

Mothers and Friends: Intergenerational Preference Transmission and Women's Work Choices

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Abstract

This paper explores the intergenerational determinants of women's work choices. For a recent cohort of women, we find that there is a general positive relationship between the labor supply of mothers and daughters (e.g., the more mothers work, the more they represent a role model for their daughters). This direct effect is mitigated by an indirect network effect that we measure using the average hours worked by the daughter's friends' mothers (e.g., if friends mothers are more similar to my mother, the "role model" effect is weaker). Our definition of "friends" refers to the daughter's social network in high school. The relative weight of the direct and indirect effect differs depending on whether the mother worked above or below the average mother in the reference group. In the first case, the role model effect is strongest when mom works much more than the average mother. In the second case, the own-mother role model effect is weak and the indirect effect dominates.

Key words: Intergenerational transmission, social networks, female work attitude, labor force participation

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1 Introduction

Women’s economic role in the US economy has dramatically changed during the last century. Recent statistics, however, suggest that the increase in female labor force participation began to level off in the late 1990s. This has led to speculation about whether the natural rate of female labor force participation has been achieved (Goldin, 2006) or newer cohorts have developed more conservative gender role attitudes than their predecessors (Fortin, 2006).

Against this backdrop, this paper explores the intergenerational determinants of women’s work choices. In particular, it studies the relative importance of the intergenerational transmission from mothers to daughters and of the social context during adolescence in shaping women’s beliefs and work choices. Following the framework developed by Bisin and Verdier (2000, 2001), we emphasize, both theoretically and empirically, the direct role played by having a working mother (direct vertical socialization) as opposed to the role played by the work behavior of the daughter’s friends’ mothers (oblique and horizontal socialization). Our empirical analysis uses different waves from the National Longitudinal Survey of Adolescent Health (AddHealth) data set, which allow us to define the peer group precisely (that is, using the smallest unit of analysis, the dyad, a two-person group). Our definition of friends refers to the daughter’s social network in high school. The information on friendship choices was collected in 1995-96 (wave I) when the women in our sample were in grades 7-12. The information on work outcomes was collected in 2007-08 (wave IV) when they are 24-30 years old. This time lag helps us identify network effects. Unobservable characteristics driving the choice of friendships while in school (i.e. common interests in sports or other activities) are unlikely to remain as important for individual decisions later in life.

We find that there is a general positive relationship between the labor supply of mothers and daughters: the more mothers work, the more they represent a role model for their daughters (e.g. the more their daughters work). This direct effect is mitigated by an indirect network effect that we measure using the average hours worked by the daughter’s friends’ mothers: if friends’ mothers are more similar to my mother, the role model effect is weaker. The relative weight of the direct and indirect effect differs depending on whether the mother worked above or below the average mother in the reference group. In the first case, the role model effect is strongest when mom works much more than the average mother. The effect seems to be driven by (college graduate) women whose mothers have a college or professional degree (most of whom worked more than the average mother at the time their daughters were in grade 7-12). Our finding is robust to the inclusion of a set of control variables (presence of children, marital status, race, religiosity, etc.) and of network fixed effects. In the second

case, the own-mother role model effect is weak and the indirect effect dominates but this finding is not robust to the inclusion of network fixed effects.

There has been much recent debate (especially in the media) on the so-called ‘opt-out revolution’ in which current generations, especially of college graduates, are opting out of work when having children, thus behaving somewhat more conservatively than their parents’ generation. Our analysis can speak to this debate as we study the behavior of women born between 1978 and 1983 who are in their late twenties in 2007-08. We find no evidence in support of a backlash for this group of women, though our results suggest that as an increasing number of college educated women invest in their careers the role model effect might weaken.

This paper contributes to a growing literature on the importance of cultural transmission and socialization in shaping individual’s economic decision (see Fernandez (2011) and Bisin and Verdier (2011) and references therein). In particular, it is closely related to two streams of research within this literature. On the one end, papers that study the cultural component of trends in women’s labor force participation, either focusing on intergenerational transmission mechanisms (see for example, Fernandez, Fogli and Olivetti (2004)) or on horizontal mechanism of transmission/learning (see for example Fogli and Veldkamp (2011) and Fernandez (2012)). On the other end, the literature that uses the social network approach to identify the importance of early socialization for economic outcomes (see for example, Bisin et al. (2010), Oreopolous (2003), Patacchini and Zenou (2011), Solon et al. (2000)).

We contribute to the first line of research by looking at the relative importance of vertical vs. horizontal transmission of preferences as determinants of women’s labor supply decision for a recent cohort of women. We contribute to the second literature, by measuring the importance of the social context more precisely than in most previous studies. Moreover, in this paper the reference group for the women in our sample is predetermined at the time they make working decisions and the target variable is the behavior of the mothers of her peers in adolescence rather than her peers behavior in adulthood. To the extent that a woman’s network of friends during adolescence does not exactly coincide with her network in early adulthood, our empirical strategy should mitigate the endogeneity concerns that naturally arise in this context.

Our paper is organized as follows. Section 2 present a simple model to illustrate the gist of our idea. Section 3 describes the data. Section 4 discusses our empirical strategy and presents our results. Finally, Section 5 concludes.

2 Model

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3 Data description

Our empirical analysis is based on data from the National Longitudinal Survey of Adolescent Health (AddHealth).¹

The AddHealth survey has been designed to study the impact of the social environment (i.e. friends, family, neighborhood and school) on adolescents' behavior in the United States by collecting data on students in grades 7-12 from a nationally representative sample of roughly 130 private and public schools in years 1994-95 (wave I). Every pupil attending the sampled schools on the interview day is asked to compile a questionnaire (*in-school data*) containing questions on respondents' demographic and behavioral characteristics, education, family background and friendship. This sample contains information on roughly 90,000 students. A subset of adolescents selected from the rosters of the sampled schools, about 20,000 individuals, is then asked to compile a longer questionnaire containing more sensitive individual and household information (*in-home* and *parental data*). A subset of these students are interviewed again in 1995-96 (wave II), in 2001-2 (wave III), and again in 2007-2008 (wave IV).² One of the most interesting aspects of the AddHealth data is the information on friendship networks, which is based upon actual friends nominations during the school years (wave I). Indeed, pupils were asked to identify their best friends from a school roster (up to five males and five females).³ As a result, one can reconstruct the whole geometric structure of the friendship networks. Such a detailed information on social interaction patterns allows us to measure the relevant local community, i.e. the students who actually interact with each

¹This research uses data from Add Health, a program project directed by Kathleen Mullan Harris and designed by J. Richard Udry, Peter S. Bearman, and Kathleen Mullan Harris at the University of North Carolina at Chapel Hill, and funded by grant P01-HD31921 from the Eunice Kennedy Shriver National Institute of Child Health and Human Development, with cooperative funding from 23 other federal agencies and foundations. Special acknowledgment is due Ronald R. Rindfuss and Barbara Entwisle for assistance in the original design. Information on how to obtain the Add Health data files is available on the Add Health website (<http://www.cpc.unc.edu/addhealth>). No direct support was received from grant P01-HD31921 for this analysis.

²The AddHealth website describes survey design and data in details. <http://www.cpc.unc.edu/projects/addhealth>

³The limit in the number of nominations is not binding (even by gender). Less than 0.1% of the students in our sample show a list of ten best friends.

other, much more precisely than in previous studies. Given that friendship relationships are typically reciprocal, we consider that a link exists between two friends if at least one of the two individuals has identified the other as his/her best friend. For each school, we thus keep track of all the individuals who actually interact with a given student. By matching the identification numbers of the friendship nominations to the respondents' identification numbers, one can also obtain information on the characteristics of nominated friends. In particular, such an information allows us to obtain a detailed picture of the employment conditions of the parents of each student's friends. In addition, the longitudinal structure of the survey provides information on the characteristics of the respondents during the adulthood, including their employment outcomes.⁴

We exploit the richness of information of this data to study the influence of the working attitudes of the mothers of the friends on the female working attitude, as distinct from the influence stemming from own mother's working attitude. We focus on the sample of female students who are working in Wave IV.⁵ We measure the mother's influence and the influence of the friends' mothers (i.e. of the local environment) during the teenage using the information from Wave I. Specifically, we measure own mother's influence using the mother's weekly hours worked and the influence of the daughter's friends using average weekly hours worked by the friends' mothers. The work decision in adulthood is measured using the individual data on weekly hours worked from Wave IV.

Our final sample of in-home wave I students (and friends) that are followed over time and have non missing information on our target variables both in waves I and IV consists of XX individuals distributed over XX networks. The minimum number of individuals in a network is XX while its maximum is XX. The mean and the standard deviation of network size are roughly XX and XX individuals, respectively.⁶

Table A.1 in Appendix 1 provides the descriptive statistics and definitions of the variables used in our study.⁷ TO BE FIXED: Female students are the XX% of our sample, out of which XX% are blacks. The average mother education is high school graduate. Roughly 10% have parents working in a managerial occupation, another 10% in the office or sales

⁴The friendship nominations (i.e. social contacts) are only collected in Wave I.

⁵Almost all the females in our sample declare to work at least few hours in a week (less than 1% report less than 10 hours).

⁶TO BE FIXED On average, these adolescents declare having 1.46 friends with a standard deviation of 1.4.

⁷Information at the school level, such as school quality and teacher/pupil ratio is also available but we don't use it since our sample of networks are within schools and we use fixed network effects in our estimation strategy.

sector, 20% in a professional/technical occupation, and roughly 30% have parents in manual occupations. More than XX% of our individuals come from household with two married parents, from an household of about four people on average. At wave IV, XX% of our adolescents are now married and roughly half of them (XX%) have a son or a daughter. The mean intensity in religion practice slightly decreases during the transition from adolescence to adulthood. On average, during their teenage years, our individuals felt that adults care about them and had a good a good relationship teachers. Roughly, 30% of our adolescents were highly performing individuals at school, i.e. had the highest mark in mathematics.

4 Empirical analysis

4.1 Empirical model

Let \bar{r} be the total number of networks in the sample ($\bar{r} = 138$ in our dataset), n_r be the number of individuals in the r th network, and $n = \sum_{r=1}^{\bar{r}} n_r$ be the total number of individuals ($n = 1,319$ in our dataset). We keep track of social connections by a matrix $\mathbf{G}_r = \{g_{ij,r}\}$, where $g_{ij,r} = 1$ if i and j are direct friends, and $g_{ij,r} = 0$, otherwise. We assume that friendships are reciprocal so that $g_{ij,r} = g_{ji,r}$.⁸ We also set $g_{ii,r} = 0$. For $i = 1, \dots, n_r$ and $r = 1, \dots, \bar{r}$, the empirical model can be written as:

$$h_{i,r,t+1} = \gamma h_{i,r,t}^m + \phi \frac{1}{g_{i,r}} \sum_{j=1}^{n_r} g_{ij,r} h_{j,r,t}^m + \sum_{k=1}^K \beta_1^k x_{i,\kappa,t,t+1}^k + \epsilon_{i,r,t+1}, \quad (1)$$

where $h_{i,r,t+1}$ denotes the hours worked by individual i at time $t+1$ who belonged to network r at time t , where time $t+1$ refers to wave IV in 2007-2008 while time t refers to wave I in 1994-95; $h_{i,r,t}^m$ denotes the hours worked by the mother of individual i at time t ; $g_{i,r} = \sum_{j=1}^{n_r} g_{ij,\kappa}$ is the number of direct friends of i and $\sum_{j=1}^{n_\kappa} (g_{ij,\kappa} x_{j,\kappa}^m) / g_{i,\kappa}$ is the average of the hours worked by the mothers of i 's direct friends. $x_{i,\kappa}^k$ (for $k = 1, \dots, K$) is the set of K control variables collected both at times t (e.g. race, mother's education, family income) and $t + 1$ (e.g. marital status, children, education attainment) of individual i . $\epsilon_{i,r,t+1}$'s are i.i.d. innovations with zero mean and variance σ^2 for all i and r .

In the next two sections, to avoid too cumbersome notations, we omit the time index.

⁸Our results remains qualitatively unchanged if we remove this assumption and we code in an asymmetric way non-reciprocal friendships (i.e. if we work with directed networks).

4.2 Estimation issues

While most of the existing studies on the impact of the social context on individual outcomes measure the social context at a quite aggregate level (neighborhood, classroom, city),⁹ we adopt here a *social network* approach. Such an approach allows us to measure the influence of the social context more precisely than in previous studies as the peers are defined by the smallest unit of analysis, which is the dyad, a two-person group. However, when assessing the impact of the behavior of a (narrowly and well-defined) reference group on individual decisions the identification of the effect is complicated by the possible endogenous formation of the group.

The perspective of this paper mitigates such an issue as the social network structure is predetermined in the adulthood and in addition the reaction target variable is the behavior of the mothers of the peers rather than the peers' behavior. By exploiting the longitudinal structure of the AddHealth data, which allows a time lag between when friendship choices are made (wave I in 1995-1996) and when outcome is realized (wave IV in 2007-2008), possible unobserved student's characteristics driving friends' choice at school (i.e. common interests in sports or other activities) are unlikely to remain important determinants of individual decisions later on in life.

We provide further support to our identification strategy by performing different robustness checks.

Firstly, we exploit the network structure of our data to include network fixed effects. Under the assumption that any troubling source of heterogeneity, which is left unexplained, can be captured at the network level, a pseudo-panel data (OLS) fixed effects estimator delivers consistent estimates.¹⁰ However, if the correlated unobserved factors are rather individual-specific, OLS estimators will be biased (upward or downward according to the signs of the correlations between these factors, our peer-level variable and our dependent variable).

Our second robustness check consist on using an IV approach, which is similar in spirit to the strategy proposed by Mihaly (2009) who addresses endogenous network formation using the same AddHealth data. The idea is to treat the composition of students in a given

⁹See e.g., Bisin et al. (2010), Oreopolous (2003), Patacchini and Zenou (2011), Solon et al. (2000). For an overview of this literature, see Durlauf (2004), Ioannides and Topa (2010), and Ioannides (2011).

¹⁰This approach for the identification of peer effects, i.e. the use of network fixed effects in combination with high quality data on social contacts has been first proposed by Bramoullé et al. (2009) and then used in a number of recent studies based on the AddHealth data (e.g. Lin, 2010; Liu et al. 2011; Patacchini and Zenou, 2012).

grade within a school as quasi-random and to isolate this quasi-random variation in the friendship network formation process.¹¹ We use the average working hours of the mothers of the students by grade, gender, and ethnic group as an instrument for the individual average working hours of mothers of direct friends. The underlying network formation process that supports this strategy is an assortative matching behavioral mechanism where contacts are within individuals who are similar along observable characteristics (most notably grade, gender, and ethnic group). Then the individual contacts with a given trait are chosen from this population of possible links. They will thus partly depend on the share of individuals with this trait in the population, which is supposed to be exogenous. Indeed, a student of a given grade, gender, and ethnic group may be simply more likely to form friendships with friends with working hard mothers if there are many other students of the same grade, gender, and ethnic group around who have working hard mothers.

We will thus estimate model (1) using OLS, OLS with network fixed-effects and IV estimators.

4.3 Estimation results

We start our empirical investigation by reporting in Table 1 the OLS estimation results of a traditional intergenerational model of working attitudes when the working hours for the daughters are related to the working hours of the mothers. We find a strong effect, which is the highest for the most educated women.

[Insert Table 1 here]

In Table 2 we include into the regression model the average hours worked by the friends' mothers, to capture the possible influence of role models from the local environment during the teenage years. Interestingly, we find a statistically significant and negative effect (column one), meaning that the higher the working time of the friends' mothers, the lower is the individual working time. The effect can even offset the positive own mother's influence. We then investigate further this mechanism and split our sample between daughters having mothers working more than the average of the mothers' friends and those having mothers working less than (or equal to) this average. The rationale for this exercise is to understand whether there are asymmetric effects for female with mothers in the upper and lower tail of the working time distribution. Indeed, we find a negative deviation from the group-mean work hours for those with mothers in the upper tail of the distribution. That is, for young

¹¹Similar assumptions about cohort variation are frequently made in the literature, see e.g. Hoxby (2000).

women whose mothers worked much more than the average mother in their group when they were adolescents their own mother is the most important role model. As the group's average hours worked grow closer to own-mother work hours the two intergenerational channels - vertical and horizontal - tend to cancel out. However, if the mother belongs to the lower tail of the work-hours distribution then there seem to be a catching up effect, with the effect of the role models from the environment being the only influential factor shaping young women's working time decisions. This result is not robust to the inclusion of network fixed effect. In Table 3 we run the same specification as in column 1 of Table 2 but we now split the sample by daughter's education level. We find that most of the deviations from the group-mean effect occurs for high-skilled young women. This finding seems to support the notion that mothers who are more career-oriented than the mean make strong role models. Note that this statement is conditional on mother's education so is not entirely driven by differences in human capital.

[*Insert Tables 2 and 3 here*]

Tables 4 and 5 have the same structure of Tables 2 and 3 and contains the OLS results including network fixed effects. The results remains qualitatively unchanged, with the exception of the sample split reported in Table 4, column 3, where the coefficient loses statistical significance.

[*Insert Tables 4 and 5 here*]

5 Conclusions

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Table 1 Intergenerational transmission of working attitude –vertical channel-

	By education level				
	(1)	(2)	(3)	(4)	(5)
m_hours	0.1128*** (0.014)	0.0698** (0.035)	0.1315*** (0.027)	0.0986*** (0.024)	0.1335*** (0.028)
mother_ed_d2	0.8505 (0.858)	-0.5107 (1.866)	0.4370 (1.538)	1.9471 (1.560)	2.5085 (2.110)
mother_ed_d3	4.2392*** (0.980)	2.8767 (2.321)	2.9151 (1.804)	5.5966*** (1.764)	6.0431*** (2.245)
mother_ed_d4	6.8787*** (0.981)	3.0620 (2.382)	4.1113** (1.817)	9.5582*** (1.759)	8.5946*** (2.251)
ethnic2	3.0518*** (0.810)	8.4694*** (2.058)	4.5157*** (1.438)	1.1342 (1.440)	0.2809 (1.719)
ethnic3	2.1416** (0.930)	3.1560 (2.544)	3.9233** (1.703)	1.7090 (1.672)	0.6431 (1.868)
relig	-0.4212* (0.219)	-0.7083 (0.529)	-0.7538* (0.432)	-0.7931** (0.381)	0.6377 (0.450)
edu_level5	7.4314*** (0.901)				
edu_level4	4.2638*** (0.866)				
edu_level3	1.6095* (0.907)				
fam_income	0.0126*** (0.004)	0.0917*** (0.025)	0.0025 (0.011)	0.0049 (0.006)	0.0182** (0.007)
n_fam	-0.9796*** (0.215)	-1.3415*** (0.513)	-1.2113*** (0.410)	-0.6265 (0.390)	-0.8516** (0.431)
mo_fa	2.5187 (2.328)	2.6265 (4.451)	-14.9286** (6.908)	4.2466 (3.724)	6.6628 (5.188)
son_daughter_dummy	-6.7082*** (0.627)	-5.2674*** (1.609)	-6.7023*** (1.204)	-7.3880*** (1.098)	-6.3580*** (1.237)
husband_wife	4.0346*** (0.616)	5.1082*** (1.534)	2.9896** (1.196)	5.0670*** (1.077)	3.2651*** (1.230)
Constant	42.6148*** (2.769)	42.8364*** (5.434)	63.7489*** (7.740)	44.4348*** (4.354)	40.5429*** (6.161)
Observations	2,076	326	484	662	593
R-squared	0.302	0.228	0.255	0.272	0.244

(2) edu_level up to high school graduate

(3) edu level more than high school graduate and less than bachelor

(4) edu level bachelor's degree

(5) edu level more than bachelor's degree

Table 2 Intergenerational transmission of working attitude –vertical and horizontal channel-

		Above the mean	Below the mean
	(1)	(2)	(3)
m_hours	0.0998***	0.0959***	0.0818
	(0.014)	(0.016)	(0.068)
f_m_hours	-0.0714***	-0.1041***	0.1046*
	(0.020)	(0.025)	(0.062)
mother_ed_d2	0.8149	-0.2908	1.9590
	(0.863)	(1.162)	(1.463)
mother_ed_d3	4.2172***	3.7820***	3.0322
	(0.989)	(1.248)	(1.900)
mother_ed_d4	6.6220***	5.4094***	9.4875***
	(0.995)	(1.209)	(2.243)
ethnic2	2.8729***	3.0794***	1.8794
	(0.820)	(0.910)	(1.917)
ethnic3	2.1659**	1.0923	3.5311*
	(0.932)	(1.089)	(1.851)
relig	-0.3899*	0.0594	-1.3071***
	(0.222)	(0.259)	(0.435)
edu_level5	7.1953***	7.5002***	6.2949***
	(0.909)	(1.063)	(1.841)
edu_level4	4.0496***	4.1831***	4.1135**
	(0.872)	(1.047)	(1.598)
edu_level3	1.8219**	1.5003	2.7202*
	(0.913)	(1.105)	(1.627)
fam_income	0.0115***	0.0084**	0.0662***
	(0.004)	(0.004)	(0.021)
n_fam	-1.0071***	-0.8983***	-1.1940***
	(0.217)	(0.257)	(0.408)
mo_fa	2.7470	1.9079	3.6496
	(2.313)	(2.808)	(4.119)
son_daughter_dummy	-6.6470***	-7.1944***	-5.4970***
	(0.631)	(0.721)	(1.280)
husband_wife	3.9752***	3.8294***	4.4328***
	(0.621)	(0.708)	(1.278)
Constant	46.3828***	48.6808***	35.9965***
	(2.932)	(3.567)	(5.736)
Observations	2,024	1,501	523
R-squared	0.309	0.280	0.208

Table 3 Intergenerational transmission of working attitude –vertical and horizontal channel-

	By education level			
	(1)	(2)	(3)	(4)
m_hours	0.0702**	0.1242***	0.0804***	0.1162***
	(0.035)	(0.028)	(0.024)	(0.028)
f_m_hours	-0.0772	-0.0241	-0.0949***	-0.0699*
	(0.052)	(0.039)	(0.035)	(0.040)
mother_ed_d2	-1.1467	0.4432	2.0327	3.2239
	(1.888)	(1.558)	(1.555)	(2.133)
mother_ed_d3	2.5703	3.0978*	5.6780***	6.5718***
	(2.361)	(1.840)	(1.763)	(2.277)
mother_ed_d4	2.5506	4.0152**	8.7475***	9.4986***
	(2.421)	(1.854)	(1.772)	(2.287)
ethnic2	8.2701***	4.8205***	0.0613	0.8354
	(2.069)	(1.468)	(1.461)	(1.738)
ethnic3	2.7650	4.0541**	1.7896	0.7935
	(2.559)	(1.724)	(1.670)	(1.855)
relig	-0.6862	-0.7173	-0.7661**	0.6490
	(0.542)	(0.439)	(0.384)	(0.455)
fam_income	0.0863***	0.0018	0.0049	0.0166**
	(0.025)	(0.011)	(0.006)	(0.007)
n_fam	-1.4683***	-1.3067***	-0.6121	-0.8049*
	(0.521)	(0.415)	(0.394)	(0.432)
mo_fa	3.2285	-14.8149**	3.9940	6.8722
	(4.447)	(6.896)	(3.684)	(5.156)
son_daughter_dummy	-4.8580***	-6.8380***	-7.1302***	-6.5650***
	(1.630)	(1.219)	(1.102)	(1.240)
husband_wife	5.2844***	3.1078**	4.6784***	3.3770***
	(1.552)	(1.207)	(1.083)	(1.240)
Constant	46.3391***	65.6877***	49.7872***	43.1876***
	(6.018)	(8.012)	(4.640)	(6.359)
Observations	317	471	645	580
R-squared	0.243	0.262	0.275	0.258

Table 4 Intergenerational transmission of working attitude –vertical and horizontal channel-
OLS with network fixed effects

		Above the mean	Below the mean
	(1)	(2)	(3)
m_hours	0.0866*** (0.016)	0.0873*** (0.019)	0.1138 (0.084)
f_m_hours	-0.0690*** (0.026)	-0.1200*** (0.035)	0.0409 (0.085)
mother_ed_d2	1.3213 (0.991)	0.5618 (1.350)	3.6429** (1.836)
mother_ed_d3	4.3297*** (1.105)	3.8913*** (1.439)	4.2309* (2.340)
mother_ed_d4	6.1359*** (1.144)	5.2960*** (1.434)	8.6630*** (3.145)
ethnic2	2.5840** (1.296)	4.7542*** (1.516)	-1.9369 (3.415)
ethnic3	1.2525 (1.325)	3.0669* (1.680)	-0.0463 (2.507)
relig	-0.8363*** (0.273)	-0.5168 (0.332)	-1.7851*** (0.565)
edu_level5	6.9434*** (1.020)	6.5409*** (1.227)	8.4979*** (2.283)
edu_level4	3.6491*** (0.971)	3.4518*** (1.187)	4.9320** (1.970)
edu_level3	1.0854 (1.011)	0.8804 (1.248)	2.2746 (1.982)
fam_income	0.0133** (0.006)	0.0118** (0.006)	0.0490* (0.026)
n_fam	-0.8006*** (0.249)	-0.6815** (0.298)	-1.4157*** (0.529)
mo_fa	3.5799 (2.530)	4.1272 (3.047)	3.2674 (5.324)
son_daughter_dummy	-5.0658*** (0.712)	-5.3386*** (0.839)	-3.7636** (1.631)
husband_wife	3.3390*** (0.690)	3.6042*** (0.801)	2.6965 (1.636)
Constant	46.1955*** (3.345)	46.8061*** (4.061)	40.8248*** (7.940)
Network fixed effects	yes	yes	yes
Observations	2,024	1,501	523
R-squared	0.217	0.199	0.192
N. networks	489	391	195

Table 5 Intergenerational transmission of working attitude –vertical and horizontal channel-
OLS with network fixed effects

	By education level			
	(1)	(2)	(3)	(4)
m_hours	0.0690	0.0587	0.0802***	0.0638*
	(0.045)	(0.037)	(0.028)	(0.036)
f_m_hours	-0.0830	0.0016	-0.1035**	-0.1164*
	(0.074)	(0.061)	(0.052)	(0.062)
mother_ed_d2	0.1045	3.2932*	1.3572	3.2940
	(2.581)	(1.960)	(1.976)	(2.885)
mother_ed_d3	4.3051	3.9411*	4.8082**	7.1308**
	(3.066)	(2.219)	(2.187)	(3.144)
mother_ed_d4	2.1116	5.5925**	6.3483***	9.7594***
	(3.231)	(2.405)	(2.251)	(3.152)
ethnic2	6.7489	3.3528	-1.2473	1.4822
	(4.299)	(2.851)	(2.444)	(2.943)
ethnic3	-0.8308	6.0435**	-3.5031	1.5066
	(4.415)	(2.724)	(2.505)	(3.340)
relig	-1.8109**	-1.6184***	-1.2457**	-0.2740
	(0.764)	(0.605)	(0.533)	(0.667)
fam_income	0.0389	0.0131	0.0024	0.0292**
	(0.034)	(0.018)	(0.010)	(0.011)
n_fam	-1.2259*	-1.6381***	0.0508	-0.3448
	(0.631)	(0.545)	(0.505)	(0.585)
mo_fa	6.9512	-17.2122*	10.6007***	-2.2423
	(6.155)	(9.276)	(4.009)	(6.441)
son_daughter_dummy	-3.7405*	-3.6937**	-5.6058***	-5.4546***
	(2.127)	(1.587)	(1.310)	(1.574)
husband_wife	2.8088	1.2793	4.1837***	2.3199
	(2.032)	(1.522)	(1.294)	(1.629)
Constant	47.0712***	71.6353***	43.1413***	56.1949***
	(8.652)	(10.887)	(5.412)	(8.142)
Network fixed effects	yes	yes	yes	yes
Observations	317	471	645	580
R-squared	0.172	0.177	0.198	0.170
N. networks	140	201	243	234