresponds to parents’ opinions or expectations regarding their children.

First, we explore three additional modulators: children’s sex, the presence of siblings, and birth order (see Table 7). The first variable is related to the potential role of gender biases, but the interaction term is not statistically significant. Regarding the latter two variables, we expect that the intergenerational transmission would be more intense in contexts in which parents have more resources and time for their children. The signs of the latter two variables support that hypothesis, but only the interaction term of the sibling is statistically significant at 10%. As a result, we confirm the intergenerational persistence, but in the case of the presence of sibling, the intensity of transmission is lower but positive (the joint significance test reject the null hypothesis).

Table 7: Modulators of intergenerational transmission of preferences for redistribution: characteristics of the children

	(1)	(2)	(3)
$PR_{p,t-1}^H$	0.098* (0.054)	0.227*** (0.091)	0.077* (0.044)
$PR_{p,t-1}^H \times \text{Male}$	0.031 (0.077)		
Male	-0.223*** (0.070)		
$PR_{p,t-1}^H \times \text{Sibling}$		-0.151* (0.091)	
Sibling		0.071* (0.036)	
$PR_{p,t-1}^H \times \text{Firstborn}$			0.146 (0.091)
Firstborn			-0.065* (0.036)
F test	5.39	2.97	7.76
p-value	0.020	0.085	0.006
Obs.	806	806	806
R2	0.032	0.037	0.036

Notes: The dependent variable is children’s preferences for redistribution. $PR_{p,t-1}^H$ is parents’ preferences for redistribution in 11/12. The F test considers the significance of the following null hypothesis: $\gamma_1 + \gamma_2 \times \text{Modulator} = 0$. The definition of the variables and their mean values are presented in Table A2 of the Annex. The control variables used are the same as in Table 3. Coefficients are OLS estimates. Robust standard errors in parentheses. *, **, and *** indicate significance at 10%, 5%, and 1% level, respectively.

Second, Table 8 shows how children’s abilities play a role in the transmission of parents’ preferences.

First, when we consider cognitive ability, using the subscale of similarities from *WAIS*, we find that intergenerational transmission is more intense for those children who have a higher score on this instrument, and therefore higher cognitive ability. The interaction term is significant and positive, leading the persistence coefficient to be 0.423 for those children who scored 40 in *WAIS* ($0.012 \times 40 - 0.057$). When *SDQ*-based measurements are used, the transmission of preferences is lower among children with both externalized and internalized problems. In this case, the interaction term is negative but is not statistically significant. Also, in these specifications, the persistence coefficient remains significant. Finally, the intergenerational transmission is not differentially affected when considering the average of *Neurot.* score for the children.

When we used the F test to assess the hypothesis $\gamma_1 + \gamma_2 \times \text{Modulator} = 0$ for alternative values of the Modulator variables (within their actual range), an additional consistent result is obtained. The significance of the persistence coefficients tends to disappear when the score of *WAIS* is low (less than 11), or when the scores of *SDQ* (internal orexternal) and *Neurot.* are high (higher than 8/8 and 31, respectively). The joint reading of these results suggests that the transmission of preferences is more intense among children with better performance in these ability indicators, which is in agreement with the hypothesis suggested by theoretical models.

In Table 9, some parents' beliefs about their children's ability and attitudes are included as modulators. First, we identify whether parents have high educational aspirations for their children. Second, the effort and peer variables take a value of 1 when the parents have more pessimistic beliefs (parents think their child makes little effort or is a poor student compared to their peers). The coefficient of persistence remains significant only with these last two variables. In addition, parents who expect their children to obtain a high level of education transmit their preferences to a greater extent. The transmission of preferences is more than three times higher when parents are optimistic about the future educational achievements of their children (compared with those parents with low educational aspirations). The persistence coefficient is 0.064 for parents with low educational aspirations, while it increases to 0.216 for parents with high aspirations for their children. As previously mentioned, the effort and peer variables identify more pessimistic beliefs, and their negative incidence leads to a reduction in the transmission of preferences for redistribution (when these variables take a value of 1, the joint significance tests reject the null hypothesis $\gamma_1 + \gamma_2 = 0$). The individual significance of γ_1 suggests that transmission is only relevant when parents have optimistic beliefs about the performance of their children (if the modulators considered take a value of 0). These results are consistent with our findings regarding parental educational aspiration, and they are in accordance with the hypothesis suggested by theoretical models.

Table 8: Modulators of intergenerational transmission of preferences for redistribution: children's abilities

	(1)	(2)	(3)	(4)
$PR_{p,t-1}^H$	-0.057 (0.068)	0.151** (0.067)	0.183** (0.073)	0.127 (0.161)
$PR_{p,t-1}^H \times WAIS$	0.012*** (0.004)			
$WAIS$	-0.002 (0.002)			
$PR_{p,t-1}^H \times SDQ$ Int.		-0.007 (0.010)		
SDQ Int.		0.005 (0.005)		
$PR_{p,t-1}^H \times SDQ$ Ext.			-0.012 (0.010)	
SDQ Ext.			0.004 (0.005)	
$PR_{p,t-1}^H \times Neurot.$				-0.001 (0.007)
$Neurot.$				-0.003 (0.003)
F test	9.35	8.52	8.82	8.67
p-value	0.002	0.004	0.003	0.003
Obs.	806	806	806	805
R2	0.041	0.033	0.033	0.033

Notes: The dependent variable is children's preferences for redistribution. $PR_{p,t-1}^H$ is parents' preferences for redistribution in 11/12. The SDQ score corresponds to the 3rd wave, while the $WAIS$ and the BFI are obtained from the 4th wave. The higher score in the modulators reflects low abilities in SDQ and BFI , and high abilities in the $WAIS$. The F test considers the significance of the following null hypothesis: $\gamma_1 + \gamma_2 \times \text{Modulator} = 0$. In cases where the variable is continuous, the F test is performed on the mean value of the variable. The definition of the variables and their mean values are presented in Table A2 of the Annex. The control variables used are the same as in Table 3. Coefficients are OLS estimates. Robust standard errors in parentheses. *, **, and *** indicate significance at 10%, 5%, and 1% level, respectively.

Table 9: Modulators of intergenerational transmission of preferences for redistribution: parents' beliefs about their children

	(1)	(2)	(3)
$PR_{p,t-1}^H$	0.205*** (0.059)	0.064 (0.046)	0.122*** (0.041)
$PR_{p,t-1}^H \times \text{Effort}$	-0.171** (0.078)		
Effort	-0.003 (0.033)		
$PR_{p,t-1}^H \times \text{Aspirations}$		0.216** (0.091)	
Aspirations		-0.003 (0.037)	
$PR_{p,t-1}^H \times \text{Peers}$			-0.094 (0.125)
Peers			-0.039 (0.055)
F test	0.46	12.96	0.05
p-value	0.499	0.0003	0.818
Obs.	806	753	851
R2	0.041	0.044	0.034

Notes: The dependent variable is children's preferences for redistribution. $PR_{p,t-1}^H$ is parents' preferences for redistribution in 11/12. The modulators used in this table are three dummy variables collected in wave 3. These dummy variables that take a value of 1 if performance is low in Effort or Peer, or if individuals present high Aspirations. The F test considers the significance of the following null hypothesis: $\gamma_1 + \gamma_2 \times \text{Modulator} = 0$. The definition of the variables are presented in Table A2 of the Annex. The control variables used are the same as in Table 3. Coefficients are OLS estimates. Robust standard errors in parentheses. *, **, and *** indicate significance at 10%, 5%, and 1% level, respectively.

5.4 Do the modulators compete with each other? An exploration of their relative relevance

In the previous sections, we explored various modulators that may explain the intergenerational transmission of preferences, which allowed us to test the central hypotheses of this paper. In this section, we explore the relevance of all these modulators functioning simultaneously to explain the persistence of preferences between generations. For this purpose, we adapt the equation 4, and all modulators are considered together. We select one variable to represent each of the modulators we have explored, but the results do not change substantively if we use alternative representative variables. The exception is the case of the variables associated with parental personality traits. For that reason, Table 10 presents the results of three alternative specifications, which consider each of the three variables related to parental personality traits: risk aversion (Col. 1), *LoC* (Col. 2), and *Conscient.* (Col. 3).

Table 10: Modulators of intergenerational transmission of preferences for redistribution: their relative relevance

	(1)	(2)	(3)
$PR_{p,t-1}^H$	-0.023 (0.082)	0.037 (0.099)	0.427** (0.216)
$PR_{p,t-1}^H \times \text{Inter. Subj. Mob.}$	-0.058*** (0.018)	-0.054*** (0.018)	-0.054*** (0.017)
$PR_p^H \text{ 11/12} \times \text{Power 1}$	-0.032** (0.014)	-0.038*** (0.014)	-0.036*** (0.014)
$PR_{p,t-1}^H \times \text{WAIS}$	0.006 (0.004)	0.006 (0.004)	0.006 (0.004)
$PR_{p,t-1}^H \times \text{Aspiration}$	0.231** (0.098)	0.225** (0.097)	0.239** (0.094)
$PR_{p,t-1}^H \times \text{Risk aversion}$	0.122 (0.082)		
$PR_{p,t-1}^H \times \text{LoC}$		-0.004 (0.083)	
$PR_{p,t-1}^H \times \text{Conscient.}$			-0.012** (0.006)
F test (Inter. Subj. Mob.)	0.42	0.01	3.37
p-value	0.516	0.920	0.067
F test (Power 1)	0.31	0.01	3.51
p-value	0.578	0.909	0.061
F test (WAIS)	1.13	3.20	6.17
p-value	0.289	0.074	0.013
F test (Aspiration)	3.19	4.09	8.50
p-value	0.074	0.044	0.004
F test (Risk aversion)	1.05		
p-value	0.306		
F test (LoC)		0.17	
p-value		0.683	
F test (Conscient.)			0.04
p-value			0.843
Obs.	705	708	717
R2	0.081	0.080	0.080

Notes: The dependent variable is children's preferences for redistribution. $PR_{p,t-1}^H$ is parents' preferences for redistribution 11/12. The F test considers the significance of the following null hypothesis: $\gamma_1 + \gamma_2 \times \text{Modulator} = 0$. In cases where the variables are continuous, the F test is performed on the mean value of the variable. The definition of the variables and their mean values are presented in Table A2 of the Annex. The control variables used are the same as in Table 3. Coefficients are OLS estimates. Robust standard errors in parentheses. *, **, and *** indicate significance at 10%, 5%, and 1% level, respectively.

The results are consistent with those presented in previous sections. The intensity of the transmission of redistributive preferences is higher when parents display high educational aspirations for their children. At the same time, persistence is reduced when parents perceive that they have lower income mobility or lower social power. Furthermore, the coefficients on these modulators have a high capacity to predict intergenerational transmission. Regarding children's abilities as measured by the *WAIS* test, in two of the three specifications the F test is significant, accounting for higher transmission of preferences for redistribution when children's abilities are greater. In the case of parental personality traits, only *Conscient.* shows a differential impact on persistence, suggesting that those parents with low scores in *Conscient.* transmit their preferences more strongly, which is in agreement with the

results presented in the previous section.¹³ The other variables related to parental personality traits are not significant when we consider the other modulators simultaneously.¹⁴

If we consider the magnitude of the coefficients that express the interaction of parental preferences with the different modulators, and we compare them with the estimates presented in the previous sections, an increase in transmission of preferences is observed in the cases of educational aspirations and intergenerational subjective mobility, and a decrease when considering Power 1. Furthermore, when using the instrument *Conscient.*, there are no changes in the level of transmission.

Finally, the global explanatory capacity of this model is similar to previous empirical studies on preferences for redistribution for adults in other countries (Alesina and Giuliano, 2011). The R^2 of the models presented in Table 10 is around 0.08, which is also similar than the R^2 reported in Table 3, where we include contemporary parental preferences.

In sum, these results demonstrate the relevance of these modulators in intergenerational transmission and also the robustness of the results presented in the previous sections, except in the case of parental personality traits. Regarding this modulator, the results are sensitive to which variable is included in this more general model. Therefore, the evidence we find seems to support a higher degree of robustness in the approaches that explain parental learning based on a set of beliefs, which may be associated with the process of social mobility or the parents' perceptions of their children's abilities.

6 Conclusions

This paper provides novel evidence to advance our understanding of the intergenerational transmission of socio-cultural characteristics. It explores the transmission of redistributive preferences from parents to children, testing empirically the relevance of alternative modulators of transmission. It is a relatively new field of study, with no previous papers that attempt to explain these preferences among young people (whose age is close to 20 years). Evidence about the preferences of this age group is relevant since this period is a crucial stage of life during which beliefs are formed that are unlikely to vary significantly in later stages.

First, our evidence suggests that the intergenerational persistence of preferences for redistribution is statistically significant. Furthermore, its magnitude is relatively high when we compare it with the stability of preferences for the same person over time (Chuang and Schechter, 2015). Also, it is consistent with the intergenerational correlation that found Dohmen et al. (2012) in other dimensions (as risks and trust), and with the high persistence in attitudes towards politics and redistribution found by Giavazzi et al. (2019) for US immigrants. This evidence suggests that parental household matters for explaining redistributive preferences, and it also supports the "hypothesis of impressionable years" proposed in Inglehart and Baker (2000). At the same time, the results are consistent with the previous findings of the intergenerational transmission of attitudes and cultural traits.

¹³In fact, in this case, the F test is not significant, indicating that preferences for redistribution are not transmitted when the score of this instrument is high.

¹⁴It is possible that these results can be explained by the fact that parental personality traits are related to their mobility perspectives and empowerment performance. To test that hypothesis, we carried out the same estimation, but removed these variables one by one, and the results were not substantially modified.

Second, we find that the recent learning process of parents is relevant in explaining the preferences of the average child. Those parents who have increased their preferences for redistribution in recent years transmit their preferences more intensely to their children. This result suggests that parental learning leads to an adjustment in their preferences, which affects intergenerational transmission. Furthermore, the changes in parental preferences and their role in intergenerational transmission might represent favorable evidence of "the lifelong openness hypothesis" (Hogg and Vaughan, 2008).

Third, we use a variety of variables to analyze how three modulators suggested by the theoretical literature affect the intensity of intergenerational transmission of redistributive preferences. So far, these hypotheses have not been previously tested empirically, and even some of the modulators addressed in this paper have been less considered in the literature on redistributive preferences. Our results suggest that these modulators are relevant, affecting the intensity of intergenerational transmission. The transmission of preferences is less intense when parents perceive upward income mobility and when they experienced greater empowerment. We also find evidence of the role of parental personality traits in transmission. Intergenerational persistence is higher when parents are more risk-averse, when they have a more internal locus of control, and when they are more conscientious. Finally, the transmission of preferences is more intense when parents are more optimistic about their children's abilities or if the objective measures of their children's abilities are stronger. However, the sex of the children, and the order of birth are not relevant, while the presence of siblings reduces the intensity of transmission.

Finally, these results are robust to different specifications. The conclusions remain when we consider a more general model, simultaneously including all the modulators in the analysis. Also, we alternatively use subjective and objective measures, which allows us to discuss the role of parental misperception. Furthermore, we exploit the longitudinal nature of the data to mitigate potential endogeneity problems associated with measurement errors and omitted variables. However, our estimates cannot be interpreted in causal terms, and other strategies are needed to advance in this direction. Future research faces the challenge of establishing the causal interpretations of these links. Another limitation of our study is that ELBU's sample excludes households with very high income. On the other hand, we only consider the mothers' preferences, but it could be interesting to incorporate the role of fathers' preferences.

The findings presented in this article thus constitute a relevant contribution to the field of political economics. First, they are consistent with the coexistence of heterogeneous preferences for redistribution among individuals and families, in which preference's characteristics are relatively permanent. They also highlight the role of intra-family transmissions in the formation of tastes, preferences, and attitudes, which could be relevant in other areas that transcend preferences for redistribution. Furthermore, our results confirm that there is persistence in preferences at the family level, but the experiences and events that parents face affect the intensity of transmission significantly. Namely, there is a component of preference formation that seems much more volatile. Also, we provide novel evidence about the empirical relevance of the main transmission modulators suggested by the theoretical models in this field. This finding supports the importance of parental household in explaining the heterogeneity of preferences for redistribution. At the same time, it rejects the main predictions of the canonical model of Meltzer and Richard (1983): individual preferences for redistribution share characteristics

of a cultural trait and cannot be fully explained by economic self-interest or by the current political and economic environment. Furthermore, the relatively high persistence of redistributive preferences helps to explain the stylized fact that societies with high-income inequality coexist with a majority of individuals with a low demand for redistribution.

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7 Annex

Table A1: Probability of being interviewed in 2016/17. Wave 1 and 4. Parents and children

	Parents	Children	Parents and children
Sex (1=Male)	0.005 (0.003)	0.001 (0.021)	0.004 (0.021)
Size of household	0.009 (0.005)	0.004 (0.006)	0.004 (0.006)
Years of education	0.008** (0.004)	0.004 (0.003)	0.0054 (0.003)
Family Income/1000	0.002 (0.004)	0.001 (0.004)	0.003 (0.004)
Montevideo	-0.056*** (0.027)	-0.047** (0.021)	-0.022 (0.021)
Constant	0.368*** (0.034)	0.431*** (0.050)	0.370*** (0.049)
Obs.	2778	2778	2778
R^2	0.006	0.003	0.002

Note: Coefficients are OLS estimates. Robust standard errors in parentheses. *, **, and *** indicate significance at 10%, 5%, and 1% level, respectively.

Table A2: Descriptive statistics

	Mean	Sd	Min	Max	Obs.	Codification and questions
Preferences for redistribution						
Parents in 2011/12 ($PR_{p,t-1}^H$)	0.227	0.419	0	1	806	Do you think that in Uruguay: (i) people pay low taxes, (ii) what people pay in taxes is appropriate, and (iii) people pay high taxes. High preferences for redistribution (=1) are identified if the interviewee answers that he thinks that in Uruguay people pay low taxes or what people pay in taxes is appropriate
Parents in 2016/17 ($PR_{p,t}^H$)	0.128	0.334	0	1	806	
Children in 2016/17 ($PR_{ch,t}^H$)	0.242	0.429	0	1	806	
Modulators:						
(1a) Household/parents mobility						
Subjective Intergenerational	0.520	2.078	-9	9	803	Difference of this statement "Imagine a scale from 1 to 10 where 1 is the poorest people and 10 the richest": (i) Where are you?", and (ii) "... home where you lived during your childhood? (9=High mobility)
Subjective Intragenerational	1.088	1.384	-4	9	805	Difference between the 11/12 and 16/17 waves of this statement "Imagine a scale from 1 to 10 where 1 is the poorest people and 10 the richest Where are you?" (9=High mobility)
Objective Intergenerational	0.065	2.497	-9	9	785	Change in household income decile observed between 11/12 and 16/17 (9=High mobility)
Objective Intragenerational	0.523	0.500	0	1	680	Educational level of the parents is higher than that of the grandparents (1=High mobility)
(1b) Parents' perception						
Fairness	0.581	0.494	0	1	790	Takes a value of 1 if the parents believes that a person who is born poor and works hard can become rich (0 otherwise)
Power 1	0.681	2.886	-8	8	770	The people believe they have no power (=1) / believe they have a lot of power (=9). The variable identifies the difference between the position in which parents were located in 16/17 and the position in which they were located in 11/12 (8=High power)
Power 2	0.443	1.571	-8	8	777	The people believe they have no power (=1) / believe they have a lot of power (=9). The variable identifies the difference between their position in 11/12 and the one that they declared five years before (8=High power)
(2) Parents' personality						
Risk aversion	0.420	0.494	0	1	776	Takes a value of one if, in any of the three options (going on vacation, replacing your broken kitchen, or replacing your sofa), indicate that if you don't have the money, you should save before buying/doing it
<i>LoC</i>	0.599	0.490	0	1	778	Some people believe that individuals can build their destiny ... do you believe that...? (1=Internal locus: "We make our destiny" or "Mostly self")
BFI: <i>Conscient.</i>	34.947	6.366	11	45	799	In the <i>BFI</i> 44 statements are made where the interviewee is told: "I see Myself as Someone Who ...". The response scale is from 1 to 5 (1 = Disagree strongly and 5 = Agree strongly), where each statement is associated with one of the five dimensions. The score of each dimension is constructed from the sum of the answers given in each statement (in some cases the reverse of the statement). (9 items in <i>Conscient.</i> , 45 = High; 10 items in <i>Open.</i> , 50 = High)
BFI: <i>Open.</i>	34.422	7.153	13	50	789	

Table A2: Descriptive statistics (cont.)

	Mean	Sd	Min	Max	Obs.	Codification and questions
(3a) Characteristics of the children						
Sex	0.494	0.500	0	1	806	1=Male
Sibling	0.743	0.437	0	1	806	1=Yes
Firstborn	0.259	0.438	0	1	806	1=Yes
(3b) Children's abilities						
<i>WAIS</i>	15.037	8.805	0	36	806	The similarities subtest consists of 18 items where the interviewee has to link two common objects or concepts. Depending on the quality of the response it is scored with 0, 1 or 2, and then the total score of this subtest is added (36=High abilities)
SDQ Int.	5.230	3.835	0	18	806	Each subscale has 10 statements, with three answer options (0 = Not true; 1 = somewhat true; 2 = Totally true). The total score for each subscale arises from the sum of the score for each statement (18=Low abilities)
SDQ Ext.	5.760	3.798	0	18	806	
BFI: <i>Neurot.</i>	22.606	5.929	8	40	805	Same characteristics as <i>Open</i> and <i>Conscient.</i> (8 items, 40=Low abilities)
(3c) Parents' beliefs about their children						
Effort	0.501	0.500	0	1	806	Parents believe that their children should be more responsible and try harder to achieve the goals that they want to achieve at age 30 (1=Need more effort)
Aspirations	0.355	0.479	0	1	753	Parents believe that their children will finish university (1=High aspirations)
Peers	0.093	0.291	0	1	806	Parents believe that their children's school performance is below average or that their child is one of the worst students in the class (1=Low performance)

Table A3: Dynamics of the transmission of preferences for redistribution

	(1)	(2)	(3)	(4)	(5)	(6)
$PR_{p,t}^H$		0.317*** (0.052)		0.305*** (0.053)		
$PR_{p,t-1}^H$			0.113*** (0.039)	0.085** (0.038)	0.303*** (0.087)	
$PR_{p,t-1}^H \times \Delta^D$					-0.237** (0.093)	
$PR_{p,t-1}^L$						-0.150*** (0.039)
$PR_{p,t-1}^L \times \Delta^U$						0.336*** (0.064)
Parental characteristics						
Age	0.001 (0.002)	0.000 (0.002)	0.001 (0.002)	0.000 (0.002)	0.000 (0.002)	0.000 (0.002)
White	0.035 (0.045)	0.048 (0.046)	0.034 (0.046)	0.047 (0.046)	0.034 (0.046)	0.048 (0.046)
Married	-0.030 (0.033)	-0.018 (0.032)	-0.027 (0.033)	-0.017 (0.032)	-0.026 (0.033)	-0.017 (0.032)
Years of education	-0.006 (0.005)	-0.008 (0.005)	-0.006 (0.005)	-0.008 (0.005)	-0.007 (0.005)	-0.007 (0.005)
Children characteristics						
Male	0.083*** (0.032)	0.082*** (0.031)	0.080** (0.031)	0.081*** (0.031)	0.084*** (0.031)	0.076** (0.031)
Years of education	-0.001 (0.007)	0.000 (0.007)	0.000 (0.007)	0.001 (0.007)	0.001 (0.007)	0.000 (0.007)
Married	0.067 (0.084)	0.068 (0.086)	0.068 (0.084)	0.069 (0.085)	0.072 (0.085)	0.064 (0.084)
Unemployed	-0.058* (0.033)	-0.043 (0.032)	-0.055* (0.033)	-0.041 (0.032)	-0.047 (0.033)	-0.051 (0.032)
Household characteristics						
Family income	-0.070 (0.054)	-0.083 (0.053)	-0.072 (0.054)	-0.084 (0.053)	-0.077 (0.053)	-0.079 (0.053)
Family income ²	0.002* (0.001)	0.003** (0.001)	0.002* (0.001)	0.003** (0.001)	0.002* (0.001)	0.003* (0.001)
Montevideo	0.003 (0.032)	0.003 (0.031)	0.001 (0.032)	0.002 (0.031)	0.005 (0.032)	-0.004 (0.031)
Constant	0.262** (0.125)	0.243* (0.124)	0.241* (0.125)	0.227* (0.124)	0.254** (0.125)	0.357*** (0.127)
F test					2.572	6.870
p-value					0.109	0.009
Obs.	806	806	806	806	806	806
R2	0.019	0.079	0.032	0.086	0.043	0.076

Notes: The dependent variable is children's preferences for redistribution. $PR_{p,t-1}$ is the preferences for redistribution of parents in 11/12, and $PR_{p,t}^H$ it is parents' preferences for redistribution in 16/17. Δ^D (Δ^U) is a variable that identify whether parental preferences for redistribution decreased (increased) between the two waves. The F test considers the significance of the following null hypothesis: $\beta_1 + \beta_2=0$ (or $\beta'_1 + \beta'_2=0$). Coefficients are OLS estimates. Robust standard errors in parentheses. *, **, and *** indicate significance at 10%, 5%, and 1% level, respectively.

Table A4: Modulators of intergenerational transmission of preferences for redistribution: Risk aversion

	All (1)	Risk aversion (parents and children)	
		Equal (2)	Different (3)
$PR_{p,t-1}^H$	0.103** (0.042)	0.066 (0.054)	0.151*** (0.057)
$PR_{p,t-1}^H \times$ Risk aversion (1=High parents and children)	0.031 (0.116)		
Risk aversion (1=High parents and children)	0.005 (0.048)		
F test	1.53		
p-value	0.216		
Obs.	775	421	354
R2	0.031	0.050	0.067

Notes: The dependent variable is children's preferences for redistribution. $PR_{p,t-1}^H$ is parents' preferences for redistribution in 11/12. The parents' Risk aversion variables correspond to the 3rd wave and children's Risk aversion to the 4th wave. Parents' Risk aversion is a dummy variable that takes a value of one if, in any of the three options (going on vacation, replacing your broken kitchen, or replacing your sofa), parents indicate that if you don't have the money, you should save before buying/doing it. The children's Risk aversion is a dummy variable that take value one if, in any of the three options (change your cell phone, buy a musical instrument, or replace your sneakers), children indicate that if you don't have the money, you should save before buying/doing it. The control variables used are the same as in Table 3. Coefficients are OLS estimates. Robust standard errors in parentheses. *, **, and *** indicate significance at 10%, 5%, and 1% level, respectively.