# Is There a Racialized Legacy in Wealth Across Generations? Evidence from Panel Study, 1984-2013

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**Abstract**

The wealth accumulation of parents appears to be strongly determinative of the wealth holdings of their adult children. However, very little is known about the association of wealth that may occur across three generations of a family. This paper includes a focus on the grandparent generation in order to provide a more complete picture on economic transfers in the extended family. We use 1984 to 2013 data from the Panel Study of Income Dynamics. We find that the children of white parents and grandparents may have higher wealth positions, but there is little intergenerational mobility in net wealth. And, while the children of black parents and grandparents have wealth positions that lag far behind that of white families, black children still also face very little intergenerational mobility in net wealth.

**Keywords**: stratification economics, intergenerational transfers, wealth inequality, elasticity, legacy effects, racial inequality.

**JEL Codes**: Z13, D31, D64, J15

## 1 Introduction

In the social science literature, the intergenerational framework plays a central role in exploring issues of mobility. However, in economics, the concept of an extended family is an unorthodox notion. The orthodox approach to analyzing the family, i.e. nuclear family, was put forth by Becker (1981). Such an approach overlooks the powerful role played by intergenerational transfers of resources in supporting a nuclear family or even driving intergroup disparity. An emerging approach within economics that gives primacy to the relative as a

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fundamental component of understanding mobility is stratification economics (Darity 2005; Darity, Hamilton, Stewart 2015). Stratification economists explore the structural forces, i.e. resources available in a family tree, that are behind wealth or income inequality.

An area of the literature that attracts much attention is the intergenerational transmission of income (see Black and Devereux 2010). Previous research finds that in the United States, the father's earnings may explain up to two-fifth (0.4) of the son's income (Solon 1992, 1999; Lee and Solon 2009). Thus, the income of male adult children is heavily influenced by male parental income. However, the literature on the intergenerational transmission of wealth is far more limited. A few scholars focus on the association between the wealth portfolio composition of parents and the portfolio of their children (Chiteji and Stafford 1999; Chiteji and Hamilton 2005). Equally limited is work on the correlation of wealth across parent-child generations (Charles and Hurst 2003; Conley and Glauber 2008). To date, no scholarship has focused on the intergenerational correlation of wealth for grandchildren with respect to their grandparents. Also missing from the literature is a comprehensive focus on the elasticity of different asset components of wealth.

An original contribution of this paper is that it explores intergenerational family transfers and wealth accumulation with an emphasis on two and three generations. Our motivation for examining three generations is to provide a more complete story on economic transfers in the extended family. In previous research, the emphasis is only on two generations (Chiteji and Stafford 1999; Charles and Hurst 2003; Chiteji and Hamilton 2005; Conley and Glauber 2008) primarily due to longitundinal data limitations. Data limitations aside, parent-to-child estimates are likely to underestimate the full extent of social mobility and inequality in the US economy (Ferrie, Massey and Rothbaum 2016). In this inquiry we examine the elasticity of wealth across three generations and with respect to specific asset types, e.g. stocks, bonds, bank account, retirement, business proprietorship, real estate, and homeownership.

The concept of household wealth is very distinct from that of income. Hamilton and Chiteji (2013) depict the difference as one between flow and stock. Flow is represented by income, where labor services are typically provided in exchange for income. A stock of financial assets, amounting to what a household owns, is represented by wealth. Wealth

can be retrieved from a financial account, despite the presence of income payments going to a family. Family fortune can provide as a measure of security; if ever there is an abrupt shock to income or health, the family can weather the potential damage that hardship may inflict. Even more, wealth can purchase economic advantages; such as buying a home in a neighborhood with strong schools, using financial fortune to open or expand an enterprise, assisting with payments for helping descendants obtain higher education, and influencing or contributing to political causes.

Contributions of this paper are informed by 1984 to 2013 data from the Panel Study of Income Dynamics (PSID). A family tree's array of wealth are summarized through descriptive statistics. We show that **[1]** before the Great Recession from late 2007 to July 2009, traits of the PSID sample for grandparents-adult grandchildren for 1984 to 2007 align with the fundamental tenants of the age-wealth profile. Greater levels of average household income, larger proportions of households possessing different asset components, and higher levels of wealth accumulation may be afforded by a rise in age; grandparents are much older (57.57) than their adult grandchildren (40.36). With regards to race, the black and white subsample is logically consistent with the PSID sample.

**[2]** There are large and persistent differences in economic standing. Measured in 2005 dollars, the black-white ratio of median net worth is 22.20% [=\$22,040/\$99,256] for grandparents in 1984 to 1989. This means that, at the median, black grandparents own about 22% of the wealth that is possessed by the white grandparents. Two generations later, for the adult grandchildren in 2007, the black-white wealth gap is 23.57% [=\$18,842/\$79,935]. Why are wealth positions of black Americans so far behind the wealth positions of white Americans? Katznelson (2005) provides context by showing how white wealth is boosted through affirmative action over the 20th century. For example, millions of white veterans benefit from the GI Bill of 1944, which allows them to accumulate human capital and financial assets. Through a combination of generous governmental assistance and no barriers in the administration of the policy, the GI Bill allows white veterans to purchase farms, open enterprises, own a home, and obtain grants for higher education. Such preferential treatment was not granted to black veterans.

**[3]** We also find that tendencies in wealth after the Great Recession are characterized by greater inequality and the contraction in ownership of different asset types. Adult grandchildren are older in their life cycle by 2013. Despite adult grandchildren gaining in age, the economic circumstances greatly weaken their wealth accumulation. Indeed, the availability of family wealth declines, particularly for black families, which accelerates racial wealth inequality. In fact, the median wealth ratio drops to 15.21% [=$13,640/$89,688], adjusted in 2013 dollars. This implies that black adult grandchildren own only 15% of the median wealth that is owned by white adult granchildren in 2013. Meanwhile, the ownership of particular asset components decline but do not escape from disparity. While black adult grandchildren are on a much lower rung of asset ownership, their white peers are on a slightly higher rung of asset ownership.

Whereas our descriptive statistics allow for comparing how generations fare, elasticities allow for correlating intergenerational family wealth. The elasticities, or intergenerational transfers, of wealth are computed via multivariate regressions, using age as a covariate. **[4]** We find that over the period of 1984 to 2007, the elasticity of wealth across three generations (grandparent to adult grandchildren) is in the precinct of 0.13. This means that grandparental wealth explains slightly over one-tenth of the net worth of their adult grandchildren. This result provides as a novel contribution to the social science literature. Disaggregated by race, we find a much higher correlation of wealth across white grandparent-adult grandchildren pairs. In fact, grandparental wealth may directly account for two-tenth (0.18) of the net worth obtained by white adult children. Said differently, when grandparents hold wealth that increases by 10%, their adult grandchildren will possess wealth that rises by about 2% in the adult grandchild generation. Meanwhile, black grandparent's wealth predicts their adult grandchildren's wealth at an estimated correlation coefficient of 0.02. That is, when black grandparental wealth increases by 10% in their cohort, this is associated with a 0.2% rise for the adult grandchildren among their generation. Obviously, black wealth is much less likely to reproduce itself, relative to the higher wealth positions held and carried by white families. These results reveal the hysteresis, a term coined for lagging behind, in wealth

across generations.[1] Simply put, families have vastly different wealth positions but there is very little intergenerational mobility.

Finally, the intergenerational transfer of wealth from grandparents to adult granchildren over 1984 to 2013 rises to 0.33. This means that, to use the family names given in "Keeping Up with the Joneses" by Arthur Momand (1913), if grandparent Jones holds two times the amount of family wealth as grandparent McGinis, the adult grandchild in the Jones family will have a networth that is 33% above the wealth owned by the adult grandchild in the McGinis family. This correlation is higher than the correlation found to exist between 1984 to 2007. Perhaps one answer is rooted in the average age of the adult grandchild in the cycle of wealth accumulation. Adult grandchildren are younger in 2007, and by implication their wealth accumulation is less mature, than in 2013. The elasticity of grandparent to adult grandchild along racial dimensions vary in possibilities of reproduction. The correlation in net wealth between a white grandparent and grandchild is 0.60. This elasticity implies that higher reproduction is patterned after the higher initial wealth endowments of white grandparents. With regards to three generations of the black family tree, the estimated correlation coefficient is around 0.09. Such correlation matches the account observed in the previous estimate, that wealth in the black family tree faces very little intergenerational mobility in net wealth. Overall, our results indicate that there is persistence in advantages and disadvantages in wealth positions, but also indicate that there is hysteresis in wealth, particularly along racial dimensions.

## 2 Literature Review

Previous investigations reveal the legacy effects in intergenerational family wealth of two generations. Chiteji and Stafford (1999) examine the association between the wealth portfolio of black parents and the portfolio of their children, making use of data from the Panel Study of Income Dynamics (PSID). An underlying premise of the research is that the wealth portfolio of children in the next generation will mirror their parents in the previous generation. To

[1] An explanation for hysteresis in unemployment is provided by Darity and Goldsmith (1993).

test this proposition, Chiteji and Stafford (1999) create a learning model that examines the portfolio profile of parents in 1984 and estimates the portfolio of their children who are living on their own in 1994. Learning about the foundations of investing is modeled as a function of adequate resources and information supplied by family members. However, one critique is they do not sort among the resource, social network or information effects. Rather, they do find that if parents do not open and maintain an account for financial transactions, then their young adult children are less likely to open and maintain transaction accounts (Chiteji and Stafford 1999).

In addition, they use a multivariate probit model to test the degree to which the wealth portfolio of children mirrors the portfolio of their parents with respect to stock ownership. Their multivariate probit model controls for a broad set of variables, including demographics and economic well-being. Results show that the marginal effect of young adult families becoming stock owners is positive (=0.505) if their parents carry stocks in their portfolio. An immediate implication is that by broadening access to learning about pathways to financial wealth, this may help to decrease racial wealth disparities in portfolio composition. However, as the learning model suggests, another dimension may be adequate resources. Therefore, if some parents are less likely to open and maintain a transaction account due to having low positions in wealth and income, this may produce low wealth in the next generation.

In another study, Chiteji and Hamilton (2005) examine wealth accumulation under the context of the class positions of two generations. Precisely, they explore to what extent are the foundations of overall wealth and particular asset accumulation for more well off family members impacted by having ties to relatives dealing with poverty. Helping to render such a portrait of wealth accumulation among the middle-class is the PSID survey, with data compiled from the 1984 to 1994 intervals. Methodologies used with the data include descriptive oriented statistical figures and probit regressions with multiple variables. Through their descriptive statistics, Chiteji and Hamilton (2005) find that the foundations of wealth accumulation among the middle-class are uneven. In 1994, nearly nine of 10 (87%) intermediate income white families own a bank account. The figure is just over half (54%) for middle-class black families. In another example, over one-third (35%) of white families own

a portion of corporations through stocks. A little over one-tenth (13.1%) of black families are stock owners. Meanwhile, middle-class families are trying to accumulate through ownership of stocks and a bank account within the constraint of poverty in the extended family. Parents of middle-class white families are less likely to face poverty, with a poverty rate of 8.3%. The poverty rate for parents of middle-income black families is much higher at nearly 36%. This provides some preliminary evidence that hardship among kin may contribute to lowering ownership rates of financial assets.

Actually, results from probit regressions show how much hardship among kin weighs on the probability of asset ownership. Bank account ownership among middle-class families is likely to drop by 9% when their parents and siblings are mired in misery, compared to families that do not have poverty in their family (Chiteji and Hamilton 2005, 105). More, the probability of owning stocks among middle-income earners may decline by about 5%, conditional on forebears and siblings living in poverty, and relative to those without economic hardship permeating their lives (Chiteji and Hamilton 2005, 106). Among those with financial resources, having the presence of considerable economic hardships in the family tree appears to weigh down the accumulation of asset components. What is undermined is not only the foundations for building wealth but also for carrying wealth across generations.

A third study that explores the association of wealth across two generations is by Charles and Hurst (2003). They employ data from the 1984 to 1989, and 1999 waves of the PSID. They connect 1,491 observations of children and parents. The article's main finding is that the elasticity of wealth across parent and adult child generations is 0.37. In short, when parents hold wealth that hovers 50% (i.e. t statistic=10, thus 10*5) above the average wealth held in the parent generation, their adult children will possess wealth that is about 18% (i.e. elasticity=0.37, thus 3.7*5) above the average wealth held in the adult child generation (Charles and Hurst 2003, 1156).[2] Their result takes into account the age of both the adult child and parent generations. Although not previously recognized by Charles and Hurst (2003), one interpretation of this result is that there is significant lagging or

[2]The t statistic is known to follow a t distribution. The t distribution is very closely related to the normal distribution. What this means is that Charles and Hurst (2003) implicitly assume that family wealth falls into a normal distribution. This is a strong assumption to make.

downward mobility for children from comparatively affluent households. Furthermore, a decomposition of the elasticity estimate reveals that income explains up to one-half of the association between wealth of parents and their adult children. What also becomes apparent is that in conducting their decomposition, the estimate reveals an endogeneity problem. It is critical to note that not only is intergenerational wealth correlated, but also intergenerational income is correlated. Previous research finds that in the United States, the father's earnings may explain up to two-fifth (0.4) of the son's income (Solon 1992, 1999; Lee and Solon 2009). Perhaps the broader meaning of the result by Charles and Hurst (2003) is that family resources and economic class can assist with wealth being carried from the parent to the adult child generation.

Charles and Hurst (2003) also use residuals from the regressions to correlate, by quintile, the adult child's wealth and the parent's wealth. Called a transition matrix, the correlations reveal the patterns of wealth across two generations. Lateral mobility in wealth carries the heaviest weight in terms of a proportion. Over one-third (36%) of parents with the lowest proportions of wealth in 1984 to 1989 are likely to have adult children who end up in the lowest wealth stratum in 1999. Meanwhile, over one-third (36%) of parents with the highest proportions of wealth are likely to have adult children who possess high levels of wealth. Upward and downward mobility are also themes of their analysis. Nearly 7% of parents who hold low amounts of wealth are likely to have children who hold high amounts of wealth. Finally, high amounts of wealth do not yield absolute immunity from downward mobility. In fact, slightly over one-tenth (11%) of parents who hold high levels of wealth are likely to have adult children that slide into the poorest wealth quintile (Charles and Hurst 2003, 1163). On face value, the results from the transition matrix appear to say that adult children are more likely to face downward mobility than upward mobility. Missing from their article on mobility is an exploration of race or potential black-white differences in the stability of wealth across generations.

Similarly to Charles and Hurst (2003), Conley and Glauber (2008) also explore the correlation of wealth using a framework of two generations. Conley and Glauber (2003) seek to understand the degree of upward mobility in wealth. They ask how many people emerge

from the lowest wealth quantile and end up in the highest quantile as adults. They also examine whether people have the capability to hold their wealth position from childhood to adulthood. Perhaps their main point of departure from Charles and Hurst (2003) is that they are not content to consider solely aggregate data on economic mobility and reproduction. They are also very much interested in disaggregation by race. Toward that end, they consider, separately, black and white observations from the PSID, with data covering 1984 to 2003. Their intergenerational analysis also uses a different conceptual foundation for sample restriction. Whereas Charles and Hurst (2003) limit their sample to adults within ages 25 to 65, Conley and Glauber (2008) compare the wealth in a juvenile's family to the wealth they obtain as an adult in later years. The former restriction uses an older cohort while the latter uses a younger cohort. Juveniles are between the ages of six and 21 in 1984. Wealth in the juvenile's family consists of the net worth of the parental household in the same year.

Parental household median net worth in 1984, adjusted to 2006 dollars, was $59,145. By 1999 to 2003, the juveniles have entered adult life at ages between 21 and 40. Their median net worth in 2006 dollars amounted to $27,495. The adult child's wealth is then compared to their parental household's wealth. An immediate implication of using a younger cohort model is that the sample overlooks adult households over the age of 40. According to the life cycle model, the age of 40 and beyond displays a more rapid rise, and peak, in income and wealth. Still, the younger cohort sample exposes the effect of legacies by wealth. A person's wealth legacy is largely derived from their family background. In terms of lateral mobility, Conley and Glauber (2008) find that over half (55%) of children with origins in households in the highest wealth group, households with a net worth of $155,000 or more in 1984 dollars, maintained their relative wealth position by the time they became adults. The exception to lateral mobility is a leapfrog from the lowest wealth stratum to the highest track. Conley and Glauber (2008) report that "less than 10 percent of children who grew up in families in the bottom wealth quartile, which had a max cut off at $8,000 in 1984, reached high wealth levels [i.e. top quartile] by early adulthood between 1999 and 2003." Such a finding echoes Charles and Hurst (2003), despite their use of a different cohort methodology.

For white households, their story on wealth is one of stability across generations. Fifty-

five percent of white children that live with parents who belong to the highest wealth category maintained their status in the highest wealth category as they grew into adults. However, black young adults are less likely to reproduce their wealth status if their parents were in the top tier of the wealth distribution. Only 37% of black children, who grew up in an environment where their parents were in the top quartile of black wealth holders, are able to stay in that top wealth quartile as grown adults.

For the entire sample, the parent-child elasticity is 0.28, according to Conley and Glauber (2008). In other words, wealth held in the parent generation is responsible for almost a third of the wealth held by adult children in the next generation. This estimate does not fall within the Charles and Hurst (2003) range; they compute an elasticity of 0.37. The main reason for the difference is that Charles and Hurst (2003) use an older cohort in their age-adjusted elasticity, whereas Conley and Glauber (2003) do not. The Charles and Hurst (2003) estimate is the superior one because their sample does not overlook adult children over the age of 40. Finally, Conley and Glauber (2008) show that the correlation of wealth for the entire sample mirrors the correlation for the white subsample, at 0.28. Meanwhile, black parent's wealth predicts their adult children's wealth at an estimated correlation coefficient of 0.22. Obviously, black parental wealth is much less likely to predict their offspring's wealth than white wealth. While there is much scholarship that focuses on parent-child generations, no scholarship has focused on the intergenerational correlation of wealth for grandchildren with respect to their grandparents.

# 3 Data

The data source for the series of statistical figures in this paper come from the Panel Study of Income Dynamics (PSID). The PSID survey is conducted and assembled by the Institute for Social Research, University of Michigan. It is a longitudinal survey that has been in existence since 1968. Quite expansive and representative of the nation's inhabitants, the PSID continuously follow households based on a series of economic and demographic measures.

Measures include racial identity, number of children present in the household, employment status, years of educational attainment, and age. Complementing these measures, the survey also compiles detailed information on household net worth and family income.

The PSID naturally lends itself to studying the association of wealth across generations. In the original core sample starting in 1968 there were a few thousand children in those households. As those children grew up to create their own households, the PSID continued to collect information on their economic and demographic measures. The multiplication of this household process means that the PSID now holds information on a few family generations, e.g. grandparents (first generation), parents (second generation), and their adult children (third generation). Linking up to three generations of a family tree is possible through the PSID's family mapping technology. Such a longitudinal design allows for a unique exploration on intergenerational family comparisons and intrafamilial connections with respect to wealth and financial asset components.

This paper uses research from predecessors as a base to replicate and extend the social science literature. First, we seek to replicate the results generated by Charles and Hurst (2003). Using their two generation framework, we assemble a data set that pairs 1,438 adult children with their parents. Data on adult children come from the 1999 wave of the PSID, while the data on parents come from the interval 1984 to 1989. A restriction of the sample is that it represents families that are in the prime stages of their life cycle. Adult children are in the age range of 25 and 65 in 1999. Parents are between 25 and 65 in 1984. We then replicate key descriptive statistics and their finding on the parent-child elasticity. When this analysis refers to age-adjusted elasticity, it refers to the sample restriction that both parents and adult children are between the age of 25 and 65. One extension to the Charles and Hurst (2003) paper and the literature comes in the form of presenting descriptive facts and generating elasticity of wealth with respect to different asset components; in an environment where very little is known about the elasticity of different asset types.

Another extension includes going back to the grandparent generation. Our motivation for examining the grandparent generation is to provide a more complete story on economic transfers in the extended family. Under a framework of three generations, we compile data

that pairs 152 grandparents with their adult grandchildren. Core demographic information, wealth and income measures on adult grandchildren households are drawn from the 2007 PSID. For grandparents, their data covers the period 1984 to 1989. The sample restriction is similarly applied to the data with three generations, where adult grandchildren are between the ages of 25 and 65 in 2007. Without exception, grandparents are within the age range of 25 and 65 in 1984. Finally, we compile data that pairs 130 grandparents with their adult grandchildren, with measures on the adult grandchildren stemming from the 2013 wave of the PSID. We acknowledge an inherent limitation of the data in this study. Data, and results, may be sensitive to life cycle bias; that is, attrition bias of wealth across three generations. Simply put, the adult grandchildren will have fewer grandparents living in 2013.

# 4 Empirical Methodology

## 4.1 Computing Elasticity of Wealth across Family Generations

Multivariate regressions of the double logarithmic form yield elasticities, where both the dependent variable and the independent variable of interest are in natural log form. In general, elasticities describe changes in proportions, or sensitivity. We are interested in the sensitivity of percentage change in adult child's wealth given a very small percentage change in parent's or grandparent's wealth. Formally, let

$$W_{child} = f(W_{parent}, A_{child}, A_{parent}) + \epsilon \tag{1}$$

where $W_{child}$ = log wealth of adult children (third generation); $W_{parent}$= log wealth of parents (second generation); $A_{child}$ = variables of age and age squared of adult children; $A_{parent}$= variables of age and age squared of parents; $\epsilon$ = error term. Wealth of the parent generation is measured as a five-year average (1984-1989) and wealth of the adult child generation comes from 1999. Positive levels of wealth are included in wealth variables ($W_{child} > 0$, $W_{parent} > 0$); excluding those with zero wealth. We do not consider the log of negative wealth to avoid elasticities that yield complex numbers. Complex numbers, or irrational values, in an

analysis such as this would depart from convention used in the social science literature, e.g. Charles and Hurst (2003) and Conley and Glauber (2008). It would also disrupt the ease of exposition, presenting elasticities that are less natural to interpret. For these reasons, we use positive wealth variables to estimate the correlation of wealth across family generations. Equation 1 captures the elasticity of wealth across parent-child generations, using age as a covariate. Using age as a covariate helps to compare generations during their prime working ages. The elasticity comes in the form of the coefficient associated with log wealth of parents. There are many ways to interpret the coefficient associated with the log wealth of parents. Suppose that the estimated coefficient is 0.37. A conventional way to interpret the coefficient is to say that a 10% increase in parent's wealth is associated with a 3.7% increase in adult child's wealth. The economic meaning is that the variable of parent's wealth has a powerful impact on predicting their child's wealth, albeit with a lag, and provided that age is held constant. Appearing in different empirical performances, Equation 1 first replicates the parent-child elasticity that Charles and Hurst (2003) compute, then disaggregates by black and white households to aid in intergroup comparisons. This process is repeated for the various asset types.

Extensions to the intergenerational analysis come in the form of Equation 2. Consider the relation

$$W_{child} = f(W_{grandparent}, A_{child}, A_{grandparent}) + \epsilon \tag{2}$$

where $W_{grandparent}$= log wealth of grandparents (first generation); $A_{grandparent}$= variables of age and age squared of grandparents; $\epsilon$= error term. Same measures apply to log wealth of grandparents. Wealth of the grandparent generation is measured as a five-year average (1984-1989), and wealth of the adult child generation comes from either 2007 (before Great Recession) or 2013 (after Great Recession). Non-negative levels of wealth are considered ($W_{child} > 0, W_{grandparent} > 0$). With regards to wealth, Equation 2 reveals the elasticity across three generations, proceeding next to black and white observations and asset components.

Elasticities provide important insights about intergenerational transfers of wealth. A

major strength of computing elasticities is that they indicate movement in wealth, providing assessment in light of the mean for the parent generation or the adult child generation, etc. They are also indicators of stretch in the sample, standing for distance like time or like a generation on the family tree (Conley and Glauber 2008; Cameron and Trivedi 2010). However, whatever advances are made in terms of understanding movement and stretch of wealth, elasticities certainly lack for a more detailed view. They can broadly explain that the wealth of adult children is statistically related to, or dependent upon, the wealth of their parents or grandparents. However, they cannot pinpoint the exact details that contribute to the movement of wealth carried across generations. A more detailed view would be able to sort between possible resource, social network, and information effects, for example.

# 5 Results

## 5.1 Descriptive Statistics

### 5.1.1 PSID Sample for Parents-Adult Children, 1984-1999

Descriptive statistics for comparing parents and adult children on key measures are presented in Table 5.1. Columns (1) and (2) of Table 5.1 describe the overall PSID sample for parents and their progeny. Traits of the overall PSID sample for 1984 to 1999 fit into the story of the age-wealth profile of the average household. The average household story, however, is told from the perspective of two family generations. That is, higher levels of household income, greater proportions of households owning different asset types, and higher levels of wealth accumulation may be attributed to parents being older (51.56) than their adult children (37.44), on average.

Measures on average age, average household income, proportions of the sample owning stocks, a home, or a business are reproductions of Charles and Hurst's (2003) work. Table 5.1 is distinguished by offering a more comprehensive set of measures on parents and their adult children. That comprehensive set of measures include proportions of households owning bonds, a bank account, retirement wealth, real estate, and features a wider range of

percentiles of net worth than were previously considered.

There are a few exceptions to the general age-wealth profile logic in the PSID sample. In the case of owning retirement wealth, a larger proportion of adult children (nearly 23%) in 1999 own such wealth compared to their parents (4.54%) in 1984 to 1989. King and Dicks-Mireaux (1982) find similar patterns for retirement wealth. A similar conclusion is reached by Ghilarducci (2008, 2012), that American households typically are unsuccessful at furnishing enough for retirement. Another exception occurs with respect to owning real estate. Parents own real estate at a slightly lower rate (14%) than adult children (17.33%). A parallel trend exists in the ownership of stocks. The percentage of households owning stock rises from the parent generation (20%) to the adult child generation (34%). This description is in line with the literature. Stock ownership rises, for all households, from early 1990's to 1998. After 1998, however, the proportion of black households engaged in stock ownership rapidly declines, yet white households experience is a steady progression (Hanna and Lindamood 2008).[3]

### 5.1.2 Black-White Subsample for Parents-Adult Children, 1984-1999

The rest of Table 5.1 shows the sample statistics by race for comparing parents and children on core indicators. On core indicators, the black and white sample is logically consistent with the PSID sample, supporting the age-wealth profile. Average age difference between parents and their adult children can claim responsibility for higher positions in household income, wealth and asset types being associated with parents. But while the average age difference between black adult children (38.88) and white adult children (39.67) is minuscule, and the average age difference between black parents (50.44) and white parents (48.9) is small, there are substantial differences on income and wealth measures.

Let us consider the parent generation. The black-white gap in average parent household income is over $28,000 in 1996 dollars. On the composite wealth measure, the ratio of

[3]Actually, Charles and Hurst (2003) originally reveal that the percentage of parents owning stock is 50% and the proportion owning a business is 30%. However, this is a considerable exaggeration because such proportions do not bear out in the PSID data that we compile. Neither Charles nor Hurst have responded to numerous request for data and code replication files.

Table 5.1: Sample Statistics on Parent-Child Demographic, Income, and Wealth Measures, 1984-1999

| | **PSID Sample** | | **Black** | | **White** | |
|---|---|---|---|---|---|---|
| | Parents | Children | Parents | Children | Parents | Children |
| **Measures** | (1984-1989) | (1999) | (1984-1989) | (1999) | (1984-1989) | (1999) |
| Age | 51.56 | 37.44 | 50.44 | 38.88 | 48.9 | 39.67 |
| | (5.67) | (7.07) | (6.11) | (8.17) | (5.14) | (8.62) |
| Average Household Income | $70,761 | $56,592 | $43,947 | $41,980 | $71,962 | $67,688 |
| | (28151) | (48188) | (18225) | (22743) | (29977) | (61223) |
| Proportion owning stocks | 19.53 | 33.96 | 15.26 | 3.27 | 24.11 | 43.35 |
| | (39.64) | (47.35) | (35.96) | (17.78) | (42.77) | (49.55) |
| Proportion owning bonds | 33.13 | 15.93 | 12.77 | 10.36 | 39.23 | 21.16 |
| | (47.06) | (36.59) | (33.37) | (30.47) | (48.82) | (40.84) |
| Proportion owning a home | 92.48 | 69.15 | 44.75 | 36.03 | 82.38 | 75.61 |
| | (26.37) | (46.18) | (49.72) | (48.01) | (38.09) | (42.94) |
| Proportion owning a business | 17.3 | 12.68 | 5.41 | 2.2 | 24.17 | 17.55 |
| | (37.82) | (33.53) | (22.62) | (14.66) | (42.81) | (38.04) |
| Proportion owning retirement wealth | 4.54 | 22.92 | 3.09 | 5.64 | 6.58 | 31.55 |
| | (20.81) | (42.03) | (17.31) | (23.06) | (24.79) | (46.47) |
| Proportion owning a bank account | 73.54 | 69.18 | 47.49 | 38.86 | 90.68 | 83.2 |
| | (44.11) | (46.17) | (49.93) | (48.74) | (29.07) | (37.38) |
| Proportion owning real estate | 13.96 | 17.33 | 7.18 | 3.86 | 12.15 | 15.47 |
| | (34.65) | (37.85) | (25.81) | (19.14) | (32.67) | (36.16) |
| Percentile of wealth | | | | | | |
| 10th | $5,134 | $5,076 | $453 | $827 | $12,700 | $3,854 |
| 25th | $23,977 | $16,920 | $1,510 | $3,760 | $36,830 | $15,040 |
| 50th (median) | $71,725 | $48,880 | $16,865 | $12,690 | $75,203 | $51,512 |
| 75th | $158,248 | $121,624 | $54,904 | $34,780 | $178,435 | $172,960 |
| 90th | $403,170 | $265,080 | $63,500 | $80,840 | $360,045 | $389,160 |
| Average wealth (level) | $281,804 | $135,048 | $56,486 | $48,288 | $239,296 | $148,857 |
| | (1382171) | (380534) | (132007) | (309850) | (190441) | (270638) |
| Average wealth (log) | 11.68 | 10.7 | 9.54 | 9.09 | 11 | 10.73 |
| | (0.85) | (1.81) | (1.62) | (2.35) | (1.51) | (1.76) |

Notes: The data set pairs 1,438 adult children with their parents. Data on adult children come from the 1999 wave of the PSID, while the data on parents come from 1984 to 1989. A restriction of the sample is that families are in the prime stages of their life cycle; adult children are within the age range of 25 and 65 in 1999, and parents are between 25 and 65 in 1984. Wealth and income figures shown are in 1996 dollars. Standard deviations are shown in parentheses. Figures in the table are all computed using PSID provided longitudinal weights.

median net worth is 22.43% [=$16,865/$75,203]. This means that at the median black parents own about 22% of the wealth that is possessed by the white parents. Breaking down the composite measure, we find that asset-type ownership is held in varying proportions. Lower proportions of black parent households own stocks (15.26%), bonds (12.77%), a home (44.75%), a business (5.41%), retirement wealth (3.64%), a banking account (47.49%), and real estate (7.18%). Their white counterparts own stocks (24.11%), bonds (39.23%), a home (82.38%), a business (24.17%), retirement wealth (6.58%), a banking account (90.68%), and real estate (12.15%) in much higher proportions.

Differences on wealth and income appear to be passed virtually unchanged from the parent generation to the next generation. The second generation racial gap in average family income is around $25,708. The magnitude of the racial wealth gap among adult children is also similar to the one for parents. With a median wealth ratio at 24.63% [=$12,690/$51,512], black adult children possess about 25% of the wealth that is possessed by white adult children. Remaining parts of wealth yield patterns of divergence in asset ownership. Lower proportions correspond to the lived experiences of black adult children, including their percentages on owning stocks (3.27%), bonds (10.36%), a house (36.03%), a business (2.2%), retirement wealth (5.64%), a banking account (38.86%), and property (3.86%). Meanwhile, white adult children enjoy higher proportions of asset ownership, examples include stocks (43.35%), bonds (21.16%), homeownership (75.61%), business proprietorship (17.55%), retirement savings (31.55%), being banked (83.2%), and holding real estate (15.47%). Several economic implications can be derived from these data. Under the framework of two generations, the overall pattern supports the age-wealth profile. A rise in age is associated with a precipitous rise in wealth accumulation and ownership of asset types, with some exceptions noted. A second implication is that families are in different positions in the age-wealth profile. Typically, white parents are on a higher position while black parents are on a lower position. These racialized positions in income, net wealth and asset types in one generation are then renewed in the next. What the results provide are preliminary evidence that there are intergenerational forces at work – forces that help to stratify the American population into wealth groups.

### 5.1.3 PSID Sample for Grandparents-Adult Grandchildren, 1984-2007

Columns (1) and (2) of Table 5.2 illustrate the overall PSID sample for grandparents and their adult grandchildren. Information on grandparents and grandchildren on categories of average age, average household income, proportions of the sample owning stocks, a home, or a business are full extensions of Charles and Hurst's (2003) work and the social science literature. Features of the overall PSID sample for 1984 to 2007 align with the fundamental tenants of the age-wealth profile. Now told from the perspective of three generations, higher levels of average household income, larger percentages of households possessing different asset components, and higher levels of wealth accumulation may be afforded by a rise in age. Typically, grandparents are older (57.51) than their adult grandchildren (40.36).

There are moments, however, where being older does not have a decisive advantage over being younger in terms of asset ownership. One exception to the general age-wealth profile comes in form of owning retirement wealth, where a larger proportion of adult grandchildren (nearly 27%) in 2007 own such wealth compared to their grandparents (merely 1%) in 1984 to 1989. Another exception is noted in the area of real estate. Grandparents own real estate at a slightly lower rate (12.33%) than adult grandchildren (14%). A third exception is visible in the ownership of stocks. The percentage of households owning stock rises from the grandparent generation (22.48%) to the adult grandchild generation (37%).

### 5.1.4 Black-White Subsample for Grandparents-Adult Grandchildren, 1984-2007

Columns (4) to (6) of Table 5.2 display the subsample statistics by race for comparing grandparents and grandchildren on core measures. On core measures, the black and white subsample conforms to the PSID sample – faithful to the age-wealth profile. That is, average age difference between grandparents and their adult grandchildren correspond to a progression in household income, wealth and asset types being associated with grandparents. Average age difference among black grandparents (56.27) and white grandparents (57.51) is trivial. And, the average age difference between black adult grandchildren (38.27) and white adult grandchildren (41.88) is small. Despite there being small differences in age, there are marked

Table 5.2: Sample Statistics on Grandparent-Grandchild Demographic, Income, and Wealth Measures, 1984-2007

| | **PSID Sample** | | **Black** | | **White** | |
|---|---|---|---|---|---|---|
| | Grand-parents | Adult Grand-children | Grand-parents | Adult Grand-children | Grand-parents | Adult Grand-children |
| **Measures** | (1984-1989) | (2007) | (1984-1989) | (2007) | (1984-1989) | (2007) |
| Age | 57.51 | 40.36 | 56.27 | 38.27 | 57.51 | 41.88 |
| | (3.66) | (6.23) | (4.02) | (5.39) | (3.7) | (5.17) |
| Average Household Income | $72,924 | $60,427 | $46,313 | $39,221 | $75,759 | $68,596 |
| | (18599) | (41733) | (16190) | (30048) | (20002) | (51648) |
| Proportion owning stocks | 22.48 | 37 | 16.74 | 3.86 | 27.54 | 44.7 |
| | (41.74) | (48.28) | (37.33) | (19.26) | (44.67) | (49.71) |
| Proportion owning bonds | 41.8 | 22.99 | 6.29 | 7.58 | 56.68 | 28.83 |
| | (49.32) | (42.07) | (24.27) | (26.46) | (49.55) | (45.29) |
| Proportion owning a home | 84.44 | 77.09 | 46.36 | 34.91 | 78.42 | 72.39 |
| | (36.24) | (42.02) | (49.86) | (47.66) | (41.13) | (44.7) |
| Proportion owning a business | 10.53 | 5.06 | 7.21 | 5.22 | 15.3 | 10.53 |
| | (30.69) | (21.91) | (25.86) | (22.24) | (35.99) | (30.69) |
| Proportion owning retirement wealth | 1 | 27.43 | 0.36 | 7.58 | 1 | 32.12 |
| | (9.94) | (44.61) | (5.98) | (26.46) | (9.94) | (46.69) |
| Proportion owning a bank account | 77.26 | 68.83 | 53.19 | 42.59 | 95.35 | 87.43 |
| | (41.91) | (46.31) | (49.89) | (49.44) | (21.05) | (33.15) |
| Proportion owning real estate | 12.33 | 13.82 | 7.21 | 5.73 | 13.9 | 15.7 |
| | (32.87) | (35.51) | (25.86) | (23.24) | (34.59) | (36.38) |
| Percentile of wealth | | | | | | |
| 10th | $22,606 | $910 | $2,730 | $910 | $47,126 | $1,001 |
| 25th | $65,768 | $6,388 | $6,536 | $3,640 | $55,539 | $8,190 |
| 50th (median) | $76,000 | $53,781 | $22,040 | $18,842 | $99,256 | $79,935 |
| 75th | $264,859 | $192,105 | $67,340 | $59,455 | $172,223 | $199,481 |
| 90th | $413,418 | $399,490 | $140,896 | $141,050 | $354,462 | $399,500 |
| Average wealth (level) | $321,821 | $143,271 | $56,575 | $48,993 | $249,236 | $147,585 |
| | (125060) | (209271) | (87096) | (67747) | (140201) | (210948) |
| Average wealth (log) | 12.3 | 10.75 | 9.4 | 9.28 | 11.06 | 10.7 |
| | (0.34) | (2.3) | (1.8) | (2.41) | (1.08) | (2.04) |

Notes: The data set pairs 152 adult grandchildren with their grandparents. Data on adult grandchildren come from the 2007 wave of the PSID, while the data on grandparents come from 1984 to 1989. A restriction of the sample is that families are in the prime stages of their life cycle; adult grandchildren are within the age range of 25 and 65 in 2007, and grandparents are between 25 and 65 in 1984. Wealth and income figures shown are in 2005 dollars. Standard deviations are shown in parentheses. Figures in the table are all computed using PSID provided longitudinal weights.

differences on indicators of social well-being.

Let us turn to the grandparent generation. Adjusted in 2005 dollars, the black-white ratio of median net worth is 22.21% [=$22,040/$99,256], according to 1984 to 1989 data. This means that, at the median, black grandparents own about 22% of the wealth that is possessed by the white grandparents. Looking into the foundations of wealth, we find divergent proportions of financial asset ownership. Much lower proportions of black grandparent households own stocks (16.74%), bonds (6.27%), a home (46.36%), a business (7.21%), retirement wealth (0.36%), a banking account (53.19%), and real estate (7.21%). Their white counterparts own stocks (27.54%), bonds (56.68%), a home (78.42%), a business (15.3%), retirement wealth (1%), a banking account (95.35%), and real estate (13.9%) in higher proportions.

Varying proportions in the ownership of wealth in the grandparent's generation pave the way for their descendants in the third generation. With a median wealth ratio at 23.57% [=$18,842/$79,935], black adult grandchildren possess about one-quarter of the wealth that is possessed by their white peers in 2007. Other aspects of wealth show differences in asset ownership. Lower percentages are associated with black adult grandchildren, including their percentages on owning stocks (3.86%), bonds (7.58%), a home (34.91%), a business (5.22%), retirement wealth (7.58%), a banking account (42.59%), and property (5.73%). White adult grandchildren, meanwhile, enjoy much higher proportions of asset ownership. Examples include stocks (44.7%), bonds (28.83%), homeownership (72.39%), business proprietorship (10.53%), retirement savings (32.12%), being banked (87.43%), and holding real estate (15.7%). Where adult grandchildren are positioned in their cohort may be dependent on their grandparent's legacy in wealth.

### 5.1.5 Black-White Subsample for Adult Grandchildren, 2013

The preceding results provide a view on wealth accumulation and inequality of adult grandchildren before the Great Recession from late 2007 to July 2009. This section details the tendencies of wealth ownership in the aftermath of the recession. Table 5.3 displays de-

scriptive statistics on adult grandchildren by race for 2013. Adult grandchildren are older in their life cycle. By 2013, on average, black adult grandchildren are 41 and white adult granchildren are nearly 45 in age. Although adult grandchildren are gaining in years of age, the economic circumstances greatly weaken their wealth accumulation. Indeed, the availability of family wealth declines, particularly for black families, which accelerates racial wealth inequality. In fact, by 2013 the median wealth ratio drops to 15.21% [=$13,640/$89,688]. This implies that the median black adult grandchild owns 15% of the wealth that is owned by the median white adult granchild in 2013. Meanwhile, the ownership of particular asset components decline but do not escape from disparity. On a lower rung of asset ownership include black adult children, who hold lower percentages of stocks (0.09%), bonds (4.91%), a home (39.68%), business (4%), retirement wealth (3%), bank account, (22.02%), and real estate (2.17%). Their white peers are on a slightly higher rung of asset ownership, including their ownership of stocks (45.57%), bonds (27.9%), homeownership (71.74%), business proprietorship (5.42%), wealth in retirement (38.12%), bank account (85.57%), and proportion owning real estate (14.88%). The tendencies in wealth after the Great Recession are characterized by the movement toward greater inequality and the contraction in ownership of different asset types.

## 5.2 Elasticity of Wealth across Family Generations

### 5.2.1 Elasticity of Wealth across Two Generations, 1984-1999

Whereas descriptive statistics allow for comparing how generations fare with respect to endowments in income, wealth, and particular asset ownership, elasticities allow for correlating intergenerational family wealth. Table 5.4 presents the elasticities of wealth across two generations. Column (1) of Table 5.4 supplies the elasticity for the overall PSID sample, in the precinct of 0.39. In other words, over the period of 1984 to 1999, parental net worth is a force that explains over one-third of the net worth of their adult children. This result is a replication of the main finding of Charles and Hurst (2003), with a slight overstatement of .02. To put it another way, when parental wealth rises by 10% in their cohort, this is associated with a 3.9% rise for the adult children among their generation. Although not

Table 5.3: Sample Statistics on Adult Grandchild Demographic, Income and Wealth Measures, 2013

| | **PSID Sample** | **Race** | |
|---|---|---|---|
| | Adult Grandchildren | Black Adult Grandchildren | White Adult Grandchildren |
| **Measures** | (2013) | (2013) | (2013) |
| Age | 42.12 | 41.37 | 44.81 |
| | (4.95) | (4.94) | (4.06) |
| Average Household Income | $65,755 | $35,460 | $83,859 |
| | (59198) | (30384) | (68184) |
| Proportion owning stocks | 41.74 | 0.09 | 45.47 |
| | (49.31) | (2.99) | (49.79) |
| Proportion owning bonds | 21.7 | 4.91 | 27.9 |
| | (41.22) | (21.6) | (44.85) |
| Proportion owning a home | 63.32 | 39.68 | 71.64 |
| | (48.19) | (48.92) | (45.07) |
| Proportion owning a business | 1.39 | 4 | 5.42 |
| | (11.7) | (19.59) | (22.64) |
| Proportion owning retirement wealth | 25.38 | 3.02 | 38.12 |
| | (43.51) | (17.11) | (48.56) |
| Proportion owning a bank account | 63.39 | 22.02 | 85.57 |
| | (48.17) | (41.43) | (35.13) |
| Proportion owning real estate | 11.76 | 2.17 | 14.88 |
| | (32.21) | (14.57) | (35.58) |
| Percentile of wealth | | | |
| 10th | $2,020 | $1,010 | $2,020 |
| 25th | $8,080 | $2,525 | $24,745 |
| 50th (median) | $30,300 | $13,640 | $89,688 |
| 75th | $116,655 | $65,650 | $240,380 |
| 90th | $247,450 | $170,185 | $354,510 |
| Average wealth (level) | $114,621 | $83,513 | $210,744 |
| | (249731) | (192668) | (360924) |
| Average wealth (log) | 10.34 | 9.71 | 11.13 |
| | (1.85) | (1.05) | (2.49) |

Notes: The data set pairs 130 adult grandchildren with their grandparents. Data on adult grandchildren come from the 2013 wave of the PSID, while the data on grandparents come from 1984 to 1989. A restriction of the sample is that families are in the prime stages of their life cycle; adult grandchildren are within the age range of 25 and 65 in 2013. Wealth and income figures shown are in 2013 dollars. Standard deviations are shown in parentheses. Figures in the table are all computed using PSID provided longitudinal weights.

Table 5.4: Elasticity of Racial Wealth across Two Generations, 1984-1999

| | **PSID Sample** | **Race** | |
|---|---|---|---|
| | Parents | White Parents | Black Parents |
| | (1984-1989) | (1984-1989) | (1984-1989) |
| Adult Children (1999) | 0.39 (0.03) | ... | ... |
| White Adult Children (1999) | ... | 0.48 (0.05) | ... |
| Black Adult Children (1999) | ... | ... | 0.17 (0.04) |

Notes: Age-adjusted wealth elasticities across parent and child family generations are shown. Elasticities are computed using double logarithmic regressions, where variables are evaluated in light of the sample averages. Parental wealth is measured as the log of an average of non-negative net worth over 1984 to 1989 waves of the PSID. Adult child wealth is measured as the log of net worth in 1999. Standard errors of regressions (in parentheses) are robust to heteroskedasticity.

previously recognized by Charles and Hurst (2003), one interpretation of this result is that there is significant lagging or downward mobility for children from comparatively affluent households.

A valuable contribution to the overall PSID sample elasticity, and the social science literature, comes in the form of showing the racial dimension. Columns (2) and (3) of Table 5.4 display the correlation of wealth for whites and blacks, respectively. The age-adjusted elasticity of wealth for white parent-child pairs is 0.48. That is, when parental wealth increases by 10% in their cohort, this is associated with a 4.8% rise for the adult children among their generation. A generation that is blessed with the preceding family's wide array of wealth allows for greater possibilities of white families to reproduce their economic standing. By comparison, the economic standing of black family generations fare less well. As reported in Table 5.4, black parental wealth over 1984 to 1989 explains a mere one-fifth (0.17) of the wealth obtained by black adult children by 1999. Simply put, family background accounts for less of the economic standing and material reproduction of black families. More, the estimated elasticity suggests that there is a fair amount of lagging across generations. When black parental wealth increases by 10% in their generation, this is affiliated with a 1.7% rise for the black adult children among their generation.

These results resemble the core findings of Conley and Glauber (2008). Recall that they find that white parent's wealth predicts their adult children's wealth by an amount of 0.28. For their black counterparts the intergenerational family wealth elasticity is 0.22.

Table 5.5: Elasticity of Racial Wealth across Three Generations, 1984-2007

| | **PSID Sample** | **Race** | |
|---|---|---|---|
| | Grand-parents | White Grandpar-ents | Black Grandpar-ents |
| | (1984-1989) | (1984-1989) | (1984-1989) |
| Adult Grandchildren (2007) | 0.13 (0.03) | ... | ... |
| White Adult Grandchildren (2007) | ... | 0.18 (0.08) | ... |
| Black Adult Grandchildren (2007) | ... | ... | 0.02 (0.04) |

Notes: Age-adjusted wealth elasticities across grandparent and grandchild family generations are shown. Elasticities are computed using double logarithmic regressions, where variables are evaluated in light of the sample averages. Grandparental wealth is measured as the log of an average of non-negative net worth over 1984 to 1989 intervals of the PSID. Adult grandchild wealth is measured as the log of net worth in 2007. Standard errors of regressions (in parentheses) are robust to heteroskedasticity.

Resemblance is revealed through the strong correlation between the wealth accumulations of white parents and the wealth holdings of their adult children. But a much weaker correlation is revealed for black parent-child pairs. However, there are substantial differences on both the dispersion of the computed elasticities and the conception of the methodology. As we discussed before the differences may be driven by the use of vastly different cohort methodologies. Whereas our results rely on an older cohort, where ages are between 25 to 65, Conley and Glauber (2008) rely on a younger cohort. Our estimate is the superior one because our sample does not overlook adult children over the age of 40. The life-cycle model posits that the age of 40 and above offers a more rapid rise, and peak, in income and wealth accumulation. Perhaps along with that rapid rise is a widening of the inequalities facing households. Imprinted in our descriptive statistics is the persistence of racial disparities in income, net worth, and financial asset ownership across generations. These disparities may very well dictate the racial differences in accumulation and estimated correlation.

### 5.2.2 Elasticity of Wealth across Three Generations, 1984-2007

Table 5.5 presents the elasticities of wealth across three generations. Column (1) of Table 5.5 describes the intergenerational wealth correlation for the overall PSID sample, which

Table 5.6: Elasticity of Racial Wealth across Three Generations, 1984-2013

| | **PSID Sample** | **Race** | |
|---|---|---|---|
| | Grandparents | White Grandparents | Black Grandparents |
| | (1984-1989) | (1984-1989) | (1984-1989) |
| Adult grandchildren (2013) | .33 ( .04) | ... | ... |
| White adult grandchildren (2013) | ... | .60 (.05) | ... |
| Black adult grandchildren (2013) | ... | ... | .09 (.04) |

Notes: Age-adjusted elasticities across grandparent and grandchild family generations for financial assets are shown. Elasticities are computed using double logarithmic regressions, where asset variables are evaluated in light of the sample averages. Each financial asset held by the grandparent's generation is measured as the log of an average of non-negative wealth over 1984 to 1989 waves of the PSID. Each asset type held by the adult grandchilds' generation is measured as the log of wealth in 2013. Standard errors of regressions (in parentheses) are robust to heteroskedasticity.

is 0.13. Over the period of 1984 to 2007, grandparental net worth is a force that explains slightly over one-tenth of the net worth of their adult grandchildren. Such correlation is lower than what is found between parents and their progeny. The difference may be due to time. The closer in time there is between three generations, the higher the correlation coefficient. Conversely, the more distance there is in time, the lower the association. Still, the theme of lagging behind still resonates. When grandparent's wealth rises by 10% in their generation the result is a 1.3% rise for the adult grandchildren in their cohort. This result provides as an extension to the social science literature.

Disaggregated by race, we find a much higher reproduction of wealth across white grandparent-adult grandchildren pairs. In fact, grandparental wealth may directly account for two-tenth (0.18) of the net worth obtained by white adult grandchildren. In short, when wealth in the grandparent generation increases by 10%, wealth in the adult grandchild generation increases by 1.8%. Meanwhile, black grandparent's wealth predicts their adult grandchildren wealth at an estimated correlation coefficient of 0.02. That is, when black grandparental wealth increases by 10% in their cohort, this is associated with a 0.2% rise for the adult grandchildren among their generation.

### 5.2.3 Elasticity of Wealth across Three Generations, 1984-2013

Table 5.6 displays the grandparent-to-grandchild transfer of wealth for 1984-2013. The intergenerational transfer of net wealth from grandparents to adult granchildren between 1984 and 2013 is in the neighborhood of 0.33. This means that, to use the family names given in "Keeping Up with the Joneses" by Arthur Momand (1913), if grandparent Jones holds two times the amount of family wealth as grandparent McGinis, the adult grandchild in the Jones family will have a networth that is 33% above the wealth owned by the adult grandchild of the McGinis family. This correlation is higher than the correlation that is found to exist between grandparents and their adult grandchildren (0.13%) between 1984 to 2007. Perhaps an answer is rooted in average age of the adult grandchild in the life cycle of wealth accumulation. Recall that the intergenerational wealth elasticity is adjusted for age and estimated in light of the sample averages for independent variables. Age variables for adult grandchildren show that they are indeed younger in 2007 than in 2013. By implication, wealth accumulation is among its lowest level when adults are younger, while it is much higher when adults are older, according to the general life-cycle model.

The elasticity of grandparent to adult grandchild along racial dimensions vary in possibilities of reproduction. The correlation in net wealth between a white grandparent and grandchild is 0.60. This elasticity implies that higher reproduction is patterned after the higher initial wealth endowments of white grandparents. Although this may be true, however, caution must be used because the correlation does suffer from multicollinearity in the age variables. With regards to three generations of the black family tree, the estimated correlation coefficient is around 0.09. Such correlation matches the account observed in previous estimates, that wealth in the black family tree faces very little intergenerational mobility in net wealth.

## 5.3 Elasticity of Asset Types across Generations

### 5.3.1 Elasticity of Asset Types across Two Family Generations, 1984-1999

The component parts of net worth offer a more detailed look into how lower and higher wealth trajectories are determined. Our detailed orientation on the components of net worth in the PSID come from Gittleman and Wolff (2004). The portfolio composition for black households resemble a combination of a peculiar imbalance and spectacular growth. Between 1984 and 1989, a vast majority of black wealth is carried by the asset components of homeownership, business, vehicles, and banking account. The proportion of black households that possess a home rises from 37.1% to 37.9% (Gittleman and Wolff 2004, 206). Home equity, though, is greatly represented in the wealth portfolio of black households. The proportion of net worth stemming from homeownership amounts to 55.2% and 46.5% over the span of 1984 and 1989. Simultaneously, stocks feature less prominently as a share of the portfolio composition. The share of blacks holding financial stock is 6.9% in 1984, adjusting to 6.4% by 1989. Over the same time horizon, stock assets account for 3.9% of the entire wealth portfolio, moving to 2.7%. Ownership of business assets also make less of an appearance in the portfolio. The share of black households owning an enterprise rises gently from 1.2% to 1.8%. Nonetheless, yields from business equity offer black households some of the most spectacular growth in their collection of assets, lifting from 4.6% to 18% as a percent of all wealth. Finally, the second largest pathway to wealth for black households is the banking account; nearly half of black households own such an asset. More, the yields from a banking account loom as the third or fourth contributor of their portfolio.

Featuring a little more balance and stability in growth is the portfolio composition of asset types for white households. Compared to their black counterparts, the share of the portfolio supplied by home equity is lower (about one-third). Another difference is that the rest of the portfolio distribution is quite diverse, with key proportions coming from real estate, business, stocks, and owning a banking account. For whites, the banking account is roughly the first pathway, with 86% of white families owning this financial asset. And the banking account is decidedly the fourth contributor as a proportion of household wealth.

The stark differences on portfolio composition offer an important context. Such a context give us the underlying picture for the persistence in privilege and disadvantage of asset types carried from one generation to the next.

Table 5.7 presents the elasticities of wealth across parent-child generations by asset type and race. Based on Table 5.7, a row by row break down of the intergenerational elasticity by financial asset is what follows:

**Stocks.** All ages being equal, when parent's wealth in stock goes up by 10% in their generation the result is a 0.5% rise for the subsequent generation. An immediate implication of this result is that there exists very low correlation across generations with respect to stocks. That low correlation translates into low economic reproduction. Simultaneously, it means that children face a greater amount of downward mobility for this particular asset type. A similar pattern of accumulation and elasticity exists for the white parent-child pairs. Meanwhile, there is an absence of a pattern for black generations, largely due to a lack of sufficient observations to compute the correlation. This is a feature that is very much related to the insights that Chiteji and Stafford (1999) provide; if parents barely carry stocks in their wealth portfolio, then their adult children will barely carry stocks.

**Bonds.** Parental wealth in bonds is a factor that explains less than one-quarter (0.22) of the wealth in bonds held by the children's generation. Again, what emerges from this data is the dual theme of low reproduction and correlation. In some cases, the response is so low that it tilts into the negative territory. If white parental wealth in bonds goes up by 10%, their children's wealth in bonds goes up by 3.7% (in absolute value).

**Homeownership.** For the overall PSID sample, the intergenerational correlation for homeownership is 0.36. The statistical correlation is a bit weaker for black parent and children households, in the neighborhood of 0.14. Meanwhile, the association is much stronger for white families. Their elasticity of wealth in homeownership is 0.40. Overall, when parents hold home equity that increases by 10% in the parent generation, their adult children will possess housing wealth that rises by 3.6% in the adult child generation. When black parental housing wealth goes up by 10%, this is associated with a 1.4% rise for the adult

Table 5.7: Elasticity of Racial Wealth across Two Generations by Asset Type, 1984-1999

| | **PSID Sample** | **Race** | |
|---|---|---|---|
| | Parents-Children | Black Parents-Children | White Parents-Children |
| **Asset Type** | | | |
| Stocks | 0.05 (0.09) | ... | 0.05 (0.08) |
| Bonds | 0.22 (0.11) | ... | -0.37 (0.25) |
| Home | 0.36 (0.04) | 0.14 (0.06) | 0.40 (0.04) |
| Business | 0.46 (0.16) | ... | 0.38 (0.14) |
| Retirement | -0.53 (0.77) | ... | -0.09 (0.08) |
| Bank Account | 0.32 (0.03) | 0.19 (0.06) | 0.42 (0.05) |
| Real Estate | -0.05 (0.09) | ... | -0.05 (0.15) |

Notes: Age-adjusted elasticities across parent and child family generations for financial assets are shown. Elasticities are computed using double logarithmic regressions, where asset variables are evaluated in light of the sample averages. Each financial asset held by the parental generation is measured as the log of an average of non-negative wealth over 1984 to 1989 waves of the PSID. Each asset type held by the adult children generation is measured as the log of wealth in 1999. Standard errors of regressions (in parentheses) are robust to heteroskedasticity.

children among their generation. For white parent-child pairs the comparable figures are 10% and 4%. There is a striking similarity with regards to lagging behind. However, Myers and Chung (1996) find that even when black households have the same homeownership rate as white households, there is still a home equity gap due to discrimination in the terms that shape home equity, e.g. loan conditions and prices.

**Business.** The attribute of parental wealth in business explains nearly half (0.46) of their offspring's relative wealth position in business. The result for white families is also quite strong. Business equity held by the parent generation is associated with over one-third (0.38) of the business assets held by the adult child generation.

**Retirement.** When parental wealth in retirement increases by 10% among their cohort this determines that their children's wealth in retirement will rise by 5.3% (in absolute value) in their generation. The retirement dynamics for white families are consistent with this description. Actually, both results are consistent with the literature; families are under-prepared for retirement (King and Dicks-Mireaux 1982; Ghilarducci 2008, 2012).

**Banking Account.** A preceding generation with an increase of 10% in bank account wealth generates a result where their adult children hold an increase of 3.2% in their banking account. Figures also reveal that some generations are on a lower trajectory, while others are

Table 5.8: Elasticity of Racial Wealth across Three Generations by Asset Type, 1984-2007

| | **PSID Sample** | **Race** | |
|---|---|---|---|
| | Grandparents-Grandchildren | Black | White |
| **Asset Type** | | | |
| Home | 0.22 (0.05) | -0.02 (0.06) | 0.12 (0.08) |
| Bank Account | 0.21 (0.08) | -0.40 (0.09) | 0.71 (0.14) |

Notes: Age-adjusted elasticities across grandparent and grandchild family generations for financial assets are shown. Elasticities are computed using double logarithmic regressions, where asset variables are evaluated in light of the sample averages. Each financial asset held by the grandparent's generation is measured as the log of an average of non-negative wealth over 1984 to 1989 waves of the PSID. Each asset type held by the adult grandchilds' generation is measured as the log of wealth in 2007. Standard errors of regressions (in parentheses) are robust to heteroskedasticity.

on a higher trajectory with being banked. Falling into the lower trajectory are black parent-child pairs. In fact, when banking account wealth increases by 10% for black parents this is associated with an increase of 1.9% for their progeny's banking account wealth. Simply put, the influence of black parental wealth in banking assets is comparatively small. Meanwhile, if banking account wealth rises by 10% for white parents, the banking account wealth of white adult children gains by an amount of 4.2%.

**Real Estate.** Suppose that wealth in real estate increases by 10% for the parental generation. This presents a slight source of disadvantage for the next generation, where wealth in real estate increases by 0.5% (in absolute value). Such a pattern of accumulation of real estate wealth also holds for white families, provided that ages are the same.

### 5.3.2 Elasticity of Asset Types across Three Family Generations, 1984-2007

Table 5.8 shows the correlation of wealth across grandparent-adult grandchild generations by asset type and race. Where sample size and degrees of freedom allow, a brief description is what follows.

**Homeownership:** Overall, grandparental wealth is a force that accounts for nearly one-quarter (0.22) of the wealth in homeownership that is attained by adult grandchildren. There is also the force of hysteresis in homeownership. A 10% increase in grandparent's wealth in homeownership between 1984-1989 is affiliated with a 2.2% increase in adult grandchildren's

Table 5.9: Elasticity of Racial Wealth across Three Generations by Asset Type, 1984-2013

| | **PSID Sample** | **Race** | |
|---|---|---|---|
| | Grandparents-Grandchildren | Black | White |
| **Asset Type** | | | |
| Home | 0.10 (0.05) | 0.45 (0.33) | 0.04 (0.04) |
| Bank Account | 0.52 (0.06) | 0.19 (0.16) | 0.55 (0.08) |

Notes: Age-adjusted elasticities across grandparent and grandchild family generations for financial assets are shown. Elasticities are computed using double logarithmic regressions, where asset variables are evaluated in light of the sample averages. Each financial asset held by the grandparent's generation is measured as the log of an average of non-negative wealth over 1984 to 1989 waves of the PSID. Each asset type held by the adult grandchilds' generation is measured as the log of wealth in 2013. Standard errors of regressions (in parentheses) are robust to heteroskedasticity.

wealth in homeownership by 2007. The statistical correlation is less powerful for black grandparents and grandchildren, in the precinct of 0.02. With a 10% increase in black grandparent's wealth in homeownership, this determines that there will be a 0.2% increase (in absolute value) in their adult grandchildren's wealth in homeownership. Meanwhile, the association is relatively stronger for white generations. Their elasticity of wealth from owning a home is 0.12. In other words, a 10% rise in white grandparental wealth in homeownership is associated with a 1.2% rise in white adult grandchildren's wealth in homeownership.

**Banking Account:** A grandparent that sees a 10% increase in their banking account wealth helps to generate a result where their adult grandchildren experience a rise of about 2.1% in their banking account wealth. Statistical figures also reveal legacies by race. If bank account wealth rises by 10% for black grandparents, then this is associated with bank account wealth increasing by 4% (in absolute value) for their grandchildren. Comparatively, white adult grandchildren gain a lot in terms of their relative position with banking account wealth (7.1%), provided that their grandparents have wealth in banking assets that increase by 10%.

### 5.3.3 Elasticity of Asset Types across Three Family Generations, 1984-2013

In Table 5.9, we present the results for the grandparent-to-adult grandchild transfer of wealth by asset type for 1984-2013.

**Homeownership:** Analysis of grandparental wealth in homeownership reveals that it

accounts for nearly one-tenth (0.10) of the wealth in homeownership that is attained by adult grandchildren. Translated into relative terms, if grandparent Jones holds two times the amount of housing wealth as grandparent McGinis, the adult grandchild in the Jones family will possess home equity that is 10% above the housing wealth owned by the adult grandchild in the other family. Disaggregated by race the intergenerational transfer of housing wealth from black grandparents and their grandchildren is 0.45. With a 10% increase in black grandparent's housing wealth in homeownership, this determines that there will be a 4.5% rise in their adult grandchildren's housing wealth. However, due to the small sample size, and inflammation of the standard errors, we cannot speak about this result with much statistical confidence. Contrarily, the relative correlation is much weaker for white generations. Their elasticity of wealth from owning a home is 0.04, although it may be biased due to the presence of multicollinearity.

**Banking Account:** A grandparent that experiences a 10% rise in their banking account wealth helps to generate a result where their adult grandchildren experience a rise of about 5.2% in their banking account wealth. Together with the figures on race we can get an even clearer view of social mobility in banking fortunes. If bank account wealth rises by 10% for black grandparents, then this is associated with bank account wealth increasing by 1.9% for their grandchildren. In comparison, white grandparents with banking assets that rise by 10% will provide a pathway for their adult grandchildren's banking account wealth to rise by 5.5%.

With the findings on the elasticity of asset types, we are even more clearly able to see the particular differences that exist in wealth accumulation. Particular differences on the elasticity of wealth components help us understand why legacy effects in wealth remain unbroken. Legacy effects are related to a combination of linked forces occurring in asset types. Pronounced legacies, however, are revealed through the racial dimension. The children of white parents do indeed experience downward mobility in financial assets. But they also enjoy the intergenerational transfer of wealth associated with ownership of stocks, bonds, business equity, retirement wealth, a banking account, and real estate. With regards to grandparent-adult grandchild pairs, the advantages are more limited to homeownership and

bank account. Still, there are ever more forces of accumulation for white families. Results for black children indicate effects of lagging but also point to disadvantage. The only clear sources of elasticity through grandparents and parents come in the form of home equity and having an account for banking services. Clearly, fewer routes are available for blacks to carry their wealth across generations, which is a reminder of the peculiar imbalance of asset types in their portfolio. An underlying context for that imbalance is provided by Katznelson (2005), who argues that white wealth was significantly boosted and expanded through affirmative action over the 20th century. Our results indicate that not only is there persistence in advantages and disadvantages in different wealth components, but also indicate that there is hysteresis in asset types, particularly by race.

# 6 Conclusion

This paper explores intergenerational family transfers and wealth accumulation with an emphasis on two and three generations. The contributions of this paper are informed by 1984 to 2013 data from the PSID. Dynamics on a family tree's array of wealth are summarized through descriptive statistics. We show that the PSID samples from grandparents to adult grandchildren fit into the story of the age-wealth profile, with a few exceptions. We also find that families have vastly different wealth positions in the age-wealth profile; typically, white grandparents have higher wealth positions while black grandparents have lower wealth positions in net worth and financial asset ownership. These racialized positions in net wealth and asset types in one generation are then renewed in the next two generations. Descriptive statistics provide preliminary evidence that there are intergenerational forces at work – forces that help to stratify the American population into wealth groups.

Elasticities allow for correlating intergenerational family wealth. The elasticities of wealth and asset components are computed via multivariate regressions, using age as a covariate. We find that the children of white parents and grandparents may have higher wealth positions but there is little intergenerational mobility in net wealth. Meanwhile, we find that the children

of black parents and grandparents have wealth positions that lag far behind that of white families. But, similarly to white children, black children face very little intergenerational mobility in net wealth. These results reveal the hysteresis, a term coined for lagging behind, in wealth across generations.

Allowing for a detailed view into the intergenerational forces of accumulation, we compute the elasticities of different asset components. We find that the children of white parents enjoy the intergenerational transfer of wealth associated with ownership of stocks, bonds, business equity, retirement wealth, a banking account, and real estate. With regards to white grandparent-adult grandchild pairs, the advantages are more limited to homeownership and bank account. Still, there are ever more forces of accumulation for white family generations. In comparison, results for black children point to disadvantage. The only clear sources of intergenerational transfer of wealth (or elasticity) from grandparents and parents come in the form of homeownership and having an account for banking services. Clearly, fewer routes are available for blacks to carry their wealth across generations. Our results indicate that there are racialized legacies in wealth, legacies that are key determinants of intergroup disparity.

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