Intergenerational Transmission of Inequality: Parental Wealth and the Financing of Children's College and Home Buying

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Abstract

In this paper, we examine the relationships between parental wealth and children's higher education and housing decisions using data from the 2013 Panel Study of Income Dynamics (PSID) and the new Rosters and Transfers Module. In particular, how parents' decisions about providing financial transfers to their children in support to fund their children's education and housing. We examine how such transfers differ across the distribution of parental wealth and income for different types of households and across time and across macroeconomic conditions. Finally, we use measures of local labor and housing market conditions over time to identify the causal effect of parental wealth on the provision and amounts of these two types of transfers to their adult children.

Introduction

Since the late 1970s in the U.S. there have been dramatic increases in the costs of a college education, which, in the last two decades, has been coupled with unexpected instability in housing prices. Over the same period, there has been rapid rise in the inequality of the distribution of both family income (Fisher, Johnson, & Smeeding, 2013) and wealth (Keister & Moller, 2000) and continuing high persistence of outcomes across generations (Chetty et al., 2014). Finally, starting in the late 1990s, the U.S. and the rest of the world experienced a major boom in housing in which housing prices increased over 85% through 2005 (Shiller, 2007) only to be followed by the collapse of housing markets starting in 2006 in which housing prices fell by one third through 2009 (Grusky, Western and Wimer, 2011). The latter changes in housing prices both had consequences for household wealth but also for young households trying to become home owners.

The above trends are likely to have important consequences for the relationships between parents and their children as the latter enter adulthood, since parents have long been a primary source of financial support for their children's post-secondary education (Lovenheim & Reynolds, 2013) and in helping their children purchase homes (Engelhardt and Mayer, 1998). With respect to parental resources and college, a number of studies have looked at the relatiosnhips between parental resources and the likelihood of their children going to college and the types of colleges they attend. For example, Lovenheim & Reynolds (2013S) found that the rise in housing values during the first part of the 2000-10 decade significantly increased college enrollments, with he largest effects among less wealthy households. And a number of studies (Carneiro & Heckman, 2002; Dynarski, 2003; Lochner & Monge-Naranjo, 2015) have attempted to determine the extent whether students from poorer families are less able to finance the costs of higher edu-

cation.

Similarly, there is a growing literature on the home-leaving patterns of young adults (Kaplan, 2012, Matsudaira, 2015, Wiemers 2014a, 2014b,) and the role that the higher cost of housing[1] and the burdens of consumer debt, especially student debt, play in young adults being able to secure a mortgage (Yelowitz, 2007; Chiteji, 2007, Dettling & Hsu, 2014). Furthermore, many of the consequences of the Great Recession for families and their attainments resulted from what happened in the housing sector of the U.S. economy, e.g., increased foreclosures, price declines and curtailing of new construction (Hurd and Rohwedder, 2010). These changes in housing markets are notable for families, given that one's home is the single largest or second largest (to retirement accounts) asset for American households (Gottschalck et al. 2013).

These changes in housing wealth are all the more notable given previous evidence that housing wealth, and changes in it, has consequences for fertility (Dettling & Kearney, 2014; Lovenheim & Mumford, 2011), the affordability of college education for young adults (Lovenheim & Reynolds, 2013), and for physical health, psychological well-being and cognitive functioning of family members (Hamoudi & Dowd, 2013a, 2013b). What is less known is how changes in housing wealth, especially during the Great Recession, affected financial and other forms of assistance between non-coresident family members, including caregiving for younger children by grandparents and for older parents by their adult children. Understanding these patterns is important for assessing the long-term consequences of the Great Recession and other macro changes in housing markets.

While some of the contours of the relationship between parental resources or capacity and the college and housing attainment of their children are understood, what is missing from our

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[1] Ermisch (1999) provides an early model of the home leaving decision of young adults and the role that housing prices play in that decision.

understanding are the mechanisms for some of these links. For example, while indirect evidence exists about the importance of parental income and wealth on college enrollment, most sources of data do not actually measure how much parents of differing backgrounds actually provide in the way of financial help with college tuition and expenses. Similarly, we have few studies which directly measure the extent to which parents help children finance housing as the latter leave their parental homes. Finally, the recent studies of the role of student debt in affecting the housing and other transition-to-adulthood decisions of young adults typically don't have measures of the financial capacities of their parents and, thus, the potential roles that parents may play as safety nets for their adult children.

In this paper, we address these latter questions about the relationships between parental wealth and children's higher education and housing decisions using data from the 2013 Panel Study of Income Dynamics (PSID) and the new Rosters and Transfers Module which obtained information from all parents in the PSID on the financial help (transfers) they provided to each of their adult children for education, housing and other larger expenses. In addition, we exploit the data collected in the PSID on family wealth, including housing wealth over the entire history of the PSID and a more comprehensive measurement of the components of family wealth since the late 1990s, and more recent data on student debt for all PSID households, including young adults. These data allow us to more directly examine exactly how parental wealth affects parental contributions to their children's education and housing by looking at the relationship between parental wealth and the direct transfers parents make to their children for these two investments as well as the indebtedness of their children.

A key issue to address is the extent to which parental resources, i.e., measures of wealth, have a causal impact on the transfers for education and housing and on the indebtedness of their

children. Put differently, any findings of differences in the impact of parental wealth on these outcomes across the wealth distribution may simply reflect sorting across families with respect to common ability or other traits which gives rise to the attainments of each generation. In order to isolate exogenous influence of parental wealth, we will use measures of local labor and housing market conditions as instrumental variables for parental wealth. The characteristics include changes in local employment and unemployment rates, the industrial composition of employment, etc., for labor markets, and local measures of changes in housing values, foreclosure rates, etc. for housing. The detailed geographic information included in the PSID makes it possible to incorporate these contextual data to identify exogenous shocks to parental resources and examine the effect of these changes in parental wealth on transfers to children for college and home purchases. Data on local labor markets are obtained from the Quarterly Census of Employment and Wages (QCEW), a joint program of the Bureau of Labor Statistics and the U.S. Department of Labor, and for local housing markets from CoreLogic.

In the remainder of this initial draft, we describe the PSID data, especially the 2013 Transfers Module, in more detail and also provide some preliminary tabulations from these data.

PSID Data

The PSID began with a sample of roughly 18,000 people in approximately 5,000 household units in 1968. All individuals in households recruited into the PSID in 1968 are said to have the PSID "gene." Individuals who are born to or adopted by someone with the PSID gene acquire the gene themselves and are recruited to become members of the PSID sample for the rest of their lives. This genealogical design implies that the study provides data on a sample of extended families at each wave. Individuals without the PSID gene also are represented in the PSID as long as they live with a PSID sample member. These individuals without the gene are not followed if they

stop living with a PSID sample member. Though the PSID provides a sample of extended families at each wave, this extended family is incomplete because some children (particularly step children), and some parents (for example in-laws without the PSID gene) are not included in the sample. The 2013 Roster and Transfers Module was designed to complete the parent-adult child information in the PSID and to describe the transfers that parents and adult children make to one another.

The 2013 PSID Roster and Transfers Module

We use the Roster and Transfer Module of the 2013 PSID in which respondents (PSID heads and wives) are asked to list and describe their adult children and step children (those age 18 and older), as well as their parents, step parents, and in-laws (including "in-laws" from long-term cohabiting relationships). Respondents also report about transfers of time and money that they give to and receive from each parent and adult child over the last year and about transfers of money for school, housing, and other large expenses since they (their children) were 18 years old. In what follows, we refer to these larger forms of help as "long-term" transfers. Respondents report about relationships and transfers with coresident *and* non-coresident children and parents (see Schoeni et al., 2013 for a more complete description of the module).

Long-term, Life-cycle Transfers. The 2013 Roster and Transfers Module includes questions about large transfers that the Head and Wife of a PSID household each may have received from their parents (whether or not the parents are alive in 2013) and/or provided to each of their children since they/their children were age 18. Two specific large life-cycle transfers were assessed—one for post-secondary education and a second for help with the purchase of a home—along with a more general question on large financial transfers between parents and their adult children. These questions capture retrospective information about important and salient types of

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transfers. For transfers to offspring, both whether assistance was provided and the amount of assistance was assessed. However, for transfers from parents only yes/no and whether the transfer was received from the parent of the head, the parent of the wife, or both, was assessed because of the potentially long recall period. In what follows, we rely mainly on reports from parents about what they gave to children for schooling and housing but in future work we plan to also examine whether adult children report receiving a transfer from their parents. Until 2013, the PSID had never asked these types of life-cycle transfer questions.

Descriptive Results on Parental Wealth and Transfers to Children for Education and Housing

Table 1 compares long term financial transfers to children from parents across the wealth distribution. Table 1 shows the percentage of parents who made a financial transfer, the average number of children per household receiving a financial transfer, and the average transfer amount per child (unconditional on making a financial transfer), for schooling and for housing, in each parental wealth quintile. The quintiles were calculated using total family wealth.

We observe substantial differences in transfers to children between parents of different wealth quintiles. Almost half of the parents in the top quintile of the wealth distribution make at least one transfer to at least one of their adult children for help with schooling, with an average transfer amount of $20,503 per child. In contrast, only 33% of parents in second highest wealth quantile make financial transfers for schooling and on average they make smaller transfers. The incidence and average amounts of financial transfers for schooling continue to decline with parental wealth, leveling off for the lowest two wealth quintiles, with only 18% parents in the bottom quintile of wealth making transfers for schooling, and transferring on average $1,552 per child.

Similar patterns exist for parents making financial transfers to help their children purchase a

home. Transfers to children for housing are uncommon for all parents except those in the highest wealth quintile. In the top quintile of the parental wealth distribution, 17% of parents make transfers for their children's housing, and give $5,472 on average. We note that both the incidence and amounts of transfers for housing are small in the Roster and Transfers data. However, these data combine transfers given over a very long period of time and so are not comparable to contemporary data on financial transfers for home purchases.

In addition to being more likely to give financial transfers, and giving more money to children, wealthy parents also provide financial help to a greater number of children. On average, one child for every household in the top 20% of the parental wealth distribution receives financial help with college, compared to 0.6 children for the next highest wealth quintile. The average number of children receiving transfers for schooling per household in the lowest two wealth quintiles is 0.3 and 0.2. The drop from the wealthiest parents to the second highest quintile is even more dramatic for housing transfers, 0.27 children per household in the top quintile of parental wealth receiving financial help compared to 0.05 children in the bottom quintile.

We also find evidence that student loan debt accumulation is associated with the financial status of an individual's parents. Table 2 shows the student loan debt of children by their parent's wealth. Individuals with parents in the bottom wealth quintile are significantly more likely to have outstanding student loan debt—46% of respondents in this group have such debt—while rates of student loan debt for the other four quintiles of parental wealth range between 11% and 21%. Similarly, the average amount of student loan debt for individuals with parents in the bottom quintile of the parental wealth distribution is substantial at $17,896, while children with wealthier parents carry much lower levels of student loan debt.

We are currently linking the 2013 Roster and Transfers data to the main PSID data and

obtaining wealth and geographic information for parents at the time their children were 18 years old—when schooling decisions are likely made. In future work we will examine how transfers for schooling are correlated with parental wealth at the time children were age 18 and will use the detailed information on the zip code of parental residence to examine the causal effect of differences in parental wealth on transfers for schooling.

Modeling Adult Children's Educational and Housing Choices and Parental Transfers

In this section, we outline the modeling strategy we will use in our analysis of the effects of parental wealth (and income) on the transfers made to their children in support of higher education of their adult children. We forgo outlining the model for their support of their adult children's housing as the structure of the model is quite similar to that for education.

Consider a family, j, who is headed by a parent (or parents) and denote their adult child by i. Adult child i with parents j are assumed to make decisions about whether they go to college, E_{ij}, A young adult makes her decision as to whether she goes to so as to maximize expected well-being, V_{ij}^E. Following standard models of educational attainment, this decision is a function of the child's ability, A_{ij}; of her own income/wealth, Y_{ij}, (which may be zero); the tuition cost of colleges C_{ij}^E, and the amount of financial support, or transfers, their parents are willing to provide her. Denote this transfer by T_{ij}^E.

With respect to the parents' decision about transfers, we follow the theoretical frameworks of Becker and Tomes (1979) and Solon (2004), and assume that parents – be they altruistic, caring, etc. in the sense of Pollak – make decisions about whether they will invest (transfers to) their children so as to maximize the "paternalistic" value of their and their child's well-being as it relates to the child's choice of college. Then the parents' decision about T_{ij}^E, conditional on their child going to college, depends on their wealth, W_j, the obligations they have with other

"dependents," i.e., other children, and various other factors.

The resulting structure of this decision problem is a game involving child i and parents. For simplicity, we assume that this is a complete information game and that it is cooperative. Thus, following the approach of Chiappori, we presume that the decisions are Pareto efficient. Children's college choice, E_{ij}, and parents' decision about how much of a transfer (both incidence and amount) they can provide, T_{ij}^E, are endogenous outcomes of this game. Moreover, these decisions are likely to be functions of unobserved factors and they are likely to be correlated. Finally, we have to take account of the fact that we only observe T_{ij}^E the child chooses to go to college.

While one could approach the econometric model by trying to estimate the "reactions functions" for educational choices and parental transfer decisions of the game adult children and their parents play. While we ultimately plan to do that, for now we focus on what we shall refer to as "quasi-reduced form" specifications for each of our two outcomes for each adult child i of parents j:

$$E_{ij} = \alpha_0 + \alpha_1 A_{ij} + \alpha_2 Y_{ij} + \alpha_3 W_j + \alpha_4 Z_{ij} + \varepsilon_{ij}^E \tag{1}$$

$$T_{ij}^E = \beta_0 + \beta_2 Y_{ij} + \beta_3 W_j + \beta_4 X_j + \varepsilon_{ij}^T, \text{ conditional on } E_{ij} = 1, \tag{2}$$

where Z_{ij} denotes a vector of characteristics of child i available in the PSID and X_j denotes a vector of characteristics of the parent, including the numbers and ages of other children, etc.

Recall that we referred to these as quasi-reduced form equations. This is because we wish to allow for the possibility that Y_{ij} and W_j are likely to be correlated with the ε's in these two equations. To deal with the endogeneity of Y_{ij} and W_j in these two equations we will, as noted above, use local labor and housing market conditions as *instrumental variables*. As noted above, we will exploit data from the QCEW to construct measures of local labor market conditions and

data from CoreLogic to construct measures of local housing market conditions. For some of our analyses, we will include ***family fixed effect****s* in the estimation of these equations, exploiting the fact that for parents with multiple children and that for most of them we obtain measures of E_{ij} and W_j at the time the ith child was deciding whether to go to college. Finally, we will employ standard selection-correction methods to account for the fact that we only observe T_{ij}^{E} for children who go to college.

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Table 1. Parental Financial Transfers for College and for Housing by Parental Wealth

Parental Wealth Quintiles	Financial help with College			Financial Help with Housing		
	% of Parents who made transfer	Avg # of Children who Receive Transfers per HH	Avg Transfer amt per Child	% of Parents who made transfer	Avg # of Children who Receive Transfers per HH	Avg Transfer amt per Child
Bottom 20%	18%	0.3	$1,552	1%	0.01	$86
21% - 40%	17%	0.2	$1,746	1%	0.02	$45
41% - 60%	24%	0.4	$2,022	2%	0.02	$51
61% - 80%	33%	0.6	$6,264	4%	0.05	$347
Top 20%	48%	1.0	$20,503	17%	0.27	$5,472

Table 2. Student Loan Debt of Adult Children by Parental Wealth

Parental Wealth Quintile	Incidence of Debt	Mean	Maximum
Bottom 20%	46%	$17,896	$550,000
21% - 40%	16%	$2,039	$150,000
41% - 60%	21%	$3,501	$215,000
61% - 80%	17%	$2,511	$160,059
Top 20%	11%	$2,725	$350,000