

# My parents taught Me. Evidence on the family transmission of values

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**Abstract** The paper uses questions included in the 2010 wave of the Bank of Italy's Survey on Household Income and Wealth to investigate the role of family transmission of values. It presents three main empirical findings. First, the paper shows that a number of attitudes (generalized and personalized trusting behaviour, risk and time preferences) and outcomes (female labour force participation, fertility, entrepreneurship, productivity) are associated with the values received. Second, it documents that values received from parents are correlated with the values transmitted to descendants. Third, by using respondent moving patterns, the paper highlights that values received are slowly changing even after a discontinuity in the reference environment. Comparisons between first- and second-generation movers suggest that what matters for breaking the family chains are the formative years, when young people somehow strike a balance between the values transmitted by their parents and what they experience in the (possibly different) environment where they grow up.

**Keywords** Family · Values · Cultural transmission · Persistence

**JEL classification** Z1 · D10 · C83

## 1 Introduction

A growing body of literature argues that cultural traits have important socio-economic consequences (for a review, see Guiso et al. 2006). Culture includes values, beliefs, and

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gut feelings about what is the right or wrong action in a particular situation (Nunn 2012).<sup>1</sup> Examples are the importance of obeying the law, attitudes towards diversity, one's position on whether women should work outside home, and the importance of hard work. Cultural traits can persist from generation to generation if they are passed down from parents to children. Bisin and Verdier (2000), Bisin et al. (2004), and Tabellini (2008) argue that individuals receive an endowment of values, update them in the light of their life experience, and transmit the updated package to their children. The updating process, which can reflect the role of the local milieu in which the individual lives, provides a wedge between what has been inherited and what is transmitted. Björklund et al. (2006), exploiting a sample of adoptees, suggest that parental transmission matters even in the absence of any genetic link to their children.<sup>2</sup> More recently, Dohmen et al. (2012), using German survey data, provide empirical evidence regarding the importance of the transmission process. Finally, the persistence of cultural traits is also a central point in the literature on social capital. Following Putnam (1993), Guiso et al. (2008), De Blasio and Nuzzo (2010), and Tabellini (2010), among others, show that the contemporaneous endowments of social capital have deep historical roots.

This paper adds to previous literature with empirical evidence on the importance of the intergenerational transmission of values within the family. It uses Italian survey data. In particular, it elaborates on two questions included in the 2010 wave of the Bank of Italy's Survey on Household Income and Wealth (SHIW). The questions refer to the values received from parents and those transmitted to descendants. The cultural traits surveyed include tolerance for different opinions, for the sexual and religious customs of others; obedience to parents and teachers; respect for the law; the value of having a family; and the importance of success at work. The responses to the questions capture both the degree to which the transmission of values is deemed to be important (some parents may think that instilling values is one of their key duties, while others may have a less intrusive stance) and the type of cultural traits received and transmitted (say, obedience rather than tolerance). Empirically, we try to disentangle these two aspects.

The paper presents three main empirical findings. First, it sets the stage by documenting that a number of individual attitudes and socio-economic outcomes are associated with the values received. As for the former, we provide evidence that a measure of generalized trusting behaviour is correlated positively with the respondent's exposure to an education that insisted on tolerance and the importance of work and negatively with the extent to which the respondent's parents instilled cultural traits focused on obedience. By the same token, a measure of particularized trust captures only received values related to hierarchical principles. We also show that the cultural traits received from parents predict individual measures of risk and time preferences (that are derived from specific questions in the financial section of the SHIW). Regarding socio-economic outcomes, we take an open approach and consider a list of activities that previous research has shown to be affected by cultural traits (see De Blasio and Nuzzo 2010 and De Blasio and Omiccioli 2013). We use entrepreneurship,

<sup>1</sup> The neurosciences provide biological foundations on how values help people to make decisions in a complex and uncertain environment (Damasio 1994; Gigerenzer 2007).

<sup>2</sup> The degree to which genes and environment (the so-called nature-nurture debate) matter for the transfer of values across cohorts is the subject of an extensive body of literature recently surveyed by Sacerdote (2011), who concludes that there is sufficient evidence that both can make the difference.

labour productivity, female labour market participation, and fertility. Again, the values received from parents are strongly correlated with these outcomes (and, again, we find an overall consistency between the types of cultural traits received and the characteristics of individual outcomes).

We then turn to cultural transmission. As surveyed in Bisin and Verdier (2010), socialization inside the family is crucial to the intergenerational transmission of culture. Differently from other approaches that focus on the link between cultural traits of people and their place of origin, such as the “epidemiological” one (see Fernandez 2010), our data allows us to investigate more directly the “purposeful transmission decision inside the family”, as Bisin and Verdier (2010) put it. In this respect, our paper differs from Dohmen et al. (2012) in that we look at a broad range of cultural traits, not only trust and risk attitudes. We find significant correlations between the values received from parents and those that the respondents have passed down (or intend to pass down) to their descendants. These correlations survive an extensive robustness analysis. The fact that the values received are associated with those transmitted is only a *prima facie* sign of persistence driven by family transmission. As explained by the theory, individuals may update their received endowment of values before passing them down to their descendants. The updating may reflect the local environment in which the individual lives, for instance, the influence exerted by someone else in the surrounding population. Also, the updating may reflect the individual’s own life experience. Therefore, the estimated correlations between the values received and the updated package of values transmitted reflect both family background and the role of the updating mechanism.

The third finding of the paper helps to unravel the respective roles of the family background and of a single component of the updating mechanism: the local environment. As in Fisman and Miguel (2007) and Fernandez and Fogli (2009), we elaborate on situations where individuals from different geographical backgrounds share the same environment. We exploit the fact that in Italy cultural traits have strong regional components and check whether the transmission differs for individuals who experienced moving patterns (compared with those who did not). With the SHIW data, we are able to identify moving patterns featured by different exposures to the host environment and ranges of within-country migration. According to our results, first-generation movers do not systematically differ from stayers in the importance of the values received from their parents as determinants of the values they transmit to their offspring. Their move to a different environment (possibly with different characteristics from the one their parents and their parents’ values came from) does not lead them to attach less importance to what their parents taught them.

We also look at second-generation movers, i.e. persons living in the area where they were born, which is different from the birthplace of their parents. Here, the results lend more support to the role of the environment outside the family as an engine of change of the values transmitted by individuals. For this group, the importance of the values received from parents as determinants of the values to be transmitted is weakened, even if only for a limited subset of values. These results, whose robustness to the possible presence of endogeneity in the mobility of people is examined in this paper, support the importance of family chains in value transmission; only the more formative years of youth appear to be conducive to a weakening of these family chains upon contact with a new environment.

The paper is organized as follows. The next section describes the data. Section 3 shows the implication of the cultural traits received for a number of the socio-economic behaviours of the respondents. Section 4 provides some evidence on the strength of the

relationship between values received and values transmitted. Section 5 investigates the respective roles of family transmission and the local environment. Section 6 concludes.

## 2 Survey measures of family cultural traits

The SHIW is a representative survey of the Italian population conducted every two years by the Bank of Italy on a sample of about 8000 households, distributed over some 300 Italian municipalities.<sup>3</sup> The unit of observation is the household, which is defined so as to include all persons sharing a common dwelling and pooling all or part of their incomes. The survey collects detailed information on socio-demographic and economic characteristics, household consumption and income, and real and financial wealth. Questions regarding the whole household are answered by the head of household.

The 2010 wave of the SHIW includes a small set of questions on values and other individual attitudes.<sup>4</sup> For the types of cultural traits to elicit from the survey, we followed previous research. An initial interesting distinction concerns horizontal as opposed to hierarchical values. According to the classification of Platteau (2000), horizontal values relate to generalized morality obtaining both within and between groups, whereas hierarchical values relate to limited morality, which implies intra-group norms of behaviour. At macro level, Tabellini (2010) shows how places with a higher prevalence of generalized morality are distinguished by better governance and better economic performance.

A second distinction refers to family ties as opposed to work orientation. On the one hand, family ties capture the importance attached to being a member of a family structure. Banfield (1958) identifies “amoral familism” as the fundamental cause of Southern Italy’s lack of social capital and underdevelopment. Alesina and Giuliano (2010) document that strong family ties are associated with a number of socio-economic consequences: less trust, more fertility, lower rates of female education and labour market participation, and less geographical mobility. On the other hand, following Weber’s thesis on the Protestant ethic, work-related values are commonly associated with individual self-determination and personal development. Moreover, in the work of Inkeles and Smith (1974), family ties and work orientation are pitted against each other, in a process where traditional and conventional views are rejected in favour of more individualistic principles.

The values received and those transmitted are elicited from two parallel questions: “In your upbringing, how much emphasis was placed on the following values?” and “In bringing up your children, how much emphasis did you place (or do you think should be placed) on the following values?”. For both questions, the answers were recorded according to the following single scheme:

- a) TOLERANCE for different opinions, for the sexual and religious customs of others
- b) OBEDIENCE to parents and teachers
- c) OBSERVANCE of the law

<sup>3</sup> Details on methodology (sample design, data collection, data editing and imputation, non-response, data quality, etc.) can be found at <https://www.bancaditalia.it/pubblicazioni/indagine-famiglie/>.

<sup>4</sup> The questionnaire for the 2010 wave (including its special section on values and other individual attitudes) can be downloaded from <https://www.bancaditalia.it/statistiche/tematiche/indagini-famiglie-imprese/bilanci-famiglie/documentazione/index.html>. The data are freely available in an anonymous form for further elaboration and research.

- d) Having a family/having children (HOME)
- e) Success at WORK<sup>5</sup>

According to our classification above, the first three points are directed to gauging the strength of horizontal versus hierarchical values, while the last two allow us to assess the intensity of family ties and work orientation.

As the questions were asked only to a subset of the SHIW respondents,<sup>6</sup> we were able to collect data on 3816 individuals. Respondents rate the importance of each different item on a 10-point scale from 1 (not important, no emphasis at all) to 10 (very important, great emphasis). Table 1 presents the main descriptive statistics for our sample. While the respondents' age is high on average (since the interviewees are limited to heads of household), the other sample statistics nicely mirror those of the Italian population. For instance, the percentage of females, the percentage of persons with the different levels of educational attainment, and the breakdown of respondents across Italy's macro areas are very similar to their population counterparts.

The fact that family cultural traits are collected via a survey poses important challenges. First, there could be a problem of social desirability. As highlighted by Bertrand and Mullainathan (2001), this problem arises when the interviewees want to avoid looking bad in the eyes of the interviewer and select answers they deem more politically correct. To deal with this issue, in the survey, we worded all the possible responses in a way that reflects "positive" values. In point of fact, there appear to be no obvious features of social desirability in the responses we collect. For instance, the percentage of those who indicated that HOME is an important value to transmit is about the same as that of those who chose TOLERANCE as a key trait to teach. As the survey was administrated in 2010, social desirability concerns would probably have driven the answers in a totally different way. Very likely, respondents concerned about political correctness would have given more weight to TOLERANCE.

A more subtle concern is the possibility of a survey-induced correlation between values received and values transmitted. Both sides are collected from the same SHIW respondent, so, if for any reason the respondent is inclined to give similar answers to the two questions, we might artificially overestimate the degree to which cultural values are transmitted. While a survey-induced correlation is in principle very damaging for our results, in our defense, we note that (a) since social desirability should not be an issue (see above), there is no obvious inducement for an individual to replicate the answers and (b) 70 % of respondents do not give the same answers to questions on values transmitted and received.<sup>7</sup>

We are mostly interested in values orientation, i.e. whether the pattern of values received (transmitted) is tilted more towards, say, OBEDIENCE as opposed to TOLERANCE. There may also be differences among individuals in the importance ascribed to a value-oriented upbringing. For instance, some parents may think that instilling values is one of their key duties, while others may take a less intrusive approach. In the answers, the

<sup>5</sup> Capital letters denote the short name for the type of cultural trait, which we will use from now on.

<sup>6</sup> For budgetary reasons, the questions were limited to one half (a survey rotation) of the respondent heads of household.

<sup>7</sup> To verify if the sources of values received and values transmitted differ at least in part, we also performed a simple check of the relationship between surveyed values and basic characteristics of parents and the respondent, such as place and year of birth, finding that values received (transmitted) are relatively more (less) correlated with parents' characteristics than with those of the respondent. Results are available upon request.

**Table 1** Descriptive statistics

	Mean	St. dev.	Min	Max	Obs.
Values received					
Tolerance	7.616	1.932	1	10	3816
Obedience	8.758	1.445	1	10	3816
Observance	8.829	1.420	1	10	3816
Home	8.582	1.594	1	10	3816
Work	7.756	1.753	1	10	3816
Values transmitted					
Tolerance	8.213	1.625	1	10	3816
Obedience	8.705	1.481	1	10	3816
Observance	8.856	1.427	1	10	3816
Home	8.377	1.700	1	10	3816
Work	8.061	1.612	1	10	3816
Individual attitudes and socio-economic outcomes					
Trustgen	0.000	2.031	-6.914	4.870	3816
Trustpar	0.000	1.070	-6.588	2.601	3816
Risk aversion	3.302	0.786	1	4	3816
Impatience	1.831	1.492	0	4	3816
Labour income	11,783	15,734	0	165,500	3816
Entrepreneur	0.122	0.328	0	1	3816
Female labour force participation	0.592	0.492	0	1	1737
Fertility	1.667	1.423	0	20	1737
Individual covariates					
Age	58.642	15.641	19	99	3816
Female	0.455	0.498	0	1	3816
Years of education	9.557	4.651	0	20	3816
Disposable income	33,053	25,457	0	587,784	3816
Marital status					
Never married	0.128	0.334	0	1	3816
Married	0.618	0.486	0	1	3816
Separated/divorced/widowed	0.254	0.435	0	1	3816
Education					
Elementary or less	0.285	0.451	0	1	3816
Middle school	0.349	0.477	0	1	3816
High school	0.251	0.433	0	1	3816
Bachelor degree	0.116	0.321	0	1	3816

Bank of Italy's Survey on Household Income and Wealth (2010 wave)

two aspects are interrelated. We try to distinguish between them by using, in addition to the raw measures directly deriving from the responses, a de-measured measure, which subtracts from each respondent's raw response for each single value the individual average of the responses. This measure captures the predominance of certain types of cultural traits over others, differencing out the individual degree of preference for cultural transmission.

Table 2 describes the individual correlations between values received.<sup>8</sup> They are calculated on the raw data, which reflect both the intensity of the transmission and the type of cultural trait. Table 3 shows the corresponding correlations when the de-meaned data are used instead. Here, the focus is on the relative importance of a single value with respect to the others, as the common factor relating to the absolute importance of parental transmission has been taken out. The results confirm the expected relationship within the two dimensions outlined at the beginning of this section. First, we find a clear distinction between horizontal and hierarchical values: OBEDIENCE is positively correlated with OBSERVANCE, while both of these values are negatively correlated with TOLERANCE. Second, the dichotomy between family ties and work orientation is confirmed: HOME is negatively correlated with WORK.<sup>9</sup>

On the basis of these insights and for the sake of convenience, the single cultural traits can also be aggregated. In what follows, we will work with two synthetic indexes. We elaborate on the results from Table 3 and extract the first principal component from the de-meaned responses to TOLERANCE, OBEDIENCE, and OBSERVANCE (which we call PC\_HORIZ) and the first principal component from the de-meaned responses to HOME and WORK (which we name PC\_FAM). Table 4 gives the correlations between the two principal components and their single-item components. The table shows that PC\_HORIZ can be seen as an index of the prevalence of horizontal values (with respect to hierarchical ones) and PC\_FAM as a measure of the predominance of familism over work orientation. Note also that the correlation between each principal component index and the single-value variables that do not enter into its extraction procedure is quite low. This reinforces the information value of the two aggregate indexes.

In what follows, we show empirical results with both raw single values and the de-meaned principal components. Results with de-meaned single-value variables are similar (and available upon request).<sup>10</sup> We also extracted the principal component from the raw responses. This variable is a very coarse measure of the importance of cultural traits that pools together both the aspects related to the intensity of the transmission and those referring to the types of cultural trait. However, it is very hard to interpret this measure as reflecting some underlying meaningful value ordering. Accordingly, we avoid discussing it in the paper.

### 3 The role of values received for individual attitudes and outcomes

The purpose of this section is to show that inherited cultural traits play an important role. They are associated with a number of individual attitudes and socio-economic outcomes.<sup>11</sup> We start by using as dependent variables the two measures of trusting

<sup>8</sup> The individual correlations between the values transmitted are similar.

<sup>9</sup> Note also that both OBEDIENCE and OBSERVANCE are negatively correlated with HOME, suggesting that familism is conceptually related to an authoritarian inclination. More puzzling is that both TOLERANCE and OBSERVANCE are negatively correlated with WORK.

<sup>10</sup> Intuitively, this is because the issue of scale (i.e. the absolute intensity of value transmission at individual level) is less relevant in the regression context.

<sup>11</sup> Note that no causal interpretation can be given to these estimates, due to the possible presence of endogeneity. The solution of this issue is beyond the scope of our analysis (see Giavazzi et al. 2013 for an attempt to disentangle causal effects from correlations).

**Table 2** Correlation matrix for values received (raw data)

	TOLERANCE	OBEDIENCE	OBSERVANCE	HOME	WORK
TOLERANCE	1				
OBEDIENCE	0.37	1			
OBSERVANCE	0.38	0.78	1		
HOME	0.33	0.60	0.60	1	
WORK	0.34	0.37	0.37	0.44	1

Correlation coefficients are calculated using raw data

behaviour calculated by Albanese et al. (2013) on the basis of the SHIW. The Appendix gives details on how these indexes are built. The first measure refers to generalized trust, i.e. trust in strangers. The second measure refers to particularized trust, i.e. limited to the small circle of family and friends. Columns 1 and 2 of Table 5 report the result we obtain by regressing these indexes respectively on the raw single values (panel A) and the two de-meaned aggregate indexes PC\_HORIZ and PC\_FAM (panel B). In this table, we make use of a number of basic controls for all the dependent variables: we include age (and its square), gender, education, marital status, and area of residence.

As reported in column 1, panel A, TOLERANCE and WORK enter with a positive coefficient and high statistical significance in the regression for generalized trust. This suggests that an upbringing oriented towards horizontal values and work can form individuals who are more inclined to trust anonymous others. The orders of magnitude involved are substantial: for instance, an increase of one standard deviation in TOLERANCE (WORK) is associated with an 18 % (15 %) increase in the dependent variable. As shown in column 1, panel B, the synthetic measures extracted from the de-meaned data provide a consistent picture: while both enter with high statistical significance, PC\_HORIZ enters with a positive sign and PC\_FAM with a negative one. The results reported in column 2, referring to particularized trust, offer additional insights. This measure of trust reflects positively OBEDIENCE and OBSERVANCE (panel A). The aggregate de-meaned indexes (panel B) now enter with the signs reversed compared with column 1, thus validating the overall logic of the findings.

Next, we study the bearing of inherited cultural traits on impatience and risk aversion. Standard theory suggests that these attitudes are crucial for understanding such basic economic behaviours as consumption, saving, and investment. Recent research highlights

**Table 3** Correlation matrix for values received (de-meaned data)

	TOLERANCE	OBEDIENCE	OBSERVANCE	HOME	WORK
TOLERANCE	1				
OBEDIENCE	-0.40	1			
OBSERVANCE	-0.39	0.38	1		
HOME	-0.43	-0.07	-0.08	1	
WORK	-0.24	-0.43	-0.43	-0.20	1

Correlation coefficients are calculated using de-meaned data (at individual level)



**Table 4** Correlation matrix for PC\_HORIZ and PC\_FAM

	PC_HORIZ	PC_FAM
TOLERANCE	0.78	-0.12
OBEDIENCE	-0.77	0.23
OBSERVANCE	-0.76	0.23
HOME	-0.13	0.78
WORK	0.26	-0.78

Correlation coefficients are calculated using de-meaned data (at individual level). PC\_HORIZ is the first principal component of TOLERANCE, OBEDIENCE, and OBSERVANCE. PC\_FAM is the first principal component of HOME and WORK

the role of time and risk preferences as predictors for a number of additional economic behaviours, including migration (Constant et al. 2011), occupational choices (Bonin et al. 2007), credit card borrowing (Meier and Sprenger 2010), and smoking and alcohol consumption (Chabris et al. 2008). Our measures for these attitudes are derived from specific questions, routinely included in the financial section of the SHIW. We find (column 3, panel A) that individuals whose upbringing was based on OBEDIENCE and OBSERVANCE tend to be more risk averse, while those who grew up in an environment that emphasized the importance of success at work are more willing to take risks. Panel B shows that—even when we differentiate out the strength of the transmission—family values are positive correlates of risk aversion, while horizontal cultural traits help people to cope with a risky environment. The findings are quite similar for impatience (column 4), with the notable exception of TOLERANCE, which enters with a (highly significant) negative sign, and HOME, which tends to increase the weight assigned to the present with respect to the future.

Finally, we show that a number of socio-economic outcomes are associated with the cultural traits received from parents. Our exploration here is guided by the previous literature. We take as outcomes entrepreneurship, female participation in the labour market, and worker productivity, because De Blasio and Nuzzo (2010) show that these variables reflect cultural aspects. We also make use of a measure of fertility as a dependent variable, as the impact of cultural background on family size has been pointed out by Alesina and Giuliano (2010) and De Blasio and Omiccioli (2013) in the case of Italy. Overall, we find that the values received from parents are associated with these outcomes. In particular, for the likelihood of becoming an entrepreneur (column 5) and that of a woman's participation in the labour force (column 6), WORK is the only value that makes a difference. Note also that values oriented towards familism are negatively correlated with both entrepreneurship and female labour force participation, even when the de-meaned aggregate indexes are used. We also find that fertility (column 7) is positively associated with an upbringing that stressed obedience to parents and teachers, and family-oriented values. Finally, our results suggest that worker productivity (column 8) is higher for persons raised in a cultural milieu that emphasized tolerance towards diversity and attachment to work. For this outcome, an increase of one standard deviation in TOLERANCE (WORK) is associated with a 2 % (3 %) increase in productivity.

To probe the robustness of our findings, Table 6 provides the analogues to Table 5 where parents' characteristics (year of birth, education, occupation) are also entered as

**Table 5** The impact of values received on attitudes and socio-economic outcomes

	TRUSTGEN	TRUSTPAR	RISK AVERSION	IMPATIENCE	ENTREPRENEUR	FEMALE LFP	FEMALE FERTILITY	LOG(WAGES)
A) Single values								
TOLERANCE	0.192*** (0.020)	-0.002 (0.011)	-0.006 (0.007)	-0.065*** (0.014)	-0.007 (0.015)	-0.017 (0.020)	-0.023 (0.022)	0.019** (0.009)
OBEDIENCE	-0.073* (0.040)	0.201*** (0.024)	0.067*** (0.014)	0.065** (0.028)	0.017 (0.033)	0.057 (0.040)	0.083*** (0.031)	0.001 (0.019)
OBSERVANCE	-0.022 (0.044)	0.070*** (0.026)	0.031** (0.014)	-0.027 (0.029)	-0.024 (0.033)	-0.028 (0.042)	-0.056 (0.035)	-0.018 (0.019)
HOME	0.036 (0.031)	0.026 (0.018)	-0.003 (0.010)	0.057*** (0.021)	-0.024 (0.024)	-0.023 (0.030)	0.065*** (0.025)	-0.008 (0.013)
WORK	0.152*** (0.024)	0.005 (0.012)	-0.034*** (0.008)	-0.046*** (0.016)	0.051*** (0.019)	0.080*** (0.021)	-0.025 (0.022)	0.027** (0.011)
B) Aggregate indexes								
PC_HORIZ	0.251*** (0.027)	-0.100*** (0.015)	-0.049*** (0.009)	-0.076*** (0.019)	0.001 (0.020)	-0.016 (0.027)	-0.028 (0.026)	0.027** (0.011)
PC_FAM	-0.081** (0.035)	0.034* (0.019)	0.033*** (0.011)	0.074*** (0.024)	-0.061** (0.026)	-0.092*** (0.032)	0.066** (0.030)	-0.027* (0.015)
Method	OLS	OLS	OLS	OLS	PROBIT	PROBIT	OLS	OLS
Observations	3816	3816	3816	3816	3816	1737	1737	1893

See the [Appendix](#) for a description of the dependent variables. Each regression includes age, age squared, gender, years of education, and dummies for marital status and area of residence. Columns 6 and 7 include only female respondents. Robust standard errors are in parentheses

\*, \*\*, and \*\*\* denote significance at the 10, 5, and 1 % levels

**Table 6** The impact of values received on attitudes and socio-economic outcomes (robustness checks)

	TRUSTGEN	TRUSTPAR	RISK AVERSION	IMPATIENCE	ENTREPRENEUR	FEMALE LFP	FEMALE FERTILITY	LOG(WAGES)
A) Single values								
TOLERANCE	0.174*** (0.023)	0.005 (0.012)	-0.001 (0.008)	-0.059*** (0.016)	-0.014 (0.018)	0.006 (0.026)	-0.009 (0.020)	0.024** (0.009)
OBEDIENCE	-0.069 (0.045)	0.175*** (0.026)	0.052*** (0.015)	0.046 (0.031)	0.002 (0.038)	-0.029 (0.050)	0.099*** (0.034)	0.005 (0.023)
OBSERVANCE	0.019 (0.049)	0.034 (0.026)	0.022 (0.016)	-0.025 (0.032)	-0.035 (0.038)	-0.017 (0.052)	-0.089** (0.037)	-0.023 (0.022)
HOME	0.017 (0.036)	0.019 (0.020)	-0.006 (0.011)	0.046* (0.023)	-0.030 (0.029)	-0.014 (0.039)	0.056* (0.030)	-0.007 (0.016)
WORK	0.144*** (0.028)	0.007 (0.013)	-0.031*** (0.009)	-0.026 (0.019)	0.075*** (0.024)	0.098*** (0.027)	-0.003 (0.025)	0.014 (0.013)
B) Aggregate indexes								
PC_HORIZ	0.223*** (0.031)	-0.062*** (0.016)	-0.033*** (0.011)	-0.063*** (0.022)	0.008 (0.025)	0.040 (0.035)	-0.003 (0.025)	0.031** (0.012)
PC_FAM	-0.089** (0.042)	0.024 (0.021)	0.027** (0.013)	0.050* (0.027)	-0.088*** (0.031)	-0.104** (0.040)	0.044 (0.035)	-0.014 (0.019)
Method	OLS	OLS	OLS	OLS	PROBIT	PROBIT	OLS	OLS
Observations	3049	3049	3049	3049	2883	1308	1347	1558

See the Appendix for a description of the dependent variables. Each regression includes age, age squared, gender, years of education, and dummies for marital status, area of residence, and parents' characteristics (year of birth, education, occupation). Columns 6 and 7 include only female respondents. Robust standard errors are in parentheses  
\*, \*\*, and \*\*\* denote significance at the 10, 5, and 1 % levels

controls. Even if this inclusion reduces the sample size because of missing data, the qualitative results are similar.

#### 4 The correlation between values received and values transmitted

This section investigates the correlation between the values respondents received from their parents and those they have passed down (or intend to pass down) to their descendants. The evidence is illustrated in Table 7, where each entry is the estimated coefficient (with its standard error) for a given value (or aggregation of values) received in a regression where the corresponding value (or aggregation of values) transmitted is used as a dependent variable. The table has a straightforward structure. Column 1 presents the results from specifications with no additional controls. Column 2 adds the basic set of covariates (the ones used for the estimates in Table 5): age (and its square), gender, education, marital status, and area of residence. Column 3 includes family income and the work status (occupation) of the respondents. Column 4 augments the specifications of column 3 by adding the other cultural traits received (for instance, in

**Table 7** The correlation between values transmitted and values received

	(1)	(2)	(3)	(4)	(5)	(6)
TOLERANCE	0.478*** (0.019)	0.465*** (0.019)	0.466*** (0.019)	0.363*** (0.020)	0.338*** (0.022)	0.363*** (0.022)
OBEDIENCE	0.684*** (0.020)	0.671*** (0.020)	0.671*** (0.020)	0.439*** (0.033)	0.415*** (0.036)	0.435*** (0.036)
OBSERVANCE	0.723*** (0.020)	0.710*** (0.021)	0.709*** (0.021)	0.521*** (0.034)	0.520*** (0.039)	0.502*** (0.036)
HOME	0.711*** (0.021)	0.690*** (0.021)	0.689*** (0.021)	0.544*** (0.030)	0.557*** (0.034)	0.522*** (0.037)
WORK	0.596*** (0.019)	0.602*** (0.019)	0.602*** (0.019)	0.493*** (0.021)	0.498*** (0.024)	0.466*** (0.023)
PC_HORIZ	0.459*** (0.021)	0.443*** (0.021)	0.443*** (0.021)	0.440*** (0.022)	0.413*** (0.023)	0.428*** (0.025)
PC_FAM	0.415*** (0.027)	0.387*** (0.028)	0.386*** (0.027)	0.405*** (0.029)	0.415*** (0.034)	0.379*** (0.034)
Controls	None	Basic	Standard	Standard	Full	Standard
Observations	3816	3816	3816	3816	3049	2966

OLS regressions. Each row reports the estimated coefficient (and standard error) for a given value (or PC) received in a regression where the corresponding value (or PC) transmitted is used as a dependent variable. Column 1 presents the results from specifications with no additional controls. Column 2 adds the basic set of covariates: age, age squared, gender, years of education, and dummies for marital status and area of residence. Column 3 also adds family income and the work status (occupation) of the respondents. Column 4 augments the specifications of column 3 by adding the other cultural traits received. Column 5 also includes parents' characteristics (year of birth, education, occupation). Column 6 restricts the sample to respondents with children. Robust standard errors are in parentheses

\*, \*\*, and \*\*\* denote significance at the 10, 5, and 1 % levels

the first row, where we analyse TOLERANCE, we add the remaining four inherited values), while column 5 includes some observable characteristics of the respondent's father and mother (i.e. education and occupation). Finally, in column 6, we restrict the sample to the respondents with children (2966 out of 3816). This is a necessary robustness check, as the question on the values transmitted was also posed to interviewees with no descendants.

As can be inferred from the table, each value received (or PC index) is highly correlated with its transmitted counterpart. The correlations are very stable across columns and (in the more robust specification) ranges from 0.36 to 0.52. According to these estimates, hierarchical values (OBEDIENCE and OBSERVANCE) are more persistent than TOLERANCE; also, the transmission of family values is stronger than that of work orientation. We also explored the gender dimension of intergenerational transmission. Estimates (not reported here but available on request) indicate that the transmission of values differs significantly in two cases (WORK and OBSERVANCE), where the correlation between values received and values transmitted is lower for female respondents. This could be associated with the change in social and cultural norms regarding gender role and labour force participation that has occurred in the last few decades.

In summary, our results provide evidence of the intergenerational transmission of values inside the family that can be associated with a purposeful transmission by parents. In addition to being statistically significant, these relationships are substantial and, interestingly, they are of the same order of magnitude as the intergenerational correlations in trust and risk attitudes found by Dohmen et al. (2012), which are respectively about 0.40 and 0.32.<sup>12</sup>

## 5 Family values versus local values

The correlations illustrated in the previous section can only be considered *prima facie* evidence of persistence in cultural traits driven by family transmission. As suggested by Bisin and Verdier (2000), Bisin et al. (2004), and Tabellini (2008), individuals who receive an endowment of values from their parents may update them before passing them down to their descendants. One important channel for the updating mechanism is the environment in which the individual lives. As underscored by Tabellini (2010), Grosfeld et al. (2013), and Becker et al. (2015), local culture and institutions can influence individual cultural traits. In this respect, socialization outside the family (e.g. at school, the local church or sports association) can be crucial. Gavia and Raphael (2001) explain the importance of role models developed among peers. As a general rule, people who move to a new environment may be more likely to update the values received before transmitting them to their offspring: experiencing a new environment should induce them to balance the values received with the possibly different ones they may deem relevant in the new setting.<sup>13</sup> Similarly, people whose parents have moved away from the place where they grew up may be more likely to de-emphasize the values received, which they may find ill-suited to this different environment. In this

<sup>12</sup> Furthermore, as noted by Dohmen et al. (2012), these coefficients are close to those obtained in other recent studies on intergenerational correlations in income, wealth, and educational attainment.

<sup>13</sup> However, this effect could be observed also for stayers following a change in the environment. For instance, some studies provide evidence that culture can change with economic conditions and institutional shocks (Alesina and Fuchs-Schündeln 2007; Giuliano and Spilimbergo 2014; Giavazzi et al. 2014).

section, we elaborate on this intuition, following the contributions of Fisman and Miguel (2007) and Fernandez and Fogli (2009). To do this, we exploit the spatial cultural differences in Italy, well known due to the seminal contributions of Banfield (1958) and Putnam (1993). Figure 1 illustrates the local distribution for a selection of values received. With reference to the regional (NUTS2) spatial units and considering the place of birth of the respondent, the figure depicts TOLERANCE, WORK, PC\_HORIZ, and PC\_FAM. As can be noted, the regional averages do not follow a strict south to centre-north orientation but show a richer picture.<sup>14</sup> However, the fact that local cultural orientation patterns are more complex than this seems to be confirmed by many empirical studies (see, for instance, the recent paper by Paccagnella and Sestito 2014).

With the SHIW data, we are able to identify moving patterns featured by different exposures to the host environment. We distinguish between (i) stayers: individuals observed (because they respond to the SHIW) in the same area where they were born; (ii) first-generation movers: individuals observed in a different area from the one where they were born; and (iii) second-generation movers: individuals observed in the same area where they were born but whose parents were born somewhere else.<sup>15</sup> <sup>16</sup> We can also single out different ranges of within-country migration. People might move to an adjacent area, but they might also embark on long-distance migrations, say from the south to the north of the country. For classification purposes, we use three geo-categories: provinces (NUTS3), regions (NUTS2), and south and centre-north. For the second generation, we can even disentangle whether the status of a mover comes through the father or the mother. Therefore, our SHIW respondents can be variously classified according to their exposure to the host environment, the distance between the area of origin and that of the destination, and the parent who determines the status of a second-generation mover. A simple example will be useful. One of the authors of this paper was born in Naples (south) and now resides in Rome (centre-north). So he is a first-generation mover according to all three geo-categories. If he had moved to Avellino (south, same region as Naples) instead of Rome, he would have been a first-generation mover only according to the NUTS3 criterion. His daughter (born in Rome, residing in Rome) is a second-generation mover according to all three geo-categories, when the status of a second-generation mover is defined according to the place of birth of the father; however, she is a second-generation mover only according to the NUTS2 and NUTS3 definitions when the status is defined according to the origin of the mother (she is from Veneto, in the north of Italy).

Table 8 shows the number of SHIW respondents who fall into the three categories (stayers, first-generation movers, second-generation movers) when we use the NUTS2 category and take the origin of the mother as key for the status. We have 825 first-

<sup>14</sup> Note that, in some cases, the number of observations is quite small. To rule out some of the variation driven by sampling variability, we have also regressed the values received on a vector of regional dummy variables, as well as on the observable features of the respondents (age and its square, gender, education, marital status, income, work status, parent's characteristics). As a measure of regional values, we then used the estimated coefficients on the regional dummy variables, but the graphical result was similar at all.

<sup>15</sup> When we look at second-generation movers, we identify the stayers as those observed in the same area where both they and their parents were born.

<sup>16</sup> SHIW respondents are classified into three categories on the basis of their and their parents' area of birth and that of current residence. The survey does not allow us to identify subsequent moves or to measure the exact timing of the first move (for first-generation movers).

generation movers in our dataset (over 3816 respondents). As for the second generation, we are able to identify 336 movers (out of only 3192 interviewees, as the information on parents' area of residence is missing for 624 respondents).

The test we use to investigate the role of the family background versus that of the local context is straightforward. We replicate the specifications of Table 7 and add a dummy variable for the movers and an interaction term between this dummy and the cultural traits under investigation. Basically, we test whether the transmission mechanism is different for stayers and respondents characterized by various degrees of exposure to the host environment. Should this be the case, it lends empirical support to the hypothesis that the values received have been updated, because of exposure to the host environment, before being passed on. Table 9 (panel A) provides the results we obtain for first-generation movers in a specification that includes the standard set of covariates (it replicates the specification of column 3 in Table 6). The sample of movers is defined using the NUTS2 spatial units (as in Table 6). The results are striking: no single interaction coefficient enters with statistical significance at the usual levels.<sup>17</sup> Therefore, compared with family transmission of values for the stayers, first-generation movers do not declare that they pass down to their children different values from those they received from their parents. This implies that the exposure to a different background, which for first-generation movers is shorter than their lifespan, does not seem to matter.<sup>18</sup>

Table 9 (panel B) gives the results for second-generation movers. The sample is that of Table 8; that is, it includes stayers and NUTS2 migrants identified via their mother's place of birth.<sup>19</sup> From persons who have spent all their life in a given environment but whose parents were born somewhere else, the test gives some more support to the role of the local context. The transmission of cultural traits for this type of mover is different from that of stayers with reference to the value of HOME.

The results of Table 9 have been extensively replicated by using the different ranges of within-country migration and selecting a different criterion to identify the second-generation movers. Table 10 provides the analogue to Table 9 by using the south and centre-north geo-classification and defining second-generation movers as the individuals born and resident in the centre-north but with at least one parent born in the south.<sup>20</sup> Overall, the findings are confirmed. Being a first-generation mover never modifies the transmission process; being a second-generation mover modifies it in a few cases (HOME and OBEDIENCE).

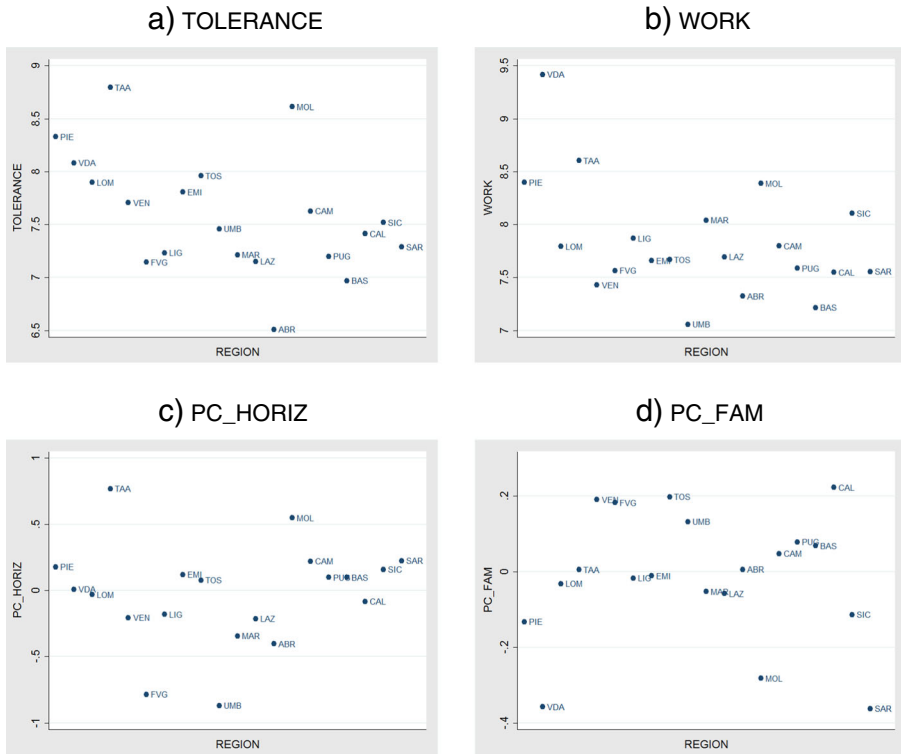
In summary, it appears that the small magnitude of the differences between stayers and first-generation movers may be interpreted as evidence of the strength of family

<sup>17</sup> The fact that the dummies for first-generation movers in Table 9 (panel A) are always positive (even if not significant) could suggest that migrants are (everything else being equal) more tolerant, obedient, etc. We looked at this issue more deeply by comparing results with raw and de-measured data. We find that the positive coefficient seems to depend on a higher absolute intensity of values transmitted, rather than on different cultural preferences.

<sup>18</sup> A similar result can be found in the intergenerational literature on outcomes such as income and education. There, however, the inference is generally based on a comparison of sibling and neighbourhood correlations (for a review, see Björklund and Jäntti 2009).

<sup>19</sup> For this exercise, we exclude respondents whose parents' origin is unknown and first-generation movers. We have also pooled stayers, first-generation movers, and second-generation movers, with very similar results to those documented in the text.

<sup>20</sup> Note that this classification gives higher representativeness to migrants. In particular, the estimates in Table 10 are based on 396 first-generation movers and 129 second-generation movers.



**Fig. 1 a–d** Local differences in values received. The figures report the average level by region of birth

chains in cultural transmission (whatever the sources of these chains, i.e. genetic or related to upbringing). The weakening of these family chains for second-generation movers could signal that what matters for breaking those family chains are the formative years, when young people somehow strike a balance between the values transmitted by their parents and what they experience in the (possibly different) environment where they are growing up. This is in line with previous findings that suggest non-cognitive traits are formed in early childhood and often stabilize in adolescence (see, for instance, Heckman and Carneiro 2003 and Cunha and Heckman 2007).

A major threat to the possibility of inferring from our exercises the respective roles of family background and local environment is endogenous sorting. To the extent that

**Table 8** Number of movers by generation

	Stayers	Movers
First generation	2991	825
Second generation	2202	336

First-generation movers are respondents who were born in a different region from the one where they live. Second-generation movers are respondents who were born in a different region from the one where their mother was born (second-generation stayers are observed in the same region where both they and their mother were born)



**Table 9** Values transmitted by movers (NUTS2 migrations)

	TOLERANCE	OBEEDIENCE	OBSERVANCE	HOME	WORK	PC_HORIZ	PC_FAM
A) Values transmitted and first-generation movers							
First-generation movers	0.392 (0.362)	0.157 (0.491)	0.444 (0.542)	0.291 (0.491)	0.024 (0.376)	0.073* (0.039)	-0.016 (0.040)
VR	0.471*** (0.022)	0.672*** (0.022)	0.717*** (0.023)	0.693*** (0.023)	0.599*** (0.022)	0.434*** (0.024)	0.397*** (0.027)
First-generation movers × VR	-0.033 (0.043)	-0.010 (0.053)	-0.043 (0.058)	-0.023 (0.055)	0.012 (0.045)	0.044 (0.047)	-0.049 (0.081)
Observations	3816	3816	3816	3816	3816	3816	3816
B) Values transmitted and second-generation movers							
Second-generation movers	0.560 (0.522)	0.690 (0.971)	0.365 (1.149)	1.305* (0.742)	0.072 (0.615)	0.102* (0.055)	0.014 (0.058)
VR	0.448*** (0.026)	0.660*** (0.027)	0.691*** (0.029)	0.688*** (0.028)	0.596*** (0.025)	0.403*** (0.027)	0.432*** (0.030)
Second-generation movers × VR	-0.050 (0.062)	-0.073 (0.105)	-0.040 (0.123)	-0.140* (0.083)	0.003 (0.074)	-0.006 (0.071)	-0.182 (0.139)
Observations	2538	2538	2538	2538	2538	2538	2538

OLS regressions. Each column reports the results for a given value (or PC) received in a regression where the corresponding value (or PC) transmitted is used as a dependent variable. The set of control includes age, age squared, gender, years of education, income, and dummies for marital status, work status, and area of residence. First-generation movers are respondents who were born in a different region from the one where they live. Second-generation movers are respondents who were born in a different region from the one where their mother was born. Robust standard errors are in parentheses

\*, \*\*, and \*\*\* denote significance at the 10, 5, and 1 % levels

**Table 10** Values transmitted by movers (migrations from south to centre-north)

	TOLERANCE	OBEEDIENCE	OBSERVANCE	HOME	WORK	PC_HORIZ	PC_FAM
A) Values transmitted and first-generation movers							
First-generation movers	0.175 (0.557)	0.093 (0.814)	0.459 (0.966)	1.038 (0.783)	0.859 (0.600)	0.058 (0.056)	-0.047 (0.061)
VR	0.422*** (0.036)	0.607*** (0.040)	0.648*** (0.054)	0.680*** (0.045)	0.671*** (0.031)	0.416*** (0.034)	0.434*** (0.037)
First-generation movers × VR	-0.012 (0.067)	0.001 (0.089)	-0.052 (0.105)	-0.111 (0.088)	-0.091 (0.072)	0.053 (0.070)	-0.157 (0.136)
Observations	1661	1661	1661	1661	1661	1661	1661
B) Values transmitted and second-generation movers							
Second-generation movers	1.360 (0.930)	0.511 (0.357)	-1.883* (1.049)	1.476* (0.855)	-0.687 (0.711)	0.053 (0.085)	-0.052 (0.073)
VR	0.421*** (0.040)	0.598*** (0.051)	0.594*** (0.066)	0.654*** (0.054)	0.668*** (0.036)	0.399*** (0.039)	0.455*** (0.045)
Second-generation movers × VR	-0.153 (0.113)	-0.147* (0.079)	0.190 (0.183)	-0.188* (0.098)	-0.082 (0.082)	0.035 (0.108)	-0.070 (0.117)
Observations	1056	1056	1056	1056	1056	1056	1056

OLS regressions. Each column reports the results for a given value (or PC) received in a regression where the corresponding value (or PC) transmitted is used as a dependent variable. The set of control includes age, age squared, sex, years of education, income, and dummies for marital status, work status, and area of residence. The sample includes only respondents from the centre and north of Italy. First-generation movers are respondents who were born in the south of Italy. Second-generation movers are respondents who were born in the centre-north but with at least one parent born in the south of Italy. Robust standard errors are in parentheses

\*, \*\*, and \*\*\* denote significance at the 10, 5, and 1 % levels

**Table 11** A test for endogenous sorting

	TOLERANCE	OBEDIENCE	OBSERVANCE	HOME	WORK	PC_HORIZ	PC_FAM
Region of birth	0.06	0.07	0.08	0.05	0.06	0.12	0.04
Region of residence	0.02	0.08	0.06	0.04	0.06	0.03	0.03

Correlation coefficients between values received by a first-generation mover and, respectively, the average level for stayers of his region of birth and his region of residence. The regional levels are obtained from the average by region of the residuals in a regression of values received on the full set of controls (as those included in column 5 of Table 7)

people move from places where the local endowments of cultural traits differ from their family endowments to places where the local values correspond more closely to their families' values, our analysis sheds no light. Take SHIW respondents who consider the value of TOLERANCE to be very important. If they move from an area where this value is not prized to one where most people are tolerant, then the fact that the interaction coefficient does not enter significantly might come as no surprise. These mover respondents transmit exactly the same cultural traits as stayers in the new area, since both groups consider tolerance an important value to pass down. To deal with this issue, we run a robustness test to detect endogenous sorting. First, we calculate the average local endowments of cultural traits received. Next, we focus on first-generation movers, who in principle may have chosen to move to a destination where local values are more consonant with family ones. For these respondents, we calculate the correlation between values received and the average local values of the place of origin (birth) and that of destination (residence). The correlation coefficients are reported in Table 11, for the sample defined using NUTS2 spatial units.<sup>21</sup> In almost no cases do we find that the values received by a mover are closer to the values received on average in the region of residence than in that of birth. The results of Table 11, therefore, do not allow us to reject the hypothesis that the patterns of migration are not driven by endogenous sorting of families according to the discrepancies between local and family cultural traits.

## 6 Conclusions

This paper uses survey information on cultural traits to investigate the role of family transmission of values. It shows that values received from parents are associated with a number of attitudes and socio-economic outcomes. For instance, persons whose upbringing stressed horizontal values and work appear to be more inclined to trust anonymous others; individuals whose upbringing emphasized obedience to parents and teachers and observance of the law tend to be more risk averse. The paper also documents that values received from parents are correlated with values and then passed on to descendants.

<sup>21</sup> We also replicated this analysis by using the sample of Table 10 (panel B), obtaining the same result.

We believe that our results contribute to the literature on the importance of family transmission of values in several respects. To begin with, they provide evidence regarding the importance of received cultural traits for a good number of key attitudes and outcomes routinely investigated by economists. Our evidence refers to generalized and personalized trusting behaviour, risk and time preferences, female labour force participation, fertility, entrepreneurship, and productivity. It is hard to overstate the importance of this body of evidence: some of the aspects we explore—for instance, trust, labour productivity, and women’s participation in the labour market—have been identified in the current policy debate in Italy as critical ingredients for putting the country back on the path of growth. Second, our results are germane to the nature-nurture debate. The survey questions we use disclose parents’ *direct* efforts to educate their children and therefore highlight that parent socialization matters. Clearly, we cannot establish if such teaching efforts are due to some genetic inclination. However, if this were the case, there would be little hope of ever distinguishing between the effects of genetics and those of parental coaching. Third, our results break new and promising ground for establishing the strength of family chains in cultural transmission. By using respondent moving patterns, the paper highlights that values received change slowly even after a discontinuity in the reference environment. We observe a weakening of family cultural chains only for second-generation movers. This signals that family chains are more likely to break when pre-adults are exposed to a new setting.

Our findings leave a number of questions for further research. For instance, it would be interesting to verify to what extent the importance of family transmission, which we highlight for the case of Italy, holds for other countries as well. It would be equally interesting to explore the role played by other factors, over and above the impact of the local environment, in modifying the identification with received values.

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## Appendix A. Descriptions of the socio-economic outcomes of Section 3

TRUSTGEN is a measure of generalized trust obtained using the first factor from a factor analysis of the next seven items of the 2010 wave of SHIW designed to elicit the degree of trust towards different kinds of people: “Could you please indicate your degree of trust of the following groups: 1) your family; 2) your friends; 3) your neighbours; 4) another resident of your region; 5) an Italian from a different region; 6) a foreigner from another European country; 7) a foreigner from outside the European Union”, where respondents have to rate their trust for each different category on a 10-point scale (see Albanese et al. 2013 for more details).

TRUSTPAR is a measure of particularized trust obtained using the second factor from the factor analysis described above.

RISK AVERSION is a qualitative indicator based on the following question: “In managing your financial investments, would you say you have a preference for investments that offer: (1) very high returns, but with a high risk; (2) a good return, with a fair degree of protection; (3) a fair return, with a good degree of protection; (4) low returns, with no risk”.

IMPATIENCE is a qualitative indicator based on the following imaginary situation: “You have won the lottery and will receive a sum equal to your household’s net annual income. You will receive the money in a year’s time. However, if you give up part of the sum you can collect the rest of your win immediately”, with the respondent given five choices (from 20 to 0 %) for the fraction they are willing to give up.

ENTREPRENEUR is a dummy equal to 1 if the respondent is an entrepreneur (or was an entrepreneur before retiring).

FEMALE LABOUR FORCE PARTICIPATION is a dummy equal to 1 if a female respondent is employed or unemployed.

FEMALE FERTILITY is the number of children for female respondents.

LOG(WAGES) is the log of labour income.

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