The Role of Parental Financial Assistance in the Transition to Homeownership by Young Adults

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Abstract

This report examines how parental financial assistance increases the probability of home buying among grown children, net of parental wealth more generally, and net of other characteristics of parents and children. Two data sets that contain information on transfers from parents to adult children are analyzed, a new Panel Study of Income Dynamics (PSID) special module of transfers (2013), and a series of waves from the Health and Retirement Survey (HRS) spanning 1998 to 2004, with results largely consistent across datasets and time periods, with the exception of transfer effects in 2012. Using data from the HRS, we find the unconditional probability of transitioning to homeownership is increased by 23.0 percent among adult children who have received a transfer of at least $5,000 for any purpose from their parents in the past two years. Even after controlling for parental wealth and other parent and child characteristics, the probability of transitioning to homeownership still increases by 13.1 percent with receipt of a transfer. Children of homeowners are 6.6 percent more likely to be home buyers themselves, all other factors equal. Estimates also reveal that the children of parents who are in the highest quartile of the wealth distribution are 24.6 percent more likely to switch to homeownership than are children of parents in the lowest quartile. However,

parental income has no influence, and children of less educated parents, all other resources held constant, are more likely to be home buyers than the children of college graduates. Further, the effect of receiving a transfer varies by race, with parental transfers providing a stronger boost for non-Hispanic white children than others. By contrast, transfers had no association with home buying in the PSID data, whether or not any additional controls were introduced. This may reflect unique aspects of the reporting period, 2012 to 2013, when house prices had begun to recover, but lagging employment and incomes, and difficulties in mortgage qualification, reduced rates of transition into homeownership substantially when compared to the HRS and PSID in earlier years.

I. INTRODUCTION

Family assistance in home buying is frequently assumed to be important in today's housing market. Rising home prices and stricter underwriting standards require an increasingly large downpayment. Indeed, the 2014 Fannie Mae National Housing Survey reported that 50 percent of younger renters identified downpayments and closing costs as their greatest obstacle to obtaining a mortgage for the purpose of purchasing a home (Fannie Mae 2014).

Given the substantial barrier posed by the upfront costs of homeownership, it is not surprising that young adults sometimes need financial assistance when purchasing a home. Most often, assistance takes the form of a financial transfer (loan or gift) from parents to their children, but in practice it could also include transfers from grandparents or other family and friends (Gale and Scholz 1994). Inheritances are yet another source of financial assistance, but they are not considered as *inter vivos* transfers, i.e. financial exchanges among the living.

In this study, we quantify the impact of a financial transfer from a parent to an adult child non-homeowner on the likelihood that the child becomes a homeowner. That is, we use the variation across adult children who do and do not receive financial transfers and those who do and do not become homeowners to identify the role of transfers in promoting transitions into homeownership.

In our primary analysis of parental financial transfers, we include any monetary gift in excess of $5,000 over the past two years, and not just those earmarked for home purchase, because transfers for any purposes may have an indirect effect on transitions to homeownership (Engelhardt and Mayer 1998; Guiso and Jappelli 1999; Helderman and Mulder 2007).[1] For example, parental assistance with

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[1] In addition, utilizing only transfers earmarked for home purchase does not allow identification of the coefficient on transfers because in this case there is no variation

education expenses would reduce reliance on student loans and free up more of the child's income for use in saving for a home purchase. Similarly, an annual transfer of $5,000 for help with rental expenses also may enable young adults to save their limited funds for an eventual downpayment.

This report begins with a review of existing estimates of the prevalence of parental assistance in young-adult home buying. We then estimate the increased probability that young adults will transition into homeownership if they receive a parental transfer. In addition, we contribute to the literature by estimating the impact of financial transfers on homeownership independent of the effect of the characteristics of children and their parents. Finally, we show how results vary by age and race/ethnicity of the adult child.

II. BACKGROUND: EXISTING ESTIMATES OF THE PREVALENCE OF PARENTAL ASSISTANCE FOR HOME BUYING

Existing estimates of the prevalence of family assistance for home purchase vary depending on multiple factors, including the population of young adults to which the estimates apply and the timeframe over which transfers and home purchase activity are measured. How "assistance" is defined, including the forms of transfers and their sources, also affect these estimates.

The National Association of Realtors (NAR) reports that 14 percent of all buyers in the last year, including 26 percent of first-time home buyers, received a gift to help with their downpayment.[2] NAR reports that gifts were much more common among buyers age 34 and younger (25 percent) than those ages 35 to 49 (15 percent), and far less common among those age 50 and older. The NAR estimate is based on a large survey of all home buyers between July 2013 and June 2014. The NAR survey lists "gift from relative or friend" among 12 potential sources of funds used for the downpayment, and respondents can check all that they consider significant.

The Federal Reserve Board (2015) reports in its 2014 Survey of Household Economics and Decisionmaking (SHED) that 18.1 percent of respondents of any age who purchased a home in the last four years said they made use of a "loan or gift

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in outcome in the model when we are estimating the effects of a transfer on becoming a homeowner.

[2] Data come from the Home Buyers and Sellers Generational Trends Report 2015. The survey was mailed to a random sample of 72,206, with an adjusted response rate of 9.4 percent, producing data on 6,572 buyers who purchased between July 2013 and June 2014.

from family or friends," among multiple options, for purposes of a downpayment. [3] This sample includes both first-time buyers and repeat (or turnover) buyers. We can approximate first-time buyers in the SHED data by excluding buyers who made use of proceeds from sale of a prior home, and calculated on that basis the prevalence of family assistance is elevated to 23.7 percent of "first-time" buyers in the last four years.[4]

In the two data sources to be analyzed in detail in this report, and described in the next section, the prevalence of parental assistance during the period when a child purchased a home is somewhat lower. The 2013 Panel Study of Income Dynamics Rosters and Transfers Module reports that about 29.0 percent of adults ages 25 to 44 who bought homes in the last two years received a transfer of $100 or more from their parents in 2012, while 7.7 percent of them received a transfer of substantial size of $2,500 or more. A lower prevalence (17.8 percent and 7.1 percent, respectively) was reported in the Health and Retirement Survey (1998-2004). One explanation for these estimates being lower than in NAR or SHED is the more narrow focus on parents, rather than friends or grandparents or other relatives, as the source of a gift. In addition, the focus is on transfers to a child, but if the child is part of a married or partnered couple, there are two sets of parents who might contribute to the home purchase, and that could double the likelihood that the couple receives parental assistance.

The existing published estimates of prevalence of family assistance in home buying are limited by their focus on homeowners after purchases. Without a contrast to all renters prior to the purchase interval, there is no way to tell how much difference assistance made in achieving homeownership. That is, we do not know if individuals who received a loan or gift from family or friends for homeownership would have become a homeowner even without that transfer. Nor do these other studies tell us how important parental financial assistance was to raising the probability of homeownership attainment by their children, independent of the effects of parental wealth, homeownership, or race, and of the characteristics of the children.

III. Intergenerational Datasets and Prevalence of Parental Assistance

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[3] The SHED data were collected in October 2014 through a probability-based online panel that yielded 5,896 respondents. The overall final stage completion rate was 65.7 percent.

[4] All calculations from the SHED data are based on Table 7, with a small sample (N=501) for buyers from 2011 to 2014. Note that the first-time proxy is over-inclusive of actual first-time buyers because it possibly includes repeat buyers who did not have positive equity to use in a new purchase.

For this analysis, we utilize two nationally representative data sources that link characteristics of parents and adult children: the Panel Study on Income Dynamics (PSID) and the Health and Retirement Survey (HRS). Both datasets include information on respondents' demographic characteristics, education, homeownership, financial and housing wealth, living arrangements and financial gifts made to children. Thus, these rich data sources allow us to link information on transfers and homeownership, as well as parent and child demographic characteristics and economic status over time.

The two datasets are introduced and then we describe their variables that indicate homeownership, home buying and parental assistance.

A. The PSID and HRS Data Sources

The PSID is the longest running panel dataset in the United States. It has collected information on roughly 5,000 families and their 18,000 members annually from 1968 to 1997 and bi-annually after 1997. In addition, the 2013 PSID Family Rosters and Transfers module (RT13) affords cross-sectional data on parent-child transfers that occurred during 2012, but we link the RT 13 data also to the 2011 main PSID data so that we can estimate children's tenure transitions from 2011 to 2013, a period of economic and housing market recovery. Note that RT13 transfers cover only 2012, the second year of the 2011-2013 tenure transition interval. In some analyses, we utilize the long panel of PSID data to analyze homeownership transitions over time. Analyses examining the effect of transfers on homeownership are restricted to the survey waves where both the transfer and tenure status information are available.

The HRS is a panel study of individuals over age 50 and their spouses. This biennial study began in 1992 and surveyed over 20,000 households in 2012. The HRS is a full panel design with repeated observations of the same individuals every 2 years. We measure both homeownership transition and transfer receipt within the same 2-year interval. Analysis is based on data from survey years 1998 to 2004, during the housing boom. A planned extension of the analysis for the housing bust and early recovery periods is awaiting release of data covering the period from 2008 to 2012.

Our HRS sample includes 40,140 child/year observations and our PSID sample (based on the RT13) includes 3,382. For analytic purposes, each data set will be used to address different research questions, but our primary multivariate statistical analysis are carried out with the HRS due to its much greater sample size.

B. Definitions of Homeownership and Home Buying

The PSID and HRS are surveys of individual respondents who are followed over time as they form and dissolve households and move in and out of the households of others. The unit of observation of our analytical sample is the individual child. In

HRS, homeownership is reported by the parent for his or her child based on the following questions: "D.02 Does your child or do any of your children own a home?" and "D02A. which children?" Given the questionnaire and HRS survey design, we cannot know whether the child of the respondent is a head of a household or a spouse of the head. Thus, we assume that any child reported as a homeowner in the survey is living in an owner-occupied housing unit as either the head of household or the spouse of the head.

In the PSID, homeownership status is reported by the child herself by answering the question "A19. Do you own the home, pay rent, or what?" Matching the definition of a homeowner with the HRS, we consider the respondent as an owner if s/he owns or is buying (individually or jointly) a home.

Home buying is the principal focus of this study. That is measured in our data sets by the transition into homeownership between two survey waves (a period of approximately 2 years). This transition is conditional on not being a homeowner at the first wave, i.e. all people who are renters or occupants in parents' homes or group quarters. The transition into homeowner status is a proxy for home buying and includes only those who were successful in completing this process. Note that this metric does not represent net cohort progress into homeownership because a small percentage of cases make an opposite transition out of homeownership.

C. Questions on Financial Transfers

The data on financial transfers provided to adult children are from questions posed to parents in both the HRS and PSID.[5] In the PSID, parents are asked: "CT6. In 2012, did you give any money, loans, or gifts of $100 or more to your children age 18 and older?" If the parents answered "yes" on the question and reported more than one child, they specified who they were and reported amount of transfer money to each child by answering "CT7. About how much did you give to the child in 2012?"

In addition, the RT13 includes a set of questions asking if the child has ever received assistance since the age of 18. Although these questions about "long-term" transfers ask specifically about assistance for home buying, education expenses or some other purpose, the open-ended time interval (any time since age 18) means these questions lack the temporal specificity required for analysis of homebuying in a specific two-year interval.

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[5] In the PSID RT13, there are two components: parent unit records and child records. To be consistent with the HRS survey design, this report is based on the child records of the PSID RT13. In the HRS, information is collected from the parents about individual children.

The questions asked in the HRS of parents read: "D50: Including help with education but not shared housing or shared food (or any deed to a house)…did you (or your husband/wife/partner) give financial help totaling $500 or more to your child/any of your children or grandchild(ren)?" and "D53: About how much did that amount to for each child/each grandchild/each child and grandchild?" The purpose for the transfers is not asked in the HRS.

Analysis for this study addresses home buying as the transition to homeownership in a fixed two-year interval, and using both datasets we estimate the effect of total financial transfers to children, irrespective of purpose. We use total transfers as our measure for two reasons. First, data on transfers earmarked for home buying would be collinear with home buying, because the transfer is so-designated, most likely when a home purchase is already planned. Second, financial transfers are substitutable across uses. For example, transfers for education or rent allow a child to allocate more of his/her income to saving for a downpayment. Accordingly, our aim is to estimate the increase in likelihood of home purchase when any large amount of financial assistance is received from parents.

D. Transfer Thresholds and Prevalence

An HRS respondent reports any financial transfer of $500 or more provided to children over a two year period, while a PSID respondent reports any financial transfer of $100 or more over a one year period. The size distribution of these transfers is summarized in Table 1. The median transfer in the HRS was about $2,600, depending on survey year, and the top quartile of transfers are roughly three times as large. The median transfer in the PSID was $800 and in the top quartile transfers were at least $2,000. An indication of how skewed is the distribution of the transfers by amount of financial assistance is seen in the difference between the mean and median transfers. The mean is fully three times larger than the median.

We exclude small transfers from our analysis because those are not likely to be of material advantage in home buying. Differences in the size distribution of transfers reported in the HRS and PSID, not to mention the difference between a two-year and one-year reporting window, call for different criteria to be used in analysis with the two datasets. We have elected to include only substantial transfers to an individual child totaling $5,000 or more over a two-year period in the HRS or $2,500 or more over a one-year period in the PSID.[6]

   Table 1. Reported Transfer of Any Amount, Conditional on Receiving a Transfer (in 2012 $)

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[6] Similar approaches can be found in Mulder and Smits (2013) and Helderman and Mulder (2007), which exclude all financial supports under €5,000 ($7,260, based on 2006 exchange rates and expressed in 2012 dollars).

| | HRS | | | PSID |
	1998–2000	2000–2002	2002–2004	2012–2013
Mean	$7,620	$8,100	$7,461	$2,446
Median	$2,667	$2,552	$2,795	$800
75th pctl.	$6,666	$7,657	$7,293	$2,000
95th pctl.	$26,666	$25,525	$26,739	$10,000

Source: 1998–2004 RAND HRS Family Data File; 2013 PSID Family Rosters and Transfers module.
Note: The sample is restricted to adults between ages 20 and 49 at the beginning of each interval who have reported that they received at least $500 over a two-year period for the HRS and $100 over a one-year period for the PSID, respectively

We next calculate the probability of receiving a substantial transfer as defined by the above thresholds for the subset of survey respondents who were not homeowners at the beginning of each observation period. In both the PSID and HRS, the probability of a non-homeowner receiving a sizable transfer in a given one or 2-year period is relatively low, about 6 percent, without much variation across years. Probabilities of transfer receipt vary across several sample characteristics, including the age and race of children and wealth of parents.

Probabilities of receiving financial transfers from parents vary sharply by age of children. In the HRS, the likelihood of transfer receipt is at least twice as high at ages 20 to 24 as at other ages (Table 2). Transfers to young adults aged 20-24 are most likely granted for education expenses. On the other hand, we do not find this result using PSID data. Reasons for the much lower incidence of transfers at age 20 to 24 in the PSID are not clear, but the HRS children ages 20 to 24 have parents who are substantially more educated and have higher income and wealth than a nationally representative sample of parents of children aged 20-24. The nature of the HRS sample selection is that it includes older parents whose children are typically older. HRS parents of 20-24 year old children were at least aged 26 to 30 years old when the child was born (due to the fact that HRS respondents need to be at least 50 years of age at the time of interview). Given the nature of who practices delayed childbearing, the young children in the HRS sample have parents who are likely highly educated and much more likely to provide assistance to their children for education or other matters. Table 2 also shows that the transfer probabilities tail off among children who are middle-aged, either because they need less assistance at middle age or because the remaining renters in the sample at middle age may have parents who are less wealthy than are the parents of younger renters. Clearly, we need to address the parental wealth effect more directly, which we examine next. Later in the paper, the wealth of parents, as well as their education, are used as explanatory variables in the detailed multivariate analysis.

Table 2. Transfer Probabilities (Above Thresholds) by Age and Wave

| | HRS | | | PSID |
	1998–2000	2000–2002	2002–2004	2012–2013
Total Ages 20–49	6.1	5.9	5.5	6.1
20–24	13.5	14.1	15.9	5.5

25–34	6.4	6.4	6.9	7.2
35–44	4.0	3.8	3.6	4.7
45–49	4.5	3.5	2.8	3.4

Source: 1998–2004 RAND HRS Family Data File; 2013 PSID Family Rosters and Transfers module.
Note: The sample is restricted to non-owners between ages 20 and 49 at the beginning of the interval. Transfer thresholds are $5,000 (in 2012 dollars) over a two-year period for the HRS and $2,500 over a one-year period for the PSID, respectively.

Parental assistance is one means by which economic advantages are passed down from generation to generation. In both the HRS and PSID, children whose parents' wealth is in the top quartile have a far higher likelihood of receiving assistance through a financial transfer (Table 3). Only 1 to 2 percent of children receive a transfer if their parents occupy the bottom quartile of the wealth distribution. However, the likelihood more than doubles if the parents belong to the second quartile (the 25 percent just below the median). And the likelihood doubles again if the parents occupy the third quartile (just above the median). But if the parents are in the top quartile, the children's probability of transfer receipt doubles again, reaching a likelihood fully 8 times greater than for children with parents in the bottom quartile. Clearly, it helps to have wealthier parents, but even among parents in the lower quartiles, there are still many who provide financial assistance to their children. And the numbers also show that the great majority of wealthy parents do not report providing substantial transfers to their children in a given period.

Table 3. Transfer Probabilities (Above Thresholds) by Parental Wealth and Wave

	HRS			PSID
	1998–2000	2000–2002	2002–2004	2012–2013
Total	6.1	5.9	5.5	6.1
Lowest quartile	1.5	1.3	1.4	2.2
Second quartile	4.3	3.1	3.8	4.1
Third quartile	8.0	8.1	8.6	8.8
Highest quartile	17.6	19.7	16.9	18.5

Source: 1998–2004 RAND HRS Family Data File; 2013 PSID Family Rosters and Transfers module.
Note: The sample is restricted to non-owners between ages 20 and 49 at the beginning of the interval. Transfer thresholds are $5,000 (in 2012 dollars) over a two-year period for the HRS and $2,500 over a one-year period for the PSID, respectively.

Next, as is common in demographic and housing analyses, we examine rate of transfers by race and ethnicity. On average, children with non-Hispanic white parents are substantially more likely to receive financial assistance than children whose parents are black or Latino (Table 4). Much of that difference could be due

to wealth differences between races[7], but yet again, there are significant numbers of parents among blacks and Latinos who provide substantial financial assistance to their children.

Table 4. Transfer Probabilities (Above Thresholds) by Race and Wave

	HRS			PSID
	1998–2000	2000–2002	2002–2004	2012–2013
Total 20–49	6.1	5.9	5.5	6.1
NH-White	8.7	8.7	7.9	10.6
Hispanic	1.7	2.0	2.1	2.3
NH-Black	2.6	2.3	2.9	3.1
Other	6.9	3.5	5.5	4.2

Source: 1998–2004 RAND HRS Family Data File; 2013 PSID Family Rosters and Transfers module.

Note: The sample is restricted to non-owners between ages 20 and 49 at the beginning of the interval. Transfer thresholds are $5,000 (in 2012 dollars) over a two-year period for the HRS and $2,500 over a one-year period for the PSID, respectively.

IV. RESEARCH DESIGN

Given that a number of different factors correlate with the likelihood of receiving a transfer, we need to include them all in our analysis. But our focus is not on who receives a transfer; rather, it is on who buys a house and benefits from a parental financial transfer in that process.

We first quantify the unconditional impact of receiving a financial transfer from a parent on the likelihood that a young adult becomes a homeowner in a two-year interval. We then estimate the impact of financial transfers on the transition to homeownership independent of the effects of child and parent economic and demographic characteristics.

The dependent variable in this analysis is home buying over the past 2 years. As described above, we represent home buying as a change in the adult child's housing status from not owning (renters, dependents or group quarters residents) to homeownership.

We estimate a basic model of the following form:

$$\Pr\left(own_{i,t+2} = 1 \middle| own_{i,t} = 0\right) = \alpha_0 + \gamma C_{i,t} + \rho P_{i,t} + \beta transfer_{i,t+2} + year_t + \varepsilon_{i,t}$$

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[7]Among those 55-64 years old, median wealth in 2010 reported in the Survey of Consumer Finances was far less for blacks ($20,000) and Latinos ($89.100) than for non-Hispanic whites ($246,100).

where $own_{i,t+2}$ is a dichotomous variable which is equal to one if an adult child *i* owns a home in year *t+2* and zero otherwise in a sample of non-homeowners in year t. *transfer_{t+2}* is our main covariate of interest and is an indicator variable (0/1) for whether the adult child *i* received a financial transfer from his/her parent between t and t+2. $C_{i,t}$ and $P_{i,t}$ are vectors of child and parental attributes, respectively, at time t. Characteristics include age, marital status, and educational attainment of the child, and education, income and wealth of his/her parent. The model also includes a series of year fixed effects, $year_t$. $\varepsilon_{i,t}$ is an error term.

The HRS and PSID models are estimated identically so that we can compare their findings. One omission from the HRS data set is the income of children, which is incomplete or of generally poor quality. Accordingly, buying capacity is represented more heavily by education in the model estimations, as well as by income and wealth of parents. Some versions of the model include interactions between transfers and key covariates of interest such as race and age. However, these interactions models are only estimated using HRS data due to insufficient sample size in the PSID.

It should be acknowledged that the two data sets and this research design only observe the linkage from a set of parents to one child. When two children come together in a couple, *two* sets of parents are potential supporters. The fact that transfers are observed from only one set of parents implies that not only the prevalence but also the effect of transfers on homebuying are underestimated. A couple may appear to purchase a home without assistance only because the other set of parents is unobserved. This biases downward the estimated effect of total assistance to couples, even when it well represents the effect of *one child's* parental assistance.

V. PREVALENCE OF HOME BUYING OVER TIME

Home buying is represented in the analyses to follow by measuring the transition into homeownership between two survey waves (a period of approximately 2-years). This is calculated only for people who were not a homeowner at the prior wave. Although we lack data on actual transactions, the transition into homeowner status is a proxy for a completed transaction of home buying. Note that this metric does not represent net cohort progress into homeownership because a small percentage of cases make an opposite transition out of homeownership.

We first examine the long time series of transitions that are available in the main PSID data set, in order to place more recent numbers in historical context (Table 5). Transitions to homeownership are most common at ages 25-34 (defined at the

beginning of the interval), followed by ages 35-44. [8] For all ages, transitions slowed markedly between 2005 and 2009, a period that includes commencement of the housing bust and Great Recession. Transition rates also were slightly lower in 2003-05 than 1997-99, consistent with previous research using CPS-ASEC data that found 25-34 year-olds in the period of 1995 to 2000 experienced more rapid net cohort transition into homeownership than in 2000 to 2005 (Myers and Lee 2016: figure 2.17). Our analysis of the effect of transfers on homeownership using the PSID examines transitions to homeownership between 2011 and 2013, a period when transitions were almost 50 percent less common than in 2001-03. The declining transition in 2011-13 may also reflect that the Federal first-time homebuyer tax credit was in effect in 2009 to 2011, which may have pulled forward future homebuyers.

Table 5. Transition of PSID Panel Members into Homeownership, by Age Group

	1997-99	1999-01	2001-03	2003-05	2005-07	2007-09	2009-11	2011-13
All Aged 20-49	19.9	19.8	19.6	18.2	16.3	12.8	11.6	11.1
20–24	13.5	16.3	14.3	13.3	10.8	7.5	8.9	7.3
25–34	24.3	22.9	23.4	22.4	20.4	16.2	13.2	12.8
35–44	19.7	19.1	20.1	18.8	17.9	14.1	11.6	12.3
45–49	18.1	20.4	20.2	16.5	12.7	11.7	11.9	10.8

Source: 1997–2013 PSID.
Note: Transition of panel members into homeownership is conditional on their non-homeownership in previous years. That is, the numbers above are percentages of the non-owners by age at the beginning of the interval who were owners at the end of the interval.

Homeownership transition rates by age from the HRS are provided in Table 6. The HRS rates are similar to those from the PSID, with the exception that they are slightly lower at age 20-24, possibly due to HRS's survey design. The HRS data only include children of respondent parents who are aged 50 and older, and thus some individuals aged 20-24 will have parents who are too young to be included in the HRS sample. As a result, the HRS sample for those aged 20-24 is small and is not representative of the population of individuals of that age. The HRS data also show relatively lower transitions in 1998 to 2000, contrary to the PSID and the Myers-Lee (2016) findings.

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[8] Please note that the denominators for these transition rates are the numbers of non-owners at the beginning of the interval. Given fewer numbers of non-owners at older ages, small changes in ownership status can result in seemingly substantial transition rates.

Table 6. Transition of HRS Panel Members into Homeownership, by Age Group, Selected Years

	1998 to 2000	2000 to 2002	2002 to 2004
Total	17.5	22.1	19.4
20–24	9.2	12.7	8.3
25–34	18.5	23.2	19.7
35–44	18.3	22.9	20.8
45–49	20.7	25.8	20.6

Source: 1998–2004 HRS Main and Family Data File.
Note: Transition of panel members into homeownership is conditional on their non-homeownership in previous years. That is, the numbers above are percentages of the non-owners by age at the beginning of the interval who were owners at the end of the interval.

VI. MODEL ESTIMATES OF THE ROLE OF TRANSFERS IN HOME BUYING

A. Models without Interactions

We estimate multivariate regression models of transitions to homeownership using Ordinary Least Squares methods. Model 1 estimates the effect of transfers with controls only for the age and race of the child. Model 2 adds child marital status and educational attainment as covariates. Note that personal or household income of the child is not included due to its incomplete reporting and poor quality in the HRS. Model 3 adds to the second model controls for parental income, wealth, homeownership, and education. Results of these estimations are provided in Table 7 for the HRS sample and Table 8 for the PSID sample. None of these models include interactions of transfer receipt with child characteristics, which are examined in the next section.

<u>1. Summary Results</u>

We find that a financial transfer of $5000 or more over a two-year period in the HRS is associated with an increase in the likelihood of homeownership, consistent with previous studies (Engelhardt and Mayer 1998; Helderman and Mulder 2007). In a model with only child age and race and year covariates, receiving a transfer increases the likelihood of becoming a homeowner by 4.2 percentage points (coefficient estimate 0.042, Table 7, Model 1). If we include characteristics of the child and parent that are likely correlated with transfers and homeownership, the estimated effect is reduced to 2.4 percentage points (Model 3). We quantify the effect relative to the mean probability of home buying at age 35-44 in 1998-00, which is the reference case in the regressions, of 18.3 percent (Table 6). That implies that a transfer proportionately increases the probability of home buying by 23.0 percent in Model 1 and 13.1 percent after adjusting for parental wealth and all other factors in Model 3.

By comparison, the findings of the PSID analysis shown in Table 8 are weaker due to its small sample size. The transfer coefficient is very small and is insignificant in all three models. This noneffect might be attributable to the time period of the PSID analysis, coming in the recovery period after the recession. Transfers from parents appear not to have a significant effect in this context, perhaps because most financial assistance was being used to cope with other economic difficulties following the recession. Employment opportunities and incomes both were lagging, and difficulties in mortgage qualification may have discouraged both buyers and sellers. As a result, and as shown above in Table 5, the transition into homeownership in fact was half as frequent in 2011-13 as in 1999-2001.

We now turn to the detailed estimation results, first in the HRS, and next in the PSID.

2. Detailed Results from the HRS

As shown in Table 7, most of the covariates included in the HRS models had statistically significant effects on transitions to homeownership. Focusing first on characteristics of the children and starting with the age covariate, we find that an adult child aged 20-24 is 7 percentage points less likely to become a homeowner than a child aged 35-44 (Model 3). No other difference across age groups is statistically significant above the 0.10 level in any of the models. Race and Hispanic origin have a large effect in all models. Compared to non-Hispanic Whites, Hispanics and Blacks are 3 and 7 percentage points, respectively, less likely to become homeowners (Model 3). Being married and having a college education are also strongly associated with home buying, increasing the likelihood by 17 and 15 percentage points, respectively, relative to the reference groups of not being married and having less than a high school education.

Turning to the results for parental variables in Model 3 of Table 7, we find that parents' socioeconomic status has a direct and independent effect on the likelihood of an adult child becoming a homeowner. The strongest effects are for parental wealth, where we find that children with parents in the 4th quartile of the wealth distribution are 4.5 percentage points more likely to transition to homeownership than are children with parents in the bottom quartile. This result is consistent with other studies finding parental wealth effects (Öst 2012; Spilerman and Wolff, 2012). In addition, parental homeownership is associated with a 1.2 percentage point increase in the likelihood of children transitioning to homeownership within two years, as in previous literature (Galster et al. 2007; Henretta 1984; Aratani 2011). The effects of parental income are weak and inconsistent, whereas somewhat surprisingly, children who have parents with a college education are slightly less likely to transition into homeownership relative to peers with parents who have less than a high school education.

Overall, the model fit might appear relatively weak, with an R-square that is less than 0.10. However, the short-term probability of buying a home in a given year is much lower than the cumulative probability of attaining the status of

homeownership, and that low probability of transition weakens the explanatory power. Most of the people with characteristics that would be predictive of eventual homeownership have already purchased in previous years, and others will do so in future years, but not necessarily this given year. Despite this low probability, many of the factors influencing that choice are statistically very strong.

Table 7. The Effect of Transfers on Home Buying (HRS data) Estimated by Linear Probability (OLS) Regression

	Model 1		Model 2		Model 3	
	Coef.	*Sig.*	*Coef.*	*Sig.*	*Coef.*	*Sig.*
Transfer over $5,000	0.042	***	0.033	***	0.024	**
Child Characteristics						
Age Group (ref. 35-44)						
20-24	–0.116	***	–0.071	***	–0.070	***
25-34	–0.009	+	–0.008	+	–0.008	+
45-49	0.013		0.012		0.012	
Child Race (ref. NH White)						
Hispanic	–0.047	***	–0.042	***	–0.033	***
NH Black	–0.111	***	–0.085	***	–0.071	***
Other	–0.033	**	–0.031	*	–0.022	+
Child Marital status (ref. never married, widowed, separated or divorced)						
Married			0.169	***	0.171	***
Partnered			0.063	***	0.065	***
Other			0.053	**	0.053	**
Child Education Level (ref. less than HS)						
HS Grad/Some College			0.061	***	0.053	***
BA plus			0.162	***	0.150	***
Parent Characteristics						
Parent homeowner					0.012	*
Parent Income Quartiles (ref. 1st quartile)						
2nd quartile					–0.015	**
3rd quartile					–0.012	*
4th quartile					0.002	
Parent Wealth Quartiles (ref. 1st quartile)						
2nd quartile					0.025	***
3rd quartile					0.034	***
4th quartile					0.045	***
Parent Education Level (ref less than HS)						
HS Grad/Some College					0.003	
BA plus					–0.018	*
Year dummies (ref. 1998)						
2000	0.045	***	0.048	***	0.049	***
2002	0.017	***	0.019	***	0.020	***
Constant	0.224	***	0.081	***	0.061	***
N	40,140		40,140		40,140	
R2	0.024		0.078		0.081	

Note: +: p < 0.10, *: p < 0.05, **: p < 0.01, ***: p < 0.001. The sample is restricted to those who are between the ages of 20 and 49 and are not owners at the beginning of the interval and who are also observed at the end of the two-year interval. All child and parental characteristics are those observed at the beginning of the two-year interval. The cash transfers between surveys are reported at the end of the interval. Standard errors are clustered on individual children.

3. Detailed Results from the PSID

Model estimations using PSID data yield generally similar findings as the HRS data, although the coefficient on cash transfers is not statistically significant at any conventional level (Table 8)[9]. Model 3 using the PSID data reveals negative associations between home buying and the child being in the oldest age group, Black, or Hispanic; strong positive effects of the child being married or college-educated; and sizable positive effects if parental wealth is in the fourth quartile.

As was the case with the HRS analysis, one noteworthy finding from the PSID data is that children are less likely to transition to homeownership when their parents are college educated. The PSID estimate of the association (–2.9 percentage points) is marginally significant but even larger than the HRS estimate (–1.8 percentage points). These findings from Model 3 are net of all other factors, implying that children from families with less educated parents are more likely to transition to homeownership if they have the same characteristics and equal access to financial resources. This finding deserves further exploration, and will be studied further in the next phase of the research project.

The overall model fit is very similar to models with the HRS data and, as before, the low explanatory power stems from the low probability of people buying a home in a given year. Predictions of transition are inherently more variable than predictions of current status.

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[9] In results not shown, the coefficient on cash transfers is significant if the transfer amount is greater than $3500. We chose the $2500 threshold in the PSID to make the 1-year transfer thresholds in the PSID more comparable to the 2-year threshold of $5,000 in the HRS. The $2500 amount also is close to the 75th percentile of the transfer distribution in the PSID, while the HRS 75th percentile is more than twice as high (Table 1).

Table 8. The Effect of Transfers on Home Buying (PSID data) Estimated by Linear Probability (OLS) Regression

	Model 1		Model 2		Model 3	
	Coef.	Sig.	Coef.	Sig.	Coef.	Sig.
Transfer $2,500 or more	0.013		0.006		0.003	
Child Characteristics						
Age Group (ref. 35-44)						
20-24	−0.055	**	−0.026		−0.014	
25-34	0.008		0.000		0.011	
45-49	−0.057	*	−0.041		−0.047	+
Child Race (ref. NH White)						
Hispanic	−0.050	**	−0.035	*	−0.036	+
NH Black	−0.070	***	−0.035	**	−0.027	*
Other	−0.037		−0.024		−0.018	
Child Marital status (ref. never married, widowed, separated or divorced)						
Married			0.112	***	0.113	***
Partnered			0.025		0.026	
Other			−0.031		−0.024	
Child Education Level (ref. HS Grad/Some College)						
Less than HS			−0.024	*	−0.025	+
BA plus			0.093	***	0.088	***
Missing			0.003		0.001	
Parent Characteristics						
Parent homeowner					0.020	
Parent Income Quartiles (ref. 1st quartile)						
2nd quartile					−0.034	*
3rd quartile					0.000	
4th quartile					−0.024	
Missing income/wealth					−0.010	**
Parent Wealth Quartiles (ref. 1st quartile)						
2nd quartile					−0.006	
3rd quartile					0.032	
4th quartile					0.055	*
Parent Education Level (ref. HS Grad/Some College)						
Less than HS					0.028	+
BA plus					−0.029	+
Missing					0.008	
Constant	0.152	***	0.084	***	0.070	**
N	2,937		2,937		2,937	
R2	0.02		0.06		0.07	

Note: +: $p < 0.10$, *: $p < 0.05$, **: $p < 0.01$, ***: $p < 0.001$. The sample is restricted to non-owners between the ages of 20 and 49 in 2011 who were observed in both the 2011 and 2013 surveys. All child and parental characteristics are those in 2011. The cash transfers in 2012 are reported in the 2013 PSID. Robust standard errors are used to correct for heteroscedasticity.

B. Interactions of Transfers with Selected Variables

In this section, we assess whether the impact of parental financial transfers varies across various subgroups of children. We do this by including interactions of transfer likelihood and various child and parent characteristics in the current models, as they jointly impact the likelihood of home buying. We use only the HRS data because the PSID has insufficient sample size to test for interactions.

Interactions were tested with all variables, but only those with child age and race were found to be important and are detailed below. We report only the main and interaction estimates, which are derived from models that include the full set of covariates in Table 7, shown previously.

1. Differential Impact of Transfers by Age

The main effect of age on the likelihood of homebuying is that young adults aged 25-44 are more likely to transition to homeownership than those aged 20-24. Receipt of a transfer of $5,000 or greater, however, may have an independent effect on the likelihood of home buying that varies by age. Adding an interaction term of age with transfer allows a test for the differential effect of transfer of home buying by age group. Model coefficients are reported in the Appendix, but the results are best viewed as expected values in graphic displays.

The pattern of association in Figure 1 shows that 23 percent of young adults ages 25-34, who received a parental transfer, transition to homeownership compared to 20 percent who did not receive a transfer. Similarly, 24 percent of young adults ages 35-44, who received a parental transfer, transition to homeownership compared to 20 percent who did not receive a transfer. There were no statistically significant differences in the rate of homeownership transition at other ages.

The probable explanation for this age effect of transfers and homeownership is that people younger than 25 are far more likely to use parental transfers for education purposes rather than for home buying. After age 25, when education is more likely to be completed, and also when people are more likely to be married [the strongest effect on home buying in the model], the rate of transitioning to homeownership is much greater and transfers appear to expedite that process.

Figure 1: Predicted Probability of Transition to Homeownership by Age Group
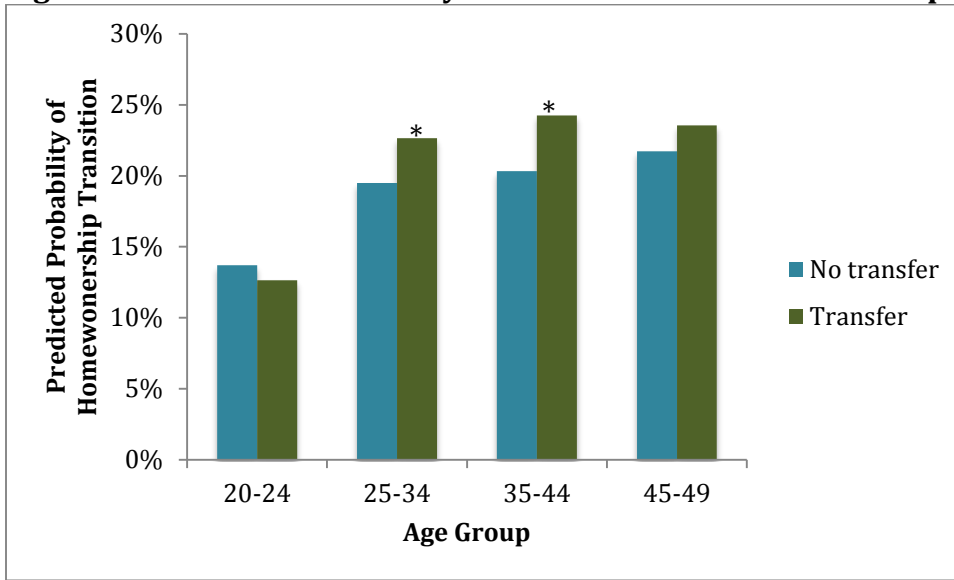
Note: + p < 0.10, * p < 0.05, ** p < 0.01, *** p < 0.001. Figure 1 is derived using post-estimation predicted probabilities from Table 7, Model 3, but with interactions added between the age group and cash transfer variables. See Appendix table 1. The sample is restricted to those who are between the ages of 20 and 49 and are not owners at the beginning of the interval, and who have non-missing transfer variables. All child and parental characteristics are those observed at the beginning of the two-year interval. The cash transfers between surveys are reported at the end of the interval. Standard errors are clustered on individual children.

2. Differential Impact of Transfers by Race

We found non-Hispanic whites were more likely to transition to home buying than other racial/ethnic groups. The model interacting race and transfers allows us to understand the joint impact of both receiving transfers and membership in a specific racial group. In general, model estimations show that non-Hispanic whites are most likely to transition to home buying, with other groups less so (Appendix Table 1). Figure 2 shows that 25 percent of non-Hispanic whites, who received a parental transfer, transition to homeownership compared to 22 percent who did not receive a transfer. Transfers have a similar impact on Hispanic households, although the difference is not statistically significant. Parental transfers to households of "other" race (i.e. not Hispanic, and not White or Black), are associated with the largest increase in the likelihood of becoming a homeowner: transitions to homeownership are 30 percent for transfer recipients compared to 19 percent for households of 'other' race who did not receive a transfer over $5,000.

Figure 2 also shows that non-Hispanic Black individuals who receive transfers are 3 percentage points *less* likely to transition into homeownership than those who did not receive a transfer. Black transfer recipients have the lowest homeownership transition rate across all racial/transfer groups. These findings indicate that

transfers play a significant role in attaining homeownership for non-Hispanic Whites, but actually have the opposite association for non-Hispanic Blacks.

Figure 2: Predicted Probability of Transition to Homeownership by Race
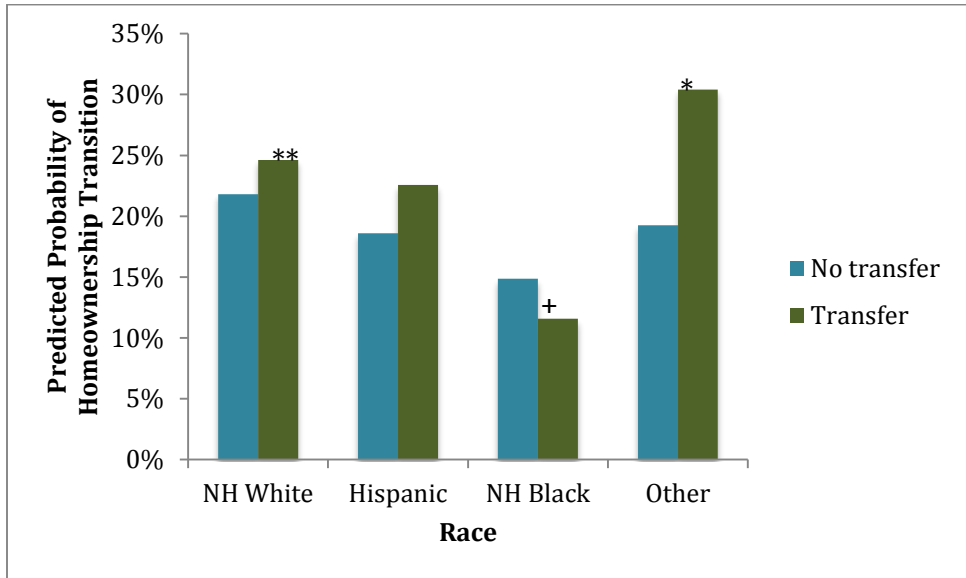
Note: + p < 0.10, * p < 0.05, ** p < 0.01, *** p < 0.001. Figure 2 is derived using post-estimation predicted probabilities from Table 7, Model 3, but with interactions added between the race/ethnicity and cash transfer variables. See Appendix table 2. The sample is restricted to those who are between the ages of 20 and 49 and are not owners at the beginning of the interval, and who have non-missing transfer variables. All child and parental characteristics are those observed at the beginning of the two-year interval. The cash transfers between surveys are reported at the end of the interval. Standard errors are clustered on individual children.

VII. CONCLUSIONS

Parental resources are a substantial benefit to young home buyers, with or without direct financial assistance. Young adults are more likely to transition into homeownership if their parents also are homeowners, and particularly if their parents are in the upper quartiles of the wealth distribution. Net of those factors and a set of other parent and child characteristics, if parents make a substantial financial transfer to their children, the likelihood of home buying is boosted by 2.4 percentage points based on analysis of the HRS. This is equivalent to a proportional increase in the probability of home buying of 13.1 percent. Before controlling for parental resources (but controlling for the adult child's demographic characteristics and marital status and education), a parental transfer increases the likelihood of homeownership by 3.3 percentage points. This indicates that the transfer effect is reduced moderately, by about 1 percentage point (27 percent), after controlling for parental resources.

Children aged 20-24 who receive a transfer from parents are no more likely to become a homeowner than those who do not receive a transfer. We hypothesize that the finding is due to the fact that transfers at that age are targeted for education expenses. Children aged 25 to 44 who receive a transfer are more likely to become homeowners than children at those same ages who do not receive a parental transfer. In addition, non-Hispanic white children who receive transfers are more likely to become homeowners than those who do not receive parental transfers, but the opposite is true for Black children. We hypothesize that this finding suggests Black parents are assisting needs other than home buying.

Somewhat surprisingly, unlike other resources, parental income and education are not positively associated with their children's home buying. It may be that only parental wealth reserves hold sufficient free resources that can be tapped for a transfer, unlike current income.

The effect of parents' education is most surprising. Children with parents who have a BA or higher are *less* likely to become home buyers compared with children of parents with less than a high school education. Said the opposite way, children who come from families where the parents are not college educated are more likely to become homeowners, if they are given the same amount of resources. Does this mean that the children of parents who are not college educated strive harder to attain homeownership? This also might reflect geographic differences, if children of higher educated parents tend to live in large cities that have less affordable housing for purchase.

Geographic differences in prevailing house prices surely have a substantial impact on the rate of transition into homeownership, and may well alter the importance of variables supporting children's home buying. Both education and income of children likely assume stronger importance for homebuying when prices are higher, but it is not yet known if parents' contributions are increased in such circumstances or if the weight placed on parents' income, wealth, and education grows ever larger. How much these supporting factors can explain or reduce racial differences in high-priced areas is of important concern.

The next phase of our project turns to a detailed examination of these and other effects on home buying, with particular attention to education. Parental resources are sometimes poured into children's education, and the resulting higher education yields higher incomes among the children and thereby supports higher rates of home buying. And, at the same time, parental resources might sometimes be used to directly support child home buying via financial assistance. We aim to unpack these relationships and explore them in more detail, studying how they vary between low- and high-priced housing markets and also across different subsets of the younger generation.

APPENDIX

Appendix Table 1: Model 3 with Age Interactions

	Coef.	Sig.
Transfer over $5,000	.040	*
Age Group (ref. 35-44)		
20-24	-.065	***
25-34	-.008	+
45-49	.013	+
Transfer*Age Group (ref. 35-44)		
20-24	-.050	*
25-34	-.007	
45-49	-.021	
N	40,140	
R2	0.081	

Note: +: p < 0.10, *: p < 0.05, **: p < 0.01, ***: p < 0.001. Model includes all variables from Table 7, Model 3. Interactions and main effects are reported. The sample is restricted to those who are between the ages of 20 and 49 and are not owners at the beginning of the interval and who are also observed at the end of the two-year interval. All child and parental characteristics are those observed at the beginning of the two-year interval. The cash transfers between surveys are reported at the end of the interval. Standard errors are clustered on individual children.

Appendix Table 2: Model 3 with Race Interactions

	Coef.	Sig.
Transfer over $5,000	.029	**
Kid Race (ref. NH White)		
Hispanic	-.032	***
NH Black	-.070	***
Other	-.027	*
Transfer*Kid Race (ref. NH White)		
Hispanic	.011	
NH Black	-.061	**
Other	.083	
N	40,140	
R2	0.078	

Note: +: p < 0.10, *: p < 0.05, **: p < 0.01, ***: p < 0.001. Model includes all variables from Table 7, Model 3. Interactions and main effects are reported. The sample is restricted to those who are between the ages of 20 and 49 and are not owners at the beginning of the interval and who are also observed at the end of the two-year interval. All child and parental characteristics are those observed at the beginning of the two-year interval. The cash transfers between surveys are reported at the end of the interval. Standard errors are clustered on individual children.

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