The Great Equalizer? Exploring K-12 Education and Wealth Outcomes Joanna Taylor, Tatjana Meschede, Alexis Mann

A good education is central to achieving the American Dream. The belief that hard work will produce success is based in the idea of good K-12 schools that prepare students for higher education and the workforce. Sociologist Heather Beth Johnson (2015) argues that setting their children on the path from school opportunity to good job and good life is a key part of parents' identity. "Providing their kids with a good education was a critical part of what it meant to them to be a *good* parent....the challenge was not simply to provide *an* education for their children – it was to provide *the best possible* education for them" (p. 53). Within a deeply unequal education system, parents with means buy homes in the best district they can, while those without will sometimes go to great lengths to get their child into a good school (Eaton, 2009).

And education seems to pay off. In the early 21st century, higher education is touted as the ticket into the middle class. College graduates earn nearly \$1 million more in their careers compared to those with only a high school diploma. Newly-minted graduates have access to a wider range of jobs and a higher likelihood of job stability, benefits, and economic security. However, the link between grade school education and later economic outcomes is less clear, particularly for amassing financial wealth. In other words, does attending a high-quality grade school tend to set young people on a path towards wealth accumulation, or are its impacts negligible? This paper attempts to explore the links between K-12 schooling and wealth in early adulthood.

Because education is a years-long project conditional on many factors, a complex set of issues must be considered when tackling this question. First, significant research examines the impact of family finances on children's educational outcomes. While most research focuses on

Page 1

the importance of family income, in the past 15 years a body of evidence has shown that family wealth is just as important, if not more so, in predicting children's educational attainment (Conley, 2001; Jez, 2008; Lovenheim, 2013). Second is the question of measurable long-term outcomes of school quality. Does the quality of grade school increase the likelihood of college attendance and completion? What is the benefit of a high-quality K-12 experience? Are benefits equal across race and class? Third, if a young person enters and/or completes college, what are the returns to higher education in terms of both income and wealth accumulation? How do wealth trajectories for young adults compare conditional on their own families' wealth resources? In an era of rapid school re-segregation and proliferation of school choice, does school quality provide any insight into the mechanisms driving wealth inequality?

Although they are often treated as interchangeable, income and wealth have quite different impacts over the life course. While income is available to meet the immediate, daily needs of a family, wealth – both in the form of homeownership and in liquid assets – is what families draw upon in times of crisis or when making strategic decisions about their future (Shapiro, Meschede & Osoro, 2013). Further, wealth inequality is one of the most significant barriers to economic parity in the United States, with the median Black family owning just 1/20 of the wealth of the median White family (Taylor, Kochhar, Fry, Velasco, & Motel, 2011). Importantly, wealth effects are often not confined to a single generation. This is perhaps particularly true when it comes to educational decisions. Home equity, for example, may be drawn upon to help a child attend college even though a family's income is not sufficient to provide the tuition payments. A young adult may rely on family assets when deciding to forego income for a time in order return to school in the hopes of garnering a higher income afterwards. And parents are frequently the source of down-payment help as young families choose

neighborhoods and schools where they will bring up their own children. Access to and the ability to amass wealth directly impacts the range of options available to families as they make decisions about their children's education.

This paper will explore the literature on these issues, contextualize them with data from a rich qualitative dataset, and present preliminary quantitative analysis of longitudinal panel data that attempts to connect young peoples' specific schooling experiences with their wealth accumulation into early adulthood, conditional on their parents' net worth. This mixed-methods study uses two complementary datasets that track wealth and family financial transfers of White and Black households over time: the Panel Study of Income Dynamics (PSID) and the Institute on Assets and Social Policy (IASP) Leveraging Mobility (LM) study.

Literature review

Wealth and Schools

School access is deeply interwoven with wealth in large part because of the connection between housing and schools. Local school districts and localized school funding mechanisms mean that, by and large, parents in the United States are choosing schools for their children when they choose a neighborhood to live in. In areas with high rates of homeownership and high home values, this usually translates into well-funded, high-quality schools. Areas with concentrated poverty, low home values, and high rental rates often suffer from lower-quality schools (Orfield, Ee, Frankenburg, Siegel-Hawley, 2016). The complicated race/class relationship in the U.S. means that parents tend to read whiter schools as better, with white parents moving their children out of schools that are Blacker using the justification that they are in search of better schools (Johnson, 2014; Holme, 2002; Renzulli & Evans, 2005; Jargowsky, 2014). "As a result, residential segregation by race and class, segregation of school children, and differences and actual and perceived school quality form a self-reinforcing vicious cycle that leads to vast disparities in the availability of quality education" (Jargowsky, 2014, p. 130).

Parents with access to the wealth needed to purchase a home in a desirable neighborhood convey the benefit of good schools to their children, often without actually knowing much about the schools themselves. Research on neighborhood and school choice shows that upper-middle class parents, usually white, rely on their high-status networks to inform their understanding of where "good" schools are located. Indeed, they often do not do explicit research into the schools themselves by visiting or learning about the curricular or pedagogical merits of different systems (Lareau, 2014; Holme, 2002). Whether these schools have the best test scores or not, parents feel comforted knowing that their children will attend school with others of similar status (Lareau, 2014).

Conversely, low-income parents who are most likely to move repeatedly concentrate on neighborhood characteristics first and decide on schools later, based on non-academic characteristics such as childcare availability and safety. This may be because the schools they know about from their networks are not of sufficiently different academic quality to make a substantive difference in their child's outcomes (Rhodes and DeLuca, 2014). Studies show that these are the parents least likely to be able to take advantage of school choice programs for their children, ending up in the neighborhood school by default (Patillo, Delale-O'Connor and Butts, 2014). Within systems that increasingly rely on choice mechanisms to provide access to high-quality schools, those students without the personal or parental know-how or time to navigate these complex choices are likely left behind in schools that are losing funds and the ability to support high-needs populations.

Page 4

Educated working class parents without much wealth are among those for whom school choice may make the most difference – these are likely the adults who have seen the benefit of education in their own lives and have the skills and resources needed to work the system to their benefit. These are the parents who are most likely to use choice programs, such as charter and magnet schools, or desegregation busing programs, to gain their children's access to higher quality schools than those in their immediate neighborhood. Two recent studies illustrate the research and time investment needed to navigate this process. Weininger (2014) notes that while parents relied first upon their networks for information about schools, those who had only weak ties to the community but were concerned about school quality became deeply involved in researching school pros and cons; one mother shared an elaborate spreadsheet designed to filter through multiple data sources to parse her options. Patillo, Delale-O'Connor and Butts (2014) argue that for many parents, the choices are overwhelming to the point of confusion, suggesting that "make sense of" is a better verb for navigating the school choice process than "research" (244).

While neighborhood is an important factor in school quality, housing is not the only form of wealth. Research on homeownership as it relates to child academic achievement is somewhat mixed (Brennan, 2010). However, research into the impact of liquid wealth on children's academic achievement shows clear benefits of such assets on children's test scores, particularly in math. For both math and reading, the asset trajectory of parents is significantly related to test scores, implying that families who are able to amass wealth during their child's school years are able to use their new assets to provide educational experiences for their children that might have been otherwise unavailable (Elliott, Destin & Freidline, 2011). Another study looking at the black-white achievement gap found that family characteristics completely controlled for the gap for young children, but that for school-aged children wealth did have some correlation with cognitive achievement (Yeung & Conley, 2008). And another study finds that African American children from high-wealth families (defined for this sample as over \$3,500 in wealth, an indication of the low wealth levels in these African American families) were more likely to graduate from high school and enter college than those from low-wealth families, regardless of family income (Williams Shanks & Destin, 2009), implying that high wealth families are able to convey higher educational expectations to their children than those with lower net worth. Other studies have found that Black families provide financial support to their children's higher education aspirations at much lower levels of income and wealth, indicating strong support for educational attainment; this support closes the black-white college completion gap (Nam, Hamilty, Darity Jr, & Price, 2015).

School Quality and Outcomes

Measuring school quality is difficult in and of itself; assessing its impact on long-term academic and economic outcomes is even more complex. The quality of a school is a subjective construct, as different people will value different schooling priorities. For example, some parents may choose a school based on test scores, which are understood to be proxies for academic rigor. Other parents may choose schools for the strictness of rules and discipline within the school, perceived as a proxy for safety. Other parents may choose schools for access to art, music, sports, lab sciences, and other programs that are often "extras" in the tightly-controlled curricula of the post-NCLB era.

Regardless of these complex factors that make up "quality," there are only so many variables that are measured and collected frequently enough to be used in quantitative studies of

school quality. Among the most-often used types of variables are test scores, measures of teacher quality, and measures of school funding (Ladd & Loeb, 2013; Mayer, Mullen & Moore, 2000). Each of these measures suffers from inadequacy and poses difficulties for comparison. Test scores, for example, are often less a measure of the school's proficiency and more a measure of a student's background and preexisting skill with tests (Reardon, 2013; Steele, 1997; Raudenbush, 2004). Additionally, standards and tests vary by state, making direct comparisons between them difficult (Lafortune, Rothstein, & Schanzenbach, 2015), and test scores are only available in all states for the past 15 years since the passage of No Child Left Behind (NCLB).

Teacher quality measures include student-teacher ratios and measures of teacher training and effectiveness. Research on class size or student-teacher ratio often show that while class size matters at some grade levels, it does not have uniform effects (Mayer et al., 2000), though some studies have shown particularly large improvements for students of color (Mosteller, 1995). Further, low student teacher ratios may reflect increased student needs more than increased resources available to students, skewing the picture of the value of lower ratios (Mayer et al., 2001). Teacher training can be measured using teacher scores on exams, grades in college, selectivity of the teacher's college, and the match between the teacher's major and their classroom subject. Better-trained and more academically apt teachers have been shown to increase student achievement (Mayer et al., 2000; Darling-Hammond, 1998).

The most commonly-used measures of school funding are total per-pupil expenditures and average teacher pay. These require standardization across time and location, as the price of a high-quality teacher is not the same in New York City and Mobile, Alabama (Mayer et al., 2000). Even if the cost were the same, there is no guarantee the schools use their resources equally efficiently (Ladd & Loeb, 2013). As noted below, research using school funding as the primary measure of quality has had mixed results, though the most recent research shows that increased funding does improve student outcomes (Lafortune et al., 2016; Johnson, 2011). Older literature makes the reverse case—that while increasing funding may not improve schools, decreasing funding will hurt them (Mayer et al., 2000).

Other variables often used in measures of school quality take advantage of the systemic inequalities of the education system. Among these variables are the percentage of black or non-white students and the percentage of students in poverty, both of which reflect the complex relationship of race, class, and schools discussed above. Because money, parent involvement, and community resources tend to be attached particularly to white and affluent students, these measures are to some extent a proxy for monetary resources in schools (Darling-Hammond, 1998).

Though the debate on how to measure school quality is by no means settled, some research has nonetheless tackled the issue of returns to school controlling for quality, which can be understood in three parts. The first piece of this question is whether school quality improves student outcomes while they are in school. While research on the quality returns to school funding has been mixed across the past two decades, with several prominent papers arguing that increasing school funding does not improve school quality (Hanushek, 1996; Hungerford & Wassmer, 2004), the most recent research shows that it does. Lafortune et al. (2016) use the natural experiment of changing school funding mechanisms in 23 states in the first years of the 21st century to demonstrate that states that changed funding formulas to direct more resources to low-income schools had increased scores on the National Assessment of Educational Progress (NAEP). Additionally, recent research on the schools in the Harlem Children's Zone (HCZ) (Dobbie & Freyer, 2011) shows that high-quality schools provided by the zone completely close

Page 8

the black-white achievement gap; however, HCZ schools are able to provide wrap-around supports and small class sizes partially through private funding sources unavailable to public schools more broadly (Ravitch, 2013).

The next question is whether students who attend better schools are more likely to enter and complete college. A recent study used the introduction of a district wide school lottery system to study the outcomes of students who got into their first-choice high school compared with those who did not (Deming, Hastings, Kane, & Staiger, 2014). They construct a school value-added measure for the district schools, finding that lottery winners who gained access to the largest jump in school quality were most likely to experience gains in college enrollment and completion. Interestingly, these gains were completely attributable to girls, who were 14 percentage points more likely to complete four-year college after a lottery win, with no increases for boys. This points to the need to study school effects intersectionally by race and gender when possible. A British-based study of school quality measured by selectivity and student-teacher ratios, finds that after controlling for family characteristics, student-teacher ratio has no impact on educational outcomes, but that attending a selective secondary school does increase educational attainment for both men and women (Dearden, Ferri, & Meghir, 2002). In both of these studies, the effects of improved school environments were largest for those who were least likely to have attended a high-quality school based on family characteristics.

Finally, researchers have explored whether improved school quality also improves longterm outcomes for students. Most often, these are measured economically, particularly looking at earnings data. Much of the work in this area is from the 1990's, and nearly all examines averages at the state level, finding that there is an increase in earnings associated with having attended school in a state with higher-quality schools (Card & Kreuger, 1990, 1992; Heckman, 1995). A

Page 9

review of the literature found that studies using a variety of quality measures did find some positive returns to earnings correlated with higher school quality (Hungerford & Wassmer, 2004). And Rucker Johnson (2011) shows that Black students who attended schools at the time of desegregation by court orders in the 1960's-1980's had improved outcomes across a variety of measures; he proposes that the mechanism by which these students' education improved was through increased funding. These studies have in common complex datasets and long-standing debates about measures and methods, highlighting the complicated nature of assigning a causal relationship between young people's school experiences, either individually or in groups, to their adult outcomes. These studies provide guideposts for our own research, though our data and methods are not yet as complex.

Higher Education and Adult Outcomes

While the link between K-12 school quality and later life outcomes is under-studied, the importance of a college education to employment, income, and wealth stability has been the focus of recent research. A recent study of Millennials (ages 25 to 32 in 2013, the focus age of this study) found that those with a Bachelor's degree earned over \$17,000 more per year than their peers with only a high school diploma (Pew Research Center 2014). And lifetime earnings for those with a BA are expected to be approximately \$1 million more than those with a high school diploma (Carnevale, Rose, & Cheah, 2011). Although this figure is true across racial groups, the lower baseline earnings for young people of color eat into the return to college. One study found that lifetime earnings of Black and Latino college graduates are approximately 20 percent lower than those of Whites, resulting in a pay gap of about \$480,000 (Carnevale et al., 2011).

In order to finance a college degree, most young people (65 percent of Whites and 80 percent of Blacks) take out student loans. And while college enrollment rates by race have converged in recent years, completion rates have not. The result is young people of color with student loan debt but no degree (Casselman, 2014). A recent study of wealth in young adulthood found that at age 25 Whites with some post-secondary education report \$17,000 more in net wealth than their Black peers with similar educational attainment (Addo, Houle, & Simon, 2016). The impact of student debt on wealth is significant; a recent study shows that an average student debt burden will reduce a family's wealth by over \$200,000 by retirement age (Hiltonsmith, 2013). Given the differences in student loan burdens and likely earnings by race, it is probable that young Black graduates face an even larger wealth drag.

Most recently, it has been shown that a college degree does not protect Black wealth in the face of financial crisis. A recent study of the Survey of Consumer Finances data found that during the Great Recession, college educated White families lost a smaller percentage of their wealth than less-educated White families, while college-educated Black families lost nearly 60 percent of their net wealth compared with only 37 percent for less-educated Black families (Emmons & Noeth, 2015). A recent study using a new PSID module finds that while white college graduates are likely to receive support from their parents for major expenses of early adulthood like down payments and graduate studies, Black college households are likely to need to support their parents, making it difficult to lay the groundwork in the early stages of wealth accumulation (Meschede, Taylor, Mann & Shapiro, forthcoming). This shows that even though a college degree is necessary to gain entrance into the middle class, family support in early adulthood helps to cement it.

The question, then, is whether adding school quality into analysis helps further define pathways towards wealth accumulation. If school quality does, indeed, predict later outcomes like college attendance, college completion, job attainment and wealth accumulation, then the work that parents do to ensure high-quality K-12 schooling for their children is important, and may be a key pathway to closing the racial wealth gap. XX

Findings from the IASP Leveraging Mobility Study

As we began forming our questions, we turned to the IASP Leveraging Mobility (LM) study to help us frame our understanding of the relationship between wealth and schooling and the choices parents make. The LM study is a unique qualitative dataset based on in-depth interviews conducted at two points in time, in 1998 and between 2010 and 2012. It offers a rare look at the financial lives of White and Black families and the decisions and trade-offs between financial security and opportunities made during a decade of particular economic volatility. In 1998, the original sample of 180 families was purposefully selected to represent even proportions of White and Black families and working class and middle-class families. At baseline, these families had children between ages 3 and 10. The second wave of interviews included 137 of the families, and the children were at the end of high school or beyond and the parents were in the latter half of their working lives, so between ages 40 and 60. The racial breakdown remains the same in the follow-up interviews as in the baseline. Aside from a few moves to other locations, the LM families continued to reside in three cities: one city on the East Coast, one city on the West Coast, and one city in the Midwest. The interviews cover a wide range of data, including information about the children's educational histories and trajectories, parents' work histories, family income and expenditures, family wealth and debt, family financial and non-financial assistance, the community or communities where they resided previously and at the time, and

reflections about their economic security and decisions made related to assets.

Many of the findings below are reflected in the literature, and they helped us to think about the larger context for the connections between parental wealth, school attendance, and child wealth outcomes. The children in the LM study are younger than those whose outcomes we analyzed in the PSID. Nevertheless, the stories of parents attempting to navigate wealth and school to their children's advantage illuminate the choices and pathways followed by many of the PSID participants whose lives are reflected in the quantitative analysis.

With few exceptions, white parents in the study had access to the needed wealth to simply purchase a home in a desirable neighborhood, guaranteeing access to the educational experience they desired for their children. For many, the school district was the main factor in their home search. For the Apple family, this meant selling other property to pay for a home in their desired district; they reported being very pleased with the education and opportunities their children received. The Durant family, relying on word of mouth in their social network, decided to move their family to a better district; they purchased the cheapest house in the new neighborhood and had to borrow a lot of money for renovations. They plan to sell the house and move back to their previous neighborhood once their children are done with school. Their children are on track for college and the Durants would like to pay for it, but their savings may not meet the demands of the elite private schools their children would like to attend.

The Stayman family, with three kids, could not afford to purchase a home in the exclusive neighborhood where they wished to send their children to school. Instead, they purchased a home elsewhere, and also bought a small condo in their desired town and used that address illegally to send their children to those schools. As of 2010, all three kids were on track

to college, with the Staymans taking on over \$100,000 in debt so their children could avoid taking out student loans.

While the Apples were able to purchase a home without down payment help, for many White families their freedom of home choice this was possible because of family assistance. For example, the Clark family of St. Louis was able to use family money to send their two children to private school for grades K-8, and then to purchase a home in a desirable school district for high school. Thus, even though the Clarks earned only \$70,000 per year, family wealth enabled them to provide the educational experiences they thought were best for their children at each stage of the K-12 journey.

Single White parents in the LM study faced more complex decisions to get their child into a desirable school. For example, when Laura Black moved to the east coast, she chose to enroll her daughters in private parochial school for several years to buy herself time to understand the school system and choose a "safe" public school for her children. Toni Brown, in the midwest, moved from the city out to the suburbs for the public schools, using a \$15,000 gift from her grandfather for the down payment. When she divorced, her father moved in with the family so that she would be able to keep the house and her children in their schools.

Black families, even with high incomes, faced a very different set of choices. Although the Dove family earned a solid income, they used retirement account money for the down payment on their home in a historically Black neighborhood. Rather than sending their children to the local schools, which they feared were not safe and were lower quality, they took advantage of a desegregation program to send them to a more affluent suburban district. They have taken on most of their children's college debt for two-year degrees, and feel pleased that they have been able to do so much for their kids' education.

Page 14

The Cole family, with a much lower income, could not afford a house in their desired district (the same district the Durants, one of the White families described above, left finding it undesirable). They chose instead to rent a "cramped" apartment in the district in order to get their children into schools there. As of the 2010 interview, Patricia Cole is divorced and reports that her daughter would like to attend a historically Black college. She has a small savings account for her daughter's education, but fears it will hurt more than help by driving down the amount of financial aid her daughter qualifies for.

The Auroras, another Black family, used a Section 8 Homebuyer program to purchase a home in the city and worked to build wealth through home equity. Using that equity, they were able to purchase a new home in a rural area. Although the new neighborhood is safer and more desirable in many ways, Patricia Aurora did not like the schools, saying the high school "looked condemned... I didn't feel safe for my kids there." She used an inter-district permit program from their former school district to allow them to continue there, and drives them a significant distance daily. As of 2010, her three children are on track in higher education, though they are going to be largely responsible for their own costs. Her son took out \$50,000 in student loans despite a large scholarship, and Patricia is hoping her daughters will choose state schools to keep their costs down.

Overall, these stories help to illustrate the lengths to which parents will go to secure a "good" education for their children. For White families in the LM study, family wealth often played an important role in helping purchase a home in a neighborhood with schools they desired for their children or help pay for private schools. Black families, without family wealth available, turned to school choice programs, passed up the opportunity to buy a home, and leveraged other resources to be able to provide a good educational experience for their children. These stories

laid the groundwork for our thinking about the complex interplay of parental and family wealth, school quality, and child outcomes.

Quantitative Methods

Data Sets

The quantitative analysis draws on data from several years of the Panel Study of Income Dynamics (PSID) to take advantage of its longitudinal approach and linkage over generations. The PSID has been tracking households and their descendants since 1968 and has widened its initial focus on income and employment to include wealth, health, expenditures, child development, and other data collection modules over the years. In 1997, the PSID began a supplemental survey of children of PSID households, the Child Development Supplement (CDS), collecting data on child-level physical, emotional, social, and intellectual development which can be connected with family and neighborhood characteristics through the main PSID survey. In addition, the CDS can be linked to the national Common Core of Data, which houses variables about every public school in the nation. This provides a unique way to connect a child to both her family and her school during her early years, and then forward to her outcomes as a young adult (see fig.1).

This study's sample began with CDS participants who were over 10 in 1997 (ages 26-30 in

Figure 1: Datasets



2013) and who were Black and White, as there were not enough participants in other racial categories for full analysis. This reduced the sample to 805 from the original 3000+ participants. The sample was further restricted to those about whom some school information was available in 1997 – either data from a public school, or the knowledge that they attended private or homeschool in that year. Finally, for models that look at wealth and homeownership outcomes, the sample was further restricted to those who were a head or wife in their household in either or both of 2011 & 2013. These restrictions resulted in a final sample size of about 350-650 depending on the inclusion criteria for the particular model.

PSID Variables

These analyses used relatively few variables from the CDS itself. Child race is used as a control throughout the analyses as we are interested in tracking different wealth outcomes by race. In addition, a child risk score was calculated from the sum of four binary variables – qualified for the federal free/reduced lunch program, whether a student had ever been suspended/expelled, had repeated a grade, or was in Special Education. These variables are theorized to be important because they provide insight into the educational experience of the child. Eligibility for free/reduced lunch is the most common way education researchers measure socioeconomic status (Harwell & LeBeau, 2010), and research shows low-income children are vulnerable to poor school outcomes (Raudenbush, 2004). Suspensions and expulsions have been shown to negatively impact students' school outcomes, and repeating a grade increases a child's risk of drop out (Balfanz, Byrnes, & Fox, 2015). While qualifying for special education (under the federal Individuals with Disabilities Education Act, or IDEA) should mean that students get access to needed services, equalizing their school opportunities, in fact students with disabilities

are often at higher risk of discipline, being placed in low-level academic classes (Losen, Hodson, Ee, & Martinez, 2014). Additionally, Black students have been shown to be over-identified for IDEA services relative to their enrollment (Losen, et al., 2014). PSID-provided weights were used to correct for the PSID's over-sample of Black households. All datasets were linked using the child's unique ID number.

The CDS data are matched to parent/household data from the main PSID. Parent data are drawn primarily from the 1999 survey because it includes wealth data with closest temporal proximity to the 1997 CDS data. For a small subset of CDS participants who had no household data for 1999, data were included for 1997 with wealth data from 1994. Household variables are used as controls, including head of household marital status, education level, homeownership status, and wealth. Wealth is transformed using the IHS transformation to account for skewness¹.

Child outcome measures are from the 2011 and 2013 PSID main survey. The first important variable is whether the child had established their own household (required to be in the PSID main interview data) in either or both of 2011 & 2013. Conditional on that, we then focus on household wealth and household income. Controls from these surveys include completed education, marital status, student loan debt, homeownership status and receipt of large gifts or inheritance. Again, wealth is transformed using the IHS transformation to account for skewness. *School Quality Variables*

The primary covariates of interest are drawn from the Common Core of Data from the National Center for Education Statistics. CDS records are linked to the CCD school identifiers

¹ ¹ The inverse hyperbolic sine transformation is defined as $log(y_i+(y_{i2}+1)1/2)$ and is approximately equal to $log(2y_i)$ or $log(2)+log(y_i)$, except for very small values of y. The interpretation of the generated coefficients is equal to the interpretation of a standard logarithmic dependent variable.

using the CDS Link restricted file from the PSID. Variables are primarily drawn from the 1996-97 survey year, with missing data filled as much as possible with 1997-98 data in order to provide more complete records.

Three variables are drawn from the CCD to measure school vulnerability. We do not use the term school quality because of the complicated nature of measuring school quality and the inadequacy of the available variables to measure the educational experience a child receives in a given school. The three available variables are: percent of the student body that is black, the student-teacher ratio, and the percent of the student body receiving free or reduced price lunch. These variables were then standardized and the standardized values summed. The value of the standardized variable was then reversed to produce a variable in which larger values are presumed to indicate less vulnerable ("higher quality") schools.

The justification for the use of these variables is described in more detail in the literature review above. Briefly, however, research has shown that schools with high percentages of non-white students, particularly those with high percentages of black students, are less likely to have rigorous course offerings and experienced teachers (Office for Civil Rights 2016). A measure of segregation was not used here due to time constraints, however we plan to integrate it in the future analyses. However, the period from 1997-2002 was the beginning of rapid re-segregation of schools across the country as districts were released from desegregation orders and school choice mechanisms began to pull students out of their local catchment schools (Orfield et al. 2016). Thus, the percentage black is used as a proxy measure for school rigor. Education research frequently uses eligibility for the federal free and reduced-price lunch program as a proxy for low-income status of students attending a school. Schools with concentrated poverty are also more likely to struggle with resource deficiencies and higher needs populations, in part

because of the school funding mechanisms of local districts (Boschma & Brownstein 2016). Finally, student-teacher ratio is hypothesized to be a proxy for how much attention an individual student gets. Research has shown that smaller class sizes often result in higher test scores and engagement among students (Mayer et al. 2000). For students in private schools, for which the 1997 CDS does not provide data, the tenth-percentile score for each of these variables was substituted, on the assumption that private schools tend to provide smaller classes and smaller proportions of poor and black students in their enrollment. Future research along these lines using later waves of the CDS will have access to the Public School Survey database to provide more precise estimates for private school attenders.

Many other variables that could contribute to this measure are unavailable for the time periods studied here. Teacher tenure and salary data, measures of school discipline and safety, and test score data among others could be included in future studies attempting to link school quality with wealth. While per pupil expenditure is available from the CCD for the late 1990's, it is only at the district level, and so is not included in this analysis.

Analytic Plan & Descriptive Statistics

In this first round of analyses we conducted several sets of stepwise OLS and logit regressions. First we explored the relationship of family wealth to school quality. Next, we explored variables that were factors in young adults being heads of household by age 24-30, followed by an examination of the factors predicting the incomes and wealth accumulation of young heads of household. Finally, we examined predictors of wealth accumulation by race.

[INSERT TABLE 1 ABOUT HERE]

Descriptive statistics are shown in Tables 1a and 1b, which highlight important disparities between White and Black CDS participants. In 1997, mean age is about 11 and mean

grade is about 5 for all participants. However, while only 6.5 percent of White students had repeated a grade by this time, 15.4 percent of Black students had. Similarly, 31.5 percent of Black students had been suspended or expelled compared with only 4.2 percent of white students. Black students were significantly more likely to qualify for federal free/reduced price lunch (88 percent vs. 59 percent). Combined, these factors contribute to a much higher risk index for Black students than for Whites.

Black participants came from families with significantly less education and wealth than white participants. While Black students came from families with an average of 11.9 years of education, or just shy of a high school diploma, White students' heads of household had an average of 13.8 years of education, indicating the average parent had about the equivalent of an Associate's degree. At the median, the preferred measure of central tendency for wealth due to its extreme skewed distribution, White families in the sample owned about \$80,500 in wealth including home equity, compared to just \$5,220 for Black families. And 31 percent of Black families had 0 or negative net wealth, compared to just 5 percent of White families.

White students, on average, attended slightly smaller schools than Black students. The average school attended by a Black student in the sample was 58 percent Black and 57 percent eligible for the federal lunch program. In contrast, White students attended schools that were 85 percent White and only 23 percent federal lunch eligible. Student-teacher ratio did not vary across schools by race. Overall, these gaps combined to produce significant difference in our school quality measure between Black and White students.

By 2011/2013, White young adults were more likely to have established their own household, and to have completed an additional year of education than their Black peers; 46 percent had at least a Bachelor's degree, compared with just 20.6 percent of Black young adults.

Page 21

Both White and Black young adults had increased their level of education compared with their parents' reported education in 1997, with Black young adults reporting an increase of 1.3 additional years of education. Whites and Blacks were about equally likely to have student loans, but Blacks were much more likely to have loans but no college degree, while Whites had higher average amounts of student debt. Whites were more likely to be homeowners (32% vs. 11.5%). At the median, Whites reported incomes of \$51,400 and \$9,200 in net wealth including home equity, compared with just under \$36,000 in income and \$200 in wealth for households headed by a young Black individual.

These data show that the gaps in wealth, income, and education that existed for parents persist into the next generation's young adulthood, despite some improvements in educational attainment. The models reported below explore predictors of wealth and income in young adulthood conditional on parental and school factors

-

Results

First we examined whether wealth was a predictor of school quality. Although race was the most significant predictor of school quality, family wealth was significant in all the models we ran. We explored both family wealth with and without equity (models A and B), and, since they were substantially similar, chose to use wealth excluding home equity in order to separately parse the importance of homeownership in model C. The family's ownership was not significant, and neither was parental education, introduced in model D. We did not include parents' marital status because of strong connections between homeownership and both marital status and education. From these analyses, we find that family wealth is a significant predictor of the quality of schools a child attends, even after controlling for race.

[TABLE 2 about here]

Next, we examined whether or not young people are in their own households by their late 20's (Table 3). One effect of the Great Recession (2008-2011) was that many young people moved back in with their parents, unable to find a job or make enough money to support their own household (Fry, 2016). This trend is apparent in our data, in which 19 percent of the sample had not formed a household by 2013. In these models, we find that the most important predictor of becoming a head of household is race, with Black young adults significantly less likely in all models to have become a head of household by 2011/2013. Additionally, education is significant in Model B, which introduces two child variables, child risk score and completed education, and close to significant in Model C, which introduces parent control variables. This points to some return to education that allows young people to set up their own households. School quality and child risk variables are not significant, nor are parental resource controls.

Next, we examined predictors for wealth and income in young adulthood (Tables 4 & 5). In these regressions, we began with child race, school quality, and risk score, then added parent variables, then child-related education variables, and finally other variables about the child in early adulthood.

[INSERT TABLES 3 & 4 ABOUT HERE]

For the analyses of wealth and income, we specified models beginning with race, school quality, and child risk score, next introduced parent variables, then child completed education variables, and finally potential additional contributors to wealth for young adults. For wealth (Table 4), race and school quality are not significant. Child risk score is not significant in the first two models, but appears significant later, likely indicating a problem with endogeneity or poor model specification. Tests for multicollinearity did not indicate an obvious problem. Family

wealth is not significant. The main drivers of wealth in early adulthood are introduced in Model C, which includes educational attainment, which has a strong positive effect. Student loan amount is a significant drag on wealth, as is having loans but no college degree. In the final model, adult household covariates are introduced, which show that homeownership is a significant predictor of wealth for young adults. For the most part, these results follow our expectations of wealth predictors and it seems from these models that for the sample as a whole school quality as we have measured it here is not a significant predictor.

Turning to income (Table 5), we find that race is significant across all models, as is school quality. The shifting power of school quality in the model is a cause for some concern about model specification, but its consistent significance shows that there is some important correlation between school quality and income. Family wealth and parent variables are not significant in any of the models, nor are the student loan variables that were so important to wealth. Instead, education, marriage, and homeownership are all highly significant predictors of higher income. Again, some issues with model specification are likely, but the findings overall make sense. The fact that school quality is related to income but not to wealth is interesting; potentially, the sample is still too young to have wealth effects show up, as they are still paying off student loans and becoming established in their careers.

Finally, we analyzed predictors of wealth and income in early adulthood by race. While the income models did not show much difference, the wealth models did (Table 5). For Black young adults, school quality was a significant predictor of wealth, while it was not significant for Whites. This finding is in keeping with recent literature that suggests that improving school quality has a much larger impact on the outcomes of disadvantaged children than it does on children from more privileged backgrounds. Interestingly, the significance of the two student loan variables was opposite for white and Black young adults, with Black young adults taking a significant wealth hit when carrying student loans without a college degree, whereas the amount is the key factor for Whites. This may reflect the higher percentage of Black students entering adulthood with debt but no degree, and the higher overall amount of debt carried by White students (see Table 1). Education is significant for both groups, though its impact is greater on Black young adults. And homeownership is an important factor for both, with a much larger coefficient for Black youth, perhaps indicating the prominence of their home equity in their wealth portfolio. Finally, child risk score is significant for White youth while not for Black youth. This may in part reflect the overall rarity of suspending or expelling White youth except for the most egregious offenses (Skiba, Horner, Cheung-Geun, Rausch, May, & Tobin, 2011) which may have more lasting repercussions.

Limitations

There are important limitations to consider with this study's findings. First, the sample size is quite small, particularly for the final analyses looking at outcomes by race. Our largest set of missing data came from the CCD identifier not being reported to the CDS, and it is possible that this group of students was systematically similar, biasing our sample.

Second, we have quite limited markers of school quality. Partially, this is because there is not much available from 1997 at the school level, making it difficult to construct a more nuanced picture of the schooling experience. In addition, we measured school quality at only one point in time, around 5th grade, which may not be the most meaningful school year. In part we did this because using 2002 CDS data as well would have cut the sample size even further. Future analyses may include 2002 CDS data, as well as looking at a broader set of CDS participants as

more of them enter their late 20's and early 30's. Such analyses may find differential importance to different parts of the K-12 school experience in predicting later life outcomes.

Third, wealth effects may not appear by a person's late 20's, as many people have yet to settle into a career, get married, or buy a home. They also may not have received the bulk of family financial gifts that they will get over the life course as their parents are still living and possibly still supporting younger siblings. Therefore, it may be too early to understand the factors that will predict an older adult's wealth profile and how education has shaped it. Once more PSID data becomes available in the future, analyses will provide us with more insights.

Fourth, inconsistencies in the data may indicate some model mis-specification that changes the findings to some extent. It is likely that endogeneity within the models are impacting coefficients and effect sizes. We have tried to highlight here only those findings that were robust to many variable changes, and to focus for the most part on framing the question for future studies to explore further.

Finally, the design of the study itself may not be the best to handle the question of school quality as it relates to wealth. Although an individual-level study is appealing, it may be more practical to use a dataset that would allow tracking of wealth outcomes at an aggregate level, as others have done to explore earnings outcomes related to school quality (Card & Kreuger, 1990). Another possibility would be studies exploiting school choice lotteries, if children are followed for long enough and their information could be linked to wealth data.

Conclusion

Despite these limitations, this paper has tried to focus on how wealth relates to K-12 schooling decisions, quality, and adult outcomes. To our knowledge, it is the first paper that has tried to examine pre-college education in the context of intergenerational wealth. Our findings

show that family wealth is a significant predictor of school quality, though it is not a direct predictor of wealth in young adulthood. Nevertheless, this pathway is likely one important way in which parents pass wealth privilege to their children. Our findings also show that black and white youth have quite different predictors of wealth in their late 20's. While educational attainment is important for both Black and White youth, it is more important for Blacks, with the flipside that they are at greater risk of wealth damage if they have student loans but no college degree.

Education has broad impacts beyond economics, acting as a protective factor against incarceration, unemployment, and many health issues. More educated individuals are less likely to need government assistance and more likely to pay taxes. And an educated citizenry is essential to good governance and a functional civic discourse. While these effects of education are enough reason to view it as a public good, a central tenet of our culture is to see education as the path to opportunity and stability, or even riches.

In the current policy climate, school choice is presented as a mechanism to extend opportunity to more youth, particularly students of color. However, choice implies a limited number of high-quality options, which may be apportioned through selectivity processes or through random lottery. In the first case, burden is then placed on children at ever-younger ages to be aware of the consequences of their educational decisions, and the impacts of mistakes or poor life circumstances are therefore heightened. The second belies the idea of meritocracy entirely – by the roll of dice a child may have her future limited. In either case, some amount of parental resources comes into play through knowing about and taking advantage of the option of something other than the local public school. Policies that support all schools and focus attention on those dealing with concentrated disadvantage are more likely to lift children to higher education, higher income, and possibly to higher wealth with the greater stability that provides.

The findings here are largely supported by the existing literature, which indicate that family resources will impact the type of school a child attends, and that acquiring a higher education is likely to lead to higher incomes and potentially greater wealth, though the impact of student loans for college is significant. K-12 schools seem to have an important impact on the wealth outcomes for young Black Americans, though not for White youth, a finding that, if borne out in future research, is an important addition to our understanding of pathways out of racial wealth inequality.

Bibliography

- Addo, F. R., Houle, J. N., & Simon, D. (2016). Young, Black, and (Still) in the Red: Parental Wealth, Race, and Student Loan Debt. Race and Social Problems, 8(1), 64-76.
- Balfanz, R., Byrnes, V., & Fox, J. H. (2015). Sent Home and Put Off Track. In D. J. Losen (Ed.), Closing the School Discipline Gap: Equitable Remedies for Excessive Exclusion. New York: Teachers College Press.
- Boschma, J., & Brownstein, R. (2016). The Concentration of Poverty in American Schools. The Atlantic.
- Brennan, M. (2010). Foundation for Success? A Review of New Research on the Effects of Homeownership on Children.
- Card, D., & Krueger, A. (1990). Does school quality matter? Returns to education and the characteristics of public schools in the United States. Retrieved from
- Card, D., & Krueger, A. B. (1992). Does school quality matter? Returns to education and the characteristics of public schools in the United States. Journal of political Economy, 100(1), 1-40.
- Carnevale, A. P., Rose, S. J., & Cheah, B. (2011). The college payoff: Education, occupations, lifetime earnings.
- Casselman, B. (2014). Race Gap Narrows in College Enrollment, But Not in Graduation. FiveThirtyEight.
- Conley, D. (2001). Capital for college: Parental assets and postsecondary schooling. Sociology of Education, 59-72.
- Darling-Hammond, L. (1998). Unequal opportunity: Race and education. The Brookings Review, 16(2), 28.
- Dearden, L., Ferri, J., & Meghir, C. (2002). The effect of school quality on educational attainment and wages. Review of Economics and Statistics, 84(1), 1-20.
- Deming, D. J., Hastings, J. S., Kane, T. J., & Staiger, D. O. (2014). School choice, school quality, and postsecondary attainment. The American Economic Review, 104(3), 991-1013.
- Dobbie, W., Fryer, R. G., & Fryer Jr, G. (2011). Are high-quality schools enough to increase achievement among the poor? Evidence from the Harlem Children's Zone. American Economic Journal: Applied Economics, 3(3), 158-187.
- Elliott, W., Destin, M., & Friedline, T. (2011). Taking stock of ten years of research on the relationship between assets and children's educational outcomes: Implications for theory, policy and intervention. Children and Youth Services Review, 33(11), 2312-2328.
- Hanushek, E. A. (1996). School resources and student performance. Does money matter? The effect of school resources on student achievement and adult success, 43-73.
- Harwell, M., & LeBeau, B. (2010). Student eligibility for a free lunch as an SES measure in education research. Educational Researcher, 39(2), 120-131.
- Heckman, J., Layne-Farrar, A., & Todd, P. (1995). Does measured school quality really matter? An examination of the earnings-quality relationship. Retrieved from
- Hiltonsmith, R. (2013). At what cost: How student debt reduces lifetime wealth. Retrieved from
- Holme, J. J. (2002). Buying homes, buying schools: School choice and the social construction of school quality. Harvard Educational Review, 72(2), 177-206.
- Hungerford, T. L., & Wassmer, R. W. (2004). K-12 Education in the US Economy: Its Impact on Economic Development, Earnings, and Housing Values. NEA Research Working Paper. National Education Association Research Department.
- Jargowsky, P. A. (2014). Segregation, Neighborhoods, and Schools. In A. Lareau & K. A. Goyette (Eds.), Choosing Homes, Choosing Schools (pp. 97-136). New York: Russell Sage Foundation.
- Jez, S. J. (2008). The influence of wealth and race in four-year college attendance. Center for Studies in Higher Education.
- Johnson, H. B. (2014). The American dream and the power of wealth: Choosing schools and inheriting inequality in the land of opportunity: Routledge.
- Johnson, R. C. (2011). Long-run impacts of school desegregation & school quality on adult attainments. Retrieved from
- Ladd, H., & Loeb, S. (2013). The Challenges of Measuring School Quality. Education, justice, and democracy, 19.
- Lafortune, J., Rothstein, J., & Schanzenbach, D. W. (2016). School finance reform and the distribution of student achievement. Retrieved from
- Lareau, A. (2014). Schools, Housing, and the Reproduction of Inequality. In A. Lareau & K. A. Goyette (Eds.), Choosing Homes, Choosing Schools (pp. 169-206). New York: Russell Sage Foundation.
- Lovenheim, M. F., & Reynolds, C. L. (2013). The effect of housing wealth on college choice: Evidence from the housing boom. Journal of Human Resources, 48(1), 1-35.
- Mayer, D. P., Mullens, J. E., & Moore, M. T. (2000). Monitoring school quality: an indicators report. US Department of Education, National Center for Education Statistics, NCES 2001-030.

Meschede, T.M., Taylor, J., Mann, A., & Shapiro, T. (forthcoming). "Family Achievements?": How a college degree accumulates wealth for whites and not for blacks. Federal Reserve Bank of St. Louis Review, First Quarter 2017, 99 (1), pp. xx-xx.

Mosteller, F. (1995). The Tennessee study of class size in the early school grades. The Future of children, 113-127.

Nam, J., Hamilton, D., Darity Jr, W., & Price, A. (2015). Bootstraps are for black kids: Race, wealth, and the impact of intergenerational transfers on adult outcomes. Retrieved from Oakland, CA:

- Office for Civil Rights. (2016). 2013-14 Civil Rights Data Collection: A First Look Retrieved from Washington, D.C.:
- Orfield, G., Frankenberg, E., Ee, J., & Kuscera, J. (2016). Brown at 62: School Segregation by Race, Poverty, and State. Retrieved from University of California Los Angeles:
- Patillo, M., Delale-O'Connor, L., & Butts, F. (2014). High-Stakes Choosing. In A. Lareau & K. A. Goyette (Eds.), Choosing Homes, Choosing Schools (pp. 237-267). New York: Russell Sage Foundation.
- Pew Research Center. (2014). The rising cost of not going to college.
- Raudenbush, S. W. (2004). Schooling, Statistics, and Poverty: Can We Measure School Improvement? Educational Testing Service.
- Ravitch, D. (2013). Geoffrey Canada: Just Tell the Truth.
- Reardon, S. F. (2013). The widening income achievement gap. Educational Leadership, 70(8), 10-16.
- Renzulli, L. A., & Evans, L. (2005). School Choice, Charter Schools, and White Flight. Social Problems, 52(3), 398-418.
- Rhodes, A., & DeLuca, S. (2014). Residential Mobility and School Choice Among Poor Families. In A. Lareau & K. A. Goyette (Eds.), Choosing Homes, Choosing Schools (pp. 137-166). New York: Russell Sage Foundation.
- Shanks, T. R. W., & Destin, M. (2009). Parental expectations and educational outcomes for young African American adults: Do household assets matter? Race and Social Problems, 1(1), 27-35.
- Shapiro, T. M., Meschede, T., & Osoro, S. (2013). The roots of the widening racial wealth gap: Explaining the black-white economic divide. Institute on Assets and Social Policy.
- Skiba, R. J., Horner, R. H., Choong-Geun, C., Rausch, M. K., May, S. L., & Tobin, T. (2011). Race Is Not Neutral: A National Investigation of African American and Latino Disproportionality in School Discipline. School Psychology Review, 40(1), 85-107.
- Taylor, P., Kochhar, R., Fry, R., Velasco, G., & Motel, S. (2011). Wealth gaps rise to record highs between whites, blacks, and Hispanics.

Taylor, Meschede, Mann

| Table 1a: Descriptive | Statist | ics in chil | dhood | | | Table 1b | : Descriptive Stat | istics | in young | g adulth | ood | |
|---|---------|-------------|-------|--------------|-------|--|--------------------|--------|-------------|-------------|--------------|---------|
| | | Wh Mean/ | ite | Bla Mean/ | ack | | | | Wh Mean/ | ite | Bla Mean/ | ack |
| Variable | р | % | SE | % | SE | Variab | le | p | % | SE | % | SE |
| Parent Variables 1999 PSID ¹ | T | N = 4 | 401 | N = | 403 | Variables 2011/201 | L3 ³ | | N = 4 | 401 | N = | 403 |
| Years of completed education | *** | 13.8 | 0.132 | 11.9 | 0.27 | 6 Head of household | | ** | 88.3 | | 75.5 | |
| % homeowner | *** | 84.8 | | 43.9 | | ears of completed edu | ucation | *** | 14.4 | 0.12 | 13.2 | 0.3 |
| % married | *** | 83.5 | | 37.6 | | 6 College or above | | *** | 46.5 | | 20.6 | |
| Net worth, w/o home equity | ** | 206458 | 52630 | 40900 | 16961 | ad or wife only | | | N = . | 354 | N = | 304 |
| (Median) Net worth w/o home equity | | 29600 | | 2097 | | 6 homeowner | | *** | 32 | | 11.5 | |
| % with 0 or neg. wealth, w/o home equity | *** | 8.6 | | 38.6 | | 6 married | | ** | 50.8 | | 30.5 | |
| Net worth, w/ home equity | *** | 269944 | 54885 | 53629 | 17739 | otal family income | | *** | 60562 | 2845.4 | 35931 | 3083 |
| (Median) Net worth w/ home equity | | 80500 | | 5220 | | Median) total family ir | ncome | | 51400 | | 27332 | |
| % with 0 or neg. wealth, w/ home equity | *** | 5 | | 31.4 | | let worth, w/o home e | equity | | 21510 | 7266 | 6556 | 3484 |
| Child Variables 1997 CDS | | | | | | Median) Net worth w/ | o home equity | | 6900 | | 0 | |
| Age (yrs, range: 10-13) | | 11.18 | 0.054 | 11.17 | 0.09 | w/0 or neg. wealth, | w/o home equity | ** | 34.6 | | 52.9 | |
| Grade (range: 2 nd - 8 th) | | 5.6 | 0.061 | 5.6 | 0.103 | let worth, w/ home eo | quity | ** | 36531 | 8059.2 | 11416 | 4032 |
| % in public school 1997 | ** | 14.1 | | 5.5 | | Median) Net worth w/ | home equity | | 9200 | | 200 | |
| % ever in private school | | 19.2 | | 12.2 | | with 0 or neg. wealth | n, w/ home equity | ** | 31.1 | | 49.8 | |
| % suspended/expelled by 1997 | *** | 4.2 | | 31.5 | | 6 received large gift/in | heritance | *** | 8.2 | | 1 | |
| % ever repeated a grade by 1997 | *** | 6.5 | | 15.4 | | 6 have student loans | | | 46 | | 48 | |
| % eligible federal lunch program 1997 | *** | 58.9 | | 88.1 | | with student loans, r | no degree | ** | 20.4 | | 36 | |
| % ever enrolled in special education,1997 | | 0.145 | | 0.166 | | mount of student loa | ns | ** | 18473 | 2405.1 | 10142 | 1505 |
| Child Risk Score (sum of four above vars) | *** | 0.9 | 0.048 | 1.517 | 0.097 | | | | | | | |
| School Variables 1997 CCD ² | | | | | | | | | | | | |
| Total Enrollment | | 607.8 | 20.7 | 656.3 | 28.4 | variables weighted using | , , , , | | | | | |
| Percent nonwhite enrollment | *** | 15.3 | 1.13 | 68.6 | 2.85 | 1: Parent data from 199 less missing, then filled f | • | | | | | |
| Percent black enrollment | *** | 6.11 | 0.75 | 58 | 2.88 | t head in either year, chi | | | | ni neau yea | , 2011 01 2 | UTD. II |
| Percent eligible for federal lunch program | *** | 23.1 | 1.17 | 57.3 | 3.61 | | | | | | | |
| Student-teacher ratio | | 16.5 | 0.35 | 16 | 0.47 | | | | | | | |
| Standardized school quality | *** | 1.05 | 0.07 | -0.85 | 0.14 | | | | | | | |

| | | | Table 2 | 2: Predio | ctors of s | School Qua | lity | | | | | |
|--------------------------------|-------|----------|------------|-----------|------------|------------|-------|------------|------------|-------|-----------|-----------|
| | | Mode | IA | | Model | В | | Mode | IC | | Model | D |
| Variable | N | = 633; r | 2 = .32 | N | = 633; r2 | = .32 | N | l = 633; r | 2 = .32 | Ň | = 625; r2 | 2 = .34 |
| | coef. | SE | Р | coef. | SE | Р | coef. | SE | Р | coef. | SE | Р |
| Black | -2.24 | 0.203 | *** (.000) | -2.24 | 0.208 | *** (.000) | -2.15 | 0.209 | *** (.000) | -2.1 | 0.218 | ***(.000) |
| family wealth (without equity) | 0.027 | 0.011 | ** (.014) | | | | 0.027 | 0.011 | * (.047) | 0.022 | 0.011 | *(0.05) |
| family wealth (with equity) | | | | 0.027 | 0.0124 | * (.032) | | | | | | |
| homeowner | | | | | | | 0.267 | 0.192 | | 0.281 | 0.192 | |
| parent education | | | | | | | | | | 0.033 | 0.025 | |

| | | Table | 3: Predicte | ors of Head of Household | | | | | | | |
|------------------|----------|-------------|-------------|--------------------------|------------|----------|---------|-------------|------------|--|--|
| | Mo | odel A n= 5 | 66 | м | odel B n = | 548 | M | lodel C n = | = 548 | | |
| Variable | coef. | SE | Sig. | coef. | SE | Sig. | coef. | SE | Sig. | | |
| school quality | -0.12079 | 0.099 | | -0.146 | 0.101 | 0.149 | -0.1595 | 0.094 | | | |
| black | -1.156 | 0.415 | ** (.007) | -1.15 | 0.473 | **(.016) | -1.745 | 0.439 | *** (.000) | | |
| education | | | | 0.464 | 0.226 | *(.041) | 0.412 | 0.215 | 0.056 | | |
| child risk score | | | | 0.223 | 0.181 | 0.22 | 0.223 | 0.183 | | | |
| family wealth | | | | | | | 0.012 | 0.031 | 0.083 | | |
| married parents | | | | | | | -0.805 | 0.463 | | | |
| parent education | | | 1 | | | | -0.056 | 0.094 | | | |

| black -1.46 1.66 -0.75 1.65 -0.341 1.63 1.19 1.54 school quality 0.084 0.379 -0.031 0.378 0.416 0.329 0.555 0.31 child risk score -0.83 0.67 -0.703 669 -1.387 0.649 *(.033) -1.14 0.6 0 family wealth 0.28 0.104 **(.007) 0.132 0.097 0.058 0.089 married parents -0.014 1.45 -0.023 1.34 -0.223 1.325 parent education - -0.102 0.213 -0.131 0.129 -0.116 0.129 education student loan amount - - - - -0.54 1.76 **(.002) -0.0004 ***(.002) loans but no degree - - - - - - 1.76 ***(.002) -5.61 1.69 ****(.002) - 1.175 own - - - - - - 0.54 1.76 ***(.01) <td< th=""><th></th><th></th><th>Model A</th><th></th><th></th><th>Model B</th><th></th><th></th><th>Model C</th><th></th><th colspan="4">Model D</th></td<> | | | Model A | | | Model B | | | Model C | | Model D | | | |
|--|---------------------|-------|-----------|------|--------|-----------|----------|---------|-----------------|-----------|-------------------|---------|------------|--|
| black -1.46 1.66 -0.75 1.65 -0.341 1.63 1.19 1.54 school quality 0.084 0.379 -0.031 0.378 0.416 0.329 0.555 0.31 child risk score -0.83 0.67 -0.703 669 -1.387 0.649 *(.033) -1.14 0.6 0.0 family wealth Example Example Example Example 0.28 0.104 **(.007) 0.132 0.097 0.058 0.089 married parents -0.014 1.45 -0.023 1.34 -0.223 1.325 education - -0.102 0.213 -0.131 0.129 -0.116 0.129 education Example Example <th>Variable</th> <th>n =</th> <th>472; r2 =</th> <th>.015</th> <th>n =</th> <th>464; r2 =</th> <th>.040</th> <th>n</th> <th>i= 353; r2 = .3</th> <th>2</th> <th colspan="3">n = 352; r2 = .39</th> | Variable | n = | 472; r2 = | .015 | n = | 464; r2 = | .040 | n | i= 353; r2 = .3 | 2 | n = 352; r2 = .39 | | | |
| school quality 0.084 0.379 -0.031 0.378 0.416 0.329 (.033) -1.14 0.6 0 child risk score -0.83 0.67 -0.703 669 -1.387 0.649 *(.033) -1.14 0.6 0 family wealth -0.83 0.67 0.28 0.104 **(.007) 0.132 0.097 0.058 0.089 married parents -0.014 1.45 -0.023 1.34 -0.223 1.325 parent education -0.102 0.213 -0.131 0.129 -0.116 0.129 education student loan amount | | coef. | SE | р | coef. | SE | p | coef. | SE | р | coef. | SE | p | |
| child risk score -0.83 0.67 -0.703 669 -1.387 0.649 *(.033) -1.14 0.6 0.6 family wealth 0.28 0.104 **(.007) 0.132 0.097 0.058 0.089 married parents -0.014 1.45 -0.023 1.34 -0.223 1.325 parent education -0.102 0.213 -0.131 0.129 -0.116 0.129 education student loan amount -< | black | -1.46 | 1.66 | | -0.75 | 1.65 | | -0.341 | 1.63 | | 1.19 | 1.54 | | |
| family wealth 0.28 0.104 **(.007) 0.132 0.097 0.058 0.089 married parents -0.014 1.45 -0.023 1.34 -0.223 1.325 parent education -0.102 0.213 -0.131 0.129 -0.116 0.129 education -0.102 0.213 -0.131 0.0001 *** (.01) 1.76 0.561 *** (.01) student loan amount | school quality | 0.084 | 0.379 | | -0.031 | 0.378 | | 0.416 | 0.329 | | 0.555 | 0.31 | | |
| married parents -0.014 1.45 -0.023 1.34 -0.223 1.325 parent education -0.102 0.213 -0.131 0.129 -0.116 0.129 education 1.488 0.574 *(.01) 1.76 0.561 **(.01) student loan amount -0.024 1.488 0.574 *(.005) -0.002 0.0004 ***(.01) loans but no degree -0.54 1.76 **(.002) -5.61 1.69 ***(.000) own | child risk score | -0.83 | 0.67 | | -0.703 | 669 | | -1.387 | 0.649 | *(.033) | -1.14 | 0.6 | 0.057 | |
| parent education -0.102 0.213 -0.131 0.129 -0.116 0.129 education 1.488 0.574 *(.01) 1.76 0.561 **(student loan amount -0.0001 0.00001 **(.005) -0.0002 0.00004 ***(loans but no degree -0.54 1.76 **(.002) -5.61 1.69 ***(married -0.001 -0.54 1.76 **(.002) -5.61 1.69 ***(own -0.102 -0.116 0.129 -0.116 0.129 ***(| family wealth | | | | 0.28 | 0.104 | **(.007) | 0.132 | 0.097 | | 0.058 | 0.089 | | |
| education 1.488 0.574 * (.01) 1.76 0.561 ** (student loan amount -0.0001 0.00001 ** (.005) -0.0002 0.00004 *** (loans but no degree -0.54 1.76 **(.002) -5.61 1.69 *** (married -0.001 -0.54 1.76 **(.002) -5.61 1.69 *** (own -0.54 1.76 **(.002) -5.61 1.175 *** (| married parents | | | | -0.014 | 1.45 | | -0.023 | 1.34 | | -0.223 | 1.325 | | |
| student loan amount loans but no degree -0.0001 0.00001 ** (.005) -0.0002 0.00004 *** (.005) married own -0.54 1.76 **(.002) -5.61 1.69 *** (.002) 4.107 1.176 *** (.002) 1.176 *** (.002) | parent education | | | | -0.102 | 0.213 | | -0.131 | 0.129 | | -0.116 | 0.129 | | |
| loans but no degree -0.54 1.76 **(.002) -5.61 1.69 ***(married own 1.78 1.78 1.175 1.176 ***(| education | | | | | | | 1.488 | 0.574 | * (.01) | 1.76 | 0.561 | ** (.002) | |
| married 0.1.786 1.175 4.107 1.176 *** (| student loan amount | | | | | | | -0.0001 | 0.00001 | ** (.005) | -0.0002 | 0.00004 | *** (.000) | |
| own 4.107 1.176 *** (| loans but no degree | | | | | | | -0.54 | 1.76 | **(.002) | -5.61 | 1.69 | *** (.001) | |
| | married | | | | | | | | | | 1.786 | 1.175 | | |
| | own | | | | | | | | | | 4.107 | 1.176 | *** (.001) | |
| inherit 1.807 1.039 | inherit | | | | | | | | | | 1.807 | 1.039 | | |

| | | | Tab | le 5: If Hea | d of Hou | usehold Pr | edictors of | Income | | | | |
|---------------------|--------|-----------|-----------|--------------|-----------|------------|---------------|-------------|------------|-------------|----------------|------------|
| | | Model A | | | Model B | | | Model C | | | Model D | |
| Variable | n= | 466; r2 = | .16 | n = 4 | 458; r2 = | .16 | n : | = 347; r2 = | .27 | r | n = 346; r2=.4 | 44 |
| | coef. | SE | p | coef. | SE | р | coef. | SE | p | coef. | SE | p |
| black | -0.506 | 0.161 | ** (.002) | -0.365 | 0.155 | * (.019) | -0.588 | 0.174 | *** (.001) | -0.335 | 0.146 | * (.023) |
| school quality | 0.075 | 0.035 | * (.035) | 0.072 | 0.035 | * (.04) | 0.065 | 0.042 | * (0.12) | 0.089 | 0.035 | * (.014) |
| child risk score | -0.141 | 0.054 | ** (.01) | -0.108 | 0.053 | * (.042) | 0.006 | 0.052 | | 0.042 | 0.041 | |
| family wealth | | | | 0.006 | 0.007 | | 0.002 | 0.007 | | -0.011 | 0.006 | |
| married parents | | | | 0.115 | 0.114 | | 0.079 | 0.123 | | 0.079 | 0.099 | |
| parent education | | | | 0.016 | 0.015 | | 0.002 | 0.017 | | -0.0002 | 0.014 | |
| education | | | | | | | 0.319 | 0.073 | *** (.000) | 0.378 | 0.065 | *** (.000) |
| student loan amount | | | | | | | Tiny coef., r | not sig. | | Tiny coef., | not sig. | |
| loans but no degree | | | | | | | 0.15 | 0.128 | | 0.11 | 0.0968 | |
| married | | | | | | | | | | 0.622 | 0.092 | *** (.000) |
| own | | | | | | | | | | 0.364 | 0.092 | *** (.000) |
| inherit | | | | | | | | | | 0.087 | 0.174 | |

| | Table C. D. | | 6 34/ 141- | hu Dava | | |
|----------------------|-------------|--------|--------------|---------|--------|------------|
| | Table 6: Pr | Black | s of Wealth, | ву касе | White | |
| variable | coef. | SE | Р | coef. | SE | Р |
| school quality | 0.786 | 0.326 | ** (.017) | 0.28 | 0.416 | |
| child risk score | 0.299 | 0.825 | | -1.56 | 0.702 | * (.027) |
| loans but no degree | -9.08 | 2.05 | *** (.000) | -3.76 | 2.15 | |
| student loans amount | -0.0001 | 0.0001 | | -0.0002 | 0.0001 | *** (.000) |
| education | 2.474 | 0.829 | ** (.003) | 1.537 | 0.604 | ** (.012) |
| family wealth | 0.03 | 0.085 | | 0.065 | 0.141 | |
| married | 3.475 | 1.831 | 0.059 | 0.966 | 1.33 | |
| homeowner | 10.373 | 1.988 | *** (.000) | 3.934 | 2.781 | ** (.003) |

-